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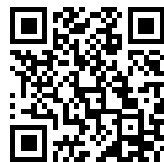
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The Journal of mental science

Association of Medical Officers of Asylums and Hospitals for the
Insane (London, England), Medico-psychological Association of ...



THE JOURNAL

OF

MENTAL SCIENCE

*(Published by Authority of the Medico-Psychological Association
of Great Britain and Ireland).*

EDITED BY

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*"Nō vero intellectum longius a rebus nō abstrahimus quā ut rerum imagines et
radī (ut in sensu sūt) coire possint."*

FRANCIS BACON, *Proleg. Instaurat. Mag.*

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EDUC.

~~PSYCH~~

"In adopting our title of the *Journal of Mental Science*, published by authority of the *Medico-Psychological Association*, we profess that we contribute 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."— *Sir J. C. Bucknill, M.D., F.R.S.*

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1895. Nicolson, Robert Henderson, M.B., C.M. Aber., Senior Assistant Medical Officer, County Asylum, Hatton Warwick.
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1888. Nolan, Michael J., L.R.C.P.I., M.P.C., Medical Superintendent, District Asylum, Downpatrick.
1892. Noott, Reginald Harry, M.B., C.M. Edin., Senior Assistant Med. Officer, Broadmoor Criminal Lunatic Asylum, Crowthorne, Wokingham.
1880. Norman, Conolly, F.R.C.P.I., Med. Supt., Richmond District Asylum, Dublin, Ireland. (*Hon. Secretary for Ireland, 1887-94.*) (*EX-PRESIDENT.*) (*Editor of Journal.*)
- Nugent, Sir John, M.B. Trin. Col., Dub., L.R.C.S. Ireland. (*Hon. Member.*)
1885. Oakshott, J. A., M.D., Assist. Med. Officer, District Asylum, Cork.
1891. O'Farrell, G.P., M.D., M.Ch. Univ. Dublin, Inspector of Lunatics in Ireland, 19, Fitzwilliam Square, Dublin. (*Hon. Member.*)
1892. O'Flaherty, Dr., District Asylum, Downpatrick, Ireland.
1892. O'Mara, Dr., District Asylum, Limerick, Ireland.
1881. O'Meara, T. P., M.B., Med. Supt., District Asylum, Carlow, Ireland.
1886. O'Neill, E. D., L.R.C.P.I., Med. Supt., The Asylum, Limerick.
1868. Orange, William, M.D. Heidelberg, F.R.C.P. Lond., C.B., 12, Lexham Gardens, London. (*PRESIDENT, 1883.*)
1893. Osburne, Cecil A. P., F.R.C.S. Edin., L.R.C.P. Edin., Surgeon to the Admiralty, Hythe, The Oaks, Hyth., Kent.
1890. Oswald, Landel B., M.B., M.P.C., Senior Assistant Medical Officer, Glasgow Royal Asylum, Gartnavel.
- * Palmer, Edward, M.D. St. And., M.R.C.P. Lond., M.R.C.S., 87, Harcourt Terrace, London, S.W.
1886. Parant, M. Victor, M.D., Toulouse. (*Corresponding Member.*)
1893. Paterson, Charles Edward, M.D. Edin., Arnold House, Farnborough, Hants.
1892. Patterson, Arthur Edward, M.B., C.M. Aber., Assistant Medical Officer City of London Asylum, Dartford.

1872. Patton, Alex., M.B., Resident Medical Superintendent, Farnham House, Finglas, Co. Dublin.
- * Paul, John Hayball, M.D. St. And., M.R.C.P. Lond., F.R.C.P. Edin. Camberwell Terrace, London, S.E. (*Emeritus Treasurer.*)
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.
1881. Peeters, M., M.D., Ghel, Belgium. (*Hon. Member.*)
1873. Pedler, George H., L.R.C.P. Lond., M.B.C.S. Eng., 6, Trevor Terrace, Knightsbridge, S.W.
1893. Perceval, Frank, M.R.C.S. Eng., L.R.C.P. Lond., Medical Superintendent, County Asylum, Whittingham, Preston, Lancashire.
1874. Petit, Joseph, L.R.C.S.I., Med. Supt., District Asylum, Sligo.
1878. Philipps, Sutherland Rees, M.D., C.M. Qu. Univ. Irel., F.R.G.S., St. Anne's Heath, Chertsey.
1875. Philpison, George Hare, M.D. and M.A. Cantab., F.R.C.P. Lond., 7, Eldon Square, Newcastle-on-Tyne.
1891. Pierce, Bedford, M.D. Lond., M.R.C.P., Medical Superintendent, The Retreat, York.
1888. Pietersen, J. F. G., M.R.C.S., Ashwood House, Kingswinford near Dudley, Stafford.
1871. Pim, F., Esq., M.R.C.S. Eng., L.R.C.P. Ireland, Med. Supt., Palmerston, Chapelizod, Co. Dublin, Ireland.
1890. Pitcairn, John James, L.R.C.P., M.R.C.S., M.P.C., Assistant Surgeon, H.M. Prison, Holloway.
1873. Pitman, Sir Henry A., M.D. Cantab., F.R.C.P. Lond., Registrar of the Royal College of Physicians, Enfield, Middlesex. (*Hon. Member.*)
1877. Plaxton, Joseph Wm., M.B.C.S., L.S.A. Eng., Lunatic Asylum, Kingston, Jamaica.
1889. Pope, George Stevens, L.R.C.P. & S. Edin., L.F.P. & S. Glas., Assistant Medical Officer, Cane Hill Asylum, Purley, Surrey.
1876. Powell, Evan, M.R.C.S. Eng., L.S.A., Medical Superintendent, Borough Lunatic Asylum, Nottingham.
1891. Price, Arthur, M.B.C.S., L.S.A., M.P.C., Medical Officer H.M. Prison, Birmingham, 2, Handsworth New Road, Birmingham.
1875. Pringle, H. T., M.D. Glas., Medical Superintendent, County Asylum, Bridgend, Glamorgan.
1892. Rainsford, Frederick Edward, M.B. Dublin, Second Assistant Medical Officer, City and County Lunatic Asylum, Fishponds, near Bristol.
1894. Rambant, Daniel F., M.D., Univer. Dub., Third Assistant Medical Officer, and Pathologist, Richmond District Asylum, Dublin.
1889. Raw, Nathan., M.D., M.P.C., Royal Infirmary, Dundee.
1893. Rawes, William, M.B. Durh., F.R.C.S. Eng., Assistant Medical Officer, St. Luke's Hospital, London.
1870. Rayner, Henry, M.D. Aberd., M.R.C.P. Edin., 2, Harley Street, London, W., and Upper Terrace House, Hampstead, London, N.W. (*PRESIDENT, 1884.*) (*Late Genera' Secretary.*) (*Editor of Journal.*)
1890. Régis, Dr. E., 54, Rue Huguerie, Bordeaux. (*Corresponding Member.*)
1887. Reid, William, M.D., Physician Superintendent, Royal Asylum, Aberdeen.
1891. Renton, Robert, M.B., C.M. Edin., M.P.C., Montague Lawn, London Road, Cheltenham.
1886. Revington, Geo., M.D. and Stewart Scholar Univ. Dublin, M.P.C., Med. Superintendent, Central Criminal Asylum, Dundrum, Ireland.
1889. Richards, Joseph Peeke, M.R.C.S., L.S.A., 6, Free's and Road, Ealing, W.
1869. Richardson, Sir B. W., M.D. St. And., F.R.S., 25, Manchester Square, W. (*Hon. Member.*)
1890. Ritti, Dr. J. M., Maison Nationale de Charenton, St. Maurice, Seine, France. (*Corresponding Member.*)
1893. Rivers, William H. Rivers, M.D. Lond., St. John's College, Cambridge.
1871. Robertson, Alexander, M.D. Edin., 16, Newton Terrace, Glasgow.
- * Robertson, Charles A. Lockhart, M.D. Cantab., F.R.C.P. Lond., F.R.C.P. Edin., Lord Chancellor's Visitor, Gungahgreen, The Drive, Wimbledon. (*General Secretary, 1855-62.*) (*Editor of Journal, 1862-70.*) (*PRESIDENT, 1867.*) (*Hon. Member.*)

1895. Robertson, William Ford, M.B., C.M., Pathologist, Royal Edinburgh Asylum, West House, Morningside Asylum, Edinburgh.
1887. Robertson, G. M., M.B., C.M., M.P.C., Medical Superintendent, Perth District Asylum, Murthley.
1895. Robinson, George Burton, M.B., L.R.C.P., M.R.C.S., Assistant Medical Officer, County Asylum, Forston, Dorset.
1876. Rogers, Edward Coulton, M.R.C.S. Eng., L.S.A., Co. Asylum, Fulbourn, Cambridge.
1859. Rogers, Thomas Lawes, M.D. St. And., M.R.C.P. Lond., M.R.C.S. Eng., Eastbank, Court Road, Eltham, Kent. (PRESIDENT, 1874.)
1895. Rolleston, Lancelot W., M.B., B.S. Durh., Junior Assistant Medical Officer, Middlesex County Asylum, Tooting, S.W.
1879. Ronaldson, J. B., L.R.C.P. Edin., Medical Officer, District Asylum, Haddington.
1879. Roots, William H., M.R.C.S., Canbury House, Kingston-on-Thames.
1860. Rorie, James, M.D. Edin., L.R.C.S. Edin., Medical Superintendent, Royal Asylum, Dundee. (*Late Hon. Secretary for Scotland.*)
1890. Rosenblum, Edward Emerson, M.B., B.S. Melbourne, Senior Assistant Medical Officer, Lunatic Asylum, Yarra Bend, Melbourne.
1888. Ross, Chisholm, M.B. Ed., M.D. Sydney, Hospital for the Insane, Kenmore, New South Wales.
1886. Roussel, M. Théophile, M.D., Sénateur, Paris. (*Hon. Member.*)
1884. Rowe, E. L., L.R.C.P. Ed., Med. Supt., Borough Asylum, Ipswich.
1883. Rowland, E. D., M.D., C.M. Edin., the Public Lunatic Asylum, Berbice, British Guiana.
1877. Russell, A. P., M.B. Edin., The Lawn, Lincoln.
1883. Russell, F. J. R., L.R.C.P. Irel., Tramore, St. Leonards-on-Sea.
1892. Rutledge, Victor, M.B., District Asylum, Londonderry, Ireland.
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.*)
1887. Rutherford, W., M.D., Consulting Physician, Ballinasloe District Asylum, Ireland.
1889. Ruxton, William Ledington, M.D. and C.M., 8, Derwent Place, Newcastle-on-Tyne.
- * Sankey, R. Heurtley H., M.R.C.S. Eng., Medical Superintendent, Oxford County Asylum, Littlemore, Oxford.
1894. Sankey, Edward H. O., M.A., M.B., B.C. Cantab., Resident Medical Licensee, Borecatton Park Licensed House, Baschurch, Salop.
1891. Saunders, Charles Edwards, M.D. Aber., M.R.C.P. Lond., Medical Superintendent, Haywards Heath Asylum, Sussex.
1873. Savage, G. H., M.D. Lond., 3, Henrietta Street, Cavendish Square, W. (*late Editor of Journal.*) (PRESIDENT, 1886.)
1894. Scanlan, William T. A., M.B., M.Ch. B.A.O.R.W.I. (Locum Tenens), Assistant Medical Officer, District Asylum, Cork.
1862. Schofield, Frank, M.D. St. And., M.R.C.S., Medical Supt., Camberwell House, Camberwell.
1887. Schüle, Heinrich, M.D., Illenau, Baden, Germany. (*Hon. Member.*)
1884. Scott, J. Walter, M.R.C.S., M.P.C., Highfield, Tulse Hill, S.W.
1889. Scowcroft, Walter, M.R.C.S., Senior Assistant Medical Officer, Royal Lunatic Hospital, Cheadle.
1880. Seccombe, Geo., L.R.C.P.L., The Colonial Lunatic Asylum, Port of Spain, Trinidad, West Indies.
1879. Seed, Wm., M.B., C.M. Edin., The Poplars, 110, Waterloo Road, Ashton-on-Ribble, Preston.
1889. Sells, Charles John, L.R.C.P., M.R.C.S., L.S.A., White Hall, Guildford.
1885. Sells, H. T., 2, London Road, Northfleet, Kent.
1881. Semal, M., M.D., Mons, Belgium. (*Hon. Member.*)
1893. Semelaigne, René, Dr., Secrétaire des Séances de la Société Médico-Psychologique de Paris, Avenue de Madrid, Neuilly, Seine, Paris, (*Corresponding Member.*)
1882. Seward, W. J., M.D., Med. Superintendent, Colney Hatch, Middlesex.
1891. Shaw, John Constance, M.R.C.S. Eng., L.R.C.P. Lond., Assistant Medical Officer, Hull Borough Asylum.

1867. Shaw, Thomas C., M.D. Lond., F.R.C.P. Lond., Medical Superintendent, London County Asylum, Banstead, Surrey.
1880. Shaw, James, M.D., Donard House, Kensington, Liverpool.
1891. Shaw, Harold B., B.A., M.B., B.S., D.P.H.Camb., Senior Assistant Medical Officer, County Asylum, Fareham, Hants.
1882. Sheldon, T. S., M.B., Med. Supt., Cheshire County Asylum, Parkside, Macclesfield.
1886. Sherrard, C. D., M.R.C.S., Avalon, Eastbourne.
1877. Shuttleworth, G. E., M.D. Heidelberg, M.R.C.S. and L.S.A. Eng., B.A. Lond., late Medical Superintendent, Royal Albert Asylum, Lancaster; Ancaster House, Richmond, Surrey.
1880. Sibbald, John, M.D. Edin., F.R.C.P. Ed., M.R.C.S. Eng., Commissioner in Lunacy for Scotland, 3, St. Margaret's Road, Edinburgh. (*Editor of Journal, 1871-72.*) (*Hon. Member.*)
1895. Simpson, Francis M.R.C.S., L.R.C.P., Assistant Medical Officer, West Riding Asylum, Wakefield.
1889. Simpson, Samuel, M.B. and M.C.H. Dublin, M.P.C., Northumberland House, Green Lanes, Finsbury Park, N.
1888. Sinclair, Eric, M.D., Med. Supt., Gladesville Asylum, New South Wales.
1870. Skae, C. H., M.D. St. And., Medical Superintendent, Ayrshire District Asylum, Glengall, Ayr.
1894. Skae, Frederick Macpherson Traill, M.B., C.M., M.P.C., Junior Assistant Medical Officer, Stirling District Asylum, Larbert.
1891. Skeen, James Humphrey, M.B., C.M. Aber., Medical Superintendent, Glasgow District Asylum, Bothwell.
1858. Smith, Robert, M.D. Aberd., L.R.C.S. Edin., Medical Superintendent, County Asylum, Sedgefield, Durham.
1886. Smith, R. Gillies, M.A., B.Sc., M.R.C.S., City Asylum, Gosforth, Newcastle-on-Tyne.
1885. Smith, R. Percy, M.D., B.S., F.R.C.P., M.P.C., Bethlem Hospital, St. George's Road, S.E.
1884. Smith, W. Beattie, F.R.C.S. Ed., L.R.C.P. Lond., Medical Supt., Hospital for the Insane, Ararat, Victoria.
1892. Smyth, W. Johnson, M.B. Edin., Station Hospital, Rochester Row, Vincent Square, London, S.W.
1881. Snell, Geo., M.D. Aber., M.B.C.S. Eng., Medical Superintendent, Public Lunatic Asylum, Berbice, British Guiana.
1885. Soutar, J. G., Barnwood House, Gloucester.
1875. Spence, J. Beveridge, M.D., M.C. Queen's University, Medical Superintendent, Burntwood Asylum, near Lichfield. (*Registrar.*)
1883. Spence, J. B., M.D., M.C., Asylum for the Insane, Ceylon.
1891. Stansfield, T. E. K., M.B., C.M. Edin., Senior Assistant Medical Officer, London County Asylum, Claybury.
1895. Stanwell, Charles Oliver, L.R.C.P. & S. and L.M. Edin., Senior Assistant Medical Officer, The Retreat, York.
1888. Stearns, H. P., M.D., The Retreat, Hartford, Conn., U.S.A. (*Hon. Member.*)
1894. Stevens, Thomas George, L.R.C.S.I., L.K.Q.C.P.I., Assistant Medical Officer, Central Criminal Asylum, Dundrum, Ireland.
1868. Stewart, James, B.A. Queen's Univ., F.R.C.P. Edin., L.R.C.S. Ireland, late Assistant Medical Officer, Kent County Asylum, Maidstone; Dunmurry, Sneyd Park, near Clifton, Gloucestershire.
1884. Stewart, Robert S., M.D., C.M., Assistant Medical Officer, County Asylum, Glamorgan.
1887. Stewart, Rothsay C., M.R.C.S., Assist. Med. Officer, County Asylum, Leicester.
1862. Stilwell, Henry, M.D. Edin., M.B.C.S. Eng., Moorcroft House, Hillingdon, Middlesex.
1864. Stocker, Alonzo Henry, M.D. St. And., M.R.C.P. Lond., M.R.C.S. Eng., Medical Superintendent, Peckham House Asylum, Peckham.
1887. Stoker, Wm. Thornley, M.D., President Royal College Surgeons, Ireland, 8, Ely Place, Dublin.
1881. Strahan, S. A. K., M.D., Assist. Med. Officer, County Asylum, Berrywood, near Northampton.
1868. Strange, Arthur, M.D. Edin., Medical Superintendent, Salop and Montgomery Asylum, Bicton, near Shrewsbury.

1895. Strapp, Walter Russell, M.B., C.M., Assistant Medical Officer, District Asylum, Inverness.
1885. Street, C. T., M.R.C.S., L.R.C.P., Haydock Lodge, Ashton, Newton-le-Willows, Lancashire.
1886. Suffern, A. C., M.D., Medical Superintendent, Rubery Hill Asylum, near Bromsgrove, Worcestershire.
1894. Sullivan, W. C., M.D.R.U.I., 30, Springfield Road, St. John's Wood N.W.
1870. Sutherland, Henry, M.D. Oxon, M.R.C.P. London, 6, Richmond Terrace, Whitehall, S.W.; Newlands House, Tooting Bec Road, Tooting Common, S.W.; and Otto House, 47, Northend Road, West Kensington, W.
1895. Sutherland, John Francis, M.D. Edin., Deputy Commissioner in Lunacy, 23, Rutland Square, Edinburgh.
1868. Swain, Edward, M.R.C.S., Medical Superintendent, Three Counties' Asylum, Stotfold, Baldock, Herts.
1877. Swanson, George J., M.D. Edin., Lawrence House, York.
1893. Symmers, William St. Clare, M.B., C.M. Aber., Pathologist, County Asylum, Prestwich, Manchester.
1881. Tamburini, A., M.D., Reggio-Emilia, Italy. (*Hon. Member.*)
1857. Tate, William Barney, M.D. Aberd., M.R.C.P. Lond., M.R.C.S. Eng., Med. Supt. of the Lunatic Hospital, The Coppice, Nottingham.
1890. Telford-Smith, Telford, M.A., M.D., Medical Superintendent, Royal Albert Asylum, Lancaster.
1892. Temple, Lewis Dunbar, M.B., C.M. Edin., late Clinical Assistant, Darenth Asylum, Ballantrae, Ayrshire.
1888. Thomas, E. G., M.B. Edin., Ass. Med. Off., Caterham Asylum, Surrey.
1880. Thomson, D. G., M.D., C.M., Med. Supt., County Asylum, Thorpe, Norfolk.
1866. Tuke, John Batty, M.D. Edin., 20, Charlotte Square, Edinburgh. (*Hon. Secretary for Scotland, 1869-72.*)
1888. Tuke, John Batty, Junior, M.B., C.M., M.B.C.P.E., Resident Physician Saughton Hall, Edinburgh.
1881. Tuke, Charles Molesworth, M.R.C.S.E., Chiswick House, Chiswick.
1885. Tuke, T. Seymour, M.B., B.Ch. Oxford, M.R.C.S.E., Chiswick House, Chiswick; and 87, Albemarle Street, Piccadilly, W.
1877. Turnbull, Adam Robert, M.B., C.M. Edin., Medical Superintendent, Fife and Kinross District Asylum, Cupar. (*Hon. Secretary for Scotland.*)
1889. Turner, Alfred, M.D. and C.M., Assistant Medical Officer, West Riding Asylum, Menston, Yorkshire.
1890. Turner, John, M.B., C.M. Aber., Senior Assistant Medical Officer, Essex County Asylum.
1873. Urquhart, Alexr. Reid, M.D., F.R.C.P.E., Physician Supt., James Murray's Royal Asylum, Perth. (*Editor of Journal.*) (*Hon. Sec. for Scotland 1886-1894.*)
1894. Vincent, William James, M.B. Durh., Assistant Medical Officer, Borough Asylum, Nottingham.
1881. Virchow, Prof. R., University, Berlin. (*Hon. Member.*)
1881. Voisin, A., M.D., 16, Rue Séguin, Paris. (*Hon. Member.*)
1876. Wade, Arthur Law, B.A., M.D. Dub., Med. Supt., County Asylum, Wells Somerset.
1884. Walker, E. B. C., M.B., C.M. Edin., Assist. Med. Officer, County Asylum, Haywards Heath.
1877. Wallace, James, M.D., Visiting Medical Officer, Parochial Asylum, Greenock.
1876. Wallis, John A., M.D. Aberd., L.R.C.P. Edin., Commissioner in Lunacy, 19, Whitehall Place, S.W.
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1892. Ward, Dr., The Asylum, Ballinasloe, Ireland.
1871. Ward, J. Bywater, B.A., M.D. Cantab., M.R.C.S. Eng., Medical Superintendent, Warneford Asylum, Oxford.
1889. Warnock, John, M.D., C.M., B.Sc., M.R.C.S., Sanitary Department, Ministry of Interior, Cairo, Egypt.
1895. Waterson, Jane Elizabeth, M.D. Brussels, L.R.C.P.I., L.R.C.S. Edin., Official Visitor, Cape Town District Lunatic Asylums, Cape Town, South Africa.
1891. Watson, George A., M.B., C.M. Edin., M.P.C., Senior Assistant Medical Officer, City Asylum, Birmingham.

1885.	Watson, William Riddell, L.R.C.S. & P. Edin., Govan District Asylum, Hawkhead, Paisley.
1883.	Watson, Robert Henry, M.A., M.B., C.M. Edin., care of B. Watson, Ardfern, Falkirk.
1880.	Weatherly, Lionel A., M.D., Bailbrook House, Bath.
1880.	West, Geo. Francis, L.R.C.P. Edin., Assist. Med. Officer, District Asylum, Omagh, Ireland.
1872.	Whitcombe, Edmund Banks, M.R.C.S., Medical Supt., Winson Green Asylum, Birmingham. (PRESIDENT, 1891.)
1884.	White, Ernest, M.B. Lond., M.R.C.P., City of London Asylum, Stone, Dartford, Kent.
1889.	Whitwell, James Richard, M.D. and C.M., Assistant Medical Officer, West Riding Asylum, Menston, near Leeds.
1883.	Wiglesworth, J., M.D. Lond., Rainhill Asylum, Lancashire.
1895.	Wilcox, Arthur William, M.B., C.M. Edin., Second Assistant Medical Officer, County Asylum, Hatton, Warwick.
1887.	Will, Jno. Kennedy, M.B., C.M., M.P.C., Bethnal House, Cambridge Road, E.
1862.	Williams, S. W. Duckworth, M.D. St. And., L.R.C.P.Lond., Chislehurst, Marlboro' Road, Bournemouth.
1893.	Wills, Ernest, M.D. Lond., M.R.C.P. Lond., Second Assistant Medical Officer, London County Asylum, Claybury.
1890.	Wilson, George B., M.B., C.M., M.P.C., Medical Superintendent, Mavisbank Asylum, Polton, Midlothian.
1885.	Wilson, G. V., M.D., Assist. Med. Officer, District Asylum, Cork.
1895.	Wilson, James, M.A., M.B., C.M., Assistant Medical Officer, Wilts County Asylum, Devizes.
1875.	Winslow, Henry Forbes, M.D. Lond., M.R.C.P. Lond., 14, York Place, Portman Square, London, and Hayes Park, Hayes, near Uxbridge, Middlesex.
1869.	Wood, T. Outterson, M.D., M.R.C.P. Lond., F.R.C.P., F.R.C.S. Edin., 40, Margaret Street, Cavendish Square, W.
1869.	Woodd, B. T., Esq., M.P., Chairman of the West Riding Asylum, Conyng-ham Hall, Knaresboro. (<i>Hon. Member.</i>)
1894.	Wood, Guy Mills, M.B. Durh., Assistant Medical Officer, County Asylum, Rainhill, near Prescott, Lancashire.
1873.	Woods, Oscar T., M.B., M.D. (Dub.), L.R.C.S.I., Medical Superintendent, District Asylum, Cork. (<i>Hon. Secretary for Ireland.</i>)
1885.	Woods, J. F., M.R.C.S., Med. Supt., Hoxton House, N.
1877.	Worthington, Thos. Blair, M.A., M.B., and M.C. Trin. Coll., Dublin, Med. Supt., County Asylum, Knowle, Fareham, Hants.
1865.	Wyatt, Sir William H., J.P., Chairman of Committee, County Asylum, Colney Hatch, 88, Regent's Park Road. (<i>Hon. Member.</i>)
1862.	Yellowlees, David, M.D. Edin., F.F.P.S. Glasg., LL.D., Physician-Superintendent, Royal Asylum, Gartnavel, Glasgow. (PRESIDENT, 1890).
1882.	Young, W. M., M.D., Assist. Med. Officer, County Asylum, Melton, Suffolk.
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	HONORARY MEMBERS 40
	CORRESPONDING MEMBERS 8
	Total 509

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List of those who have passed the Examination for the Certificate of Efficiency in Psychological Medicine, entitling them to append M.P.C. (Med. Psych. Certif.) to their names.

Adamson, Robert O.	Davidson, William.
Adkins, Percy.	Davidson, Andrew.
Ainley, Fred Shaw.	De Silva, W. H.
Alexander, Edward H.	Distin, Howard.
Anderson, John.	Drummond, Russell J.
Anderson, A. W.	Donaldson, R. L. S.
Anderson, Bruce Arnold.	Donellan, James O'Conor.
Andrierson, W.	Douglas, A. R.
Armour, E. F.	Eames, Henry Martyn.
Attegalle, J. W. S.	Earls, James H.
Aveline, H. T. S.	Eden, Richard A. S.
Barbour, William	Edgerley, S.
Barker, Alfred James Glanville.	Edwards, Alex. H.
Begg, William.	Elkins, Frank A.
Belben, F.	Ellis, Clarence J.
Bird, James Brown.	English, Edgar.
Blachford, J. Vincent.	Eustace, J. N.
Black, Robert S.	Eustace, Henry Marcus.
Black, Victor.	Evans, P. C.
Blandford, Henry E.	Evans, John A.
Bond, C. Hubert.	Ezard, Ed. W.
Bond, R. St. G. S.	Farquharson, Wm. Fredk.
Bowlan, Marcus M.	Fennings, A. A.
Boyd, James Paton.	Ferguson, Robert.
Bristowe, Hubert Carpenter.	Fitzgerald, Gerald
Brodie, Robert C.	Fraser, Thomas.
Brough, C.	Fraser, Donald Allan.
Bruce, John.	Frederick, Herbert John
Bruce, Lewis C.	Fox, F. G. T.
Brush, S. C.	Gandin, Francis Neel.
Bullock, William.	Gawn, Ernest, K.
Cameron, James.	Gemmell, William.
Campbell, Alfred W.	Genney, Fred. S.
Campbell, Peter.	Giles, A. B.
Calvert, William Dobree.	Gill, J. Macdonald.
Carmichael, W. J.	Goldie, E. M.
Carruthers, Samuel W.	Goodall, Edwin.
Carter, Arthur W.	Graham, F. B.
Chambers, James.	Graham, Dd. James.
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Coles, Richard A.	Grant, Lacklan.
Collie, Frank Lang.	Gray, Alex. C. E.
Collier, Joseph Henry.	Griffiths, Edward H.
Conolly, Richard M.	Hall, Henry Baker.
Cooper, Alfred J. S.	Halsted, H. C.
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Corner, Harry.	Hector, William.
Couper, Sinclair.	Henderson, Jane B.
Cowan, John J.	Henderson, P. J.
Cowie, C. G.	Hennan, George.
Cowie, George.	Hewat, Matthew L.
Cowper, John.	Hicks, John A., jun.
Cox, Walter H.	Hitchings, Robert.
Craig, M.	Holmes, William.
Cram, John.	Hotchkis, R. D.
Cruickshank, George	Howden, Robert.
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 Keyt, Fred.
 King, Frederick Truby.
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 Laing, C. A. Barclay.
 Law, Thomas Bryden.
 Leeper, Richard R.
 Leslie, R. Murray.
 Livingstone, John.
 Lloyd, R. H.
 Low, Alexander.
 Macdonald, David.
 Macdonald, G. B. Douglas.
 Macdonald, John.
 McAllum, Stewart.
 Macevoy, Henry John.
 Mackenzie, Henry J.
 Mackenzie, William L.
 Mackenzie, John Cumming.
 Mackie, George
 Macmillan, John.
 || Macnaughton, Geo. W. F.
 Macneece, J. G.
 Macpherson, John.
 Marsh, Ernest L.
 Martin, Wm. Lewis.
 Meikle, T. Gordon.
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 Middlemass, James.
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 Nairn, Robert.
 Neil, James.
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 Norton, Everitt E.
 Orr, David.
 Oswald, Landel R.
 Paget, A. J. M.
 Parker, William A.
 Parry, Charles P.
 Patterson, Arthur Edward.
 Pearce, Walter.
 Penfold, William James.
 Philip, James Farquhar.
 Pieris, William C.
 Pilkington, Frederick W.
 Pitcairn, John James.
 Porter, Charles.
 Price, Arthur.
 Pring, Horace Reginald.
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 Rose, Andrew.
 Rowand, Andrew.
 Rudall, James Ferdinand.
 Rust, James.
 Scott, George Brebner.
 Scott, J. Walter.
 Scott, William T.
 Sheen, Alfred W.
 Simpson, John.
 Simpson, Samuel.
 Skae, F. M. T.
 Skeen, George.
 Skeen, James H.
 Slater, William Arnison.
 Smith, Percy.
 Snyth, William Johnson
 Soutar, James G.
 Sproat, J. H.
 Stanley, John Douglas.
 Staveley, William Henry Charles.
 Steel, John.
 Stewart, William Day.
 Strong, D. R. T.
 Symes, G. D.
 Thompson, George Matthew.
 Thorpe, Arnold E.
 Trotter, Robert Samuel.
 Turner, W. A.
 Umney, W. F.
 Walker, James.
 Waterston, Jane Elizabeth.
 Watson, George A.
 Welsh, David A.
 West, J. T.
 Wickham, Gilbert Henry.
 Whitwell, Robert R. H.
 Will, John Kennedy.
 Williams, D. J.
 Williamson, A. Maxwell.
 Wilson, John T.
 § Wilson, G. R.
 Wilson, James.
 Wilson, Robert.
 Wood, David James.
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 Young, D. P.
 Younger, Henry J.
 Zimmer, Carlo Raymond.

- * To whom the Gaskell Prize (1887) was awarded.
 † To whom the Gaskell Prize (1889) was awarded.
 ‡ To whom the Gaskell Prize (1890) was awarded.
 § To whom the Gaskell Prize (1892) was awarded.
 || To whom the Gaskell Prize (1895) was awarded.

Vol. of
CONTENTS

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PART I.—ORIGINAL ARTICLES.

Lunacy Administration in Berlin and in Scotland, with Special Reference to the Care of the Insane in Private Dwellings.
By JOHN SIBBALD, M.D., Commissioner in Lunacy for Scotland.

It was first demonstrated on a large scale, by what was observed in the "Insane Colony" at Gheel, in Belgium, which, some fifty years ago, began to attract the attention of those engaged in lunacy administration, that a large number of the insane may be suitably provided for in private dwellings. It is now more or less widely recognized that in many cases they can be provided for in this way better than in asylums; and as regards the insane poor that they can often be thus provided for in a way not only conducive to their own welfare, but also at less cost to the public. This fact has received its most complete and systematic recognition in the lunacy administration of Scotland. Practical effect has been given to this recognition in various ways both on the continent of Europe and in America. One of the most recent and important steps in this direction has been taken by the authorities of the great city of Berlin, and it is proposed to give an account of what has been done by the Berlin authorities in the following paper.

A large number of the insane who are in affluent circumstances have for a long time been, in all civilized countries, well provided for in private dwellings either at home or under the care of strangers, and there has been no very remarkable accumulation of this class of the insane in asylums. The indigent insane have, however, during recent years, been accumulating in vast numbers in our asylums, and it is in regard to the placing of persons belonging to this class in private dwellings that the question is of the greatest interest and importance. What has been done in Berlin refers exclusively to this class, that is, to the insane who are main-

tained at the public cost. It is therefore necessary to a due understanding of what has been done to know something of the general system of municipal administration at Berlin, and especially of those departments of the administration which deal with the relief of the poor and the care of the insane.*

LUNACY ADMINISTRATION IN BERLIN.

Position of Lunacy Administration in Berlin in relation to the General Municipal Government.

Berlin occupies a position in one respect which is an advantage not only for the purposes of its own administration, but also for the purposes of those who wish to acquaint themselves with its mode of government. It differs from many cities in Germany and elsewhere, in the circumstance that the area of the city is under the control of a single body, which deals with all departments of local government. The area of the city is not only a Stadt, but it also constitutes a Kreis, a Gemeinde, a Provinzial-Verband, and both an Orts and a Land-Armen-Verband; and the administration from all the different points of view which these involve is in the hands of one body, the Magistrates and Town Council. This body, as one would say in England, is at once Town Council, Board of Guardians, School Board, and local authority for all purposes. Each section of local administration is dealt with by a committee. One committee, called the "Armen-Direction," controls the relief of the poor, and another, the "Deputation für die öffentliche Gesundheitspflege," or Public Health Committee, has the management of hospitals, asylums, public baths, disinfection establishments, and other matters relating to public health. Those of the insane poor who are regarded as requiring special supervision are under the care of the Curatorium der städtischen Irrenanstalten or City Asylum Committee, which is a branch of the Public Health Committee; those who do not receive special supervision are under the care of the Armen-Direction, and are dealt with as ordinary paupers. The direct dealing with the poor is entrusted to 239 local sub-committees, one for each of the districts (Städtbezirke) into which Berlin is divided. These local sub-committees (Armen-Commissionen)

* A very instructive and admirable account of the administration of Berlin is given in "A Study in Municipal Government," by James Pollard, C.A., Chairman of the Edinburgh Public Health Committee. Blackwood & Sons, Edinburgh and London. 1893.

consist of from about 5 to 15 residents in the respective districts, selected on account of their knowledge of the circumstances of the inhabitants; and their function is to make personal inquiry into the circumstances of every applicant for relief, and, under regulations framed by the Armen-Direction, to fix the amount of relief to be given. The average number of persons in receipt of relief from the Commissionen during the statistical year 1891-92 was 28,145, of whom 20,169 were adults and 7,967 were children.* Those who were imbecile or insane are not distinguished in the statistics from those of sound mind. The total number constituted a proportion of 1.77 per cent. of the population of the city. The total amount of money dispensed was £199,754, the average monthly allowance for an adult being 13s. 10d. and for a child 6s. 8d. The total expenditure, including medical relief and cost of management, was £259,922. If the cost of hospitals, asylums, reformatories, and refugees is added the sum reaches a total of £495,796.

Those insane poor who are dealt with in a special manner on account of their insanity, that is to say, those who are not dealt with by the Armen-Commissionen, are under the management of the Asylum Committee, "Das Curatorium der Städtischen Irrenanstalten," with the exception of 60 acute or recent cases which are provided for in the Irrenabtheilung of the Königliche Charité, which is the oldest of the general hospitals of Berlin. The insane under the care of the Asylum Committee are at present accommodated in the public asylums of Dalldorf and Herzberge, in private asylums, in the training school for imbeciles, and in private dwellings. The asylum of Herzberge had not been opened in 1892, when the latest report of the magistracy was published; the Dalldorf asylum was, therefore, the only public asylum in operation at the date of the most recent statistical statement. That statement shows that on the 31st March, 1892, the patients, excluding the juvenile imbeciles in the training school, were distributed in the following manner:—

	Men.	Women.	Total.
In Dalldorf Public Asylum ...	724	610	1,334
In Private Asylums ...	768	838	1,606
In Private Dwellings ...	96	87	183
	<hr/>	<hr/>	<hr/>
	1,588	1,535	3,123

* Verwaltungs-Bericht des Magistrats zu Berlin für die Zeit vom 1st April, 1891, bis 31 März, 1892.

This total number, 3,123, represents a proportion of nearly 20 in every 10,000 of the present population of Berlin. This proportion does not appear high to one who is acquainted with the statistics of lunacy in Great Britain. The proportion of pauper lunatics to population in England and Wales is 27 in every 10,000; in Scotland it is 27; and in London it is 38. But it must be kept in mind that the proportion for Berlin would be much higher if the insane poor in public institutions not under the control of the Asylum Committee and the insane poor in private dwellings under the Armen-Commissionen were included.

The Providing for the Insane Poor in Asylums.

The statistical history of State-supported insanity in Berlin is the same as it has been everywhere. Until comparatively recent times, little attention was given to the subject by Governments or by the general public. The first serious dealing with the subject by a Government was in the French Lunacy Law of 1838, the next was the English Lunacy Act of 1845, which was followed by the Scottish Lunacy Act of 1857. In each case it was found that as soon as adequate and kindly provision had been made by the public for the care of the insane poor a much larger number of persons than had been expected were found to be fit subjects for the care that was provided. Thus the introduction of an efficient system of pauper lunacy administration has always been followed by an apparent increase in the amount of insanity; and the more efficiently the insane are provided for and the more beneficent the system of administration, the more rapid is the apparent increase of insanity. It is not merely that when an opportunity was offered for obtaining good treatment a large number of cases of insanity were brought to light whose existence had been previously unknown, but it gradually became evident that a large number of persons could be suitably provided for in well-equipped asylums, whose insanity was of a kind not dreamt of in former times as requiring asylum treatment. The main cause of the apparent increase of insanity which is usually shown by asylum statistics is that when a Government, or a Legislature, recognizes its duty to provide, in an adequate and kindly way, for the insane poor, it opens the way to the recognition of a duty of far larger scope than can at first be plainly seen. From a commencement, when nothing more was in view than providing good accommoda-

tion and beneficent treatment for such persons as had previously been condemned to bad accommodation and injurious treatment, there is developed a feeling of obligation to provide protection and support for all the poor whose mental condition, whether defect, disorder, or decay, makes them unsettled or infirm. There is no doubt in my mind that it is chiefly, if not entirely, owing to the providing of better and more abundant asylum accommodation, and to the recognition by the public of wider obligations in regard to persons of unsound mind, that the number of persons classified as pauper lunatics in England and Wales has risen from 16 in every 10,000 of the population in 1859 to 27 in every 10,000 in 1892, and that they have risen in Scotland in similar proportions. From 1862 to 1893 the proportion has risen in Berlin from 5 in every 10,000 to 20 in every 10,000.

Previous to the year 1862 there was no public accommodation for the insane worthy of the name except the small Irrenabtheilung of the Charité. In that year a building was opened called the City Asylum (Städtische Irrenverpflegungsanstalt), which was capable of accommodating 204 patients. It consisted of the old buildings of the Filialhospital, in Wallstrasse, altered so as to make them as far as possible serve for an asylum; but their character and their situation did not admit of their being adapted to the requirements of the insane in a very satisfactory manner. From the date of the opening of this asylum, however, the care of the insane poor received much greater attention from the authorities than had previously been given to it. The erection of an asylum of a satisfactory kind was the subject of frequent discussion, but up to the year 1869 the action of the authorities went no further than improving the old section for the insane in the Arbeitshaus, and obtaining as good accommodation for their patients as was practicable in private asylums. In 1869 the estate of Dalldorf was purchased with the intention of erecting an asylum upon it. The final decision as to its erection was not, however, reached until the year 1877, and the asylum was not opened for the reception of patients until 1881. This asylum, with the agricultural "colony" subsequently erected, furnishes accommodation for 1,100 patients. The Herzberge Asylum, opened last year, affords accommodation for 1,000 patients; and an asylum for epileptics, now being erected at Wuhlgarten, is intended to receive 1,000 patients.

The number of patients provided for by the municipal

authorities in 1862 (which is exclusive of those in the Charité) was only 294. The increase to 3,123 in 1892 was to a considerable extent due to the extraordinary increase of the size and population of the City of Berlin since it became the metropolis of the German Empire. The population in 1870, when this event took place, was 742,000, and in 1892 it was 1,609,761, being an increase of 117 per cent. in 32 years, and showing a more rapid growth than has been known in any of the greater cities of Europe. The increase in the number of the insane poor, as it appears in the municipal statistics, indicates a much more rapid growth. They increased from 521 to 3,123 during the same period, being an increase of no less than 500 per cent., more than four times the increase attributable to the increase in the population of the city.

Recent Recognition of Care in Private Dwellings as one of the Ways of Providing for the Insane Poor.

It is not surprising that so rapid a rate of increase should have led the authorities to ask themselves whether the accumulation of so large a number in asylums was the only way of disposing of the patients, and whether the steps which were taken for removing patients who might have ceased to require detention in an asylum were as effective as they ought to be. The providing for a certain number of the insane poor in private dwellings was known to be a recognized department of lunacy administration in Belgium, in Scotland, and elsewhere, and it could not fail to be called to mind how the great Professor Griesinger had, during the later years of his life, advocated the introduction of "familiale verpflegung" into the Berlin administration.* It was ultimately determined by the Asylum Committee, at the instance of Herren Weise and Bertram, members of the committee, with the co-operation of Dr. Sander, the Director of Dalldorf Asylum, to try how far it would be practicable to relieve the pressure for accommodation in that asylum by the use of private dwellings.

An interesting account of what has been achieved in this way has just been given by Dr. Alfred Bothe, who, as assistant-physician in the asylum, had during three years

* See "Archiv. f. Psychiatrie," Band i., p. 36, etc. The writer, who was honoured by the intimate friendship of Professor Griesinger, well remembers the enthusiastic eloquence with which he discussed the lessons to be learned at Gheel.

(1889-92) the immediate superintendence of the experiment, and it is from his description that the following account is derived.*

To give practical recognition to residence in private dwellings as one of the ways of providing for those of the insane poor who are regarded as proper subjects for official supervision and control, is a problem which cannot be solved in the same way in all countries. The social condition of the people, the requirements of existing laws, and the duties and powers of various administrative authorities must be considered; and the shape which the new arrangements take will depend to a large extent on what it is found practicable to engraft on the administrative organization already existing. Every well-considered experiment will, however, yield materials of an instructive kind, not only for those immediately engaged in it, but also for those who have had to deal with the problem under different conditions. An important fact in the situation at Berlin was that the administrative authorities chiefly affected, the Armen-Direction and the Asylum Committee, were totally independent of each other, and that neither could alone take the steps which were required to make any system of boarding-out have a chance of success. The Asylum Committee had no power to deal with any insane persons not in an asylum, and the Armen-Direction had no power to deal with any persons on account of insanity except by handing them over to the Asylum Committee for detention in an establishment.

It was also an important circumstance that all direct dealing with persons in receipt of "poor relief" and living at home or in other private dwellings was in the hands of those local committees to which I have referred as Armen-Commissionen, and the members of these committees were specially unfit for dealing with the insane. The regulations under which they worked were adapted for dealing with ordinary pauperism, and were inapplicable to cases where the persons to be dealt with were either indifferent as to their need of relief, inclined to resent the idea of requiring relief, or, as frequently happens in cases of insanity, unreasonably exacting in regard to their claims for assistance or consideration. It could seldom happen that any of the members had any experience in the management of the insane, and it could

* "Die familiäre Verpflegung Geisteskranker (System der Irren-Colonie Gheel) der Irren-Anstalt der Stadt Berlin zu Dalldorf in den Jahren 1885, bis 1893." Von Dr. Alfred Bothe. Berlin. Verlag von Julius Springer. 1898.

not be expected that they would ever gain experience, for the cases with which any one member could have to deal would be very few, seldom more than one or two, and the great majority would never see a single case.

In spite of the difficulties which thus presented themselves an attempt was made by the Asylum Committee, with the co-operation of the Armen-Direction, to board out patients by handing them over to the Commissionen with written information as to their requirements supplied by the asylum authorities, and instructions from the Armen-Direction as to the mode of dealing with the patients. This plan was, however, found to be unworkable.

Ultimately in 1885, as the result of a conference between the Asylum Committee and the Armen-Direction, an arrangement was made which placed the boarding-out system in Berlin in the position in which it now stands. Under this arrangement the patients boarded out were divided into two classes:—(1) Patients for whom, after their discharge from the asylum, supervision by a physician accustomed to deal with the insane *is* still required, and (2) patients for whom, after their discharge from the asylum, a continuance of supervision by a physician accustomed to deal with the insane *is not* required. In regard to the first of these two classes it was agreed that they were to remain under the care of the asylum authorities and be maintained out of the asylum funds, the Armen-Direction taking no responsibility in regard to them and exercising no control over them. In regard to the second class, they were to be entirely under the charge of the Armen-Direction, the asylum authorities taking no responsibility and exercising no control. This second class was thus to be dealt with in the same way as had been the usual practice before the mutual understanding of the two authorities was arrived at. The placing of the first class under the management of the asylum authorities constituted a transference of a branch of the administration of relief of the poor from the Armen-Direction to the Asylum Committee, and the new system of boarding out the insane poor in Berlin consists in the management of this branch of poor relief.*

* Up to 1893 the boarding out was administered as a branch of the organization of the Dalldorf Asylum. Since the opening of the Herzberge Asylum the eastern half of Berlin has been allotted to the Dalldorf Asylum and the western half to the Herzberge Asylum, and the administration of the boarding out has been divided in the same way. Dr. Otto, the physician-in-chief at Herzberge, had, as assistant physician under Dr. Sander, the superintendence of the boarding out from Dalldorf during the first years of its operation.

The Patients who are Placed in Private Dwellings.

One of the chief advantages which the promoters of the boarding out expected to obtain was an opportunity of liberating patients on trial or probation. With this view the principle adopted in the selection of patients was to consider every patient fit for boarding out for whom a home could be found where it seemed reasonable to hope that the patient might be satisfactorily provided for. From the first they went on the assumption that no one should continue to be detained in the asylum unless it could be satisfactorily shown that such detention was necessary for the welfare of the patient or for the safety of the public. In judging of each case the kind of home that could be found outside the asylum was an important consideration. No hard and fast rule was, therefore, adopted as to the kind of mental condition which makes a patient fit for liberation. The character of the cases boarded out may be understood from the following statement, which shows the kind of insanity in the patients in private dwellings under the supervision of the asylum authorities who were dealt with during the statistical year 1891-92:—

	Men.	Women.	Total.
Imbecility and idiocy ...	27	37	64
Epilepsy or hysteria—			
(a) with alcoholism ...	27	39	66
(b) without alcoholism ...	15	1	16
Progressive paralysis ...	12	5	17
Senile insanity ...	7	15	22
Simple insanity with alcoholism ...	47	6	53
Other forms of chronic insanity ...	34	67	101
	<hr/> 169	<hr/> 170	<hr/> 339

The kinds of insanity in this list include some which are not usually regarded as suitable for treatment in private dwellings. Patients suffering from progressive paralysis, for example, are not generally thought suitable. The patients suffering from this disease who were boarded out by the asylum authorities appear to have been all males, who were placed under the care of their wives, and generally at the request of their wives. Several of the patients boarded out had been sent to the asylum at the instance of the police as dangerous. The Police Board raised no objection, however, to the action of the asylum authorities, and, indeed, showed a desire to co-operate in the experiment. "The

patients boarded out," writes Dr. Bothe,* "included a large number who had been guilty of acts of violence, such as homicide, serious assault, fire raising, and gross frauds. Some whose conduct under guardianship was irreproachable had been transferred from prison to the asylum, and had before being in prison belonged to the class of habitual thieves and burglars. The expectation that these, the majority of whom laboured under the milder form of imbecility, would, under the favourable conditions of family care, have no occasion to interfere with the property of their neighbours, was entirely fulfilled. The benevolent attitude of the Police Board (Polizei Præsidium) towards the boarding out was fully justified by experience. Notwithstanding the extraordinary number of patients who had previously undergone punishment, and in spite of the frequency with which a conflict with, or an infraction of, the law, had been the occasion of their admission to the asylum, there were remarkably few contraventions of the law on the part of patients boarded out. During the whole of the three years, 1890-92, the following were the only acts of this kind: One imbecile lad of 20 years of age, living with his parents, took part with some former associates in a burglary. The associates broke into a locked press containing money, and stole the money. The patient was charged with the crime along with the others, but before trial he was replaced in the asylum on account of his proclivity to vagrancy. He was found by the Court to have become insane after the act, and the charge was withdrawn. In a second case, an epileptic girl was induced by a companion to take part in a field robbery (Felddiebstahl), but on account of her insanity was not prosecuted. In two cases male patients were guilty of fraud. In one of these cases the patient was in the service of a coal dealer, and took the opportunity when delivering coals to make unlawful gain. In the other case, a patient obtained money from a sick fund by forging the name of the certifying physician. In neither case was there a prosecution. Breaches of public order occurred with greater frequency, but they were in most cases of little importance."

Several accidents are recorded as having occurred during the eight years that the boarding out has been in operation. There were three suicides—one by hanging, one by gunshot, and one by a leap from a window. Two patients were found dead; one demented patient under the care of his wife was found dead on a moor some days after being missed, and an

* "Familiale Verpflegung," etc., p. 115.

epileptic was found drowned in a pond where he was supposed to have fallen in a fit. Four cases of pregnancy occurred—three in the case of imbeciles and one in the case of an alcoholic epileptic vagrant. These patients were all persons whose unsoundness of mind would not be generally recognized. One girl lost an eye by a purely accidental pistol shot.

These mishaps are mentioned, not merely to show the degree to which the boarding out was attended with unsatisfactory results, but also to indicate the kind of cases in which the asylum authorities thought it incumbent on them to make trial of the fitness of patients for liberation. The number of untoward occurrences appears very large to one accustomed to Scottish administration, and the number of patients described as having been guilty of crimes is startling; but I refrain from commenting on them, because there may be circumstances connected with judicial proceedings, and in regard to the classes of persons sent to asylums in Prussia, with which I am unacquainted, and which it would be necessary to know before an intelligent criticism of these matters could be made. In the great proportion of the cases selected for trial the results were eminently satisfactory; and the trial proved successful in many cases where it was made with only slight hopes of success. The degree of success will be discussed in more detail a few pages further on. One useful result of the action of the asylum authorities which may be mentioned here was that, as Dr. Bothe says, "after the system had time to establish itself, and the necessary experience had been gathered, good results were obtained even with patients whose residence out of an asylum would not previously have been regarded as possible."*

A special feature of the Berlin system is that a large number of the patients who are removed to private dwellings are so removed though there is no expectation that they will remain long out of the asylum. Patients suffering from remittent forms of insanity, such as periodic mania, are liberated from the asylum during their comparatively sane intervals, on the understanding that they will be brought back for asylum treatment when the periodic excitement begins to show itself. This temporary boarding out under organized supervision appears to be carried out on a larger scale by the Berlin authorities than by any others up to the present time.

* *Op. cit.* p. 96.

The Homes and the Guardians.

In the selection of guardians a preference was from the first given to relatives of the patients who appeared from their character and circumstances likely to be satisfactory; and this preference continues to be given. In the case of patients who had no suitable relatives and who were sufficiently intelligent to give the necessary information, an endeavour was made to place them with persons in their own condition of life, who had been on terms of friendship with them, and seemed likely to take an interest in their welfare. A large number, however, had to be placed under the guardianship of complete strangers. At first the families of asylum attendants living near the asylum, and families living in the neighbouring villages were chosen for such cases. The asylum authorities soon arrived at the opinion, however, that it was desirable to place the patients as much as possible in circumstances similar to those in which they had been before their admission to the asylum, and that it was necessary to select the guardians from a wider field. Fortunately it was found that when the desire of the authorities to board out patients became generally known, and when it was seen that those patients already boarded out were not unacceptable inmates of the homes in which they were placed, offers to receive patients came in abundantly from persons living in and around Berlin. A house such as is occupied by the working classes in Berlin is rented at about £10 to £12 per annum, and it is a frequent thing for the occupiers to reduce the burden of this payment by taking in night lodgers. A patient was seen to be in most cases a preferable inmate to a night lodger, and many offers to take patients came from persons who wished to make the exchange. In judging of the suitability of a home and a guardian the asylum authorities were empowered by the Police Board and the Armen-Direction to obtain information regarding them from the district police and from the Armen-Commissionen, and this information was supplemented by an inquiry by the asylum medical officer charged with the supervision of the boarding out.

After the system had been some time in operation it was recognized that there were two classes of homes which might, from an administrative point of view, be regarded as distinct from one another—(1) those where relatives or friends received particular patients on account of the interest they

took in these particular patients, and (2) those where strangers possessed of the requisite qualifications were willing to receive such patients as might be chosen by the asylum authorities. The first class came to be known as Occasional Homes (Gelegenheits Pflegestellen) and the second were called Permanent Homes (Ständige Pflegestellen). It was found convenient to keep a register of the Permanent Homes. A Home was placed on this register after the inquiries regarding it proved satisfactory, and it remained on the register unless it was found by experience to be unsuitable or in some way not up to the standard of what the supervising authority thought desirable. In course of time the register came to be a list of guardians known to be trustworthy and efficient, and these persons became substantially an integral part of the asylum organization. The asylum medical officer who was specially charged with the supervision of the boarding out became acquainted with the personal qualities of these guardians and the circumstances in which they lived, and it is stated that at present there is no difficulty in finding suitable homes and guardians either for patients who may be expected to remain permanently out of the asylum, or for those whose liberation is not intended to be for more than a few weeks.

As a rule only one patient is placed in each Home. In some cases it has been found an advantage to permit two patients to be in the same Home. In a small number of cases three patients have been sanctioned, but in no case have more than four been allowed to be in the same Home.

Of the 414 patients under care in private dwellings during the statistical year 1891-92, 164 were boarded with relatives and 250 were boarded with strangers. Those placed with strangers were in 116 cases with the families of working people, in eight cases with peasant farmers (Bauern), in 61 cases with persons carrying on businesses or trades on their own account, in seven cases with officials, in seven cases in the households of private asylum proprietors, in five cases with the families of asylum attendants, and in 46 cases under the care of single women. The localities of the Homes were in 91 cases the villages of Dalldorf and Reinickendorf, near the asylum, in 34 cases in other places in the immediate neighbourhood of Berlin, in 14 cases in places at some distance from Berlin, and in 275 cases in the city of Berlin itself.

(To be continued.)

Sulphates in the Urine of General Paralytics, with Special Reference to their Relation to the Seizures in this Disease. Essay to which was awarded Bronze Medal of Med. Psych. Association, 1894. By JOHN TURNER, M.B., Senior Assistant Medical Officer, Essex County Asylum.

I.

The following analyses were undertaken with the idea that the results obtained from them might throw some light on the cause of the seizures or fits that generally occur in the later stages of general paralysis.*

The view long held by the writer is that they are of a toxic nature, and possibly may owe their origin to the poisonous matters produced in the intestines by the decomposition and putrefaction of its contents. Such processes it is now well known accompany normal digestion, and are much increased in certain diseases.

From the estimation of the amount of combined sulphates excreted in the urine we obtain an indication of the intensity of this process of putrefaction.

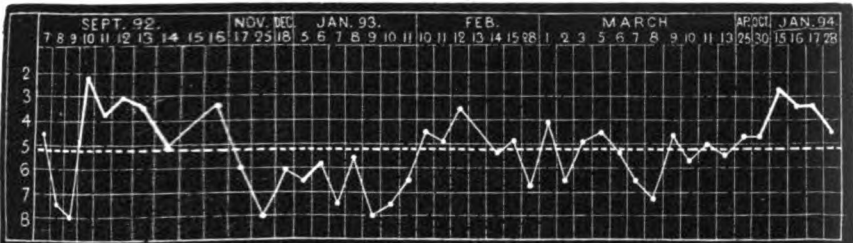
It will, perhaps, not be amiss, prior to a more detailed account of the analyses and cases here brought together, to give a short outline of the rôles which the sulphates are supposed to play in the animal economy.

The following account is mainly taken from "Bunge's Physiological and Pathological Chemistry," translated by Wooldridge.

By the action of bacteria the albumens taken into the intestines as food, and which contain from 0.5 to 1.5 per cent. of sulphur, are split up into their component molecules, and the sulphur combines with alkalies to form the so-called "preformed sulphates" of sodium and potassium. Eighty per cent. of the sulphur taken in with the food appears in this form in the urine.

By the same bacterial action various nitrogenous aromatic bodies are formed, viz., indol, skatol, cresol, etc. Taking indol as the type of these, and following its combinations

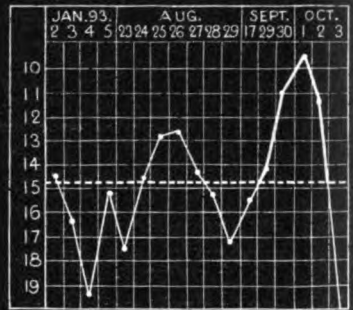
* Dr. Herter, of New York, has followed out a similar course in regard to epilepsy; his results are published in "The New York Medical Journal," August 20th and 27th, and September 3rd, 1892. My attention was drawn to his paper by an account of it in the Epitome of the "B. M. J.," October 29th, 1892, some considerable time after the analyses here described were commenced.



M. A. D. No. 4



R. E. No. 1.



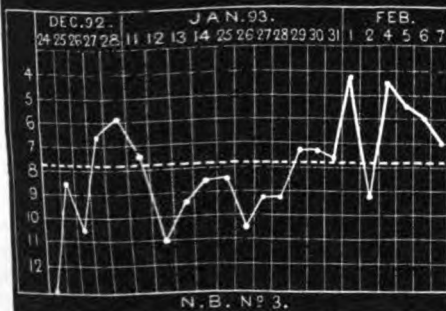
R. H. No. 8.



A. T. No. 2.



M. A. H. No. 6.



N. B. No. 3.

DIAGRAM showing the rise of ratio of combined to preformed sulphates during or about the periods of seizures in general paralysis.

The dotted line gives the average ratio for each case, and the thick black line indicates the period when the patient was having, or had just previously had a seizure. The side figures give the ratio of combined to preformed sulphates, as 1.

To illustrate Dr. Turner's Article.

onwards from the intestines, we find that it is absorbed and oxidized in the tissues; the resulting substance, indoxyl, is probably in the liver converted by its union with the preformed sulphates into indoxyl-sulphate of potassium or sodium, and as such is excreted in the urine under the name of combined or aromatic sulphate.

The other aromatic bodies undergo a similar series of changes.

Thus we have in the urine—(a) preformed sulphates arising from the simple decomposition of the albumens of the food; and (b) aromatic or combined sulphates arising from a combination of the former class with oxidized aromatic products.

In the healthy state the average excretion of total sulphuric acid for the twenty-four hours amounts to from 2·5 to 3·5 grammes, and as the combined are in the ratio of 1 : 10 of the preformed (ranging between 1 : 8 to 1 : 13) the total amount for the twenty-four hours of combined sulphates is from 0·2 to 0·3 grammes.

A mixed diet consisting largely of flesh causes an increase in the putrefactive products in the intestines, and a corresponding increase of aromatic sulphates in the urine. Bunge states, however, that the occurrence of these latter is not altogether dependent on the food. "It is difficult," he says, "to determine how much arises from the decomposition of the albumens of the food and how much from that of the tissues." A diet with much green vegetable matter in it will also, it is stated, increase the output of combined sulphates. Dr. Burton* has experimented on the influence of diet in the excretion of combined sulphates in dogs, and he finds that a farinaceous diet reduces the ratio of the combined to the preformed sulphates from 1 : 9 to 1 : 15, and also considerably lessens the absolute amount of combined sulphates excreted. I have repeated these experiments on myself with a similar, but not so decided result. I found that on a mixed diet of meat, vegetables, etc., my average output was as follows, in grammes:—Urea, 22·44 grammes; preformed sulphates, 2·0715; combined sulphates, 0·2116; ratio of preformed to combined, 9·8 : 1. Whilst on a diet consisting of rice, potatoes, bread, butter, milk, and oatmeal, but from which all flesh was excluded, it was as follows:—Urea, 16·91; preformed sulphates, 1·9774; combined sulphates, 0·1661; ratio, 11·9 : 1. Dr. Herter, in his experiments

* "British Medical Journal," April 4th, 1891.

on epileptics, found that a milk diet very considerably reduces the total amount of combined sulphates excreted and their ratio to the preformed, producing a fall of over 30 milligrammes in the former, and a decrease in the ratio from 7 to 11, and he states that normally the ratio drops to 1 : 20 or less.

These experiments show conclusively that it is possible to reduce and control the intestinal putrefactive processes by appropriate diet, and should it be proved that the seizures of general paralysis are due to a poison originating in excessive putrefactive processes in the intestines, this fact becomes one of very great importance, indicating a method of dietetic treatment whereby we may expect to prevent the fits or at least to ameliorate the condition of the patients in the later stages of the disease.

The nature of the diet must be borne in mind in considering the value to be attached to the total quantity of combined sulphates in the following cases; the small amount of meat and simple character of the asylum dietary would tend to reduce the quantity of combined sulphates excreted, and thus to lower their ratio to the preformed. Certain drugs have also an effect on the intestinal putrefactive processes and hence also on the excretion of the sulphates, but these need not be considered here, as none of the patients referred to in this paper were taking drugs. I may mention, however, that on two occasions when patients were thoughtlessly given a dose of sulphate of magnesia as a purgative, the amount of preformed sulphates subsequently eliminated was enormous, and, of course, quite out of proportion to the urea, the ratio of these two to one another in healthy states being very constant, ranging between 1:10 to 1:13. I have not included these analyses in my tables.

II.

So far nineteen cases of general paralysis have been experimented on, fourteen females and five males. I should have preferred collecting the urine from more men for several reasons: (1) Because the disease is more common among them; (2) The seizures are more frequent and severe; and (3) the collection of the urine is easier and more satisfactorily made than in women, in whom it is liable to be interfered with by the occurrence of menstruation, etc.; but as the cases at my disposal were chiefly of the latter sex, these objections could not be avoided.

Eight of the nineteen cases (six females and two males) were either in a comparatively early stage of the disease, or at any rate had not, with one exception, so far as could be ascertained, suffered from seizures; and the seizures in this one exception were very slight and transient.

In all these cases it could not be said that there was any departure from the healthy standard either as regards the total amount of the two forms of sulphates or their ratio to one another. Table No. I. gives the averages of each of these cases. It will be noted that in two of these cases where the urine was examined at different periods the tendency was for the ratio to rise as the disease progressed. This was more marked in the case of the woman R. H. (No. 7 of Table I.) where it rose from 16·3 to 13·1, but she had several slight seizures during and previous to the last batch of analyses. In the male M. H. (No. 8, Table I.) the rise was very slight, only from 13·2 to 12·7, but in his case the total amount of combined sulphates was nearly doubled. In one case, H. C. M. (No. 1 of Table I.) examination of the urine at successive periods showed neither any marked variations in the amount of combined sulphates excreted nor in their ratio to the preformed. This man, whose insanity was of much more than the average duration in general paralysis, never had whilst in this asylum any seizures.

In the other eleven cases, those in a more advanced stage and suffering from periodical seizures, the output of combined sulphates, with scarcely an exception, is large, and their ratio to the preformed is extremely high, indicating very excessive intestinal putrefactive processes. Table II. gives the average of the two forms of sulphates in each of these eleven cases of general paralysis, and the results contrast very strikingly with the figures obtained in early cases. These figures represent the averages of some hundreds of analyses, the daily collection and analyses of urine in some of the cases extending over periods of several weeks.

This table shows that in those stages of the disease in which the seizures occur a very excessive elaboration of poisonous products is being carried on in the intestinal canal, and the chief interest which, to my mind, is attached to the excretion of the sulphates in this disease is contained in their behaviour during periods of seizures. I shall show that in all the instances but one where the urine was examined at these periods the ratio of combined to preformed sulphates was very high; higher than at any time

during intermediate periods even in those cases where the urine was almost daily examined for many weeks. The high ratio drops in the course of a day or so as recovery takes place from the fit, until it occupies its usual level. Also immediately, or at most in the course of a day or two after the fit, there is a very large output of combined sulphates, and generally, but not always, an increase in the urea.

With regard to the statement that in advanced general paralysis both the absolute amount of combined sulphates excreted is large and their ratio to the preformed high, a qualification is necessary. In those cases where the symptoms (especially the physical) show, as is not infrequent, a marked temporary amelioration even in very late stages of the disease, then I have found in such cases as I have happened to be examining the urine at these periods of remission, a marked change in the output of sulphates, and although the total amount of combined sulphates excreted may be larger than before, yet there is a very considerable drop in their ratio to the preformed, so that instead of getting a ratio of 1 : 3, or higher, we have one of 1 : 10, a condition of affairs which, in spite of the higher total amount of combined sulphates occasionally found, indicates a much less active state of intestinal putrefaction.

Hence, if a number of analyses are made at different periods in such a case as that just referred to, and an average taken on the total, it is very possible that the figures, both as to total and relative amount of sulphates, may work out with very slight departure from the normal, although at certain times such urine is distinctly abnormal. In some of the advanced cases in Table II., in whom there had been a temporary remission of the symptoms whilst under observation, I have taken the average during the whole time of examination, and therefore the ratio in these cases is not so high as it would have been if I had confined myself only to periods when the patients were at their worst.

Up to the present time I have only been able to make examinations of the urine during ten periods of seizures occurring in eight general paralytics, but the results obtained in this small number of cases are too constant to allow of their being due to mere coincidence. They show, on the whole, that there is a constant relation between the activity of the decomposition processes of the intestine and the occurrence of seizures. In only one instance was the result of analysis at these times ambiguous.

It must, however, be recollected that the evidence obtained from the sulphates in the urine is indirect, and depends on the complete transformation of the decomposition substances into their end products; if the functions of the liver, or of whatever organ is concerned in this metamorphosis, are in abeyance from any cause, central or peripheral, then, although a great excess of poisonous materials might be circulating in the system, yet the determination of the sulphates in the urine of these cases would not yield us any indication of the amount of such poisons. The combined sulphates might quite possibly be much below their normal amount. In such cases we should have to resort to other means to tell us whether at these times the toxicity of the urine is increased or not.

The total sulphates were determined in these analyses by precipitation from the boiled and acidulated urine with bari-chloride, the precipitate washed, dried, burnt, and weighed; the preformed sulphates by Salkowski's method. The whole process is fully described in MacMunn's "Chemistry of the Urine." The urea was estimated by the sodium hypobromide method, correction being made for temperature variations.

III.

I shall now give a short account of those cases of general paralysis in which seizures occurred whilst their urine was being collected.

CASE NO. 1.—R. E. (No. 1. of Table II.); male. He was first admitted to this asylum in April, 1888, but was discharged in 1889 and readmitted in November, 1889, remaining here till he died in November, 1892, æt. 35. His weight when the analyses of his urine were commenced was 147 lbs., rising to 156 shortly before his death. In August, 1892, he is described as fat and apathetic, his face without lines or expression. He rarely speaks, but smiles fatuously when taken notice of. He is placid and happy, eats well, and is cleanly in his habits. His skin is greasy, pupils contracted, knee-jerks exaggerated; his temperature in the axilla varies from 97·6 to 98·4 in the morning, rising in the evening to 99·2 or a little higher. He is taking the ordinary asylum diet,* with one pint each of milk and beef-tea in addition. On August 5th, when his urine was first examined, the ratio of the combined to preformed sulphates is low, 1:13. This urine, however, was only collected for twelve hours, from 8 p.m. to 8 a.m.,

* Consisting of meat, 7 ozs. (cooked); bread, 16 ozs.; potatoes, 9 ozs.; and butter, 1 oz., besides tea and sugar.

and this probably accounts for the ratio being lower than it was afterwards found during periods when free from seizures, as the preformed sulphates are separated in least quantity during the night. On August 8th the urine for fourteen hours, from 5 p.m. (7th) to 7 a.m., was examined. This, again, was nocturnal urine, but the ratio had risen to 1:7, and the total quantity of combined sulphates was large, taking into consideration the number of hours and the time when the urine was secreted; it was 279 milligrammes. At 2.30 p.m. on the 8th he began having seizures, and voided urine, which was lost. I will only describe the fit I saw him in at 6 p.m., as they were all similar. It commenced with a strong tonic spasm of the muscles of the left side of the head, arm, and leg; the eyes were turned to the right, the pupils contracted and equal. The spasms soon became clonic, getting coarser and coarser in character till they ceased. The fit lasted about a minute, and afterwards the eyes were turned strongly to the right, but the left eye more than the right; his face became livid, and he sweated profusely. The temperature in the right axilla was 100.5, left 101.1; pulse 138. He had no more fits after the one described, and was catheterized at 10 a.m. on the 9th and 1260 c.c. of urine drawn off, but as he had wet himself during the night and preceding day this did not nearly represent the total secretion of urine for twenty-four hours; however, the combined sulphates even in the quantity I had collected were in large amount (342 milligrammes), and the ratio was slightly higher than on the day before, viz., 1:6.3. On the following day the maximum output of combined sulphates (451 milligrammes) was reached, and the ratio was 1:5.5, and from this time they both began to decline. He continued well and in his usual apathetic state until September 23rd, when he had one convulsive seizure lasting about five minutes, from the effects of which he very quickly recovered. I was, unfortunately, not informed of this fit till the 26th, and then had his urine saved. It was noticed that both two days before and three days after the fit the ratios were for him high, viz., 1:6 and 1:5.5. On November 21st he began having fits at 3 a.m., with loss of consciousness, slight occasional spasm, great sweating, and noisy breathing; his temperature rose gradually to 104.0, and his pulse to 142. He died at 2 a.m. on November 23rd. His urine dribbled away, and scarcely any could be saved.

The analyses of this man's urine show that, considering the nature of his diet, his output of combined sulphates is distinctly large, and, further, that the ratio of these to the preformed sulphates is much higher than is met with normally. Although twenty-three analyses were made at different times during the three months he was under observation, it was only at and about the time of his two periods of seizures, viz., August 8th and September 23rd, that the ratios rose to their highest. There was

also a much larger output of combined sulphates after his first batch of seizures than at any other time during the whole period during which his urine was examined.

CASE NO. 2.—A. T., a widow, with probable history of syphilis. She is now 44 years of age, and was admitted in June, 1890. An Irish woman. At first she was acutely maniacal, noisy, restless, talkative, and full of exaggerated ideas of her wealth and capabilities. She had several seizures of a mixed epileptiform and apoplectiform nature, and in 1891 she had become quite demented, dirty in her habits, apathetic, and very feeble, passing the whole day lying huddled up on a sofa. Thus she remained for several months, at the end of which time she had a seizure, and shortly after this there was a marked improvement in both her bodily and mental condition. She developed into a neat, quiet, industrious woman, emotional and easily moved to tears or laughter, but on the whole placid and happy. In this state she now* remains, having occasional seizures, generally slight, and from which she quickly recovers. She weighs 149lbs., has a good appetite, and takes the ordinary asylum diet, with in addition a custard, pudding, and a pint of beef tea daily. On August 13th, 1892, I first began to examine her urine, and from that date to the end of the year the ratio varied between 8 and 12, but the average amount of combined sulphates excreted was large (312 milligrammes). During this period, and shortly before (*viz.*, on July 27th) she had several slight paralytic seizures of a transient nature. Unfortunately, her urine was not saved before and during these attacks, but the ratios not long after are rather high (1:8). During February, 1893, she was remarkably well; she attended the weekly entertainments and took part occasionally in square dances, but was rather liable to stumble and fall when she moved about too freely. She had no seizures during this period, and her appetite remained very good. I made eight analyses of her urine from February 8th to February 15th. The average output of combined sulphates was much lower than on the previous occasions, *viz.*, 203 milligrammes against 312. The average ratio remained much the same (1:8.2), but on one occasion it was higher than it had been before (*viz.*, 1:6.5).

On the evening of March 9th, at 3 p.m., she began screaming, and seemed quite lost to her surroundings. She vomited copiously, and at 4 p.m. had a convulsive seizure with twitching of the muscles of the right side of her face and loss of power in right arm; the temperature in right axilla was 98.2, in the left 99.8. I saw her at 6 p.m.; she was then lying on the sofa, very confused in her mind, but conscious. She laughed at something I said, and whilst laughing her mouth was drawn to the left. She seemed very drowsy and kept restlessly putting her left hand up to her head;

* Written in April, 1893

the right arm and leg were quite paralyzed and hung down over the side of the sofa. She did not give any indication of feeling when I pricked her on the right side of face, right arm, and right leg. She passed urine and fæces under her whilst in the fit. Her urine during the night of the 9th was lost, but from 6 a.m. to 4 p.m. on the 10th she passed 710 c.c., which was analyzed, and showed the (for her) very high ratio of 4·9. On the 10th she took no food, and was still dazed and unable to get up from bed. On the 11th she took her food fairly well, and had nearly recovered from the effects of her seizure.

Immediately following this severe seizure we get the high ratio of 4·9, a ratio not approached on any former occasion that I had analyzed her urine. The next day the ratio had fallen to 5·8, and the output of combined sulphates was 350 milligrammes. Two days after the fit the enormous amount of 597 milligrammes of combined sulphates was excreted, and at the same time there was a large quantity of urea, viz., 52·45 grammes, but the ratio of the combined to preformed sulphates had fallen to 1:8·9. This large excretion both of urea and sulphates after a fit, independently of increased food intake, is very remarkable; a similar state of things was met with in the case of R. E., and, indeed, on all the occasions, with the exception of one, on which I have analyzed urine after seizures. Possibly, owing to some temporary hitch in the nervous mechanisms which regulate the elaboration and elimination of the effete materials of metabolism, there is an accumulation of decomposition substances in the system, which when they have collected in sufficient amount produce their toxic effects on the nervous centres, giving rise to a "seizure." And it is quite possible that one of the ulterior effects of such a powerful reaction of nervous centres may be the stimulation of the faulty mechanisms which govern metabolic processes into a resumption of their action, thus enabling the liver, and possibly other organs, to transform the poisonous decomposition substances into their innocuous end products, in which form they will be excreted by the kidneys to appear in the urine as sulphates, etc.

On April 9th at 5.30 p.m. this woman had another seizure, a very slight one, with transient loss of power in left side, slight spasm of facial muscles, but no rise of temperature, and she had quite recovered by next morning. She had attended service at the Roman Catholic Chapel on the morning of the day during which she had the fit, and for several days previously had been rather excited at the prospect. When she returned from chapel it was noticed that she looked haggard and ill, and I told the nurse to collect her urine; she did so from noon on the 9th to noon on the 10th, and it was during this twenty-four hours that the seizure occurred. The analysis of this urine, although it did not yield an absolutely large amount of combined sulphates, showed a high ratio between these and the preformed, viz., 1:6, a ratio higher

than any other occasion except that of the previous and more severe seizure. The urine for the three following days yielded a larger output of combined sulphates, but the ratios were much lower, viz., 1 : 12, 1 : 9·6, and 1 : 8·7.

CASE No. 3.—M. B., a female, married. This is her third attack of insanity, but previously she had been treated elsewhere. On her admission here in January, 1892, she was maniacal, but quieted down after a few weeks, exhibiting well-marked delusions of grandeur. The muscles of her face twitched considerably when she talked, and there was tremor of the hands when she performed purposive movements. She had occasional outbursts of excitement lasting a few days, after which she generally felt ill and exhibited paresis of the lower extremities. In December, 1892, when her urine was first examined, the following note was made of her condition: "For the last two months she has been fairly quiet and well behaved, is neat in her appearance, and clean in her habits. Grins with much exaggeration of muscle contraction when spoken to, and the muscles twitch very markedly when in action. The right pupil is the larger, and reacts slightly to light and for near objects; the left is quite inactive. There is internal strabismus of left eye. Her tongue exhibits very slight fibrillary tremor, and is protruded to the right. Her right hand is very tremulous when held out. Skin hot and clammy. Gait normal. Knee-jerks brisk." Her urine was examined on five consecutive days in this month, and certainly on one occasion, when the ratio was 5·8, and the total amount of combined sulphates excreted was 430 milligrammes, I thought it likely that a seizure was imminent, but there was no evidence that such had occurred at the time or shortly after, and later experience showed that a much higher ratio was reached when she did have a seizure, and this was both preceded and followed by a larger output of combined sulphates. Again, in January, 1893, the analyses were continued. During the first half of the month she was quiet and well, and the total output of aromatic sulphates and their ratio to the preformed were low. On the 25th she became excited, noisy, and restless, and was very lost and confused mentally. She continued so to the end of the month. During this period the average output of combined sulphates increases considerably, and the ratio tends to rise till it culminates on February 1st, less than forty-eight hours prior to a seizure, in the highest that was ever obtained in her case (1 : 4·2). On this date also there was an enormously large output of aromatic sulphates, viz., 482 milligrammes. The day immediately preceding the fit there was a very considerable drop, both in the total amount excreted and in the ratio, but on the next day, during which she had the fit, the ratio was again very high (1 : 4·4), and from this date on to the sixth day after the seizure the total output of combined sulphates was very large. The seizure referred to was of a paralytic nature. She fell down,

lost consciousness for a short time, and the muscles of the face were affected with spasm. When she regained her senses she found that she had lost all power in her legs. Unfortunately she passed her urine under her on this day, and it could not be collected.

I am inclined to regard the excessively large output of combined sulphates after the fit in this case, as in the preceding one, as an effort of elimination, probably by the liver, of toxic substances, which have been accumulating in the system. The urea was not to any marked extent affected by the seizure. In March this woman's urine was again analyzed. On the first occasion it was passed whilst she was quiet. The ratio of combined to preformed sulphates was low (1 : 8), and the actual amount of combined sulphates excreted was not large (259 milligrammes). The following day she had an outbreak of excitement, accompanied, as on the preceding occasion, with a larger output of combined sulphates, but no change in the ratio.

The fact that although this woman's urine was examined on thirty occasions, the highest ratios and largest output of combined sulphates were obtained during the time of the only fit she had whilst under observation, is to say the least extremely significant. The number of analyses made, extending over a period of several months, appears to me to render it very unlikely that this relation of intensity of putrefactive process to a fit is due to a coincidence. The annexed table gives a summary of the analyses made in this case :—

Average for three days ending	Combined Sulphate.	Ratio of Combined Sulphates to Preformed.	
December 26th, 1892	0·2421	10·3	
January 11th, 1893	0·3505	6·6	
January 14th, 1893	0·2549	9·7	
January 27th, 1893	0·3379	9·3	
January 30th, 1893	0·3294	8·1	
February 2nd, 1893	0·3080	6·3	3 days prior to a fit
February 6th, 1893	0·3739	5·4	3 days following a fit
March 10th, 1893	0·3042	8·0	
March 15th, 1893	0·3227	8·1	

CASE NO. 4.—M. A. D., female. Admitted 21st June, 1890; æt. 27; married. She has been a well-marked case, and when

first under observation was maniacal, flighty, and jocular in manner, full of exaggerated ideas, etc. She gradually passed into a depressed state, spending most of the day blubbering like a child, and took to pulling out her hair over the front part of her scalp. In November, 1891, she had a seizure of a paralytic nature, the first she was known to have had. From this time onwards they frequently recurred, about one a month, and they were generally of a mixed epileptiform and apoplectiform nature. At the present time she is very demented; is blind from atrophy of optic discs, her speech is very stuttering and indistinct, and she is rarely able to finish any of her sentences, and repeats the last word over and over again, until she seems to have entirely forgotten what she was going to say. She bursts into tears upon the slightest provocation, and exhibits the most grotesque facial contortions. She has a ravenous appetite.

Her urine was first examined for sulphates on September 7th, 1892, and she appears to have had a fit on the 5th. The ratio is high (4.5), but the total amount of combined sulphates is not very large, although, as subsequently seen, it is more than she usually excreted at times when not having fits. The urine for the twenty-four hours ending noon of the 10th contained 300 milligrammes of combined sulphates, and their ratio to the preformed rose to 1:2.1. At 7.40 p.m. on this day she had a sharp convulsive seizure, with a temperature of 102.2. For the following four days the ratio, although it still keeps abnormally high, falls slightly, but there is an enormous output of combined sulphates, especially when we take into consideration the fact that after a fit her appetite fails her for a day or two. On the 4th January, 1893, in the morning, she had a rather severe convulsive attack, lasting about an hour, with a temperature of 101.8. Her urine was collected from midday of the 4th to midday of the 5th, but the output of combined sulphates was not large, and the ratio was relatively low (6.5). I had expected to get both a higher ratio and larger amount of combined sulphates than was obtained. It was very unfortunate that the urine was not examined just previous to and whilst having the seizure, as it is very likely, judging from previous cases, that if it had been, the high ratios usually found at these times would have been obtained. Even as it is, it will be noticed that although there is not an absolutely high output after the seizure, that relatively both the amount of combined sulphates and their ratio to the preformed is higher for the four days immediately after the fit than for the three subsequent days. Thus, for January 5th to 6th inclusive, the average amount of combined sulphates was 260 milligrammes, and the average ratio 6.3, whilst for January 9th to 11th inclusive it was 204 milligrammes and the ratio 7.3.

Again, on January 14th, 1894, I had an opportunity of examining the urine passed during and after a seizure, which

occurred at 8 a.m., with convulsive twitchings of face and limbs, foaming at the mouth, involuntary passage of urine and fæces, and rise of temperature (102·2). She continued more or less under the influence of this seizure all day. Her urine was collected from the time of its onset to 8 a.m. of the 15th; she excreted 254 milligrammes of combined sulphates. This is not a large amount under ordinary circumstances, but considering the small amount of preformed sulphates in the urine it must be looked upon as excessive and out of all proportion to the latter. Thus the ratio on this occasion rises to 2·7, a higher ratio than was ever obtained from her urine, except following a previously mentioned seizure. During the next twenty-four hours a much larger amount of combined sulphates is excreted (345 milligrammes), but the ratio drops to 3·3, and on the 23rd, when she had fully regained her usual condition, only 190 milligrammes were excreted, and the ratio had gone down to 4·3.

Although this woman's urine was analyzed on forty-three occasions, at no other times than immediately prior to or during seizures were such high ratios as 2·1 and 2·7 obtained, and it was following a fit that the maximum output of combined sulphates (500 milligrammes) was reached. These high ratios, occurring as they do just before or at the time of the seizures, will scarcely allow us to look upon the active state of intestinal putrefactive processes which they indicate as an effect of the seizure.

It was noticed that from January 7th to February 15th, 1893, the excretion of combined sulphates was much less than usual, although there was not much alteration in the ratio. During this period she was remarkably well for her, had no fits, was more active, indeed, at times she would get up from her chair and dance about, although generally she has had to be supported when she tried to walk. All this time she was eating as heartily and living on a precisely similar diet as formerly. The excretion of urea during the month of February is remarkably small.

Glancing over the results of the analyses of this woman's urine one could not fail to be struck by the very high ratios and general copious output of combined sulphates. The activity of the intestinal putrefactive processes must have been very great. Her diet consisted of 3½ozs. to 4ozs. of minced meat, with bread, butter, and potatoes daily, and occasionally green vegetables; a not by any means highly nitrogenous diet, nor one calculated to set up extensive putrefactive changes in a normal intestine, and I think that it is probable that to some extent these changes were at this stage of her disease independent of food, and partly the result of extensive tissue metamorphosis. This view is, to a certain extent, borne out by the fact that when in March she was given a double allowance of cooked meat, although for a day or two after there was more urea and sulphates passed, their amount soon fell again, so that the average excretion of urea for the six days before and the

fourteen days after the increased meat diet was the same, viz., 20 grammes. Both the preformed and combined sulphates were slightly increased after, but their ratio to one another fell somewhat. The average of the six days before increase of meat was as follows, in grammes:—Preformed sulphates, 1·354; combined, 0·2541; ratio, 5·3 : 1. And for six days after increase of meat it was as follows:—Preformed sulphates, 1·8004; combined, 0·3108; ratio, 5·7 : 1. Her weight during this time increased 5lbs.

CASE No. 5.—E. E. P., female. Is at present 44 years of age, and the disease is of four or five years' duration. She has always been whilst in the asylum a particularly quiet, placid woman, and was in the habit of sitting all day reading or looking at picture books. She never attempted to obtrude her exaggerated ideas of wealth, etc., on those to whom she might be conversing, but they were, nevertheless, present in her case. She was perfectly happy, very vain and very greedy. Tremor was always a well-marked symptom, becoming very much more marked as the disease drew nearer to its end. Was subject to occasional attacks of vomiting, with paralytic symptoms, from the effects of which she usually recovered in the course of a day or two, but previous to her admission was said to have had several convulsive seizures. At the time her urine was examined she was in a very advanced stage of the disease, demented, helpless, and wet and dirty in her habits, so that there was great difficulty in collecting her urine. I have consequently made fewer analyses than in the other four cases recorded, but the examples given show that her output of combined sulphates is very large when we compare it with the relatively small output of both preformed sulphates and urea. After a seizure on January 6th of a paralytic nature, with slight rise of temperature (100° F.), the output of combined sulphates rises to 535 milligrammes. This was a larger amount than was at any other time met with in her case, but the ratio is not quite so high on the day following the seizure as on the next day. When, however, there is such a constantly high ratio as we find in this woman's urine, the slight differences as between 4 and 5·5 are not likely to have the same significance as the marked rises in the ratio noticed in cases which usually have a much lower ratio, and it will also be noticed that her urine was not examined on the day previous to the fit, which is the time when the putrefactive processes are generally found to be most active. On January 27th and 28th, when her urine was again analyzed, the amount of combined sulphates found was considerably less, and their ratio to the preformed sulphates had fallen slightly.

CASE No. 6.—M. A. H., female; admitted 7th July, 1893. She has been a hoppicker, hawker, and had probably led an intemperate life. When admitted she was to all appearances hopelessly demented, was very helpless, at times restless, and was dirty in her habits. She could scarcely speak intelligibly, but

was just able to utter her name in a drawing, tremulous manner. She was, I believe, passing through a phase of toxæmia, and on August 16th there was exacerbation of symptoms indicating a seizure. She is described as having "gone black in the face," her facial muscles and those of the third and fourth fingers of left-hand were affected with clonic spasm; her temperature rose to 103° . She remained under the influence of this seizure for several days, being at times quite maniacal, at others morbidly quiet. Her temperature gradually fell to normal. Her urine was collected on five days, and although the output of combined sulphates was small, except on September 13th (401 milligrammes), their ratio to the preformed was extremely high, ranging between 3·2 and 2·3.

Taking into account the very small amount both of preformed sulphates and urea excreted daily, we must look upon this urine as indicative of very great activity in the intestinal putrefactive processes. Her averages at this period for six days were:—Urea, 7·27 grammes; preformed sulphates, 0·5240 grammes; combined sulphates, 0·1849 grammes.

In December, during which month her urine was again examined, there was a very great improvement in this woman's condition, both physically and mentally. She had become a quiet, well-behaved, active, and industrious woman, neat in her appearance, and much more intelligent, although there was still well-marked hesitancy of speech and tremor of facial muscles, yet she could converse without difficulty. She had put on flesh, and now weighed 118lbs. Coincident with this improvement there was a marked change in the character of the urinary constituents. The urea was much more abundant, the average for three days being 37·7 grammes. The total output of combined sulphates was larger than before, but they bore quite a normal proportion to the increased output of preformed sulphates, so that now their ratio to the latter on the three occasions when they were determined was as 1 : 10·3, 1 : 10·2, and 1 : 7·8.

A somewhat similar but not so marked state of affairs was found in the case of No. 7, H. A. L., a female in an advanced stage of the disease. In her case the ratio of combined to preformed sulphates was 1 : 5·5 and 1 : 5·7 on two occasions (Nov. 24th and 25th) shortly after a fit, falling on the 27th, 28th, and 29th to 1 : 8·6, 1 to 10·4, and 1 : 8 respectively. I cannot speak as to the amount of combined sulphates, etc., passed in the 24 hours in this case as the urine was only saved during the day, but on Dec. 23rd the whole amount for the 24 hours was saved and examined, and, as will be seen by referring to the tables, she excreted a fair amount of urea and a large amount of combined sulphates (439 milligrammes).

CASE No. 8, the last I shall refer to, is that of R. H., a Jewess. This patient, when the analyses of her urine were made, was in a comparatively early stage of the disease, an intelligent, active,

and neat woman, taking a pride in her personal appearance and very industrious and useful. The analyses show that as a rule the ratio of her combined to preformed sulphates is low.

She had a transient seizure on Sept. 30th, 1893, with twitching of left side of face and left arm. She soon came round and wept copiously. Her evening temperature, four hours after the seizure, was 100° F.; at the time of the seizure it was only 99·2. A slight amount of paralysis of the left arm and hand persisted for several hours after the fit. The day before this seizure she had vomited several times, was very depressed, and complained of a bad headache. The ratio of her sulphates rises on the day of the fit to 10·9, and the day following still higher, to 9·6, falling on the third day after to 20. These two ratios (10·9 and 9·6) are the highest that were obtained from all the 17 analyses that were made of her urine at different periods. On the day prior to the seizure, when she was feeling ill and had vomited, her urine contained the largest amount of combined sulphates met with in her case (410 milligrammes).

IV.

It would be unsafe to draw any definite or final conclusions from results obtained, however uniform, in so small a number of cases as are here brought together, but there can be little doubt that the behaviour of the combined sulphates during periods of seizures is striking and fairly consistent, and points to a very close relation between the activity of intestinal putrefactive processes and the occurrence of fits. I should consider that the evidence they afford is distinctly in favour of the theory that these seizures are of a toxic character.

To summarize the results of the analyses, they show that—

(1) In the eight cases of general paralysis examined in a comparatively early stage of the disease there was no marked departure from the normal excretion of the two forms of sulphates.

(2) In the cases examined at different times there was a tendency for the ratio between the two forms of sulphates to rise as the disease progressed.

(3) In the eleven cases of advanced general paralysis the excretion of combined sulphates is large, and the ratio of these to the preformed is very high, a condition of affairs which indicates a great increase in the activity of the intestinal putrefactive processes at this stage of the disease.

(4) There is both absolutely and relatively a larger output of combined sulphates during the time of seizures than at any other period of the disease.

On the Degenerative Lesions of the Arterial System in the Insane, with Remarks upon the nature of Granular Ependyma. By CECIL F. BEADLES, L.R.C.P., Assistant Medical Officer, Colney Hatch Asylum. (With Plates.)

The degenerative changes in the tissues of lunatics are more or less well known, at any rate the grosser or naked-eye lesions that are to be expected, but even amongst these there are some points that, I venture to think, may receive further attention. Of histological changes we can say more positively that much light may yet be thrown on their nature. As to their cause—the cause of the degeneration of nerve cells, for instance—we are lamentably ignorant.

In the following paper I propose to draw attention to the widespread signs of arterial degeneration that are present in the bodies of persons dying insane.

If one observes a large number of lunatics one is early struck with the fact that their appearance as to age is slightly in excess of what is in reality the case. Of course there are individual exceptions to this rule, often very striking; but on the whole the fact remains that insane persons taken as a class have aged, and, when advancing in years, show more early than is natural the changes characteristic of old age.

The appearance of ageing is nothing more or less than an early stage of senile decay, and is dependent on the nutritive supply of the tissues. In other words, it depends upon the character of the blood and the conditions of the vessels through which the blood courses. Definite indications of degeneration of the arterial system are very manifest in a large percentage of the insane. It is shown by the prominent and rigid arteries and the concomitant cardiac signs that are present. Signs of hypertrophy and dilatation, with or without murmurs that point to valvular disease, are far from rare in asylum patients, and often without any definite evidence of the foregoing there may be clear indications of weakness of the cardiac muscle; with it may be fatty degeneration. The weakened heart makes itself manifest in the feeble pulse, tachycardia, and syncopeic attacks to which lunatics are liable, and grave symptoms of cardiac failure and even sudden death therefrom are by no means infrequent.

TABLE No. II.—Showing the Excretion of Sulphates, etc., in the Urine of Advanced General Paralytics.

No.	Initials.	Age.	Weight in lbs.	Sex.	Volume of Urine in c.c.	Urea in Grammes.	Sulphates in Grammes.		Ratio of Com- bined to Performed.	Albumen.	Averages of 21 analyses
							Performed.	Combined.			
1	R. E.	40	147	Male	953	26.36	2.5386	0.3530	1 : 7.6	Slight traces occasionally	" 23 "
2	A. T.	44	149	Female	1745	23.70	2.2700	0.2681	1 : 8.4	"	" 30 "
3	M. B.	43	140	"	1386	28.20	2.4848	0.3187	1 : 7.8	"	" 43 "
4	M. A. D.	30	90.112	"	1330	20.54	1.4500	0.2818	1 : 5.1	"	" 8 "
5	E. E. P.	43	—	"	1000	21.45	1.6717	0.3567	1 : 4.6	"	" 8 "
6	M. A. H.	44	100.118	"	1975	18.64	1.6685	0.2577	1 : 6.0	None	" 8 "
7	H. A. L.	44	84	"	1840	31.43	2.7719	0.4396	1 : 6.3	Trace	" 1 "
8	J. W.	64	—	"	917	17.15	1.2240	0.2218	1 : 5.5	None	" 5 "
9	C. B.	63	—	"	1265	19.90	1.6723	0.1512	1 : 10.8	Traces	" 4 "
10	S. S. M.	64	—	Male	1326	22.22	2.4654	0.3966	1 : 6.0	Well marked	" 4 "
11	G. E. H.	47	143	"	1051	26.22	2.4141	0.4223	1 : 5.7	None	" 5 "
Mean of the 11 cases.		48	120			24.35	2.0516	0.3136	1 : 6.5		150

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If one observes a large number of lunatics one is early struck with the fact that their appearance as to age is slightly in excess of what is in reality the case. Of course there are individual exceptions to this rule, often very striking; but on the whole the fact remains that insane persons taken as a class have aged, and, when advancing in years, show more early than is natural the changes characteristic of old age.

The appearance of ageing is nothing more or less than an early stage of senile decay, and is dependent on the nutritive supply of the tissues. In other words, it depends upon the character of the blood and the conditions of the vessels through which the blood courses. Definite indications of degeneration of the arterial system are very manifest in a large percentage of the insane. It is shown by the prominent and rigid arteries and the concomitant cardiac signs that are present. Signs of hypertrophy and dilatation, with or without murmurs that point to valvular disease, are far from rare in asylum patients, and often without any definite evidence of the foregoing there may be clear indications of weakness of the cardiac muscle; with it may be fatty degeneration. The weakened heart makes itself manifest in the feeble pulse, tachycardia, and syncopical attacks to which lunatics are liable, and grave symptoms of cardiac failure and even sudden death therefrom are by no means infrequent.



Fig. 1

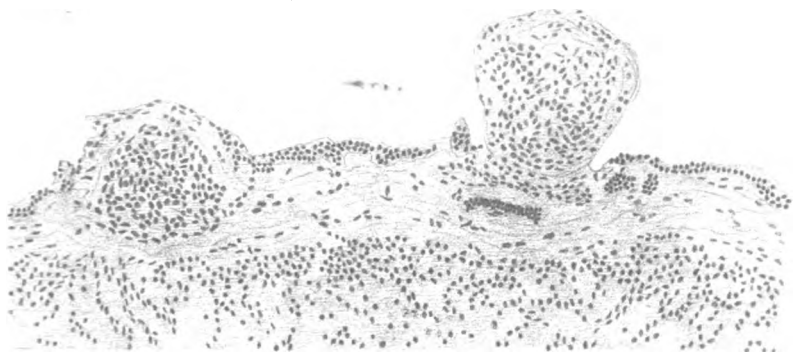


Fig. 2



Fig. 3

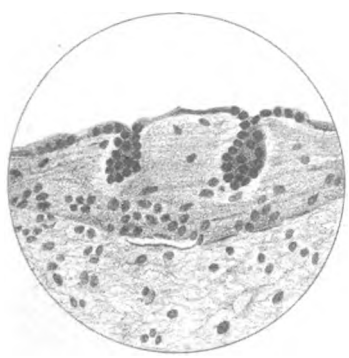


Fig. 4

I am unable to give the precise proportion of our patients in whom the organ is recognizably affected, but I find that for the last five years at Colney Hatch Asylum 5·8 per cent. of the males presented definite signs of valvular disease of the heart on admission. Dr. R. H. Wright, of the Alabama Hospital for the Insane, informs me that, as a result of a careful physical examination on 702 white patients, he found valvular heart disease among the men in 10·9 per cent.; among the women in 12·4 per cent. with a percentage of 11·7 on the total. Out of the 82 cases showing the lesion, 56 had mitral insufficiency and 16 aortic stenosis. I am indebted to Dr. Wright for the following table showing the distribution of the lesion, and by its side I have placed the male cases from Colney Hatch referred to above, which were 81 in number.

	Alabama. Both Sexes.	Colney Hatch. Males.
Mania	8	5
Melancholia ...	33	30
Dementia	28	10
Imbecility	2	1
General Paralysis ...	7	12
Epilepsy	4	3

Seeing that the total cases of mania were much more numerous than those of melancholia, the fact is brought out that the latter are the most liable to cardiac troubles; or can the explanation be that heart disease more frequently leads to melancholia? In dementia we probably have a more advanced age to deal with, and consequently must expect senile changes.

A morbid state of the arteries is observed also in chronic Bright's disease, and in that condition so commonly present in young demented which is nearly allied to Raynaud's disease, where the hands and feet are continually cold and of a blue colour, pointing to a sluggish circulation. Hæmatoma auris is another rarer manifestation. Here we have the rupture of a diseased vessel either spontaneously or as the

effect of a slight injury, which in a person with healthy arteries would produce no ill-effect, resulting in a blood effusion and followed by a life-long swelling and deformity. Why should "insane ear" be looked upon as of ill-omen? Surely only for the reason that it proves the existence of advanced arterial degeneration. The ease with which bruises are produced in lunatics, their extensive character, and the length of time they take in disappearing, show, too, a morbid condition of the arterioles and capillary vessels, and the ease with which they rupture and give rise to extravasations of blood.

Malnutrition is further exemplified by the brittleness of the bones and the decay of the teeth, for how seldom do we find a good set of teeth in an asylum patient!

But these and allied signs of deterioration it is not now my intention to study further, but rather to pass on to the signs indicative of vascular degeneration that may be met with in the body after death.

I will at once note that it has so far been my experience, when making post-mortem examinations on persons dying in a lunatic asylum, to find only as the rarest exceptions the thoracic and abdominal organs free from disease of a degenerative nature. This applies not only to old persons, but to those also of a middle or comparatively young age; it also refers to both sexes. The diseased state of the organs can, in a large percentage of the cases, be explained by the existence of a general arterio-capillary fibrosis.

If we wish to know the state of the small arteries, there is no easier method than by examining the kidney, for that organ forms an admirable index to the condition of the arterioles throughout the whole body. In fact, there is no organ better suited to study arterio-capillary fibrosis in, and, owing to its peculiar structure, it enables us to form a rough and ready estimate thereof without calling the microscope to our aid.

In the insane I have rarely found the kidneys perfectly healthy. Most often there have been indications of chronic interstitial nephritis, represented by a variable degree of granular contraction. Especially frequent is an adhesion of the capsule and a granular state of the surface. A normal condition of this organ is far rarer than would seem to be the case with patients dying at a general hospital.

Out of a total of 150 autopsies I found the kidneys presenting distinct evidence of disease in 106, or over 70 per

cent. of the cases. These do not include simple congestion of the organ. The proportion did not greatly differ in the males and females. It was rather to have been expected that there would have been a greater predominance on the male side, for it is well known that men suffer more frequently from chronic Bright's disease, and are more liable to diseases of the arteries than are women, but in the insane this fact does not appear to hold good. The high percentage here disclosed is remarkable, and it should be remembered that this result is entirely dependent on the rough examination made in the post-mortem room, and that no systematic histological examination was undertaken.

I will not stop to consider the state of the other abdominal organs, for it is impossible from a cursory glance to record the condition of their nutritive arteries.

I now come to the condition of the heart and great vessels. Again, as was the case with the kidney, what would at a general hospital be defined as a healthy heart is from my observation phenomenally rare in lunatics. Although in post-mortem reports it is not unusual to find that organ described as healthy or normal, I believe that if due care had been taken in its examination there might have been detected some slight indication of disease.

In the number of cases already quoted, I met with an abnormal condition of the heart in 136, that is to say in over 90 per cent. In a large proportion of these cases valvular disease was present, thickening or puckering of the mitral flaps with atheromatous changes being most frequent, resulting in an incompetence of the valve, less commonly in mitral obstruction. The aortic valve suffered if anything rather more frequently in the males than did the mitral. A slight degree of atheroma was seldom absent, co-existing with disease of the intima of the aorta immediately above the orifice. The wall of the left ventricle was more often than not hypertrophied, associated with a more marked dilatation, though the latter was at times absent. There were rarely wanting indications of weakness of the cardiac muscle. The myocardium in a large number of instances was soft and flabby, often pale, with signs of degeneration. Associated with this not uncommonly was an excess of adipose tissue deposited beneath the epicardial covering, at times accumulated in masses on the surface, and occasionally presenting a gelatinous character. What is popularly described as a fatty heart is common in lunatics,

and accounts for the syncopeic and fainting attacks to which many are liable, and is a great means of bringing life to a close when such are attacked by catarrhal affections of the lungs, whether it be pneumonia, bronchitis, or influenza.

Actual fatty degeneration of the muscle fibres is, then, usually present, especially noticeable towards the ventricular apices, but it occurs in patches elsewhere; the myocardium is transformed into soft, fatty tissue, which presents a pale, dirty-yellow tint. The liability in such cases to rupture of the heart is referred to in a paper which appeared in the *Transactions of the Pathological Society* for 1893.¹

It occurs invariably in the wall of the left ventricle on the anterior surface; in this it is opposed to rupture due to violence, the latter resulting in a rent on the right side of the organ. Where rupture of the heart has taken place in lunatics it has seldom been preceded by any violent exercise, but the patient has been quietly dressing, or sitting in a chair partaking of food. Several times I have found ecchymoses in the wall of the ventricle, either beneath the endo or epicardium, which without doubt could readily form the starting point of a rupture.

I have attempted to show that a disordered state of both the heart and kidney is exceedingly common in persons dying insane. My figures are set forth in greater detail in the accompanying table:—

	Males.		Females.		Totals.	
	No. of Cases.	Per-centage.	No. of Cases.	Per-centage.	No. of Cases.	Per-centage.
No. of Autopsies ...	90		60		150	
Heart abnormal ...	82	91·1	54	90·0	136	90·6
Kidney „ ...	62	68·8	44	73·3	106	70·6

Are these high percentages carried out in the experience of others? The result of a search through some autopsy books gives a percentage of 58·2 for the heart and 43·2 for the kidney in a total of 2,610 cases. That for females in both was much the highest. In the case of the heart changes are noted in 49·3 per cent. of the males and in 71·2 per cent of the

females. Although these percentages fall considerably short of my own experience, yet they still remain very high. I may point out that one cannot be entirely guided by such figures, for it is necessary to take into account the personal equation of the investigators, some observers having seldom recorded a heart that is not healthy, while others find the healthy organ only on the rarest occasion. If all the reports made by some had been excluded, the results would have practically coincided with my own. I may also mention that the percentage given for cardiac disease is probably nearer the truth than is that for the kidney, for it is evident that the heart has received greater care in its examination than has the latter organ. Still, slight changes have doubtless frequently passed unrecorded. Of the large arterial trunks I have already referred to the commencement of the aorta as displaying early or advanced atheroma, but when progressed it usually extends much beyond the arch. I should state that hearts are not included above where atheroma of the aorta beyond the valves has alone been noted; were such the case the number would be greatly increased.

A small percentage only of asylum inmates are certified as dying from cardiac disease, chronic Bright's disease, or other diseases connected with the vascular system. Although, as I have pointed out, there is often an advanced degree of degeneration, sufficient apparently to account for death, yet there has generally been some co-existing malady to which death could be readily attributed. Such are phthisis, pneumonia, exhaustion of diarrhœa, cerebral or meningeal hæmorrhage.

Some of these admittedly certifiable causes of death are in reality only symptoms of the general disease of the circulatory organs, and even many of those diseases that at first sight appear distantly related to the heart may, in fact often do, owe their fatality, if not their existence, to the weakened state of the heart and blood-vessels. In death from exhaustion of insanity from long duration, as well as in that of chronic brain disease and senile decay, there are usually to be found degenerative changes in the coats of the arteries, and these may often be seen if looked for in cases where death has occurred early from exhaustion of acute mania or melancholia.

The following table is compiled from the "death tables" of the four London asylums—Hanwell, Colney Hatch, Bau-

stead, and Cane Hill—for the five years 1889-1893 inclusive^{1b}:—

Cause of Death.	No. of Cases.	Percentage.
From Cardiac Disease	204	5·51
„ Renal Disease	47	1·27
„ Diseases referable to Arterial Degeneration	146	3·94
From Senile Decay... ..	310	8·38
„ Chronic Brain Disease	569	15·39
„ General Paralysis	950	25·69
Total number of deaths	3,897	

Here I have included besides deaths due to heart and kidney disease those assignable to extensive disease of the arteries, which for the most part were cerebral or meningeal hæmorrhages. There are also shown the deaths from such causes as are invariably accompanied by marked arterial degeneration—senile decay, chronic brain disease, and general paralysis. The same would apply to many certified as “exhaustion of mania” and of “melancholia,” but it is impossible from the data given to extract those in which cardiac or vascular degeneration is likely to have existed.

Passing on to the consideration of the vessels within the cranium, how commonly do we observe the arteries at the base of the brain presenting evidence of degeneration. Their walls are often thickened or opaque, and frequently rigid with earthy deposits, and this in persons whose age is not sufficient to account for the condition alone.

In 60 brains from females I found the basal arteries distinctly diseased in 32, viz., over 53 per cent.; in 90 brains from men the number was 45, or 50 per cent. These included all forms of insanity. Dr. St. John Bullen, in an analysis of the morbid changes exhibited in 1,565 brains of lunatics,² says that atheroma of these vessels was recorded in 410 cases, or 26 per cent. of the total. He states that in

general paralysis disease of the basal arteries is relatively infrequent, and the percentage is little more than that in epileptics and the acute insane states. In dementia, on the other hand, atheroma is present nearly five times as often as in general paralysis.

A percentage of only 18 is obtained from a total of 310 brains analyzed by Drs. Howden³ and B. Tuke.⁴ In a table of 333 cases showing the percentages of the lesions found in different forms of insanity, Dr. Balfour⁵ includes the condition of the basal arteries. These I have extracted and placed side by side with Dr. Bullen's and my own.

	Bullen.	Balfour.	Beadles.
Dementia	58.0	19.5	16.8
Chronic Melancholia ...	36.0	19	15.5
" Mania	31.8	9	37.6
General Paralysis	12.4	10.6	23.3
Epilepsy	10.5	5.8	6.4

Drs. Bullen and Balfour agree only in that atheroma of the vessels was most common in dementia, and in the percentage for general paralysis. The ratio which those present to mania, melancholia, and epilepsy is remarkable for their want of uniformity. The extraordinary differences here revealed form a convincing proof to my mind of the valueless nature of such collections of figures, and bear out the statement already made that observers are never alike in their manner or accuracy in recording morbid specimens. As Dr. Balfour himself remarks, in speaking of the condition of the brain, "little dependence can be placed upon records regarding this, seeing that what may be to one observer a deviation from the normal standard will to another be perfectly healthy." The old difficulty of classifying insanity also presents itself, and must be borne in mind, and it is possible that some cases classed as chronic mania in my own table might have been defined as dementia.

If we come to examine the smallest ramifications of the cerebral arteries in microscopical sections of the brain of lunatics, I believe it is exceptional to find the vessels in a

perfectly healthy state. There may usually be found some change in the walls of the small arteries, all the coats of which are liable to suffer.

The innermost coat of the artery may show a variable amount of proliferation, by which the calibre is much diminished, and it may proceed to such an extent as to entirely occlude the vessel. Syphilis is a great producer of such a condition; it affects the very smallest vessels as well as those of larger size. In the case of a medium size branch of the anterior cerebral artery, where there was a distinct syphilitic history, the lumen is occupied by a young connective tissue growth, and the elastic layer is much destroyed. Most frequently it is the middle coat which shows the most marked changes. The wall may be much thickened by a proliferation of the muscular and fibrous tissue, or there may be deposited in its wall material of a fatty nature, as in the larger arteries. The tissues forming the vessel wall appear to become fused, assume a homogeneous aspect, and the cell nuclei disappear. When this atheromatous change has taken place the vessel may become narrowed in places, dilated in others, producing kinking and aneurismal dilations. Medium size vessels showing these abnormalities to a marked degree may often be met with beneath the ependyma of the ventricles, when they cause an elevation of the thickened lining, and give rise to a false appearance of granulation, which is to be distinguished from the true glandular ependyma. Of the latter I shall have occasion to speak shortly.

The smallest arterioles in all forms of insanity are liable to the conditions described as existing in those of medium size. There are, however, in the case of the former the familiar collections of small round cells in the perivascular spaces and immediate neighbourhood. In addition, the diseased state of these and the capillaries is not infrequently shown by the extravasation of blood, or altered pigment in their proximity, and the small foci of softening so commonly present in the insane brain.

Sclerosis of arterioles is always followed by overgrowth of connective tissue around them, which appears to originate from the outer coat of the vessel, and this gives rise to a hardening and shrinking of the organ. Thus may be accounted for such a condition of the brain. The point Dr. Goodall has lately endeavoured to prove,⁶ that the "spider cells" are merely connective tissue cells in the pro-

cess of fibrous tissue formation, appears to me the most reasonable. In that light it is clear that they owe their existence secondarily to the diseased state of the vessels.

Although slightly apart from the subject under consideration, I may briefly refer to a form of pigmentary degeneration, depending as it does on the state of the blood and vessels. It is a pigmentary condition of the pia mater over the medulla oblongata and upper part of the cervical region of the spinal cord, which is somewhat common in lunatics. I have not been able to find any reference to this condition in general works on pathology or those special to insanity. Dr. Edwin Goodall makes no provision for such a circumstance in the very full scheme of a "table for the examination of the brain and its covering" which he recently published in the "Journal of Mental Science",⁷ and he has been unable to give me any information on the subject.

Now, I have found a marked degree of pigmentation of the membrane in this region on many occasions. To the naked eye the pia mater presents a brownish colour, varying in intensity according to the amount of pigment present, occasionally of a deep brown tint, but usually pale, and not readily distinguishable from a congestion of the minute vessels. The condition appears to bear no relation to any particular form of insanity, although it is undoubtedly most marked in general paralytics.

Under the microscope the colour of the pia mater is found to depend on many connective tissue cells, containing brown pigmentary granules. These cells vary much in form; many are elongated, some long spindle-shaped, and others irregular and branching. They have a large oval nucleus which produces a bulging, and is usually freer from brown granules than the remainder of the cell. When few in number the cells are generally clustered around or lay near a small blood-vessel. Some pigment cells can more often than not be found even when they are not sufficient in amount to give a tint to the membrane; they are then most frequently situated near one of the longitudinal fissures of the cord, especially the posterior. This condition of the pia mater is not limited to the insane, for one of the most marked specimens I ever saw was from a non-insane female who died from phthisis. Pigment cells occur normally in the pia mater of the medulla oblongata, and their existence is well known to physiologists, but this only to a slight degree, and such a condition as to give rise to a distinct colour of

the membrane is, I venture to think, of far greater frequency in the insane than in any other class of cases. It is merely another sign of degeneration, beyond which there is little importance to be attached to its presence.

Having considered the widespread degeneration in the arterial system throughout the bodies of insane persons, let us now briefly pause to find an explanation. We are at once confronted by several important questions. Is this a primary disease or a secondary, dependent on the condition of the nervous system or the state of the patient? If an initial lesion, to what is it due? Is it in any way a causative agent in the production of insanity?

The minute structure of the brain cells has lately received much attention, and rightly too, and recent investigators have proved a diffuse degeneration and vacuolation of the cortical cells. Observers, moreover, are unanimous that where this is the case the small vessels of the brain show definite signs of degeneration also. This point has been specially noted by Dr. Campbell.⁸ They usually exist together, though some brains have been described with deteriorated blood-vessels in which no vacuolation of the cortical cells or the presence of spider cells were found; yet I believe the latter conditions have never been observed without the co-existence of extensive alterations in the walls of the vessels. In fact, in those cases where the cells are extensively diseased, there the vessels are most profoundly affected.

The most recent writers are agreed that cell degeneration is not characteristic of one form, but is present in all varieties of insanity, and is seldom absent even in the most acute cases. Since Dr. Bevan Lewis first described this morbid change in epileptic insanity,⁹ many workers have been studying this point. It has been found in all regions of the cerebral cortex, but the intensity of the vacuolation appears to vary in its site in different brains. Dr. Skae¹⁰ detected it in 80 per cent. of the brains he examined, taken indiscriminately from almost all kinds of insanity. This condition, however, is not entirely characteristic of the insane brain, for it has been met with in some persons who have died from toxic poisoning or febrile diseases.

Dr. Carter¹¹ draws attention to the fact that in general paralysis the changes in the vessels and in the cells co-exist. He says: "These changes go, to a great extent, hand in hand; where the vessels are most thickened and cellular,

the dissolution of the surrounding nerve-tissue will be most evident as a rule." He regards the changes in the vessels as of secondary importance, although he states they are often far more noticeable than any disorganization of the nerve-cells. With his statement that in some brains of general paralysis the vessels are practically healthy, I am not able to agree, nor can I fall in with the remark that "the appearance of thickened, proliferated, and cellular vessel-walls is not so common a feature, and is not met with in a well-marked state in any other condition of brain disease." Taking this as a fact, he ventures the opinion that "as this feature is not so constant as the dissolution of the nervous tissues to which ultimately the symptoms of the disease must be referred, I repeat that the probability is in favour of a purely nervous origin."

Dr. Campbell¹² is inclined to refer the condition of the nerve-cells to the direct action upon them of a toxic principle in the blood. He would, moreover, account for the diseased state of the heart in the insane as depending upon a primary lesion of the vagi nerves. He says: "In addition to the clinical evidence of cardiac affections, I have been able to demonstrate anatomically the existence of most profound changes in the muscular elements of the heart in cases in which the vagi nerves were diseased;" and to the toxic infection of the nerves he attributes the cardiac troubles met with in general paralysis.

In the recent paper already cited, Dr. Skae lays stress upon the disease of the heart, blood, and blood-vessels which he has found in the insane. These, he believes, by giving rise to some obstacle in the proper supply of the blood to the brain, cause deficient oxidation and result in a fatty degeneration of the cells followed by vacuolation. From this it is to be gathered that in his opinion a diseased condition of the arterial system precedes the nerve degeneration and does not result from it. With this I am practically in agreement. I do not believe that a diseased state of such important structures as the vessels is without its effect upon the brain as the organ of the mind, and I am inclined to regard it as playing a far greater part in the pathogenesis of mental aberration than for which many would give it credit.

Not forgetting that in some cases and to some extent the condition of the arteries may be a secondary one, I consider there is distinct evidence for believing that it often has a

primary existence, and has long anteceded the onset of the insanity to which the patient has become the victim. Atheromatous changes in the vessels may undoubtedly develop rapidly, but in a large number of the cases disease of the heart and arteries is recognizable long before the onset of any mental symptoms. Surely it is not unreasonable to suppose that the diminished calibre of the vessels conveying nutrient fluid to the nerve elements must seriously affect them in their vitality and function!

I would suggest, therefore, that the vacuolation and degeneration of the nerve-cells is possibly often a secondary result of the want of proper nourishment of the cell, due to the cutting off of the blood supply by diseased or occluded arteries. And this brings me to the cause of this arterial degeneration of which I have been speaking. There are many recognized causes, but especially would this condition appear dependent on some chemical poison floating in the blood. Alcohol and the syphilitic poison are known to be potent factors in this respect, and the recognized frequency of both these as causes of insanity needs no comment from me. They both primarily affect the blood-vessels, and, through acting on the smaller vessels, produce deterioration of structure in all the organs of the body. Richardson¹³ says that seven out of every eight cases of kidney disease are attributable to alcohol. Much has been discovered relating to the absorption of ptomaines and allied poisonous substances from the alimentary tract, and lately the question of the manufacture of alkaloidal bodies in the blood itself has been receiving attention. Lauder Brunton¹⁴ has pointed out the relation of the former when absorbed into the system to various cerebral symptoms. That such bodies do, and must, exercise an injurious influence on the vessel-walls in which they exist there can be little doubt.

I may add that the toxic principles to which reference has been made may of course act primarily upon the nerve elements, but, none the less, they cannot be without their effect on the vital tissues of the vessels which convey them to their ultimate destination.

In conclusion, it is to be observed that no mention has been made of the theory held by some that the degenerated state of the cardio-vascular system found in lunatics may be fully accounted for by the strain thrown upon the heart and vessels from the restlessness, excitement, and violent exercise of the patients. This I believe to be a causative agent, if

at all, in but a very trifling proportion. It would in no way account for the condition in melancholiacs or in primary dementia, whether of senile origin or otherwise.

On the nature of Granular Ependyma.—In the previous remarks on the arterial degeneration in lunatics I incidentally made mention of the granular nature of the lining ependyma of the ventricles of the brain. I now propose to enter briefly into the microscopical nature of these remarkable little bodies that lie scattered over the ventricular ependyma like minute grains of sand.

They have long been recognized and looked upon as a sign of degeneration, but as to their minute structure and exact nature there still appears some doubt. They have been briefly and variously described by Lockhart Clarke,¹⁵ Batty Tuke,¹⁶ Clouston,¹⁷ Mickle,¹⁸ Angel Money,¹⁹ and others.

As is well known, they do not occur in the normal brain. On the other hand, they are found co-existing in a wide diversity of abnormal conditions of that organ. They are most frequently found in some chronic brain disease, and although seldom absent in general paralysis of the insane, they are by no means limited to that form of mental disorder. In fact, they occur at times in all forms of insanity, including the acute states. I do not think that I ever saw them more pronounced than in a recent case of acute and rapidly fatal mania, where the man had shown signs of insanity for little more than three weeks. The condition almost constantly accompanies hydrocephalus, both acute and chronic. In the insane brain it is more often found where the ventricles are only moderately or not at all dilated, where the brain is sclerosed and harder than natural, and the small vessels are extensively diseased.

The authorities named above are by no means unanimous in their opinions. Some regard the granules as primary connective tissue growths, others as solely due to an accumulation of proliferated epithelial cells, while others again consider them of a mixed nature, in which either the epithelium or the connective tissue plays the most important part. It is, therefore, clear that many points are still open to inquiry, and that more light may yet be thrown on the nature and origin of the bodies under consideration.

I first became interested in these granules some six years ago, when making sections from the brain of a hydrocephalic child. I was then inclined to regard them as originating from the walls of small vessels in the ependyma. More

recently I have investigated this subject further, and cannot now hold altogether to that view.

If we study sections of these granulations from a case of general paralysis or chronic brain disease we find that they are small roundish solid connective tissue tumours which spring from the ependyma and project into the cavity of the ventricle. They are usually composed of a dense fibrous tissue, often more or less granular or homogeneous in nature. Frequently, however, the more central part is of a younger nature, and exhibits numerous round or elongated nuclei. Only very rarely is there any sign of a vessel in their centre, but where this does exist the nuclei and fibrils appear to be arranged concentrically around it, as though the tissue had originated, possibly, from the outer coat of the vessel. The nodules are covered by the columnar-shaped epithelial cells of the lining membrane, which, however, are often modified in form, having become spheroidal or flattened, and although the cells may exhibit distinct evidence of proliferation at the sides of the growth, they are more often than not markedly degenerated, or have entirely disappeared from the summit of a fully developed granulation. Only in rare instances have I seen a marked accumulation of the epithelium cells, and then it could more readily be referred to an obliquity of the section than to an actual increase of the epithelium. The base of the growth blends with the tissues of the thickened membrane, which is of a coarse granular and fibrous nature (Fig. 1).

Immediately beneath the nodule it is usual to find small blood-vessels, and not infrequently here, and at the point from which the growth leaves the ependyma, are collections of deeply staining round nuclei. These nuclei sometimes appear of a different nature to those of the connective tissue or leucocytes which lie scattered singly about the stroma. They stain more darkly with logwood, and appear in spaces free from the stroma. They do not, however, seem to bear any relation to vessels or vascular spaces.

These same groups of distinctly defined cells are found beneath and in proximity to the granular bodies in the case of hydrocephalus (Fig. 2), where they stand out even more prominently against the younger connective tissue of which the nodules are composed. In some places there are spaces distinctly lined by a layer of the deeply staining cells which have the appearance of glandular epithelium, and are very different to the lining cells (endothelial) of neighbouring capillaries. This is clearly seen in a drawing in the

"Pathological Transactions" for 1889. They appear to resemble fairly closely the proliferated epithelium of the ependyma, which in the case of the hydrocephalic child is of a more spheroidal character than that of the adult brain.

With a view, if possible, to clearing up the nature of these cells I examined granulations in an earlier stage of their formation. In Fig. 3 is seen a section of the ependyma from a case of general paralysis. The membrane is but slightly raised above the surface in two places, and dips down into the brain substance to about an equal distance. It is of a coarse fibro-granular structure, and is covered by a single layer of columnar epithelium. These thickenings represent two granules in the process of formation, and they show that a change is recognizable in the stroma long before any is observable in the epithelial covering. Where these thickenings of the ependyma exist there are a few scattered round cells lying in the stroma, but here we see again to a very marked degree definite masses of the more deeply staining cells situated round the lower margin of the forming nodule. At a deeper level are many blood-vessels exhibiting more or less signs of degeneration of their walls.

The slight thickenings of the ependyma above described are very plentiful, and it is a remarkable fact that the groups of deeply-staining cells are seldom absent at these places, but are rarely found elsewhere. Still, their nature remained exceedingly obscure, and it was not until I discovered the specimen which is represented in Figure 4, and a few similar ones, that an explanation was forthcoming, but even now I will not go so far as to say positively that this is the true origin of these cells. The drawing represents a minute granulation in an early stage, there being but a slight thickening of the ependyma, covered by a layer of much degenerated columnar cells. Dipping down into the stroma at this spot are two small flask-shaped cell groups of an epithelial nature, and in connection with the surface epithelium, although the former are of a spheroidal and glandular type. They closely resemble minute glands, but I am not aware that glands exist in the normal ependyma of the ventricles.

Whether or not it is a fact that the epithelial down-growths from the surface give rise to the isolated cell-masses that have been described, I would venture to suggest the following explanation for the formation of the granulations based upon an extensive experience of both malignant and simple growths.

I believe these little nodules are of the nature of small tumours which owe their origin to an irritative cause—possibly some chemical substance contained in the fluid of the ventricles or present in the blood. This constant irritant acting upon the epithelium causes it partly to degenerate and partly to undergo proliferation, which may commence a down-growth into the tissues beneath. The continuity of the surface is thus weakened and the connective tissue in the neighbourhood, derived from the neuroglia and from the outermost coat of the vessels, undergoes active increase, producing wart-like projections upon the surface. In its growth it is conceivable that epithelial cells may become isolated and embedded in the fibrous stroma. Moreover, the blood-supply being impoverished and diminished, partly by the condition of the arteries, the new connective tissue-growth early degenerates into a more or less granular amorphous structure.

If we look for an analogy to such a case as is given by these granules on the ependyma, we easily find one in the case of warts on the skin, and this in more than one way. If the skin is constantly coming into contact with irritating fluid, such as that derived from septic or dead animal matter, we have the warty growths and thickenings produced on the hand, commonly known as dissecting-porter's warts. Such is the result when the irritant acts from without, but we also have a similar effect when it is contained in the blood and operates from within. The latter is exemplified by multiple warts on the hands and face of persons who are habitually constipated. That these warts are clearly dependent on the absorption into the blood of effete products from the alimentary canal is proved by their rapid disappearance after a short course of magnesium sulphate. In all such cases the growth is mainly and almost solely made up of dense fibrous tissue, and there is but slight proliferation of the epithelial covering.

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DESCRIPTION OF ILLUSTRATIONS.

FIG. 1.—Ependyma of lateral ventricle from a G.P. There are two granular bodies seen. That on the right hand is of a granular amorphous nature; that on the left is less advanced, and shows connective tissue cells in the central part (? proliferating cells from wall of a vascular space). The membrane is thickened and the vessels are diseased. Logwood. Obj. $\frac{1}{2}$ inch, Pillischer.

FIG. 2.—Ependyma of lateral ventricle from a hydrocephalic child four years of age. The connective tissue forming the granulations is of a younger nature than that represented in the preceding figure. The central part is the most nucleated, the cell nuclei being more elongated than in the adult brain. There is proliferation of the epithelial lining, and groups of similar-looking cells are situated beneath and at the side of one of the granules. Logwood. Obj. $\frac{1}{2}$ inch, Pillischer.

FIG. 3.—Ependyma of lateral ventricle from a G.P. Two granulations in an early stage. The membrane is only slightly thickened, except where the nodules are appearing, and is evenly covered by a single layer of columnar-shaped epithelium. Beneath the thickenings are groups of deeply-staining cells resembling

that of glandular epithelium. Logwood. Obj. $\frac{1}{2}$ inch, Pillischer.

FIG. 4.—Ependyma of the lateral ventricle from a G.P. Into a very slight thickening of the membrane are two small epithelial down-growths, derived from the surface epithelium. The cells are of a less columnar form, and have assumed a more glandular appearance. Logwood. Obj. $\frac{1}{2}$ inch, Pillischer.

Observations on the Effect of Thyroid Feeding in some Forms of Insanity. By LEWIS C. BRUCE, M.D., Assistant Physician, Royal Asylum, Edinburgh, late Assistant Medical Officer, Derby Borough Asylum.

One of the best and latest descriptions of the functions of the thyroid gland is that by Victor Horsley.* This paper furnishes an account of recent work on the subject, and so fully details the results arrived at by other workers that I use it as my chief reference throughout this paper.

Horsley holds three views with regard to the functions of the thyroid gland.

1. That it is directly a blood-forming organ.
2. That it is indirectly a blood-forming organ.
3. That it modifies or destroys substances which, circulating in the blood, are harmful to the general economy.

Dr. Gibson,† in an article on the function of the thyroid, says, in his original paper, he “gave adherence to the hypothesis advanced by Schiff, that the gland secretes some substance whose absorption into the blood is essential to life; and to the extension of this hypothesis by Sanquirico and Canalis, that the gland secretes some material which is necessary for the nourishment of the central nervous system.” Gibson believes this to be the gland’s chief function, and explains the anæmia which occurs in animals after thyroidectomy as being due “to the very serious effect that the absence of the thyroid has upon the nervous system and upon the general body metabolism, exercising a depressing influence on the blood formation.”‡

Horsley makes no definite statement with regard to the gland’s influence on the nervous system, but remarks that

* “Brit. Med. Jour.,” Jan. 30, Feb. 6, 1892.

† “Brit. Med. Jour.,” Jan. 19, 1893.

‡ “Brit. Med. Jour.,” Sept. 23, 1893.

“it secretes some substance useful to the general metabolism of the body.”*

In a series of experiments made by Dr. Otto Lanz† on dogs, he found that when the motor region was removed in one hemisphere “a very remarkable phenomenon was that, after complete recovery from the extirpation of the motor region, so that no trace of paralysis remained, the paralysis reappeared the same day that the thyroid gland was removed.” It would appear from this that the thyroid has some very direct influence on the nervous system.

The successful treatment of myxœdema by the internal administration of thyroid gland is now an established fact.

Dr. John Thompson has obtained good results by thyroid feeding in sporadic cretinism.‡

I was first led to try the effect of thyroid feeding on the insane after reading the accounts of various cases of myxœdema treated in this manner, where the temperature rose from subnormal to normal and even became feverish, with a quickened pulse rate. Bearing in mind the slow pulses and low temperatures often noticed in asylum practice, it appeared feasible that if one could induce quickened pulse rates and higher temperatures, in fact, increase ultimate cell metabolism, there might be a corresponding mental or physical improvement, which, judiciously persevered in, would be a valuable addition to the treatment of the insane.

Two mental cases were selected for observation, not because there was any hope of their ultimate recovery, but because they had reached such a low stage of human degradation, that the treatment, if not beneficial, could at least do no harm. Glycerine extract of thyroid was at that time the form in which the drug was chiefly used, and my first observations were made with this preparation.

Small doses (one thyroid lobe in seven days) gave no result, and it became evident that the treatment would not justify the expense incurred if this method was continued. I accordingly got fresh sheep's thyroid from the asylum butcher, and made large quantities of glycerine extract. Both this extract and that obtained from the druggist were administered by the mouth. This attempt was more successful; doses of the extract equalling half a thyroid per day produced changes in the pulse and temperature, with corresponding mental changes.

* *Loc. cit.*

† *Loc. cit.*

‡ “*Edin. Med. Jour.*,” May, 1893.

I have not given these cases in detail, for the reason that I do not consider the treatment was sufficiently accurate. It was not always possible to obtain a regular supply of fresh glands, and frequently the resulting extract became putrid and offensive at the end of the week. This caused irregularity of administration. Further, I am positive that the extracts did not always yield the same percentage of active constituents.

It was noticed in these two cases that the pulse increased in rate and fell in tension, coincidentally the skin became moist and warm, while the temperature rose from subnormal to normal, with at times a tendency to be feverish. After discontinuing the drug for a few days, a period of reaction set in, the appetite increased, there was slight desquamation of the cuticle, and an improved colour and tone in the skin.

Mental changes were likewise noted. One of the patients under treatment had not spoken for several months. One day, during the administration of the thyroid extract, he suddenly began to talk, and soon became quite communicative. Memories of past events were more vividly brought to his mind, and his powers of attending to himself were increased. He put on his boots and dressed without assistance—actions almost foreign to him since admission a year previously.

In the other case similar changes were noted, but in a much less marked degree.

If such results were got by extracts of uncertain strength and composition, I thought myself justified in putting more hopeful cases under treatment. I now aimed at inducing fever, with its resulting reaction. Psychological literature is full of the records of cases which made good recoveries after suffering from the exanthemata, carbuncles, erysipelas, and inflammations generally.

Dr. Clouston, in his "Clinical Lectures on Mental Diseases,"* says, "I think we shall some day be able to inoculate a septic poison and get a safe and manageable counter irritant and fever, and so get the 'alterative' effect of such things, and the reaction and the stimulus to nutrition that follow febrile attacks."

The cases on which these observations were made were not specially selected. Some had been in the asylum for a year or more, others for a few days, while the remainder were patients recently admitted, who were either making no progress to recovery, or were actually losing ground.

* "Clinical Lectures on Mental Diseases," p. 129.

The forms of mental diseases comprised mania, melancholia, general paralysis, syphilitic insanity, alcoholic amnesia, puerperal and lactational insanity, and insanity at the climacteric.

The following was the method of observation employed:— First of all the patient was weighed, then put to bed, and for three or four days previous to the administration of the drug the pulse and temperature were observed morning and evening, the urine collected for quantitative examination, and where possible a blood examination and pulse tracing made. When these preliminaries were satisfactorily settled, the patient had thyroid tabloids administered thrice daily, in doses ranging from thirty to sixty grains per day, either with the ordinary meal or immediately afterwards. All the cases to be detailed were treated with the drug in the tabloid form, each tabloid representing five grains of fresh sheep's thyroid. When the physiological effects of the drug were well marked the observations on the urine and pulse tracing were repeated. The pulse rates, respirations, and temperature were taken morning and evening throughout the whole period of observation and treatment. The drug in most cases was administered until a feverish condition was induced for two or three days. Failing this, I had to be satisfied with increased pulse rate, flushing of the skin, and perspiration. To guard against dangerous results frequent examinations of the pulse were made. When the pulse became rapid, soft, and compressible, the limit of safety of the physiological action of the drug was considered to be attained. Individual constitutions differ so much in their power of resisting the action of the drug that the amount of thyroid necessary to produce these results varied to a great extent.

The patients stayed in bed for several days after treatment was stopped. When they got up, usually at the end of a week, the weight was again ascertained, and a blood examination made. During treatment the diet was not restricted in any way.

The after treatment consisted in the administration of a tonic, combined with extra diet.

The weights were taken a fortnight after the thyroid treatment was stopped, and afterwards at the end of each month.

Mental and physical changes were noted from day to day. To avoid repetition I give in detail two typical cases out of the 23 on which these observations are based. (*Chart.*)

H. G. C., male, aged nineteen, admitted September 1, 1893.—First attack, cause stated to be overwork, but there is little doubt that the attack was induced by the practice of masturbation.

State on Admission.—He was very boyish in appearance, and poorly developed for his age; height, 5ft. 4½in.; weight, 116lbs. No physical disease detected.

His mental condition was one of acute mania, with great restlessness, intense excitement and incoherence.

He was sleepless and noisy at night, and for four nights was given drachm doses of paraldehyde. During the day he walked much in the grounds, and was prescribed a full diet. Under this treatment he gradually recovered, so that by September 15 he was free from excitement, and talked in a fairly rational manner. He appeared to be making a good recovery until September 27, when he relapsed, the excitement returned, and he again became sleepless.

October 1.—Weight, 118lbs. He was acutely excited, and though he was kept out of doors all day in the grounds he did not sleep.

October 4.—Since last note he has been continuously excited; dirty and destructive in habits; drachm doses of paraldehyde produce little or no effect on the insomnia. To-day he commenced taking thyroid tabloids, and took in all thirty grains (six tabloids).

October 5.—Confined to bed; skin hot and dry; pulse full and strong; dose of thyroid increased to sixty grains per day (twelve tabloids).

October 6.—Slept soundly last night for ten hours; skin moist and flushed; pulse quick, tension much diminished.

October 7.—Much quieter and less restless; evening temperature 99·2° F. Slept well all night.

October 8.—Perspiring freely. Evening temperature 99° F.

October 12.—Thyroid treatment was discontinued to-day, as the pulse had become weak and slightly irregular. With the exception of the night of October 9, when he was restless, he has slept well and has been much quieter during the day. Weight, 112lbs.

October 14.—The weather has suddenly become warm and close. He had a slight return of flushing of the skin, while his evening temperature rose to 98·8°.

October 15.—Slight muscular tremors noticed in his arms and legs; perspiring freely; morning and evening temperatures, 98·6°.

October 18.—Was allowed up; the mental improvement is most marked; he is quiet and rational, but looks thinner.

October 20.—Weight, 117lbs., an increase of five pounds in eight days. He now works in the garden.

October 27.—Weight, 124lbs. He has taken Fellows' syrup during the past week. His appetite has improved. He has

perfect self-control. A marked growth of hair has appeared on the lip and chin, and his manner and appearance have become more manly.

November 3.—Weight, 129lbs. His hands and feet have been desquamating freely in large flaky pieces for the last few days. The trunk also shows desquamation of a branny character.

November 26.—Weight, 140lbs. He has steadily improved ever since the reaction to the thyroid treatment became marked.

December 29.—Weight, 149lbs. Was discharged recovered. He was strong, healthy, and well developed for his age.

This case illustrates:—1. The febrile condition which may be induced by thyroid treatment, viz., the slightly feverish temperature, increased pulse rate with diminished tension, flushings of the skin, perspirations, and rapid loss of body weight. 2. The susceptibility of patients under the influence of thyroid to any change in the temperature of the surrounding air. 3. The period of reaction following cessation of treatment, viz., desquamation, increased appetite, and rapid gain in body weight; this physical improvement being attended by a return of mental power and self-control.

No. 2.—S. A., female, aged thirty-seven, admitted February 14, 1890. First attack, domestic trouble being the only known cause.

History.—She has been insane for fourteen months; part of this time has been passed in two other asylums and part at home.

State on Admission.—In indifferent health and condition. No active physical disease detected. Height, 5ft. 2½in. Weight, 114lbs.

Mental.—Subacutely excited, nervous and irritable. Irrational in manner, and sometimes used abusive language.

During the earlier part of her residence in the asylum her mental condition varied a good deal; at one time she was irritable and suspicious, but expressed no definite delusions; at another she was acutely depressed, threatened suicide, and was for some months under special supervision. As time went on she became more listless and apathetic, careless of her dress and personal appearance, and appeared to be drifting into confirmed melancholia.

On November 1, 1893, her condition was as follows: Temper capricious and uncertain, spent most of the day absorbed in herself, would neither employ herself nor read, unreasonable in her likes and dislikes, seldom spoke, except to her husband when he visited her; she was thin, and took food badly; complexion sallow, skin dry and harsh.

On November 22 she was put to bed to facilitate observations on the pulse, temperature, etc. The first time her pulse and temperature were taken she resisted, and was abusive and angry; finding resistance useless, she gave no further trouble.

November 25.—To take four tabloids thrice daily.

November 27.—Face flushed; complained of pains in legs and head; pulse quick and soft evening temperature 98·8°.

[JOUR. OF MENT. SCIENCE, JAN., 1895.]

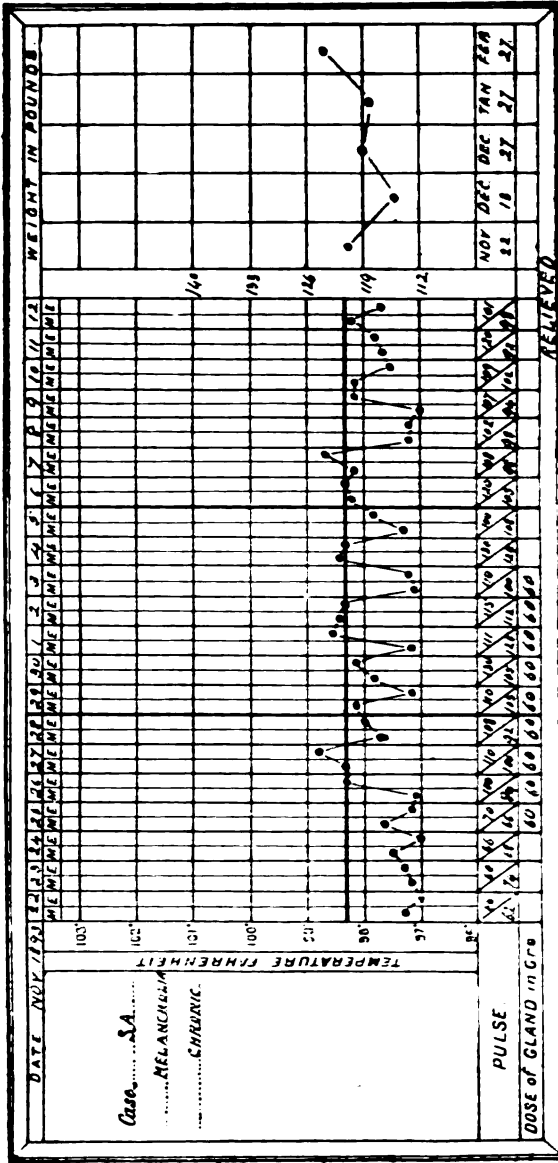


Chart illustrating Dr. Bruce's Article.

November 29.—Fine muscular tremors in the arms, legs, lips, and tongue. Complains of slight headache.

December 2.—Pulse rapid and soft. Her temperature has never been higher than 98·8°. A sudden change has occurred in her manner; she is pleasant, laughs, and talks sensibly. Her complexion has become clear and her skin soft.

December 3.—Felt sick and disinclined for food. Thyroid administration stopped.

December 7.—She continues bright and pleasant; wrote a sensible letter to her husband. This morning she fainted when walking from her bed to the bath-room.

December 11.—She got up to-day for a few hours, but felt weak.

December 12.—Is menstruating.

December 14.—Has relapsed to an emotional, irritable condition.

December 15.—Pleasant and sociable to-day; occupies herself sewing. Has not slept well for two nights.

December 17.—Has dyspeptic symptoms, and refuses food. Mentally dull, morose, and irritable.

December 21.—Sleeps better, and under treatment dyspeptic symptoms have improved. She takes her food better.

January 21.—Very variable; one day irritable, the next cheerful and talkative. Her friends say she is much improved; more intelligent and more active mentally than she has been since first becoming insane.

March 22.—There has been no further change in her condition. Her husband is satisfied with the late improvement, and took her home to-day. She was discharged relieved.*

This case illustrates:—

1. The subjective symptoms often noticed in patients treated with thyroid, namely, pains in the head and limbs.

2. The motor symptoms—tremors of the lips, tongue, arms, and legs.

3. That mental improvement is not necessarily confined to the period of reaction, but may occur early during treatment.

4. The dyspeptic symptoms which sometimes complicate treatment.

5. That there is danger of cardiac failure if the patient is not strictly confined to bed for some days after treatment is stopped.

These two cases give a general idea of the effect of thyroid feeding, in large or moderate doses, upon diseased conditions other than myxœdema.

I now proceed to give a *résumé* of the more important symptoms.

Circulatory System.—Subjective phenomena: In several cases there was a tendency to fainting when in the upright position. One patient actually fainted when walking from

* She has since completed her recovery at home.

her bed to the bath-room. Dyspnœa occurred in one patient who suffered from incompetence of the mitral valve.

The Pulse.—The changes which occurred in the pulse were the first indication that the drug was affecting the patient. These changes were, increased pulse rate, increased volume, and diminished tension. In every case the pulse became rapid, in the majority the tension was lowered. The increased rate was usually combined with excitability or irritability of the pulse, *i.e.*, if, when the pulse was being counted, the patient coughed, laughed, spoke, or moved a limb there was a perceptible quickening of the pulse rate.

Among the later pulse changes were irregularity, intermission, and compressibility. There was much variation in the time which elapsed, after the discontinuation of the treatment, before the pulse became normal.

Sphygmographic tracings of the radial pulse were taken in fifteen cases. The first tracing was obtained immediately before the patient was subjected to thyroid treatment; the second, several days after treatment commenced, when the pulse gave indication of being affected on digital examination. The following tracings give an idea of the alterations found. I need not multiply cases, but will content myself with giving typical examples. The chief distinctions between the pulse-tracings taken at different times were:—

S. G., 1.—Pulse slow, tension high. Line of ascent slightly oblique and short. Line of descent well sustained; no traces of aortic notch or dicrotic waves, but presents several little wavelets.

2.—Pulse more rapid, volume increased, tension diminished. Percussion stroke long and vertical. Apex generally acute, line of descent fairly oblique, predicrotic wave tends at times to form a semi-plateau with the apex, aortic notch shallow, dicrotic wave faint.

J. A., 1.—Pulse regular in rhythm, but not always so in force; tension tends to be high. Line of ascent practically vertical, apex rounded, tends to form a plateau with predicrotic wave. Line of descent fairly oblique, presents several little wavelets.

2.—Pulse more rapid, volume increased, tension diminished. Percussion stroke long and vertical. Apex acute. Line of descent falls rapidly, presents aortic notch, predicrotic and dicrotic waves.

H. E., 1.—Pulse small and sluggish. Cardiac percussion stroke weak, results in low line of ascent. Line of descent

forms a wide angle with line of ascent, and gradually reaches its lowest point; no traces of aortic notch or dicrotic waves.

2.—Pulse more rapid, volume increased, tension high. Line of ascent fairly vertical and of medium length. Apex rounded. Line of descent less sustained and faintly undulating.

3.—Pulse smaller, increased in rate, tension diminished, slightly irregular and undulating. Percussion stroke almost vertical and short. Apex acute. Line of descent falls rapidly; shows traces of aortic notch and dicrotic waves.

T. S., 1.—Pulse regular in rhythm and force, tension high. Line of ascent practically vertical. Predicrotic wave prominent, tending to form a plateau with apex. Line of descent falls rapidly to the aortic notch, followed by a well-marked dicrotic wave.

2.—Pulse increased in rate and volume, tension diminished. Line of ascent vertical and fairly long. Apex acute, line of descent oblique; presents dicrotic waves and aortic notch.



S. G. (1).—Pulse 56. Pressure 4 ozs.



S. G. (2).—Pulse 76. Pressure 4 ozs.



J. A. (1).—Pulse 78. Pressure 5 ozs.



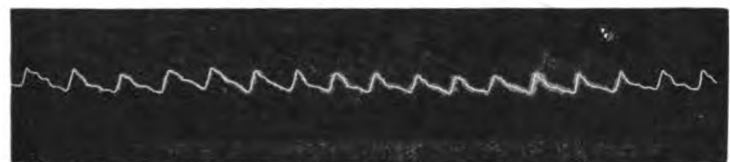
J. A. (2).—Pulse 99. Pressure 5 ozs.



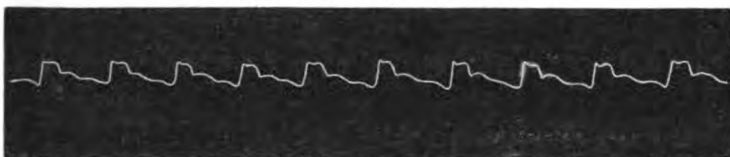
H. E. (1).—Pulse 80. Pressure 2 ozs.



H. E. (2).—Pulse 98. Pressure 2 1/4 ozs.



H. E. (3).—Pulse 120. Pressure 4 ozs.



T. S. (1).—Pulse 76. Pressure 5 ozs.



T. S. (2).—Pulse 96. Pressure 5 ozs.

Respiratory System.—Rapid respiration has been noted in animals and man after thyroidectomy, and also in patients suffering from exophthalmic goitre. This being the case, one would expect to find respiratory changes in connection with the cardiac disturbance induced by the action of thyroid as a drug. The respirations were noted in nineteen of the cases. On an average the respirations were slightly accelerated as the pulse rate increased.

It has been stated that patients suffering from exophthalmic goitre are, as a rule, exempt from phthisis, and a suggestion

has been made that phthisical patients might be benefited by treatment with thyroid. Five of the twenty-three cases had symptoms of phthisis pulmonalis on admission, but the disease was not active. The immediate effect of administering thyroid tabloids to these patients was the lighting up of activity in the phthisical areas. On discontinuing the drug, phthisical symptoms disappeared. Four out of the five patients, during the reaction after treatment, gained weight, and are now in better health than when treatment commenced. The fifth is neither better nor worse.

Alimentary System.—The tongue generally became furred. The appetite diminished, and where the temperature was high, thirst increased. Nausea and actual vomiting occurred in several cases. The vomiting did not appear to be cerebral, for all the cases had foul breaths and furred tongues, and the symptoms disappeared under stomachic treatment.

Hæmopoietic System.—The thyroid gland plays a special part in the metabolism of the sexual organs. Victor Horsley* remarks in his paper:—"Of late years the subject has been so carefully considered by Freund in its chief bearings that it is hardly necessary for me here to do more than point out how the truth of the conjunction of the functional activities of these parts is confirmed by the far greater liability of the female sex to suffer from myxœdema. The harmony between the two sets of organs is evinced by the enlargement of the thyroid occurring when active changes happen in the sexual organs. What is the nature of the change which requires the increased activity of the thyroid is not yet known, but that such a need should arise is comprehensible from the altered condition of the blood in pregnancy and menstruation."

Eight of the thirteen female cases had goitre in more or less degree. All these have made good recoveries, and in four cases there was no alteration in the size of the gland after treatment.

Blood Examinations.—The blood of the patients undergoing thyroid treatment was examined in fifteen instances. I made observations on the blood of most of the others, but doubt the accuracy of the results, and therefore omit them. The examinations were made with Gowers' hæmocytometer and hæmoglobinometer. The corpuscular richness was ascertained by examining two separate drops from each solution. The corpuscles were counted in never less than 24 squares and the average taken.

* *Loc. cit.*

The first examination was made before treatment was begun; the second three or four days after discontinuation of the drug.

In eight of the cases no other medicinal treatment except thyroid was used. On comparing the results of the second examination with the first these eight cases showed a loss in percentage of hæmoglobin and a reduction in the number of red blood corpuscles, with the exception of E. E., whose corpuscular richness was increased from 71·3 per hæmic unit to 75 per hæmic unit.

Seven cases took iron, either Blaud's pills or a solution of Ferri et Ammonii Citratis, coincidentally with the thyroid. Of these there was a gain in hæmoglobin in two; three showed a loss. Four gained in corpuscular richness, two showed a loss, and the seventh neither gained nor lost.

The average loss of hæmoglobin in the eight cases treated without iron was 6·6 per cent., and the diminution in red blood corpuscles averaged 7·3 per hæmic unit.

On the other hand, those treated with iron showed an average loss of 1·9 per cent. in hæmoglobin, and an average gain of 1·9 in red blood corpuscles per hæmic unit.

It would therefore appear that the impoverishing effect of thyroid, when given in large doses, on the blood can in some measure be prevented by the coincident administration of iron.

CASES TREATED WITHOUT IRON.

Case.	Number.	BEFORE TREATMENT.			AFTER TREATMENT.				
		Hæmoglobin per cent.	Red Corpuscls. per Hæmic Unit.	White Corpuscls. per Hæmic Unit.	Red Corpuscls. per Cub. Mill.	Hæmoglobin per cent.	Red Corpuscls. per Hæmic Unit.	White Corpuscls. per Hæmic Unit.	Red Corpuscls. per Cub. Mill.
R. O.	VII.	54	68·1	·20	3,460,000	50	64·1	·16	3,250,000
M. E.	XIV.	68	82·7	·25	4,160,000	64	75·2	·40	3,760,000
E. E.	XVII.	69	71·3	·33	3,580,000	67	75·0	·20	3,761,000
C. W.*	XVIII.	74	81·9	·41	4,040,000	70	58·9	·16	2,940,000
M. O.	XX.	64	80·1	·25	4,050,000	60	74·8	·20	3,720,000
E. F.	XXI.	60	78·4	·57	3,910,000	56	75·6	·40	3,860,000
S. G.	XI.	76	89·7	·25	4,520,000	60	76·6	·25	3,790,000
T. S.	XXII.	85	87·7	·25	4,440,000	70	81·1	·16	4,040,000

CASES TREATED WITH IRON AND THYROID.

Case.	Number.	BEFORE TREATMENT.				AFTER TREATMENT.			
		Hæmoglobin per cent.	Red Corpscals. per Hæmic Unit.	White Corpscals. per Hæmic Unit.	Red Corpscals. per Cub. Mill.	Hæmoglobin per cent.	Red Corpscals. per Hæmic Unit.	White Corpscals. per Hæmic Unit.	Red Corpscals. per Cub. Mill.
A. T.	V.	76	73·9	·50	3,750,000	68	78·0	·30	3,980,000
A. B.	IV.	62	59·6	·12	2,980,000	55	66·6	·12	3,760,000
J. A.	XII.	68	80·0	·25	4,000,000	64	79·3	·33	3,960,000
A. U.	XIII.	50	79·8	·25	4,050,000	56	70·2	·16	3,510,000
M. C.	XV.	60	79·7	·33	3,930,000	60	81·0	·41	4,010,000
C. W.*	XVIII.	62	79·3	·30	3,960,000	64	79·4	·33	3,970,000
H. E.†	XIX.	—	61·5	·24	3,250,000	—	72·6	·22	3,600,000

Integumentary System.—As the pulse quickened, the skin became moist, and at times the perspiration was profuse. Flushings, especially marked about the face and neck, were likewise constant symptoms. As treatment progressed, pigmentation of the skin, if present, disappeared, and the complexion became soft and delicate looking. One case was suffering from acne of the face; this condition greatly improved under thyroid treatment. Desquamation occurred to a greater or less degree in every case after the treatment was stopped.

In some patients desquamation was so slight as to be hardly observable, while in others the skin peeled off the palms of the hands and the soles of the feet in large flakes, while the skin of the body was shed in small branny scales.

Urinary System.—It has been stated that in myxœdema the thyroid drug produces a diuretic action, and I therefore thought it desirable to make some observations on the urine.

Dr. Alex. Haig † says "I can prove that in myself the taking of thyroid glands or a thyroid extract produces results which are identical with those produced by so much uric acid, that is to say, there is a first stage of stimulation,

* Compare results in case of C. W., twice under treatment, the first time without iron, the second time with iron.

† The blood coagulated so rapidly in this case that sufficient blood was not obtained at either examination to estimate the percentage of hæmoglobin.

‡ "Brit. Med. Jour.," Sept. 23rd, 1893, p. 674.

with rising acidity, well-being, relaxed arterioles, and diuresis."

A quantitative examination of urine was made in fifteen of the cases.

The urine was collected prior to commencement of treatment, and the second examination was made when the physiological action of the drug was well marked. No observations were made on the amount of urea or uric acid. In none of the cases was there any evidence of albuminuria or other abnormality.

The following table gives the quantity of urine excreted in forty-eight hours in each period:—

	Before Treatment.	During Treatment.
J. H.	60 ozs.	69 ozs.
A. C.	116 "	90 "
H. E.	90 "	82 "
E. E.	115 "	100 "
C. W.	75 "	80½ "
T. S.	90 "	86 "
M. E.	104 "	114½ "
M. A. O.	98 "	126 "
E. F.	112 "	98 "
M. A. S. C.	80 "	71 "
C. W.	80 "	77 "
S. A.	90 "	96 "
H. S. P.	52 "	73 "
C. F.	64 "	74 "
E. O.	82 "	79 "
	Average 87.2 ozs.	87.6 ozs.

This table would appear to indicate that thyroid, when administered in large doses, is not diuretic in action. In

small doses it may produce a diuretic action, but when given in large doses diaphoresis is so profuse as to tend to reduce the quantity of urine secreted.

Nervous System.—Sensory functions: Nothing unusual was noticed in any of the cases.

Motor functions: The organic reflexes were in no way altered in the majority of the cases. We must except the following:—The breathing became slightly dyspnoic in the case of E. F. She had organic heart disease. F. G. S., a case of adolescent mania, became dirty in habits and had enuresis during treatment. A. T., a female, suffering from melancholia, likewise became dirty in habits and passed urine and fæces in bed.

In many instances the voluntary muscles presented symptoms of over action; fine fibrillar muscular tremors were observed in the tongue, lips, facial muscles, and limbs. The facial and lingual tremors resembled those seen in general paralysis. I never noticed any paralysis, anæsthesia, or incoordination.

Vasomotor and nutritive functions: Flushings of the skin, profuse perspirations, and rapid loss of body weight were very constant symptoms. During convalescence a rapid gain in weight was the rule.

Cerebral and mental functions: Headaches of more or less severity were frequently complained of. These headaches were relieved by the administration of a mild purgative.

The mental condition of patients under the physiological action of thyroid varied greatly; some became depressed, others emotional, laughing immoderately or weeping without cause. Some became irritable and had outbursts of impotent rage, while on the other hand irritable, morose, and bad-tempered subjects showed marked amelioration of these tendencies.

Mental improvement was noted in several cases while the patients were under the influence of the thyroid, in others this improvement did not set in until the period of reaction was well advanced. As a rule the patients all slept well, both during and after treatment.

Heat Changes.—Although my aim in treatment was to produce a feverish temperature, I was not successful in every case. Slight pyrexia was induced in fourteen out of the twenty-three cases. The remaining eight either had no temperature as high as 99° F., or if the temperature did rise higher it only did so for the space of a few hours.

The temperatures of patients under thyroid treatment appear to be readily affected by any change in the temperature of the air. For example, E. F., A. T., H. G. C., and J. J. were all under treatment at the same time, during October, 1893.

The weather on October 14 became warm and close for the time of year; simultaneously the temperatures of these four cases rose.

In the cases of E. F. and A. T., the temperatures had never during the course of treatment risen above normal; on the morning of October 15. E. F.'s temperature was 101.4° , and that of A. T. was 99° . J. J.'s temperature had been falling since the night of October 12. On October 15 his morning and evening temperatures were both 99.2° . H. G. C.'s temperature had been normal and subnormal since the night of October 11. On October 14 his evening temperature rose to 98.8° .

A further example is the case of M. D., who was under treatment in December, 1893, when the weather was very cold. The patient was destructive and restless, and could with difficulty be kept warm. Her temperature never rose to 98° during treatment, and she showed no further reaction to the thyroid than a quick pulse. Since then she has again been under treatment during the end of March, 1894; she reacted well and is now recovered.

The Effect of Sex.—Of the twenty-three cases detailed, eight were men, fifteen were women. Two men out of the eight recovered, three were relieved, three were not improved. Of the fifteen women, thirteen recovered, two were not improved. These results suggest that the female sex is more susceptible to the influence of thyroid, but I believe males are equally susceptible.

An analysis of the eight male cases gives two cases of general paralysis, one case of alcoholic amnesia, one of syphilitic insanity with arterial disease; four incurable cases out of the eight. Of the four remaining cases, three were recoverable. Two recovered, one was relieved. The eighth man, though improved, was not regarded as a curable case. Last year's male admissions, and curable patients resident in the asylum from the previous year, did not furnish many cases for treatment, as they either were hopeless cases on admission, or improvement set in at once and progressed favourably, so that there was no need for any unusual form of remedy.

The female admissions last year, on the other hand, relapsed frequently, or made slow and doubtful improvement, and therefore furnished a larger proportion of cases suitable for treatment.

The following gives the results of treatment on the various forms of insanity:—

Three Cases of Acute Mania.—All of these recovered satisfactorily. Two additional cases of acute excitement were put under thyroid treatment, but the drug was discontinued because it was evident that the maniacal excitement alone was reducing the body weight so rapidly that the additional loss of weight, which almost invariably results from taking thyroid, was more than the patient could stand. One of these cases, a female, aged fifty-two, has since made a satisfactory recovery, but of course the thyroid treatment may not have contributed to the result. The other case, a male, aged thirty-eight, died of general paralysis about a month after cessation of treatment.

Four Cases of Acute Melancholia.—Two recovered, one was relieved, and one not improved.

Three Chronic Cases.—Mania drifting into dementia, of over one year's duration, one male relieved.

Two Cases of Chronic Melancholia.—One female, of over four years' duration, discharged relieved. One female, of two years' duration, recovered.

One Case of Syphilitic Insanity.—Not improved.

One Case of Alcoholic Amnesia.—Not improved.

Four Cases of Puerperal Insanity.—Three recovered after one course of treatment. The fourth recovered after a second course of treatment.

Two Cases of Lactational Insanity.—One, of over five months' duration, recovered. The other, of over one year's duration, not improved.

Three Cases of Climacteric Insanity.—All recovered.

Two Cases of General Paralysis.—One temporarily improved, the other relieved.

The beneficial effects resulting from thyroid treatment are, I believe, chiefly due to the febrile condition induced. With ordinary care this condition is not attended with any great risk to the patient. The temperature can be kept within reasonable limits, and readily reduced to normal by discontinuing the drug. Even where the temperature does not become febrile the effects of a fever are practically attained, the pulse becoming rapid and soft, the skin flushed

and moist, and there is a loss of body weight. The period of reaction following cessation of treatment resembles the condition noticed in patients recovering from the exanthemata; there is desquamation of the skin, the appetite improves, the power of assimilating food increases, with a resulting gain in weight and condition. It does not appear to be necessary to induce a febrile temperature to obtain good results, so long as the pulse is rapid and the skin flushed and moist. If these symptoms are well-marked the resulting reaction is as beneficial as if the temperature had been feverish for several days.

Thyroid certainly appears to exert a direct influence on the nervous system, and especially on the mental functions. If this was the only result aimed at, small doses of, say, one five-grain tabloid, thrice daily, would probably be sufficient. Those cases, however, which recovered appeared to benefit more by the reaction which followed the febrile condition, and to induce this larger doses must be given. I now never give more than twelve tabloids per day, and discontinue the drug if the patient shows any symptoms of gastric irritation or heart weakness. Some of the cases detailed took as large doses as ten tabloids thrice daily. This enormous quantity was given in the hope of inducing a febrile temperature, but it generally defeated its object by irritating the gastric mucous membrane.

The exhibition of this drug is certainly worth a trial in that class of patient, so commonly seen in every asylum, in whom a certain improvement has occurred, but beyond that point they never advance. They linger on month after month, too insane to discharge, but sensible enough to feel their position keenly. The monotony of asylum routine dulls their interest in life, they become lethargic, and despairing of recovery and discharge, are liable to drift into dementia, and eventually swell the list of chronic inmates.

Even if they recover after months of protracted convalescence, their mental condition cannot have benefited thereby. To these cases a course of thyroid treatment appears to give the necessary impetus which leads to complete recovery, while considerably shortening their sojourn in an asylum.

Again, amongst those classed as chronic insane, there appear to be cases suffering from diseases of function rather than structural lesion.

Two of the cases detailed illustrate this point.

S. A. was insane for more than four years. She did not improve. After a course of thyroid she recovered to such an extent that her friends removed her home, where she completed her recovery.

H. S. P. had been insane for two years, and her case was regarded as hopeless. She rapidly improved after treatment with thyroid and was eventually discharged recovered.

As the result of these observations on thyroid feeding in various forms of insanity, I think I am justified in coming to the following conclusions:—

1.—By the internal administration of thyroid, a true febrile process can be induced, and the resulting reaction is beneficial to the patient.

2.—The amount of the drug necessary to induce physiological action varies in different individuals, but it is seldom necessary to give a larger dose than sixty grains of the extract daily.

3.—Excessive and prolonged administration of thyroid extract produces gastric irritation.

4.—The use of thyroid in the treatment of the insane is accompanied by a certain amount of danger from induced heart weakness. This danger can be minimised, and almost discounted, by confining the patient to bed during treatment, and for some days afterwards.

5.—The administration of thyroid is contra-indicated in cases of mania where the excitement is acute, the loss of body weight rapid, and there is danger of exhaustion from malassimilation of food.

6.—Thyroid treatment appears to be specially useful in the insanity of the adolescent, climacteric, and puerperal periods.

7.—Its exhibition is frequently useful in cases where recovery is protracted.

8.—In cases of long standing where there is a tendency to drift into dementia, a course of thyroid treatment sometimes gives the necessary fillip which leads to ultimate recovery.

9.—Patients under treatment should be kept in as equable a temperature as possible.

10.—As far as the observations on general paralysis go, the results are sufficiently satisfactory to make me hopeful of benefit if the patient is treated at an early stage of the disease.

11.—Finally, such results as I have given cannot fail to make an impression on those who have the responsibility of treating the insane, and are anxious to use every method to help in furthering their cure. I believe that in thyroid feeding we possess a valuable addition to our armamentarium in the treatment of certain cases of insanity.

Insanity among the Natives of South Africa. By T. DUNCAN GREENLEES, M.B. Edin., Medical Superintendent, Grahamstown Asylum, South Africa.

Perhaps one of the most difficult investigations possible is the study of the mental characteristics of savage and semi-savage races, and, before formulating any theories regarding their psychic history, it is necessary that a careful study should be made of their mode of life, their normal mental state, and such folk lore as is accessible to us.

Unfortunately the material at our disposal with regard to the normal mental condition of the inhabitants of South Africa is extremely limited. While numerous works on travel and exploration have been published, few refer to the customs of the natives of the present day, and a perusal of works from Livingstone down to the recently-published "Travels of Selous" fails to throw much light on this important subject.

The history of South Africa is one full of interest, and reads almost like a novel. Perhaps in no other country has the influence of the white man been more apparent, and the devastating effects of modern civilization on the native races been more felt. At the present day, however, the Kafir, of all the native tribes, seems to thrive in spite of this civilizing influence, and, although the time is sure to come when the influence of intoxicants will exterminate him, yet so far he stands out as a member of a flourishing race; and, when uninfluenced by civilization, he is still one of the noblest types of mankind.

Further, strict classification is well-nigh impossible, the races have become so mixed. Thus in the Western Province the coloured inhabitants are mainly descended from the old slaves held by the Dutch settlers; while in the Eastern Province the Kafir and Hottentot still hold their own, intermixed to a certain extent with other tribes, and even with white people in many cases. Indeed, the Bastard—a

mixture of white and black blood—morally seems to present all the worst characteristics of both races, and so degraded is the position he occupies that he is compelled to associate still with his coloured half-brothers.

In this paper, as the statistics referring to the coloured races of the Western Province are most meagre and unsatisfactory, the natives inhabiting the Eastern Province and the Northern portions of Cape Colony will be chiefly dealt with. These comprise the Kafir races and Hottentots who may be considered as most civilized, for they have been longest in contact with the white man. The Kafir races, except near the towns, still maintain their original dress and customs.

Thus we may classify the Kafirs under two headings:—

I. Those living close to centres of civilization.

II. Those who still lead a simple and savage existence, and who are rarely brought into contact with the white man.

For the purposes of a statistical inquiry I have gone over all the cases admitted to the Grahamstown Asylum since its opening in 1875, and appended to this paper are certain tables which explain themselves.

From 1875 up to 1894—a period of 19 years—473 natives were admitted, viz., 319 males and 154 females.

1. *Age of Patients Admitted.*—A reference to Table I. will show the ages of those admitted, and it is noted that for the males, the most prevalent age at which insanity occurs is between 25 and 30, while for the females it is a little later, viz., between 30 and 35. These ages, I should imagine, are very similar to those found among the white races, and go to prove that it is while the individual is in the prime of life he is most liable to a mental breakdown.

2. *The Form of Insanity.*—In this table a curious fact makes itself apparent, and that is the enormous excess of cases of mania over other forms of insanity, 321 cases out of 473, or a percentage of nearly 67 of the total. This bears itself out in fact, for by far the larger proportion of patients admitted suffer from the simpler forms of mania. If we consider the theories of those who maintain that while mania represents a loss of the lower developed strata of the mental organism, melancholia indicates an absence of the higher and latest developed strata, then this prevalence of mania among natives of low developed brain-functions goes far to prove this theory.

Examples of melancholia are rare among natives; I only possess the records of 21 cases, and, with one exception, I have never found this condition so acute as is found among

white patients. The exception I refer to was that of a woman who attempted to drown herself and her illegitimate child in a well, and who ultimately died simply from pure mental exhaustion.

In another paper* I have attempted to prove that epilepsy and its insanity is not unknown among native races, especially those cases brought under the influence of civilization. A certain number of our cases suffer from traumatic epilepsy—the result of injuries sustained in mines, etc., but the idiopathic form is likewise found to exist, and presents no characteristics differing from the form as met with among white patients.

General paralysis, on the other hand, is so rare that amongst the pure uncontaminated natives it may be considered as practically unknown. Of the two cases recorded, one was an Africander male—a person in whom a certain amount of white blood circulated—and the other was a Kafir female regarding whom we have no information. This absence of general paralysis is not an extraordinary fact when we consider the simple mode of life of these natives; no cares and no struggle for existence such as is found in European cities. Living a life in the open air, in a perfect climate, with plenty of simple and natural food, it is not to be expected that diseases originating in mental worry and anxiety should make themselves evident.

While a fair proportion of all cases recover, yet it is to be noted that a large number had passed on to the condition of secondary dementia before they were admitted, no less than 87 being classified as such, 19·4 per cent. of the total number.

3. *The History of the Cases Admitted.*—Of the 473 cases 133 (102 males and 31 females) were discharged recovered. This represents a percentage of 28·1 (31·9 per cent. for males, and 20·1 per cent. for females), a somewhat lower rate than is presented by the entire statistics—including whites—of the asylum.

A large proportion of our non-recoveries, viz., about 146 cases, have been transferred to other institutions, and of the remainder 114 have died in the asylum, being a percentage of 24·1 on the total admissions extending over a period of 19 years.

4. *The Causes of Insanity.*—When we consider that little is known of the history of native patients it can be under-

* "Statistics of Insanity in South Africa," "American Journal of Insanity," April, 1894.

stood how difficult it is to arrive at any specific conclusions regarding the cause of the attack. In a large proportion of our cases this is totally unknown, and the medical man signing the certificate takes no trouble in endeavouring to ascertain the influences at work in any one case.

There are two causes known which are prominent and worthy of note; these are excessive drinking, and the smoking of dagga, a plant almost identical with *cannabis indica*, and which produces temporary intoxication, ending in some cases in an acute outburst of maniacal excitement.

Whether masturbation plays an important part in the causation of insanity, I cannot say; but this I know, that natives are addicted to this habit, and this is a well-marked symptom of insanity among the natives while in confinement.

The terrible curse of drink I have already referred to, and, as found among the natives of South Africa, I believe it to be most prolific in causing insanity, which, in the most acute cases, occurs as simple dipsomania.

5. *The Causes of Death.*—I have drawn up an interesting table showing the causes of death in these 114 cases. The only points I would direct attention to are the comparative rarity of deaths from cerebral disease, and the frequency with which chest disease causes death among the native races of South Africa. The former statement is explained by the fact that the average native rarely is subjected to such extraneous influences as are likely to produce cerebral disease, while the latter fact goes to prove that as soon as he is brought under the artificial influences of civilization and compelled to clothe himself, he is peculiarly liable to chest troubles; he gets cold or wet, neglects himself, allows his clothing to dry on him, and such diseases as pneumonia, phthisis, and pleurisy result.

Further, in confinement and while insane, the natives are extremely filthy in habits, and are accustomed to eat all manner of injurious articles, and abdominal diseases, especially those affecting the mucous membrane of the intestinal tract, are very common, and I frequently find large numbers of the large round worm in the intestines of patients dying from acute peritoneal trouble. We do occasionally come across patients living to a good old age in asylums, although my experience is such as to induce me to believe that the white insane has a better chance of a long life in confinement than his black brother.

6. *The Nationality of those Admitted.*—From the table, herewith appended, it will be noted that I derive my patients

from many races of the coloured tribes of South Africa, and these cases are obtained from nearly every part of the country, including Pondoland, and even as far north as British Bechuanaland, and I shall not be surprised if I am shortly asked to provide accommodation for cases even from Matabeleland and Mashonaland.

While these tribes present many traits in common, still they differ in many of their habits and customs, and some are much higher in the scale of civilization than others. Thus the Hottentots have been for the past 300 years in intimate contact with the whites, first with the Dutch, latterly with the English, and it is not unreasonable to suppose that they are becoming liable to such mental and physical diseases as affect the African emigrant; and, again, the Kafir is slowly but surely bringing himself under similar influences; in this case we may likewise expect the same results.

With regard to the other tribes they, for the most part, still hold themselves aloof from civilization, but the time will soon come when civilization will overshadow them with its baneful pall, bringing innumerable diseases in its train, and ultimately exterminating all races that oppose its progress.

In conclusion, I would point out the great advantages of studying such a disease as insanity among primitive people. We are thereby enabled by such a study to grapple many of the facts of the onset, progress, and cause of a condition which is yet to most of us obscure. The native brain has its analogue in the European child's cerebrum; in many respects his mental attributes are similar to those of a child, and in the breakdown of this infantile brain we can investigate the condition from an aspect not obtainable in any other way.

Such an investigation should be aided by pathological research, and, with this object in view, we at Grahamstown Asylum are carrying out a series of observations on the naked-eye appearances and the microscopical characters of the native brain. This investigation, when complete, should prove of some benefit to comparative anatomy, especially when this study is viewed from the standpoint of, on the one hand evolution, and on the other devolution. Investigations of this nature, with carefully compiled statistical information bearing upon mental diseases as met with among savage tribes, are of value, even although the information at our disposal may be meagre in quantity and rather inferior in quality.

TABLE I.—Showing the Ages of Patients on Admission.

	Males.	Females.	Total.
10 years and under	3	3	6
15 " "	26	10	36
20 " "	58	16	74
25 " "	60	19	79
30 " "	39	27	66
35 " "	33	19	52
40 " "	27	18	45
45 " "	15	9	24
50 " "	20	14	34
55 " "	9	6	15
60 " "	9	3	12
65 " "	1	1	2
70 " "	5	2	7
Unknown	14	7	21
Totals	319	154	473

TABLE II.—Showing the Form of Insanity on Admission.

	Males.	Females.	Total.
Mania—Acute	114	63	177
Chronic	11	12	23
Recurrent	10	5	15
Puerperal	—	6	6
Melancholia	21	10	31
Dementia—Secondary	60	27	87
Senile	11	6	17
General Paralysis	1	1	2
Epilepsy—Acquired	18	7	25
Idiocy	10	3	13
Imbecility	53	11	64
" with Epilepsy	10	3	13
Totals	319	154	473

NOTE.—Under General Paralysis a Male Afriander and Female Kafir are classified, but no records of a post-mortem examination exist.

TABLE III.—Showing the Results in Cases Admitted. Of 473 cases admitted—

	Males.	Females.	Total.
Recovered	102	31	133
Relieved	55	21	76
Not improved	49	21	70
Died	72	42	114
Still in residence	41	39	80
Totals	319	154	473

TABLE IV.—Showing the Nationality of Cases Admitted.

	Males.	Females.	Total.
Kafirs	81	32	113
Hottentots	63	41	104
Bastards	26	27	53
Fingos	38	8	46
Gaikas and Gelekas	20	8	28
Basutos	17	6	23
Zulus	18	3	21
Tambookies	9	5	14
Other Races, consisting of Malays, Hindoos, Bushmen, Griquas, Koum- nae, Bacas, Batlapin, Makatese, Pondosete	47	24	71
Totals	319	154	473

TABLE V.—Showing the Causes of Death in Patients Admitted.

	Males.	Females.	Total.
<i>Cerebral and Spinal Diseases :</i>			
1. Apoplexy	1	—	1
2. Cerebral Softening	5	1	6
3. " Tumours	1	—	1
4. " from Epilepsy	10	3	13
5. " " Mania	4	—	4
6. " " Melancholia	—	1	1
7. General Paralysis	1	1	2
8. Paralysis	1	—	1
9. Locomotor Ataxia	—	1	1
<i>Thoracic Diseases :</i>			
10. Heart Disease	3	4	7
11. Bronchitis	2	—	2
12. Phthisis	7	12	19
13. Pleurisy	1	1	2
14. Pneumonia	4	2	6
<i>Abdominal Diseases :</i>			
15. Ascites	3	1	4
16. Cancer of Pylorus	1	—	1
17. Dysentery and Diarrhœa	7	3	10
18. Enteritis	1	3	4
19. Peritonitis	2	1	3
<i>General Diseases :</i>			
20. Injury (to head)	1	—	1
21. Leprosy	4	—	4
22. Marasmus	8	3	11
23. Pernicious Anæmia	1	—	1
24. Pyæmia	1	—	1
25. Senile Decay	3	5	8
Totals	72	42	114

Current Opinion on Medico-Psychological Questions in Germany, as represented by Professor Ludwig Meyer, of Göttingen. By A. R. URQUHART, M.D.

(Continued from Vol. XL., p. 213.)

II. *Criminal lunatics.*—A brief note as to this class of patients will be of interest. Professor Meyer has very decided opinions as to their care and treatment. He fears that the practical outcome of advanced theories would be to change asylums into prisons—a change that would by no means possess the charm of novelty. According to some authorities the term "criminal lunatic" should be limited to such persons as were criminal before they became insane ;

others would include all insane persons who have committed an offence against the penal laws; some have even stretched the phrase to include all those whose mental condition would lead one to expect impulsive misdeeds, moral insanity, etc. The Academy of Medicine of Belgium gave an authoritative opinion on this subject in 1889. In answer to the inquiries of the Minister of Justice regarding criminal lunatics and criminal asylums, they resolved that these classes should be regarded as criminal, and should be relegated to a special institution—

1. Any insane person who has committed a criminal act.
2. Any criminal who has become insane after sentence.
3. Any insane person confined in an asylum who has committed or attempted a criminal act.

In the special asylum, accommodation would be provided for all those insane persons presenting on examination homicidal irresistible and violent impulses, or similar evil habits.

Professor Meyer's experience is, that the majority of criminal lunatics brought to the Göttingen Asylum from prisons or houses of correction have apparently become insane after trial, but yet there was probability, sometimes even certainty, that the mental disease had existed previous to their incarceration. One of these cases was an epileptic who had attempted to murder his mother, and had been condemned to a long period of imprisonment. An attempt to obtain a revisal of the judicial proceedings failed. Four had been accused of murder or manslaughter. Most of the others had been put in prison as guilty of homicidal attacks, and the rest were accredited with incendiarism, theft, and offences against morality. Not a few had been repeatedly punished for similar or other crimes.

Out of thirty-four of these cases at present in the asylum, only two are to be found in the wards for excited patients, and they are not so placed because of their violence, but because they would be unseemly in the ordinary wards. Professor Meyer treats them on the same general principles as other patients. First of all they are received from the prison into the clinical wards, where they are detained for observation. They are then drafted to a suitable ward and employed in so far as possible. As a rule, in a short time doctors and attendants have as good as forgotten whence these patients came; and, on the other hand, there is nothing to remind them of their criminal experience. Only the older habitués of prisons continue for a while to show certain prison traits—grumble at the routine, carry com-

plaints to excess, try to deceive, etc. By paying as little attention as possible to this querulous behaviour, by an ever-ready consideration of reasonable wishes, and an open recognition of good behaviour, the prison spirit is almost always banished in a brief space. It is good treatment to laugh away these grumblings, for in the end the grumblers laugh at their own complaints. Attempts to escape, also a prison habit, are very frequent on first admission, but after a time these are discontinued.

The magistrates have been induced to send some of the most industrious and most contented back to their native place, and to supply them with work and shelter. This has proved, on the whole, very satisfactory.

Professor Meyer maintains that there is no class of the insane who can be set apart as criminal, that there is no combination of symptoms marking out a special category. Criminal insanity is for him a "chose introuvable." He quotes Dr. Claye Shaw as supporting this view when he says that he "cannot honestly say that they have given much trouble—it is difficult to see why such objections are so often made against the reception of criminal lunatics in asylums."* Professor Meyer is, therefore, urgent that insane criminals should be treated in ordinary asylums, and adduces arguments in support of his contention, founded on economy, practical considerations, and scientific reasoning.

There must be some difference of opinion in Germany in reference to this point, as a wing has been lately added to the central prison in Berlin, into which this class of offenders are received. It belongs to the hospital department, and is, therefore, less rigorous in discipline, and more actively medical in administration than the general wards.

III. *Habitual drunkards*.—Professor Meyer does not regard habitual drunkenness as insanity, and does not distinguish between the vice or the disease from a legal point of view. He would not detain a true dipsomaniac in the asylum if the only symptom of insanity were an overwhelming desire for intoxication. At the same time he considers that such persons should be detained, and that they would be properly detained in asylums. In the interests of the insane, and in the interests of the inebriates, he would not have them congregated in one house; but is rather of opinion that the administrative arrangements of asylums permit of the addition of special villas for these cases in the most

* "Journ. Ment. Science," Vol. xxxvii., p. 174.

economical and appropriate manner. The discipline and treatment of ordinary insanity and inebriety being so evidently diverse, the idea of separate houses commends itself; and the disadvantage of accumulating collections of drunkards in colonies is necessarily counterbalanced by considerations of finance. Each case being considered on its own merits, it would appear that, as a general rule, drunkards should be segregated from the world; and, further, that as work is the principal means of treatment, it would be necessary to obtain a daily minimum of work by apportioning comforts enjoyed to labours executed.

IV. *General treatment of the insane.*—Professor Meyer speaks in no dubious tone in discussing the principles of treatment. He says that as the medical profession stands at the continual service of humanity, it is always striving to provide humane treatment. As in many other affairs, this is more a question of “how” than “what.” In good faith and in the name of humane action, no doubt, many evil deeds have been done, but when it is recognized that humane treatment must present itself as such to the perception of the patients and convince them of its humanity, it will not be difficult to arrive at an agreement as to what must be done and what left undone.

Even the most stupid patient (and stupidity is often only an appearance) must always be approached with friendliness and politeness. Experience shows that patients observe and note such trifling matters as demeanour and expression, and bear them in mind as influence for good or bad. As in the building and arrangements of the institution, so with the discipline, every idea of punishment should be most carefully considered. Restraint and seclusion almost always result in deterioration. In the excitement of struggles everything attracting attention at the moment becomes more closely bound up with the abnormal impulse. Early experience in the treatment of insanity convinced Professor Meyer that the “psychical” method of treatment was detrimental. Starting with the idea that diseased feelings and conceptions might be successfully influenced by the educational methods of ordinary life, the doctor had to enlighten his patients as to their ideas. In certain asylums special hours were set apart for the practice of pedagogic therapeutics (Ideler). As instruction proved to have no appreciable results, there was no delay in utilizing stronger measures. And thus, warned by the evil results of these

methods, Professor Meyer learned to enter on psychical relations with the insane with great caution and reserve. Many patients cannot endure a frequent disturbance of their mental life. What the darkening of a room is to a person suffering from photophobia, such is to them the apparent ignoring of their diseased mental condition. They want to be left in peace. And it is certain that the recovery of many patients, suffering from so-called fixed ideas, has been attributable to this method of procedure.

(To be concluded.)

CLINICAL NOTES AND CASES.

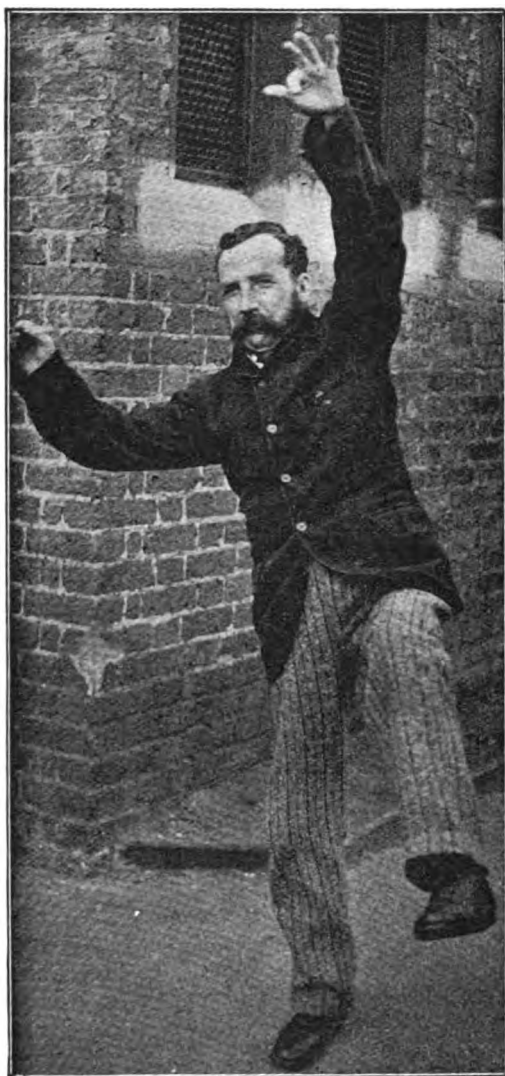
A Case of Catalepsy, with Prolonged Silence, alternating with Verbigeration. By JOHN WARNOCK, M.D., B.Sc., Edinburgh; Medical Superintendent, Peckham House Asylum. (With Plate.)

The following case seems to me to present certain mental and physical symptoms so peculiar that some notes may prove interesting. It is difficult to class it in either of the groups, mania, melancholia, or dementia, and the term stupor is not appropriate for many reasons. The apparent anæsthesia and dramatic posturing, however, suggest hysteria.

E. S., male, aged 43, clerk. Cause—love-disappointment and over-study. There is no family history of insanity. His father and mother were cousins; the father is reported to have been a brilliant mathematician. Before becoming insane the patient was an efficient clerk, intelligent and active; he took a good deal of interest in literary matters, and was highly educated.

The mental disorder commenced in December, 1880, when the patient was sent to an asylum in Scotland. His certificates then stated that he had the delusion that "an *automaton* within him spoke to him, directed his conduct and controlled him." (This delusion is especially interesting in view of his "automatic" speech and action thenceforward.)

He also confessed to the existence of subjective voices, which he referred to his absent sister and to the *automaton*. Some of his delusions were evidently of a painful and terrifying kind, *e.g.*, he thought that his limbs were to be twisted. He also burnt some effects at the bidding of the voice; he refused to open letters "for fear of fatal consequences."



DR. WARNOCK'S CASE.
(*Jour. Mental Science*).

In December, 1883, he was admitted into this asylum. The certificates stated that "he was silent and vacant, and believed that he was Arabi Pasha's son," etc.

State on Admission.—He was described as silent and motionless; eyes closed; cataleptic; muscles retained limbs in position given them. He evidently understood what he heard, and did what he was bidden.

He remained in the above state for years, cataleptic and absolutely mute. He had to be fed and dressed; eyes closed tightly. On December 27th, 1886, I noted that "he nodded his head up and down automatically all day," and in August, 1887, "that he mumbled to himself incoherently."

The following month "he spoke connectedly, and seemed a little improved."

Two months later he became "noisy, walked about, talking loudly" (in the manner described below).

He then became silent and motionless for a long period.

On February 1st, 1888, I noted that he was "very noisy, calls out incoherently, strings incoherent phrases together; paces up and down."

He then became quiet and motionless.

On April 18th, 1888, he was "noisy and incoherent. He walks to and fro, making loud incoherent ejaculations on all kinds of topics.

His condition thus varied—noisy, restless periods, alternating with mute, motionless cataleptic spells, until June, 1889. He then remained in the quiet phase, with occasional *short* alternations of noisy restlessness, until the present time.

For months he is mute and cataleptic, remaining in one position for hours; then for a short time he becomes talkative, repeating some apparently absurd phrase monotonously for hours, and either keeping up a stereotyped monotonous repetition of some gesture, such as nodding his head or making a succession of bows, or marching about the airing court, shouting emphatically.

On March 15th, 1894, he was noted to be in the silent, motionless phase.

On March 30th, 1894, he was noted to be "talkative; he recites long strings of words in the form of a dialogue. The sentences are completely incoherent, such as—'Xerxes, Artaxerxes, is it a grammatical rule? Indeed, in the bowels, reading, er, sesth-er or any er. . . .' He emphasises the various words with considerable skill, as though much impressed by the importance of his statements." His intonation reminds one of a preacher delivering a sermon. On account of the total want of connection between the meanings of his phrases, it is very difficult to remember accurately any speech of his.

August 1st, 1894.—He is more lively, and is putting on flesh; every day he recites long strings of words; more noisy than formerly.

His perceptive faculties seem to be fair; he seems to understand much that he sees and hears. On urging him to answer a question his lips moved as though he were trying to speak. His appearance suggests that of a hypnotized person.

He rises and shakes hands occasionally on seeing me, and recently suddenly ran forward and opened the door for an attendant. He seems to recognize those about him, and if told to unclench his hands will do so for a short time, and he even makes awkward attempts to do simple acts when bidden, e.g., to sit down, turn round, etc.

He has a fixed stare, yet his eyes express some intelligence, and he smiles faintly at a humorous remark. If urged to speak, a peculiar strained smile results. His speech symptoms may be summed up as follows:—

- (1.) *Mutism* for years or months, alternating with:
- (2.) *Verbigeration*, or the monotonous repetition of phrases, which seem to have no psychic representation, or with
- (3.) Dramatic shouting and declaiming of utter nonsense. If asked the meaning of his speeches, his face expresses surprise.

The *general motor* symptoms are:—

(1.) *Catalepsy*. He remains motionless for hours in grotesque attitudes; his gestures are "wooden" and machine-like; his muscles at first resist my attempts to move his limbs (negativism, the amount of this resistance varying on different days), but finally the limbs become less rigid and assume any position desired (see photograph), and remain so for some time. Usually his hands are clenched together, eyes fixed, staring, seldom blinking. Alternating with:

(2.) *Monotonous automatic movements* ("stereotyped"), such as continuous head nodding, salaaming, etc., rapid aimless strutting, absurd crab-like walking, always towards left, right foot dragging on ground. A series of these movements can often be started by talking loudly to the patient.

Sensory symptoms.—Probably some general anæsthesia and analgesia. He takes no notice of pricks and pinches, and recently endured a painful operation on a toe without exhibiting emotion.

Trophic and *vasomotor* changes are evidenced by cyanosis of hands and feet, chilblains, and a low form of inflammation of a toe recently.

Reflexes.—His patellar, plantar, abdominal, and cremasteric reflexes are all brisk, especially on the left side.

His *pupils* are at times unequal; they react naturally to light, accommodation and skin irritation, and consensually.

His *heart* and *lungs* appear to be normal.

Pulse, 86, soft. *Temperature* in axilla, 96.8.

Respiration, 20; almost completely diaphragmatic. Chest movement very slight.

Urine normal, sp. gr. 1.024; 62 ounces daily.

Bowels fairly regular. *Habits* dirty. He feeds himself very well, but has to be dressed by his attendant. *Appetite* voracious; he will eat almost all he can get, "bolting" it if allowed. He sleeps well.

From the foregoing description it is evident that the case of E. S. presents many of the symptoms mentioned by Neisser in Tuke's "Psychological Dictionary," art. "Kata-tonia," yet not all. The existence of hallucinations and delusions at the inception of the disease is evident, but the first stage of melancholia did not, so far as I know, occur, though there is some evidence in his certificates in 1880 that his ideas were of a painful kind (*vide supra*).

The next stage of mania or melancholia agitata I have no evidence of, though possibly it occurred. The other symptoms, viz., *cataplexy*, with immobility, negativism, and his ordinary *bizarre* attitude; *automatic movements*; *mutism* for years, yet apparent knowledge of his surroundings; and *verbigeration*, all seem to be marked enough.

The presence of religious delusions in the early stages is doubtful, and there is no history of convulsive attacks.

I have never met with a case of insanity that followed the course of katatonia as described by Neisser and other writers, and I am reluctant to diagnose the present case as such, its symptoms and course being so irregular and so divergent from other described cases. Possibly the true explanation of the symptoms may be that the cataplexy, mutism, etc., are all *secondary* to a delusion under which the patient labours, or that auditory hallucinations still govern the patient's actions. Is it then a case of delusional insanity with some hysterical phenomena superadded?

Three Cases of Recovery from Melancholia after unusually long Periods. By JAMES NEIL, M.D., Assistant Medical Officer, Warneford Asylum, Oxford.

(By permission of Dr. Bywater Ward.)

In the following cases recovery from melancholia took place after 11, 9½, and 7 years respectively.

CASE I.—E. M., a clergyman, aged 50. He was naturally a timid and nervous man, deficient in active volition. Just before his illness he suffered anxiety and grief from family bereavements and a prolonged lawsuit. After these events he fell gradually

into a state of melancholia. He was treated for a month in Bethlem, and improved considerably. He resumed his clerical duties, relapsed, became gradually worse, and made two or three half-hearted attempts at suicide. He was admitted into the Warneford Asylum in June, 1888, three years after the first appearance of mental symptoms.

He was then suffering from well-marked emotional depression and painful delusive ideas about moral and religious subjects. He had the usual foul tongue, fœtid breath, and sluggish bowels.

During the three years that followed his admission he continued to get worse. His religious delusions disappeared and were replaced by those of a visceral kind. He believed that his inside was full of scalding matter, that his food did not reach his stomach, but "lay about in the cavities of the chest," and set up "dreadful inflammation." The climax of the attack was reached three years after his admission, and six after the commencement. He refused food, and was fed several times with the stomach tube. His feelings of misery goaded him to frenzy. He abused the attendants, and made attacks on one of the medical officers with homicidal intentions. He masturbated. He wrote frantic letters to his wife, sometimes abusing her, sometimes imploring her to take him home. He attempted suicide by wounding himself with a broken pane of glass, and by setting his night-shirt on fire. He lost a good deal of weight. His breath was very offensive, and his tongue was coated. His nose had a reddish-blue and cold appearance. His eyes were watery and his facial aspect pinched and dyspeptic.

The state of excited melancholia subsided in about six months, and he settled down into a condition of dull, chronic misery, his mind engrossed with painful visceral delusions. He refused animal food and hot food of all kinds on the ground that it increased "the internal inflammation."

He remained in this state about four years longer, when a remarkable change began to appear. His weight began to increase, and he ate largely of farinaceous and saccharine food that he begged to be supplied with. His feelings of organic misery became less intense. His visceral delusions grew fainter, and in a few weeks disappeared. Lastly, his affection for his family returned, and he became very friendly towards the asylum officials. The change in his physical condition was not less striking. He gained 1st. 4lbs. in weight, and his face entirely lost the pinched and dyspeptic look. The process of recovery occupied three months. He left the asylum thoroughly well, after a residence of eight years, and eleven years after his mental illness began.

CASE II.—A. H. H., a widow, aged 45. The apparent causes of the attack were the climacteric period and grief occasioned by the death of friends. The inception occupied six months. The

symptoms began as vague, aimless restlessness. This was followed by emotional depression, painful doubts and perplexities, delusions of attempts to poison her, and of hostile conspiracies. She displayed causeless animosities to those around her. As in the last case, the physical symptoms were those of chronic dyspepsia. She constantly complained of feelings of fulness and weight in the epigastrium. It was probably upon these sensations that the delusions about poison were based.

She remained in this state for nearly nine years. Then the dyspeptic symptoms began to disappear spontaneously. The delusions became weaker, and gradually vanished. The affective nature returned to its healthy state, and she became friendly and sociable. The progress to complete recovery was very gradual, and occupied ten months. She left the asylum quite recovered, after a residence of eight years, and $9\frac{1}{2}$ years from the commencement of the illness.

CASE III.—E. A. K., an unmarried woman, at the climacteric. There was a strong family tendency to insanity, and she had once before suffered from a short mental attack. On this occasion the early symptoms consisted of accessions of painful excitement alternating with depression. Then appeared delusions that she had defied God, that she was lost, that she had set the world on fire and could see the flames. She attempted suicide by throwing herself from a window. These symptoms lasted for a year, when the attacks of excitement ceased, and the mental state became one of deep and constant stupor. The muscular system was resistive. There were automatic twitchings of the facial muscles and rocking of the body backward and forward. In the house she sat motionless in one spot, and in the courtyard she walked round mechanically with short shuffling steps, staring vacantly before her. She never conversed, but at times she would repeat over and over again, in a whining falsetto voice, "I don't know what to do; I don't know where to go." Her habits were wet and dirty.

The stupor continued without marked change for six years. At the end of that time she began to speak a little in a natural tone; then attention to personal cleanliness and neatness in dress appeared, and she began to employ herself in knitting. She was discharged recovered after a sojourn of seven years in the asylum, having been there during the whole of the attack.

Commentary.—The first of these cases, that of E. M., who recovered after eleven years, is the most protracted case of melancholia ending in recovery that I have heard of, with the exception of one mentioned by Dr. Blandford, where recovery took place after thirteen years.

All the three cases presented features that are usually thought to be of bad omen. In the first the attack developed

very slowly. He was ill for three years before permanent asylum detention became imperative, and three years more elapsed before the symptoms reached their maximum severity. The first and second had vivid delusions that remained firmly fixed in their minds for several years, and in the third there were automatic movements and wet and dirty habits also persisting for years.

An interesting feature of the cases is the completeness of the recoveries. The long and severe illnesses left no traces behind them, and the patients retained their mental faculties unimpaired.

When recovery took place not one of the cases had been under any special "treatment" for several years. The dyspeptic symptoms which two of them suffered from had been diligently treated with all the approved drugs in succession, without any obvious result. In both cases medication had long been discontinued. The repugnance of E. M. to animal food, and his preference for the starchy and saccharine food stuffs, which he was consuming in large amount when he recovered, is an interesting fact in connection with Dr. Clouston's well-known teaching.

OCCASIONAL NOTES OF THE QUARTER.

The Epileptic Colony.

We are glad to be able to record that on November 14th, 1894, the stone of the first permanent building of the Industrial Colony for Epileptics was successfully laid at Chalfont St. Peter's, Buckinghamshire. As our readers are aware, the National Society for the Employment of Epileptics founded this Institution. The benevolence of Mr. Passmore Edwards rendered it possible for the committee to erect it on this spot, and he, as was only proper, laid the foundation stone. Many will recall the occasion when a meeting at the Mansion House was held, the then Lord Mayor, Sir Stuart Knill, presiding, for the purpose of passing certain resolutions in favour of adopting the scheme which has now been inaugurated. Last August temporary galvanized iron buildings were erected, and about a dozen epileptics have been admitted; the farm consisting of about 130 acres of land. Among those who attended the ceremony, which took place

on a miserably wet day, were Dr. Ferrier, Dr. Buzzard, Dr. Savage, Dr. A. Turner, Dr. Fletcher Beach, Dr. Colman, Dr. James Taylor, and others who took an interest in this movement. The Chairman of the Executive Committee, Mr. Nicholls, recounted the history of the scheme, and explained that the committee would proceed as quickly as possible with the work, having regard to the amount of donations they received. For women and children distinct provision will be made. A speech was delivered by Dr. Buzzard, who spoke of the satisfaction with which the experiment on the present small scale had been attended. The general health of the colonists has strikingly improved, and the fits of epilepsy have diminished in number. On the latter point it is too soon to speak with enthusiasm, because everyone knows that with regard to this neurosis any change in treatment or in locality will produce excellent, but, alas, only temporary, results. It is not, however, necessary to lay too much stress on this psychological fact when addressing a lay audience.

The provision for epileptics on the same lines as those which are being carried out at Chalfont St. Peter's, has been advocated by Dr. William Pryor Letchworth, LL.D., in a very lucid manner in a Paper read before the National Conference of Charities and Correction, held at Nashville, Tenn., May 23rd to 28th, 1894. In what follows we shall freely avail ourselves of information given in this address. Dr. Peterson, of New York, who has been an earnest advocate of the colony system, observes that:—"There is but one kind of institution which can meet the case of those who suffer from this disease. No asylum, no large hospital, no single vast building in a great City is appropriate for the purpose." After enumerating the special arrangements required, he proceeds:—"Such a place would not be a hospital in the ordinary sense of the term; it would be a village in itself." Ohio was the first State in the United States to provide an Institution for Epileptics, the foundation stone of which was laid November 12th, 1891, at Gallipolis. Through private charity hospital cottages had been erected for children suffering from various affections, including epilepsy. In September, 1893, there were 103 children. The number treated during the fifteen previous months was 170. Two-thirds of this number were epileptics. The Governor of Massachusetts in 1892 recommended to the Legislature early action in regard to

making State provision for epileptics, and advocating Cottage Hospitals. During the Session of 1893 nothing was done. The Board of Lunacy and Charity in the following year pressed immediate attention being given to this subject. At Elwyn, Penn., the Training School for Feeble-minded Children (which will always be associated with the lamented Dr. Kerlin's name), two buildings are now set apart for epileptic children. In Philadelphia a hospital for sane epileptics has been recently opened in connection with St. Clement's Church parish, the building having been formerly known as St. Clement's Hospital.

At Santa Clara, California, the Home for Feeble-Minded Children secured from the Legislature in 1887 permission to establish an epileptic department, in which there are now 100 inmates. This movement was due to the action of Dr. Osborne. In Michigan the Legislature has agreed to provide cottages for epileptics and the feeble-minded, and for this purpose a farm has been purchased. In Minnesota a school for feeble-minded, with a department for epileptics, has been established at Faribault. The Secretary of the Board of Corrections and Charities of Minnesota states that about 120 epileptics are under public care there.

The New York Legislature has passed an Act, entitled "An Act to establish an Epileptic Colony, and making an appropriation therefor." The objects of the colony established in consequence are described as follows:—"To secure the humane, curative, scientific, and economical treatment and care of epileptics, exclusive of insane epileptics." It was decided that the general plan adopted should be in accordance with the recommendations laid down in the Report of the State Boards of Charities to the Legislature. Dr. Letchworth gives a map of the Craig Colony Estate, which is situated at Sonyea, Livingston Co., N. Y., named in honour of the late Hon. Oscar Craig, whose public services are thus commemorated. It ought to be stated that the plans were based upon principles previously enunciated by Dr. Peterson, who is a member of the Managing Board, and in fact its president. From our personal knowledge of Dr. Peterson this position is certainly his due, and reflects honour upon himself and upon those who have recognized his merits.

Having in view all that has been done in the United States, and even so far back as in the forties in France, where Pastor Bost, of La Force, near Bordeaux, was the real originator of the colony system, and again in Germany under the inspira-

tion of Pastor v. Bodelschwingh at Bielefeld,* it would have been a disgrace to our own country had nothing been done for sane epileptics in the manner now witnessed in the new colony in Buckinghamshire. The actual therapeutic results will, likely enough, be exaggerated with the pious hope of obtaining liberal subscriptions from the public, but we doubt not that the good effected will be of a substantial character.

Judicial Lunacy Orders.

In view of the uncertainty which exists among medical men as to the position of magistrates "specially appointed" to exercise the powers conferred on "the judicial authority" by the Lunacy Acts, and, we may add, in view of the very singular ideas which some of these magistrates themselves appear to entertain with regard to the manner in which their duties may be discharged,† we propose to state briefly what we consider the law on this important subject to be. Under the Lunacy Act of 1890, section 9—re-enacting section 2, sub-section 1 of the Lunacy Act, 1889—the powers of "the judicial authority" (as to reception and urgency orders) are to be exercised by "a justice of the peace specially appointed as hereinafter provided, or a judge of county courts, or magistrate, having respectively jurisdiction in the place where the lunatic is." It is with these specially appointed magistrates that we here propose chiefly to deal. They are appointed annually by the justices of every county and quarter sessions borough (section 10, sub-section 1) at their Michaelmas quarter sessions or October special sessions respectively (*ib.* sub-section 2), or in default of such appointment, by the Lord Chancellor (sub-section 3); and provision is made for interim appointments in the case of insufficiency, or of the death, absence, inability, or refusal to act of any of these specially appointed justices (*ib.* sections 3-6). The Lunacy Act of 1891, section 24, carries matters a little further. It provides—meeting a difficulty which had been pointed out, *viz.*, that a magistrate having jurisdiction in the place where the

* See Journal, Vol. xxxviii., p. 214, etc. The same number contains a notice of the colony of the Countess of Meath.

† Cf. Letter, "In Search of a Magistrate," in the last October number of this Journal, p. 708.

lunatic is might not be available—for the exercise of the powers of the judicial authority by a specially appointed justice whether he has such jurisdiction or not (sub-section 1), and for the transfer of petitions for reception orders from one justice to another independent of the existence or non-existence of such jurisdiction (sub-section 2).

Here are the sub-sections in full :—

24—(1.) A Justice of the Peace specially appointed under section 10 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 10 of the principal Act, if the order is *within fourteen days* after its date approved and signed by a judicial authority.

No fresh legislation on the subject has taken place. Like most of the other disputable sections in the recent Lunacy Acts, these provisions do not seem to have yet been made the subject of any authoritative judicial exposition. But one thing at least is perfectly clear. The “specially appointed” magistrates have no right to exercise the powers committed to them arbitrarily. They constitute not only an “authority,” but a “judicial authority,” and they are bound to act judicially. Whatever may be said as to the judicial supervision over the grant of reception orders introduced into our lunacy law by the recent Acts, it was certainly not intended to have the effect of setting up a number of independent and irresponsible magistrates, entitled to take holidays without making provision for the discharge of their duties in their absence, or to transfer petitions for reception orders irrespective of the convenience of applicants or the health of patients, or to interpose unreasonable and excessive delays between the presentation of petitions and deciding upon them. If any misconception upon these points exists, there is a simple and effective means open to aggrieved persons of removing it. Let the matter be brought in

detail, and with proof, under the notice of the Lord Chancellor. Specially appointed magistrates are no doubt elected officers, but they are required to be justices before, and as a condition precedent to, their election; and the Lord Chancellor has the power at any time to remove them from the commission of the peace, to their place on which they owe their eligibility for special appointment. It is to be hoped that on any fresh outbreak of the disorders to which our correspondent in his letter "In Search of a Magistrate," published in our last number, referred, this remedy will be promptly tried. The new Lunacy Acts are a very clumsy and unsatisfactory piece of legislation. But there is force enough in the existing law to prevent the time of medical men, and the best interests of insane patients, from being the sport of inferior magistrates who are either ignorant of their duties, too careless to perform them, or who are out of reach for nearly the whole of the day.

One remedy which should be embodied in an amendment to the existing Lunacy Act, is that of permitting the same Magistrate who signs an order for the reception of a patient without having personally examined him, to visit the case in the asylum to which he has been admitted, if he has filled up the form required when a patient claims his right of being examined by a Magistrate. The Act requiring a *different* Magistrate in these instances frequently occasions difficulty and delay. If this change were made, and if it were required that Magistrates empowered to sign Reception Orders should communicate with their colleagues when unable to perform their duties in consequence of illness or absence from home, the existing difficulties now justly complained of would be materially lessened.

In order to stop the dilatoriness of these Justices a new clause should be inserted in any future Act, with a penalty attached if any unnecessary delay occur in making the order after the other legal documents are placed in their hands.

It would be extremely easy to give instances of what can only be designated as Justices' stupidity regarding the signing of orders for private patients—of two who signed orders founded on one medical certificate, of another who refused to make the order at all because one of the medical men had made some alterations in his certificate, but our space does not allow of it.

The documents of reception in their present form are far too complicated for ordinary people, and are often a grievous

trouble to their poor relatives. The petition should certainly be simplified. Few, according to our experience, are ever correctly filled up, and the subsequent amendments give no end of trouble.

One of the first cases admitted under the new Act into an asylum with which we are acquainted, had been under certificates when the old Act was in force. Her sister, a schoolmistress, on the completion of the various certificates, made this remark:—"If the new Lunacy Laws had been framed to drive sane people out of their wits I could have understood them." Others who have had similar experiences will undoubtedly agree with her.

Dry and Wet Packs.

Having a decided opinion in favour of the judicious employment of hydropathic measures in the treatment of the insane, including the careful use of the dry and wet pack, we are afraid that the recent death of a patient who was placed for a considerable time in the former, while labouring under maniacal violence, will exercise a very injurious effect in inducing the medical superintendents of asylums to forego its employment in the treatment of patients under their charge, from fear of possible results and consequent blame. True, this would be illogical, but unfortunately this is no reason whatever against such a course being pursued, as in most other human affairs. At any rate, the logic, such as it is, in which the interests of the patient may be sacrificed to the legal danger facing the physician, is natural, for he argues that if an accident should occur to a patient treated by the dry or wet pack he will be blamed. Some time ago we took pains to inquire of asylum superintendents what their practice had been in this respect. The slight degree in which the pack in any form was found to be in use was strikingly elicited, the reasons alleged for this being various. It was obvious, in some instances, that the attention had never been directed to hydro-therapeutics in any shape; nothing beyond the ordinary bath had been employed, and that for the purpose of cleanliness, and not in the slightest degree for treatment. The prolonged bath had never been in use. Packing patients had been regarded as altogether out of the question.

Other superintendents were well aware of the utility of the pack, and individually desired to make use of it, but the knowledge that it is regarded as one form of mechanical restraint, and, further, the fact that one or two patients had died under this treatment, whether *post hoc* or *propter hoc*, paralyzed their wishes and judgment, and this, it may be added, at a time when prescribing remedies hypodermically of a much more risky character.

Following in the footsteps of Dr. Lockhart Robertson, Dr. Duckworth Williams has used the wet sheet largely, and testifies that "those who have used it most are unanimous in their opinion that it is a valuable addition to their means of treating certain forms of insanity."* Patients suffering from acute sthenic mania and recurrent mania are, as Dr. Williams considers, the most likely to derive benefit from this treatment. This treatment may be continued for eight to twelve hours at a stretch. Some liquid nourishment, and certainly stimulants occasionally, have been beneficial if symptoms of exhaustion appear. In recurrent mania, marked by violence rather than the physical symptoms just mentioned, most good is done by using the pack daily for four hours, twice in the morning and twice in the evening for a week. Dr. Williams regards the dry pack as much more limited in its usefulness. With the exception of the sheet not being wet, the manner of its use and the caution necessary are practically the same. It is important to note that although the shock is not so great, there is more danger of exhaustion, the pulse becoming slower and the temperature reduced, while the perspiration is very great indeed. Dr. Percy Smith, however, thinks the dry pack safer than the wet pack. He has found that the dry pack is not so successful as the wet in soothing the system, and, indeed, occasionally has had quite the opposite effect.

We have adduced the practice of high authority on the employment of the dry and wet pack in insanity, not as one to be necessarily followed in detail, but as of interest and importance in reference to that which was adopted at the Holloway Sanatorium, in which the patient died, and was the means of attracting much public attention. From the evidence given by the assistant medical officer we find that Thomas Weir, aged 25, the patient in question, was on August 9th, 1894, much excited, and made a violent attack on two of the patients. Two days later he was still violent,

* *Vide* "Dictionary of Psychological Medicine," Art. Baths.

made desperate attempts to escape, and refused his food. On that day he was dry packed. On the 13th, believing his food to be poisoned, he refused it again. On September 3rd he attacked three of the attendants. Dry pack from 5.30 p.m. to 7.30 p.m. Two days afterwards he was very violent, and had the dry pack for five hours. On September 10th he attempted to escape. On September 20th it is reported that "owing to his incessantly repeated attacks it has been found necessary to keep him more or less continuously under restraint by means of the dry pack." Again "this evening (26th) he managed, during the short absence of the attendants, to free himself from the pack, and to escape through the window on to the roof." It appears that on this occasion the attendant had just left him for a moment or two. He was recovered about midnight, having sustained a few bruises. He was kept more or less from this period in the dry pack till his death. He was, therefore, on the 27th eighteen hours in the dry pack. On the 29th he was reported as trying to bite his attendants on their approaching him. On the 30th "furiously excited and noisy all night. About 4 a.m. the same morning he died."

From this record it is not easy to discover very clearly the exact duration of time during which the patient was confined in the pack, but the allegation was made, and was not contradicted by the medical staff, that he was practically so treated for the last three or four days of his life; say, about ninety-six hours, not allowing for those times when he was removed in order to be washed and to attend to his necessary wants. However liberal a deduction may be made for these purposes, the duration would clearly exceed by many hours the period or periods already mentioned. We do not state this by way of blame, but simply in order to put on record the fact.

With regard to the patient's escape from the pack, it was concluded that the straps had not been properly applied. The inference would certainly be that they were not too tight. Afterwards they were applied more tightly.

The summing up of the Coroner does not appear to have been characterized by any prejudiced feeling, and the opinion was clearly expressed that the medical staff would regret the unfortunate result as much as anyone else.

The verdict of the jury was as follows:—"We are of opinion that Weir died from exhaustion, following mania. Rider:—The jury are of opinion that not sufficient medical

supervision was exercised, and that the mechanical restraint was excessive and too long continued."

We do not propose to enter into the question whether the treatment adopted was continued for too long a time or not; whether the amount of nourishment administered was sufficient; whether stimulants ought to have been freely supplied; or, lastly, whether the medical supervision was as great as so serious a case required. Doubtless the Lunacy Commissioners will report on the unhappy event, with all the evidence at their command to assist them in arriving at a correct conclusion. Any criticism on our part at the present time would be premature. Our sole object is to record the treatment adopted, earnestly hoping that the judicious use of the dry or wet pack will not be thereby jeopardized.

Pensions.

We regret to note that the Derby County Council, at their meeting of 3rd October, have thrown out the scheme for pensions submitted by the Asylum Committee. It had been carefully prepared on similar lines to that which has been lately accepted by the Norfolk County Council. Unfortunately the Finance Committee had arrived at the conclusion that they could not recommend the scheme, holding that every case must be determined at the time when the official applying for a pension became eligible. After hearing opinion of counsel, and debating the question from the point of view of the Finance Committee and of the Asylum Committee, it was moved that the scheme be received as containing reasonable suggestions for the guidance of the Asylum Committee. An amendment to the effect that no scheme could be legally formulated by the Asylum Committee with regard to pensions, but that each case should be dealt with on its own merits, was the finding of the Council by 24 to 14 votes. The arguments advanced were, briefly, that the Committee could not bind their successors with reference to pensions; that the Lunacy Act was permissive and not compulsory in this respect; that the different classes of officials would be dealt with on different grounds, and each on his own merits. It was also thought that every recommendation for payments must come through the Finance Committee, who act for the Council as advisers on financial questions.

It is to be regretted that there is such diversity of pro-

cedure in different parts of the country. We cannot doubt that security of tenure and assured provision for incapacitated officials are necessary for the proper management of these important institutions, and it is to be hoped that the consensus of opinion will tend to uniformity in dealing with this question, in the liberal spirit of the Norfolk County Council.*

In this connection it should be noted that a pension of £37 a year was voted to attendant John Harrison, of the Derby County Asylum, on the completion of 22 years' service—being equivalent to 22-40ths of his salary and emoluments per annum. This was confirmed by the County Council on the date above mentioned. Yet the month did not pass without a further illustration of the inequalities and defects of asylum service, and of the risks to which these officials are exposed. Head attendant Harry Bird died from blood-poisoning contracted in the post-mortem room, leaving a widow and eight children unprovided for. He had served 8½ years at the above asylum. Had he been a police-constable, his widow would have received a pension. The Chairman of the Committee interviewed the Local Government Board and the Lunacy Commissioners, but was informed that they had no power in the matter. The officers of the Derby County Asylum have organized a fund on behalf of the bereaved family; but it is unjust and discouraging that such a claim on the public funds should be transferred to private charity.

* The scheme adopted by the Norfolk County Council in July last:—1. That the committee shall, subject to confirmation by the County Council, grant to every official named in the schedule who has been an officer or a servant in the asylum for not less than fifteen years and is not less than fifty years old, a superannuation allowance amounting to not less than one-fiftieth or more than one fortieth of his or her pay and allowances at the time of retirement for every year of service. 2. No pension in any case to exceed two-thirds of such pay and allowances. 3. The resignation of officials mentioned in the schedule to be compulsory at sixty years of age. 4. That in all cases where any official named in the schedule shall be incapacitated by confirmed illness, age, or infirmity the committee may grant to him or to any official not named in the schedule such superannuation allowance as they may think fit, as provided by Sec. 280, 53 Vict., cap. 5. 5. All applications for pension shall be laid before the committee by the Medical Superintendent, accompanied by his report. 6. Any official named in the schedule who shall be dismissed from his or her office by the Committee of Visitors shall not be entitled to a pension. 7. No person mentioned in the schedule shall be engaged as an officer, attendant, or servant after the age of 35 years. Schedule: Medical superintendent, assistant medical officer, matron, assistant matron, day or night nurse or female attendant, laundrymaid, cook, kitchenmaid, head male attendant, assistant male head attendant, day or night male attendant.—*Derby Express*, 30th Oct., 1894.

Guild of Friends of the Infirm in Mind.

A meeting of the above excellent Guild was held at the Chaplain's House, Colney Hatch, on October 31st, 1894. At this meeting a paper was read by the Rev. Henry Hawkins, which gave a brief but interesting sketch of the amelioration of the condition of the insane. Special reference was made to the Association for the After-care of poor patients who have left asylums recovered, the inception of which was due to a proposal of Mr. Hawkins himself.

It may be stated in passing that the number of applicants for relief or help in obtaining situations is greater than at any former period.

We wish every success to the "Guild," which was established in 1871 (some eight years before the "After-care Association"), having among other objects that of promoting visits to friendless patients in asylums in conformity with the regulations of the establishment; of maintaining friendly intercourse with discharged patients; of recommending efficient attendants; and, lastly, of furthering in any other way the interests of the infirm in mind. It is to be regretted that other asylums have not followed in the footsteps of Colney Hatch. We would fain hope that chaplains generally will display a little more enthusiasm than is their wont in this direction, and venture to recall the portraiture of an ideal Asylum Chaplain sketched in this Journal in the number for July, 1893.

PART II.—REVIEWS.

The Forty-eighth Report of the Commissioners in Lunacy, 19th June, 1894.

The Forty-eighth Annual Report of the Commissioners in Lunacy supplies us with the usual statistical review of the certified or reported insane in England and Wales, and a critical retrospect of the different institutions devoted to their care. Directly with the publication of this Report there has arisen the usual outcry in lay and even some medical papers as to the alarming increase of insanity in our midst, and our reiteration of the same series of arguments year by year, disposing of this erroneous idea, becomes somewhat wearisome. The observations we have frequently made bearing on this point

have received ample corroboration by the evidence contained in the Registrar-General's returns for 1891 issued last year, and we cannot refrain from expressing our regret that in an official Report such as that of the Commissioners, bearing apparently so much weight with the public, this important problem, viz., the alleged increase of insanity, should have been almost entirely disregarded; save for a passing note the Commissioners make no mention whatever of the census returns which furnish us with such interesting proofs that insanity in England and Wales bears practically a stationary ratio to the population. The Press of the country will, unfortunately, persist in regarding the Commissioners' Report as a trustworthy guide as to the actual number of the insane, whereas it happens to be, as we all should know, merely a *résumé* of work done during the past year with respect to a section, the greater section it is true, but still a section only, of the mentally afflicted in the kingdom. The Commissioners' figures, as we have before had occasion to observe, are quite misleading for the purposes of statistical deduction, and a glance at the census returns for 1891 will clearly show how erroneous such alarmist inferences are. We find from the censal report of 1891, in the first place, that there continues to be a steady rise in the proportion of cases coming under official cognizance out of the existing insane population, for of the total number of insane in England and Wales in 1871 only 82·3 per cent. were known to the Commissioners; this proportion rose in 1881 to 86·5 per cent., and in 1891 to 89·1 per cent., so that we can very easily account for a certain portion of the yearly augmented figures furnished by the Commissioners. From the census report again there appears to be a steady diminution in the rational increase of enumerated insanity to population, falling from 7 per cent. in 1871-81 to 3 per cent. in 1881-91. On the basis of the mortality and recovery statistics of the Commissioners also, the census report shows that it may be calculated that the annual proportion of new cases of insanity to population was actually lower in 1881-91 than it had been in the previous decade; the increase in the enumerated cases of existing insanity in 1881-91 being due, as we have year after year insisted, to the slowly diminishing death-rate taken as a whole, and to the diminishing death-rate of progressive age-periods, the result being the accumulation of aged chronic cases. Another interesting illustration may be taken from the census returns when considering the propor-

tion of the insane to the population at different age-periods; were insanity to be so largely on the increase we should expect to find the main increment in the proportion of the insane under the age of 45, whereas, on the contrary, during the 20 years ending 1891 the number has remained almost stationary. The ratio shows an increase as age advances, but only to the extent of 1.67 per 1,000 in 20 years for the age-period 45-65, and of 1.66 per 1,000 above 65. We are, therefore, justified in concluding that there has been no proportionate increase of insanity during the decade; that the augmented figures in the census report are due to the accumulation of cases the result of an increased longevity in the insane owing to improved treatment, etc.; that the large annual increase in the Commissioners' figures of the total number of certified insane is due to an increase in number of cases coming under official cognizance out of the almost stationary insane population, together with an accumulation of cases in asylums by reason of diminishing death-rate among the insane generally and as age advances. Some of the statistical tables in the Commissioners' Report, notably Nos. II. and III. (dealing with the ratios of insane to population and admissions to population), are in consequence of little practical utility, except that they are evidence of the proportion of certified cases to the population, which in itself is a matter purely of official interest.

The number of registered insane on the 1st January, 1894, was 92,067, and they were classified and distributed as on p. i. There is an increase in the total number of reported insane therefore of 2,245, an increase far above the average for the ten preceding years. The pauper cases increased in county and borough asylums by 2,781, in the criminal asylum by 1, and in ordinary workhouses by 29; while they decreased in registered hospitals by 22, in metropolitan licensed houses by 390, in provincial licensed houses by 227, in metropolitan district asylums by 38, and as outdoor by 10, and the changes being mainly metropolitan are explainable by the accommodation recently afforded by the opening of Claybury Asylum. The net increase for the year among the pauper class is only to be explained by the fact that no sooner is ample accommodation afforded than advantage is taken of this by the numerous cases made to lie by, as it were, waiting for this superior grade of treatment, for, looking at the number of admissions in 1893 into Claybury Asylum alone, we find that of the 2,180 so admitted,

Where Maintd on 1st January, 1894.	PRIVATE.			PAUPER.			CRIMINAL.			TOTAL.		
	M.	F.	T.	M.	F.	T.	M.	F.	T.	M.	F.	T.
	In County and Borough Asylums	445	589	1,034	26,688	32,544	59,232	66	26	95	27,202	33,159	60,361
In Registered Hospitals	1,833	1,734	3,567	263	148	401	1	1	2	2,087	1,903	3,990
In Licensed Houses :—												
Metropolitan	770	867	1,637	269	331	600	...	...	...	1,039	1,198	2,237
Provincial	588	797	1,385	107	116	223	3	...	3	666	913	1,611
In Naval and Military Hospitals	230	...	230	...	...	...	...	...	...	280	...	280
In Criminal Lunatic Asylum (Broadmoor) ... ..	...	...	...	1	...	1	472	159	631	473	159	632
In Workhouses :—												
Ordinary Workhouses ... ..	...	...	...	4,765	6,121	10,886	...	...	...	4,765	6,121	10,886
Metropolitan District Asylums ... ..	...	...	...	2,678	3,105	5,983	...	...	...	2,678	3,105	5,983
Private Single Patients	186	252	438	...	...	...	...	...	...	186	243	438
Out-door Paupers ... ..	...	...	...	2,276	3,423	5,699	...	...	...	2,276	3,423	5,699
Total	4,052	4,269	8,311	37,237	45,768	83,005	845	186	731	41,834	50,233	92,067

1,091 were transfers and the remainder 1,289 fresh cases, many of them, no doubt, by no means recent ones. For the County of London alone there has been an increase of 800 of its pauper lunatics, being nearly 500 above the average yearly increase. As the Commissioners very rightly show, the diminishing death-rate and recovery-rate in county and borough asylums accounts for 360 of this large augmentation in the number of the pauper insane.

Taking a survey of the statistical tables, we find that in the summary showing the number and distribution of all reported insane, the average annual increase for the decade 1885-1894 was 1,353. The increase for the past year, 2,245, is the largest yet recorded.

The ratio of registered insane in England and Wales to the population can only be of interest to such of us as have a morbid curiosity for figures, for, as we have maintained, so long as no allowance is made for the 10·9 per cent. of uncertified insane (according to the census returns), these tables lose their value as true records of the rational proportion of insane to population. However, we may note the increase of this ratio to 30·63 per 10,000 of population, a differential increase of ·42 on the ratio of last year. The average ratio for the last ten years is 29·69.

The ratio of the admissions, or the number of patients coming within official cognizance during the year, to the whole population is of interest in showing the ratio of newly-certified insane to the whole population, but that is all, and the objection to this table pointed out last year, that first attacks are not alone dealt with, naturally detracts from its value. The ratio per 10,000 of the whole population in England and Wales has increased to 5·99, an increase of ·16 on that of last year.

The ratio per cent. of pauper lunatics, etc., to paupers of all classes on the 1st of January, 1894, shows a further diminution from 10·32 last year to 10·10 in this, an apparent diminution of ·22 per cent., but the total number of paupers to population has increased to 2·73 per cent. from 2·64 per cent. last year, so that the actual diminution, allowing for this increase, = ·57 per cent. This table is, perhaps, the most valuable of the three dealing with proportionate ratios of insane to population, as the insane classified as paupers include but a small number of those who would not, if sane, be also ranked as paupers. We may, therefore, take it that these figures give as near an approach

as possible to a comparative estimate of the fluctuations of the proportionate number of insane in our midst. Of the total number of pauper insane under official supervision, we find from another table that 72·82 per cent. are in asylums, hospitals, and licensed houses, and that 20·32 per cent. are in workhouses, the remainder, 6·86 per cent., being with relatives and others. During the decade the first of these has increased by 5·37 per cent., the others having diminished by 3·95 and 1·42 per cent. respectively, evidence of the growing appreciation among parish and union authorities of the four-shilling grant, and among the poorer classes of the advantages of asylum treatment. The number of patients under detention in asylums, registered hospitals, licensed houses, etc., on the 1st of January, 1894, was 67,236, an increase of 1,992 on that of last year. The appended table shows the increase or diminution in the various classes :—

	County and Borough Asylums.	Registered Hospitals.	Metropolitan Licensed Houses.	Provincial Licensed Houses.	Naval and Military Hospitals.	Criminal Asylum.	Private Single Patients.	Idiot Establishments.	Total.
Increase ...	2,009	15	19	—	—	1	—	—	2,044
Diminution	—	—	—	24	16	—	10	2	52
									1,992

The admissions during the year (excluding transfers and readmissions due to lapsed orders) show a total increase of 717 on the number last year. The increase or diminution under the various forms of care is here shown :—

	County and Borough Asylums.	Registered Hospitals.	Metropolitan Licensed Houses.	Provincial Licensed Houses.	Naval and Military Hospitals.	Criminal Asylum.	Private Single Patients.	Idiot Establishments.	Total.
Increase ...	875	15	—	—	—	5	—	22	917
Diminution	—	—	77	64	25	—	14	—	200
									717

There is a continued diminution in the number of recertifications rendered necessary by the lapse of reception orders, but though the improvement is not very marked it speaks highly for the close and careful application there must be in all asylums to the requirements of the Act, when only 71 fresh reception orders were found necessary in county and borough asylums, 14 in registered hospitals, 12 in metropolitan licensed houses, and 22 in provincial licensed houses. We shall not, however, be surprised to find in a few years some augmentation in these figures, owing to the growing intricacy of the work as time goes on.

The recoveries during 1893 numbered 6,853, or 183 more than last year. The increase occurred in county and borough asylums (76), in registered hospitals (8), in metropolitan licensed houses (13), in provincial licensed houses (113), and the diminution in naval and military hospitals (24) and among private single patients (5). The increase in provincial licensed houses from 227 in 1892 to 340 in 1893 is worthy of note. The other discharges as not recovered, including lapsed orders, numbered 4,790. The proportion per cent. of stated recoveries to admissions fell further to 38.45. This is the lowest yet recorded, and 1.21 per cent. below the average for the decade, the diminution being mainly in county and borough asylums, in naval and military hospitals, and among private single patients, while there is a marked increase in all licensed houses. We append a table of these percentages:—

	County and Borough Asylums.	Registered Hospitals.	Metropolitan Licensed Houses.	Provincial Licensed Houses.	Naval and Military Hospitals.	Criminal Asylum.	Private Single Patients.
Average of percentages of recoveries to admissions, during the decade 1884-1893	39.57	47.19	38.90	37.97	54.54	21.07	15.26

The deaths during 1893 numbered 6,688, an increase on that of last year of 203. The death-rate during 1892 of the certified insane at different age-periods to the number of patients living on December 31st of that year compared with the death-rate among the general population for the

same ages and at the same time, gives us the following table:—

Age Periods.	Death-rate per 1,000 Reported Insane.	Death-rate per 1,000 whole Population.	Proportion of Insane Death-rate to whole Death-rate.
Under 5	—	{ Males 61·9 Females 52·1 } 57·0	—
5—9	{ Males 16·5 Females 22·0 } 39·2	{ Males 4·7 Females 4·5 } 4·6	8·5 to 1
10—14	{ Males 67·0 Females 63·5 } 65·2	{ Males 2·6 Females 2·7 } 2·6	25·0 to 1
15—19	{ Males 63·0 Females 51·0 } 57·0	{ Males 4·0 Females 3·9 } 3·9	14·6 to 1
20—24	{ Males 64·2 Females 54·7 } 59·5	{ Males 5·2 Females 4·7 } 4·9	12·1 to 1
25—29	{ Males 75·4 Females 48·7 } 62·0	{ Males 7·1 Females 6·7 } 6·9	8·9 to 1
30—34	{ Males 111·1 Females 66·2 } 88·6	{ Males 12·2 Females 10·4 } 11·3	7·9 to 1
35—39	{ Males 98·6 Females 63·9 } 81·2	{ Males 12·9 Females 15·5 } 14·2	5·7 to 1
40—44	{ Males 131·0 Females 93·0 } 112·0	{ Males 36·8 Females 30·6 } 33·7	3·3 to 1
45—49	{ Males 208·1 Females 151·3 } 179·7	{ Males 75·4 Females 65·9 } 70·6	2·5 to 1
50—54	{ Males 394·6 Females 289·5 } 342·0	{ Males 154·9 Females 141·9 } 148·4	2·3 to 1
55 and upwards	—	{ Males 305·1 Females 274·1 } 289·6	—

The death-rate per 1,000 of the reported insane for the year ending December 31st, 1892, was 97·8, the general death-rate being 19·0 per 1,000. By a study of the above table it may be seen how the general population death-rate and the insane death-rate tend to approximate as age advances, accounting thus, as we showed last year, for the accumulation of aged chronic cases in asylums. It may be of interest also to note the diminishing death-rate among females with advancing age as compared with the general population rate, helping thus to explain statistically the predominance of the female element in chronic asylum inmates.

Tables giving the yearly average of the total number of lunatics admitted into various institutions during the five

years 1888-1892 and the ratio per 10,000 of this yearly average to the whole population at the time of the last census, together with two tables as to occupation and marriage, are, we presume, to be regarded as of interest in determining the ratios of occurring insanity to the general population under different conditions, but we fail to see that these can be anything but approximations, of advantage perhaps to the Commissioners, but of no general practical value, as the basis of calculation is not a correct one. Of the yearly average of admissions during the five years 1888-1892, 49·3 per cent. represented cases of mania, 25·4 per cent. cases of melancholia, 11·2 per cent. and 4·4 per cent. cases of ordinary and senile dementia, 5·7 per cent. cases of congenital mental affection, and 4·0 per cent. other forms of insanity. Of these 70 per cent. were first attacks and 30 per cent. relapses or recurrences.

The tables giving the assigned causes of insanity of the yearly average number of admissions during the five years ending 1892 are of interest as showing the increasing percentage of intemperance as a cause of insanity. The other figures vary but slightly from those of previous similar tables, and a remarkable uniformity is noticeable with regard to heredity, an influence which appears almost regularly to show a percentage of 20·5 for males and 25 for females. The preponderance of mental causes in the private and of intemperance in the pauper class may also be noted. Would it be asking the Commissioners too much to have these tables of causes revised? The old list might easily be extended to the improvement of the table, especially in what is there termed the "moral" section.

In the table dealing with the causation of general paralysis we find that venereal disease is given as the cause in only 3·9 per cent. of the yearly average number of males admitted during five years, and of females 1·4 per cent., while alcoholism as a cause of general paralysis is made to account for 26·1 per cent. and 20·1 per cent. respectively. The whole matter of the ætiology of general paralysis requires, we think, careful study; there is too great a proclivity among medical superintendents blindly to discard the syphilitic theory of the origin of this malady in favour of the whole of the other causes (but notably intemperance) in the Commissioners' calendar. On the Continent, especially in Denmark, Holland, and Germany, the most scrupulous inquiry is always made as to syphilitic antecedents in cases of general

paralysis, with the result that their percentages for syphilis and alcoholism as causes of the affection differ materially from our own. We make the remark in the hope that closer investigation into the previous histories may in future be made for the sake of obtaining information on this point, for at present the causation table of general paralysis almost tallies with that of suicidal cases in the percentage of each stated cause. The table dealing with the relation between suicidal propensity and the causation of insanity we do not deem of great importance, the approximation of the different figures to those in the general causation table being too close for any deductions of value; moreover, we question very much the rôle causation plays in the induction of suicidal proclivities; at the best the influence can be but secondary to the grade and variety of the mental affection and the heredity and temperament of the patient. It would appear from these tables that suicidal propensities were more rife among the married between 35 and 44, but that surely is accounted for by the preponderance of all cases, and especially melancholia of recent origin at that age-period. More than half (55·1 per cent.) of the number of cases of melancholia admitted during the five years were returned as suicidal.

The average number resident during 1893 in all institutions came to 68,868, distributed as follows:—In county and borough asylums, 59,177; in registered hospitals, 2,383; in metropolitan licensed houses, 2,401; in provincial licensed houses, 1,794; in naval and military hospitals, 233; in the criminal asylum, 634; of private single patients, 437; and in idiot establishments, 1,809.

The percentages of post-mortem examinations made during the past year show a good deal of improvement in this direction. In county and borough asylums 78·7 per cent. of the causes of death were verified by autopsies (an increase of 2 per cent. on the previous year); in other institutions, except the criminal asylum, where post-mortems are performed at every death, the figures are necessarily lower owing to the difficulty in many cases of obtaining the necessary leave from relatives.

The total number of boarders admitted into registered hospitals and licensed houses was 250, of which number 92, or 36·8 per cent., had to be subsequently certified, while seven died during their residence as boarders.

Prestwich Asylum has been the first to take advantage of

the 26th section of the Act providing for boarding-out of chronic harmless cases in workhouses, 80 of its patients being thus transferred.

There are numerous tables dealing with the location and distribution of pauper insane, annual returns from institutions, tables of transfers, of criminal lunatics, etc., on which we cannot here dwell. We may, however, note some points of interest in the remainder of the Report.

By the completion of Claybury Asylum the number of county and borough asylums is augmented to 68, the patients in these being classified thus:—

	Males.	Females.	Total.
Private.....	445	589	1,034
Pauper.....	26,688	32,544	59,232
Criminal.....	69	26	95
Total.....	27,202	33,159	60,361

Compared with last year's figures the private patients have increased by 43, the pauper by 2,789, and the criminal by one. County and borough asylums appear still to be lagging in taking advantage of their privileges in providing accommodation for paying patients. The Commissioners notice the approaching completion of the hall attached to Claybury Asylum for the reception of private patients, but we fear they will, from more recent developments, suffer some disappointment in their hopes here expressed as to the range of payment to be demanded—the charges which are being made are certainly not very low.

Mention is made of the improvements and additions to various county asylums which are being undertaken or proposed in the direction mainly of detached hospitals for infectious diseases and for the increase of accommodation. Twenty-one asylums still lack the necessary provision for the isolation of infectious maladies. The serious annual complaint as to the insufficiency of space is dealt with at greater length by the Commissioners this year than usual, and they very properly suggest that the Legislature should be called upon to intervene in the unnecessary flooding of valuable accommodation in asylums with old incurables and chronic cases. They show that whereas in 1875 the per-

centage of pauper lunatics in asylums was 57·13 as against 27·47 in workhouses, the numbers last year were respectively 71·34 and 20·32. In addition to the projected new asylums, eight in number, mentioned in last year's Report, we learn that proposals for a fifth asylum for Lancashire, a sixth for London, and an additional one for Notts have been considered. Defective sanitary conditions in eleven asylums, leading to scarlet fever in two, typhoid fever in nine, erysipelas in four, and diarrhœa and dysenteric diarrhœa in six, are noted, and the need for special isolation buildings for each asylum is one of serious moment.

The deaths from suicide in county and borough asylums during 1893 numbered (exclusive of one in which the act was committed before admission) seventeen. This is an increase on the number last year, but considering the large number of suicidal cases admitted there is nevertheless satisfactory evidence of the vigilance and care exercised by the authorities and staff of asylums. Details of these suicides (ten males and seven females) are given. Nine of these (six males and three females) met their deaths by hanging, two (one male, and one female, while absent on leave) by drowning, one (male) by strangling, one (male) by cut throat, one (male) by throwing himself under a train, one (female) by swallowing a teaspoon, one (female) by leaping from a height of 18 feet, one (female) by drinking a strong solution of ammonia. Misadventure other than suicides accounts for nineteen deaths, including one (a female) who succumbed owing to self-insertion of needles into the abdomen with suicidal intent prior to admission. There are only four of these deaths attributable to suffocation during epileptic fits, an improvement on last year's figures (fifteen) on which the Commissioners make no favourable comment whatever; two deaths were due to scalding through gross neglect of bath-rules, and one was the result apparently of a subcutaneous injection of hyoscyamine.

The average weekly cost of maintenance per head was as follows:—

In County Asylums...	...	...	8s. 3d.
In Borough Asylums	...	...	9s. 6½d.
In both taken together	...	...	8s. 6¼d.

This is a diminution which is apparently a record in asylum expenditure.

The number of registered hospitals remains at 18. Two

suicides (both females) by drowning are recorded, one during leave of absence. The occurrence of what is thought to have been Asiatic cholera at Coton Hill Institute (on very slender evidence, however, in our opinion) led to a thorough revision of the drainage system and water supply of that hospital. One death is recorded through misadventure, a patient (male) while on leave for the day accidentally falling under a tram-car.

The number of licensed houses has decreased by one in the metropolitan district. There were no deaths from suicide or other misadventure in metropolitan licensed houses, and only one suicide (by drowning), and two fatal casualties (fractured ribs and suffocation in an epileptic fit) are recorded from provincial houses. This satisfactory result is, however, not commented upon.

The total number of single patients shows no increase. Of the 438 thus classified, 160 were chancery patients. There is still no desire apparently on the part of the Commissioners to sanction the permissive clause in the Act as to more than one certified patient in the same house.

The number of pauper lunatics in workhouses was 16,869, a decrease of nine on the number in the previous year. One patient died through accidental scalding.

Under the heading "Prosecutions for breaches of the Lunacy Act," the Commissioners consider at length the case of Dr. Sherrard, and they arrive at the conclusion that "the result of the trial leaves it possible for persons suffering from mental disorder to be received for payment and treated clandestinely and withdrawn from official supervision, and opens the door to abuses which the Lunacy Laws were designed to prevent." Most will agree with this official view. It is to be devoutly hoped that so painful a case will not occur again. That there is ample scope for the exercise of the Commissioners' powers in this direction is undoubted, and it would be well did they act more freely and energetically.

A matter which perhaps would not be out of place in a review of this Report is that the Commissioners might well direct the attention of the Lord Chancellor to the difficulty frequently experienced, especially in the metropolis and other large towns, of obtaining the services of the judicial authority in the matter of certification. Relatives of patients shrink from making application to a stipendiary magistrate, and judges of county courts are not readily

accessible, so that justices specially appointed are mainly sought after for granting the necessary orders. A representation should, we think, be made of the manner in which these duties are evaded, and of the trouble and expense petitioners are put to, frequently to find a justice at all, and when so found to induce him to act.

We cannot close our remarks without an expression of regret at the retirement of Mr. Cleaton from active service as a Commissioner. His services will not, however, be lost to the Board, whereon he retains a seat as Honorary Commissioner.

Thirty-sixth Annual Report of the General Board of Commissioners in Lunacy for Scotland. Edinburgh, 1894.

The number of the officially recognized insane in Scotland increased during the year 1893 from 13,058 to 13,300. In relation to population this represents an increase of three, as compared with six in the preceding year, per 100,000, an increase which applies only to pauper lunatics, the ratio remaining exactly identical for private patients with that of 1892. In the same relation the increase is made up by an addition of two to those maintained in establishments, and of one to those who are disposed of in private dwellings. From Table III. of the Appendix it appears that this increase in the ratio of insane to population was up to 1885 a steadily progressive one, the increase in the quinquennium ending with that year being 24 per 100,000, but that since then the rate of increase has been a diminishing one, the addition during the five years ending 1890 being only 18; and there is every indication that this is being maintained.

The mode of distribution of all lunatics on 1st January, 1894, is shown in the table on the next page, and as regards the registered insane the following changes have taken place during the year. There has been an increase of 26 private and 152 pauper patients in Royal and District Asylums, of one patient in private asylums, 44 pauper patients in parochial asylums, and of 46 pauper patients in private dwellings, while a decrease has occurred of 19 pauper patients in the lunatic wards of poorhouses, and of seven private patients in private dwellings. A total increase of 225 took place, of whom 21 were private and 204 pauper. The increase of numbers in establishments was 186, and in private dwellings 39.

Number of Lunatics at 1st January, 1894.

Mode of Distribution.	Male.	Female.	Total.	Private.			Pauper.		
				M.	F.	T.	M.	F.	T.
In Royal and District Asylums	3696	3962	7648	802	842	1644	2884	3110	6004
" Private Asylums	69	99	158	69	98	157	...	1	1
" Parochial Asylums, i.e., Lunatic Wards of Poorhouses, with unre- stricted Licenses	751	863	1614	...	...	...	751	863	1614
Lunatic Wards of Poorhouses, with restricted Licenses	417	440	857	...	...	...	417	440	857
" Private Dwellings	1053	1620	2673	40	68	108	1013	1552	2565
	5976	6974	12950	901	1008	1909	5075	5966	11041
" Lunatic Department of General Prison	40	14	54	...	...	...	...	...	...
" Training Schools	191	105	296	84	60	144	107	45	152
Totals	6207	7063	13270	986	1068	2053	5182	6011	11193

The number of admissions into establishments during 1893 was of private patients 531, or one more than during the preceding year; and of pauper patients 2,513, or 109 more than during 1892. This represents a total increase during the year of 3·7 per cent., the estimated population having increased only by ·7 per cent., but as no table of admission is given in which the attack is stated to be the first it is impossible to say how far this represents an increase, or otherwise, of occurring insanity in the country.

Advantage appears to be increasingly taken of the provision by which patients voluntarily enter establishments, for the admission-rate of this class shows an increase during the year of 17 over the previous year, and of 19 over the average for the decade 1884-93.

An increase in the recovery-rate in establishments from 43·3 to 44·4 per cent. of admissions, and of the death-rate from 8·4 to 9·8 per cent. of the average number resident, are factors which act in the direction of reduction of the accumulation-rate. The recovery-rate for the various classes of establishments, and the death-rate for private and pauper patients and for the various classes of establishments are given in the following tabular statements:—

Classes of Establishments.	Recoveries per cent. of Admissions.				
	1885 to 1889.	1890.	1891.	1892.	1893.
In Royal and District Asylums ...	39	38	35	41	42
„ Private Asylums	34	35	28	44	38
„ Parochial Asylums	42	46	42	43	44
„ Lunatic Wards of Poorhouses ...	6	11	13	4	5

Classes of Patients.	Death-rates in all Classes of Establishments per cent. of the Number Resident.				
	1885-89.	1890.	1891.	1892.	1893.
Private Patients	6·6	8·4	9·0	7·0	8·1
Pauper Patients	8·1	8·1	9·6	9·0	8·6

Classes of Establishments.	Proportion of Deaths per cent. on Number Resident.				
	1885-89.	1890.	1891.	1892.	1893.
Royal and District Asylums	7·8	8·5	9·5	9·0	8·8
Private Asylums	8·0	7·8	5·1	7·5	5·7
Parochial Asylums	8·9	8·9	12·7	8·4	9·8
Lunatic Wards of Poorhouses	5·5	4·0	4·4	6·1	4·5

There is one feature in the table showing the causes of death which cannot be regarded as other than of serious import from the broad social point of view, namely, the increase of general paralysis. Up to 1886, to judge from the opinions recorded in Tucker's "Lunacy in Many Lands," this disease was not on the increase in Scotland, but whatever, up to that date, may have been the actual fact, there can be no reasonable doubt, even after making due allowance for possible greater certainty of diagnosis, that of late years there has been a steady and by no means inconsiderable increase, notably in the male sex. The following table gives for a series of years the average percentage of general paralysis as a cause of death in the Royal and District Asylums:—

Average for 31 years, 1858-88:	Males	18·3,	Females	4·5
" 32 "	1858-89	" 18·5	" 4·7	
" 33 "	1858-90	" 18·6	" 4·7	
" 34 "	1858-91	" 18·7	" 4·7	
" 35 "	1858-92	" 18·8	" 4·7	
" 36 "	1858-93	" 19·0	" 4·8	

Whatever view be taken as to the increase of insanity—and this is, with every show of reason, to be attributed to accumulation and the increasing tendency to place lunatics under official supervision—it is almost impossible to come to any other conclusion than that this premature and fatal form of nervous disease is in Scotland, as in England, on the increase. In other words, though there is no disproportionate increase in insanity in general, there is a steadily progressive increase in the proportion of those cases of nervous disease which have this rapidly fatal complication. It is to be regretted that somewhat fuller information of a scientific kind, with regard to such points as causation and form of insanity, is not given in the Scotch Commissioners' reports. From the data supplied by the English reports it is possible to arrive at some conclusion as to the probable cause of such

a fact as that just mentioned. This increase of general paralysis applying to both divisions of the United Kingdom, it may reasonably be supposed that it arises from common causes. There is nothing to show that it has any direct connection with the increasing migration to the larger centres of population, and the consequent overcrowding and greater stress of life. So far as English statistics show, its origin is associated, and that in a very intimate fashion, with an increase of those ætiological factors, alcoholic and sexual excesses, and venereal disease. The social importance of the increase of this type lies in the indication it affords of the general lowering of the moral standard, and of the increasing tendency to premature decay of the people.

It might naturally be expected that the effect of this increasing preponderance of general paralysis, and the drafting out of the quieter, chronic, and, therefore, presumably longer-lived inmates of establishments to private dwellings, would be to raise the death-rate of the former, and that the tendency is in this direction a glance at the table giving the death-rate in those will show.

The boarding-out policy, which is such a distinctive feature of the lunacy administration of Scotland, continues to be highly recommended by the Commissioners. During the year under review the number of pauper lunatics so accommodated has risen from 2,519 to 2,565, an increase of 46. This represents 23 per cent. of total pauper lunatics, which, judging from the statistics of the past seven years, would appear to mark the limit of this mode of provision, though, from the remarks of the Commissioners, there still remain some districts in which this policy is not, in their opinion, properly recognized, and which may therefore be regarded as possible sources of further supply of patients suitable for this mode of disposal. Very full details are given to show the advantages of the system from the point of view of the well-being of the patients; the defects, though not so prominently dwelt upon as the advantages, are acknowledged. The risk attending undue aggregation of patients in one locality is a fact which is recognized, and this, even though it is asserted that the presence of these patients "causes no dissatisfaction in the villages in which they reside," can hardly be regarded as other than an admission of ill-effects from the point of view of the public. When does aggregation cease to be undue and devoid of this attendant risk?

English local authorities, to judge from statistics, have not yet attempted to avail themselves of the provision afforded by section 57 of the Lunacy Act of 1890, which was constructed on the lines of the Scottish statute; on the contrary, the pauper lunatic in private dwellings, so far as England is concerned, is destined apparently, within a limited period, to extinction.

Verbrechen und Wahnsinn beim Weibe mit Ausblicken auf die Criminal-Anthropologie Ueberhaupt. Von Dr. PAUL NÄCKE. Wien und Leipzig: Braumüller. 1894. Pp. 257.

Dr. Näcke's very careful and thorough investigation—clinical, anthropometric, and statistical—of one hundred criminal insane and insane criminal women (as compared with a considerable number of normal women) was duly summarized in this Journal when first published in the "Zeitschrift für Psychiatrie." The author has now elaborated his various studies of this material, as carried on at his asylum at Hubertusburg, in Saxony, into a volume which is well worth study. In many respects Dr. Näcke's position resembles that of Dr. Bäer, whose book was recently reviewed here. But wherever comparisons suggest themselves the Saxon asylum superintendent appears to greater advantage than the experienced Berlin prison director. Dr. Näcke is more in touch with recent progress in psychiatry and criminal anthropology; his own investigations are far more elaborate and complete, and he refrains from the confused piling up of other people's results and from futile criticism. His object is not to present a general manual of insanity and criminality in women, but simply to investigate his own cases, thoroughly and independently, to state his results as precisely as possible, and only to deal with other people's opinions so far as they bear strictly on the matter in hand.

Such general conclusions as Dr. Näcke tentatively reaches are perhaps less interesting than the admirable method and spirit with which his work is carried out. He recognizes a predisposition to criminality, but regards social causes as of far greater importance than organization. He refuses to accept any "criminal type," and minimizes the instinctive criminal, whom he is willing to identify with the moral imbecile; but in regard to the latter he will only admit that

there is an *apparent* absence of intellectual defect. There is an excellent chapter on the prevention and treatment of insanity.

It is not always possible to agree with Dr. Näcke's views, though they are always temperately and cautiously expressed. One may be permitted to believe that a wider induction of facts might sometimes modify the results. But as a whole the book cannot be neglected by anyone who is interested in the scientific progress of psychiatry.

Die Frage nach dem Geborenen Verbrecher. Von Dr. J. L. A. Koch. Ravensburg: Maier. 1894.

There has lately been great activity in Germany in the investigation of criminal anthropology. In this pamphlet the experienced director of the Württemberg State Asylum at Zwiefalten brings forward his contribution of fact and opinion. His position, which is based on his own minute analysis of psychopathic conditions as expounded in his work, "*Die Psychopathische Minderwertigkeiten*," is midway between those who believe that criminality is solely due to social causes, and those who try to demonstrate the existence of a special human variety congenitally formed for crime.

In the first place, Dr. Koch gives some account of 205 skulls belonging to individuals (including both insane criminals and the criminal insane) who have died in the asylum during the last quarter of a century. From this collection he selected, without noting to what individuals they belonged, forty which seemed to show the greatest number of "atavistic" characters, subsequently comparing the clinical histories. Of these forty only two belonged to women, although the number of women in the asylum is not very inferior to that of men. Among the abnormal characteristics which each occurred in more than half (sometimes all) of these forty skulls were subnasal prognathism, receding forehead, very prominent supraciliary ridges, very prominent frontal bones, high frontal crest, prominent zygoma and massive lower jaw; torus palatinus, narrow or flat hard palate, abnormal spacing of teeth, sclerosis and plagiocephaly occurred in something less than half the number; and many other abnormalities in less than a quarter of them. Of these forty skulls, however, only five belonged to indi-

viduals who could be described as congenitally criminal. The result is interesting: unfortunately, however, we are not told what proportion of the remaining 165 skulls belonged to individuals who could be described as congenital criminals, so that the significance of the fact remains a little uncertain. Dr. Koch, however, insists that there are no truly characteristic cranial signs of criminality.

He then proceeds to develop his own view of the phenomena of criminality. Lombroso's congenital criminal he classifies as a psychopathic variety, and remarks that he has never come across one who on the psychic side was characterized by criminality alone. He regards it as certain that so-called "atavistic" signs are more numerous and more marked in individuals with congenital psychopathic predisposition. He asserts, as against those who only admit social causes, that there are persons whose organization impels them to crime, and is unable to understand what valid objection there can be to the recognition of moral insanity, whether congenital (idiotic) or acquired.

Dr. Koch advocates special asylums for criminals who are psychopathic though not insane, to serve both for their protection and reformation; such criminals to be retained as long as may be necessary in the interests of society. Finally, he emphasizes the necessity of a regular and thoroughgoing psychiatric service in all prisons.

The Anatomy of Melancholy. By ROBERT BURTON. Edited by Rev. A. R. SHILLETTO, M.A., with an Introduction by A. H. BULLEN. Three volumes. George Bell and Sons, London. 1893.

Of all the great classics in English literature that which makes the most direct appeal to the psychiatrist is Burton's "Anatomy of Melancholy." It happens to be among those classics which have received little attention from editors. The present edition is charming to look at and pleasant to use—in every respect a credit to the publishers and to the Chiswick Press. It contains an admirable reproduction of Burton's portrait at Brasenose, an introduction by Mr. Bullen in his most felicitous vein, and a full index by Mr. W. F. R. Shilleto. The editor has verified a very large number of Burton's quotations, and has also supplied brief explanatory notes and suggested emendations, but owing to illness he

was unable to see the third volume through the press. This edition cannot be regarded as absolutely final; the various differing editions published by Burton himself have never yet been collated; the notes are sometimes trivial, sometimes fail to explain points that are completely explainable. Still, it is likely to be the best edition for some time to come, and it may be warmly commended to the use and enjoyment of those who have not Burton on their shelves already, and who are willing to expend the price of a three-volume novel on a possession of imperishable value.

It is a curious fact, not easily to be gathered from his book, that Burton was not a physician, but a divine. For, as he himself tells us, he was a physician by nature; he was also a patient by nature—"fatally driven upon this rock of melancholy." His great work was written for his own cure and the cure of others like himself (though he warns the latter to pass lightly over that part of his work dealing with symptoms, or they will certainly think themselves worse than they are). "I can peradventure affirm with Marius in Sallust," he says, "that which others hear or read of I felt and practised myself; they get their knowledge by books, I mine by melancholizing. *Experto crede Roberto.*" The physician in Burton seems to have kept the patient well in subjection. The "Anatomy" is a very sane book, shrewd and sagacious even in its eloquence, and it is difficult to put one's finger with assurance on anything that argues morbidity or perversity in the author. His portrait is interesting, and seems to bear witness to this union of physician and patient. The melancholy but observant eyes are combined with a large fleshy nose, and a humorous mouth that carries a fixed smile. It seems to be the face of a man who has had much conflict with an inner self, but who has resolutely kept it in subjection. The facts of his life are few and insignificant. He belonged to a family which showed strenuous intellectual power in various directions. He held two livings "with much ado to his dying day," but spent most of his time in his Oxford study. We gather that he was something of a valetudinarian, much concerned with the qualities of food and air, and never taking wine, although he has written an eloquent eulogy of its virtues. He lived a fairly long life (1577-1640), and was a person, we are told, of great honesty, plain dealing, and charity. He died at Oxford; it was rumoured that he hanged himself in order to ensure a prediction of his own that he

would die at this time; he had made his will a few months earlier.

What condition did Burton understand by "melancholy?" This is a question of some interest. He distinguishes melancholy from "madness," by which he means mania; on the other side he distinguishes it from passing moods of depression, and his definition is both wider and narrower than ours of melancholia. Melancholy, as he understands it, is a "chronic or continue disease, a settled humour," curable, it may be, but only with difficulty. He admits that the patient sometimes finds his condition pleasant, and he does not absolutely exclude states of exaltation. The melancholy he deals with is a condition of hypochondriacal depression, not seldom hereditary, often found, as he states, in men of considerable intellectual energy, sometimes associated with obsessions, and even with systematised delusions, but not usually involving any considerable degree of mental dissolution. It is much influenced by hygiene, to which he devotes great space. Could Burton have adopted the current phraseology of to-day he would probably have considered his work a comprehensive treatise on neurasthenia.

"The Anatomy of Melancholy" is still full of instruction. Burton knew everything up to his day written on his subject, and in spite of his immense erudition he retains his own individuality and his own opinion. His sayings and his quotations are often stamped with wisdom that is still to the point; for the master-spirits are always modern, and in essentials they are much of one mind. Burton is scarcely less instructive when he reproduces for us the superstitions and medical dogmatisms which also are always young, with quiet humour pitting one eminent authority against another, and sometimes more than half committing himself to one side or the other. But here we must leave our English Montaigne.

The Senses and the Intellect. By ALEXANDER BAIN, LL.D.
London: Longmans, Green, and Co. 1894.

After an interval of 26 years, Professor Bain has issued the 4th ("and the last") edition of this well-known work, to which many important additions have been made since its first appearance.

In most directions the author has endeavoured to keep abreast with the recent advances in our knowledge of mind

and its physical adjuncts; the chapter on the nervous system in the introduction has thus been entirely re-written by Dr. W. Leslie Mackenzie, and within the compass of less than 50 pages we find a very good account of the structure and functions of the brain and spinal cord, including the generally recognized views on the tracts in the spinal cord and cerebral localization.

How far certain fundamental conceptions, space, time, cause, etc., are instinctive or grow out of experience and education, is still, though in a modified aspect, a problem which deeply exercises psychologists; in view of the controversy which rages round the doctrine of the hereditary transmission of foregone aptitudes or acquirements, denied by Weissman and many others, it acquires still more importance. The question is, especially, as Professor Bain expresses it, "whether or not we possess at birth a large contribution towards the full realizing of the three dimensions of the extended world," and the author inclines to Herbert Spencer's side; for, while holding that the perception of distance is acquired, that such voluntary actions as imitation are acquired, etc., he still admits the possibility and the fact of hereditary transmission in at least preparing the way or giving facilities for these operations; and again, in discussing the origin of the notions of space, time, etc., in the appendix, he concludes that life experience cannot account for our knowledge of space, and "we may say with safety . . . that something may be gained from the experience of former generations in aid of the primordial ingredients of our sense of real succession."

Professor Bain clings to the view that certain movements exist anterior to and independent of the sensations of the senses, and gives much evidence in its favour.

Although the organic feelings are not sensations in the full meaning of the term, *i.e.*, in having distinct external causes, still we think they are conveniently included among the sensations as the author has here done; the senses themselves being divided into two groups according to their importance in the operations of the intellect—and touch, hearing, and sight being the intellectual senses by pre-eminence. While the author recognizes the possibility of advancing psychological doctrines by means of well-concocted experiments, in the otherwise complete and interesting chapter on sensation, we miss some of the more recent researches on the physiology of the senses.

The chapters on the intellect deal with the fundamental

attributes of Retentiveness and Similarity or consciousness of agreement, and with compound association and constructive association. Useful additions have been made, as in the account of the special circumstances governing recuperation of memory or retentiveness. The pages on external perception, on associations of volition, etc., are very good examples of the author's best manner—his careful, easy style, and clear, persuasive logic. The new edition of this work will add to its wide reputation.

Epitome of the Synthetic Philosophy. By F. HOWARD COLLINS, with a Preface by Herbert Spencer. London: Williams and Norgate. 1894.

It is a pleasant duty to welcome the third edition of this book, in which is now included an abridgment of the "Principles of Ethics," so that we have in some 600 pages the whole of the Synthetic Philosophy of Mr. Herbert Spencer in miniature. To those unacquainted with the great philosopher's works, this epitome will serve as an introduction; to those who are studying them it will prove a useful book of reference. The statements, though much condensed, are correct and clear, and being of the nature of an essence require to be taken in small doses at a time. Mr. Howard Collins hopes that his volume may lead the general reader to a better acquaintance with Mr. Spencer's own works. We think he will have his reward.

An Essay Concerning Human Understanding. By JOHN LOCKE. Collated and annotated with Prolegomena, Biographical, Critical, and Historical. By ALEXANDER CAMPBELL FRASER, Hon. D.C.L. (Oxon.). In two Vols. Oxford, at the Clarendon Press. 1894.

Professor Fraser has performed his labour of love in connection with Locke in a most admirable manner, and these two beautiful volumes printed at the Clarendon Press will be most welcome to all those interested in the history of psychology, and especially so to students and lovers of Locke. In addition to 134 pages of most interesting prolegomena teeming with useful information and wise reflections, the text, carefully collated with previous editions, is copiously supplemented with explanatory and critical foot-notes and references which considerably enhance the value of the original work. Professor Fraser intends

his work partly as homage to Locke's historical importance as a chief factor in the development of modern philosophy during the last two centuries, and to recall to a study of Locke those who, interested in the philosophical and theological problems of this age, are apt to be dominated too exclusively by its spirit and maxims. It is difficult to imagine a more judicious and sympathetic presentment of the Essay than the present edition; for in the past, as Professor Fraser remarks, when referring to the critics of the Essay and to the controversy which it has occasioned, it seems clear that the work has been named more than it has been studied and that sufficient allowance has not been made for the circumstances under which it was written.

The Prolegomena open with an account of Locke's interesting, varied, adventurous career, and the evolution of his mind; his early love for facts rather than abstractions; his studies in chemistry, meteorology, and medicine; his delight in the works of Descartes; his application to social questions, etc., etc. In the 20 pages which Professor Fraser devotes to the *résumé* of Locke's preparation for the Essay, we are led to form an estimate of the philosopher as a man, and of the bent of his mind: his advocacy of the methods of experiment and observation as means of acquiring true knowledge, his contempt for blind authority and for pointless speculation, his objection to empty sounds in place of lucid ideas, etc., all information of great moment; for the Essay, we must remember, is in a singular degree the reflex of its author. The pages xxxix. to liv. deal with Locke's stay at Oates, the county seat of Sir Francis Masham, during the years 1691 to 1704. It was during this time that took place the celebrated controversy with Bishop Stillingfleet, and that a number of adverse critics launched out against the Essay: Dr. Sherlock, Thomas Burnet, John Sargeant, etc.; it was at Oates, too, that Locke wrote his "Examination of Malebranche," his letters and writings during this period all shedding more or less light on many passages of the Essay. Professor Fraser has carefully examined them and gives us their essence.

The 70 odd pages of the expository and critical prolegomena are an admirable example of careful constructive criticism, Professor Fraser maintaining throughout a calm, sympathetic, yet judicial attitude toward his author. He shows how Locke has been misinterpreted in places, as in the charge that he makes a bare apprehension of simple ideas the primary form of human knowledge (instead of

which it is a mental proposition); on the other hand he acknowledges his inadequate appreciation of certain elements, and criticizes his mistakes—Locke's misapprehension of "innate ideas;" his assumption that "nothing can be in the mind of which the mind is not conscious;" his test of the "certainty of real existence to be found in the irresistible intuitive assurance of which we are conscious," etc., are examples in point. Commenting on the three ultimate realities of Locke in their mutual relations, on Locke's examples of absolute certainty in general propositions (pure mathematics and abstract ethics), on the inclusion of all inductions in what Locke calls presumption or undemonstrable proposition to which "assent" is given, etc., etc., Professor Fraser introduces valuable explanatory and critical remarks.

Finally, in the historical prolegomena, Professor Fraser points out how Locke's philosophy was first developed and modified through Berkeley. Berkeley detected that Locke had overlooked the nature and origin of the idea of "real," and saw clearly himself that whatever is real must depend for its actual reality on conscious mind. A short account of Berkeley's philosophy and its development is here given. With Hume we are introduced to the next succeeding evolution of philosophy, which occurred in Scotland, and in an opposite direction to the spiritual philosophy. Hume's agnostic criticism emptied the Essay of Locke of most of its fundamental elements, and in particular banished the "propositions of real existence" that Locke took as presupposed in all "knowledge by means of ideas." Reduced to a state of philosophical nescience, we see him turning to "feeling" as a reconstructive influence. As Professor Fraser remarks: "the spiritual philosophy of Berkeley and the philosophical nescience of Hume—opposite issues of the Essay of Locke—are types of the two antithetical modes of treating the eternal problem of the universe and our knowledge of it, that have appeared, in various phases, in all ages of philosophical activity."

The Cures at Lourdes. By J. R. GASQUET, M.B.

This reprint from the "Dublin Review," October, 1894, cannot fail to attract the attention of the readers of this Journal, not only from the psychological interest attaching to the alleged supernatural cures performed at Lourdes, but on account of the writer—one of the most learned, acute,

and philosophic members of our Association. Dr. Gasquet regards the phenomena alike from a scientific and religious standpoint. To ignore either of these elements disables the impartial inquirer into their nature. We find him appreciating most fully the importance of the influence of the mind upon the body. Expectant attention, which is practically equivalent to combined faith and hope, is recognized as an almost illimitable curative power in disease. But the question which the writer sets himself to solve is "Do not some cases indicate that there is a limit to this influence, and that in order to explain certain remarkable influences we must admit some supernatural element?" In the first instance the author gives examples of cases which seem to him after perusing their records to suggest that they are outside the ordinary course of nature, and yet supported by abundant testimony. One was a case in which the left metatarsal bone was diseased (caries), and pus flowed freely from the sinus. There was also strumous disease of the left knee-joint, two medical men certifying such to be the case. She was bathed at Lourdes, there being no effect. She was in consequence of her urgent entreaty put back into the bath, and then felt violent pains in her foot, and that she was cured. Immediately afterwards, on examination at the "Bureau des Constatations Médicales" nothing could be detected amiss except a newly-formed cicatrix. Her medical attendants certified her complete recovery shortly afterwards.

Another case reported was that of a male, *æt.* 35, a painter, suffering from plumbism for nearly five years. The paralysis affected his lower limbs as well as the upper, and he also had anæsthesia and loss of smell and taste. He was at first treated by Dr. Houzé in the Hôpital St. Jean at Brussels. Two years ago he went to Paris to be treated by Charcot, who twice tried to hypnotise him, but failed. On his return to Brussels he was again treated in the hospital there, and some improvement was effected, but the extensors of both hands were still completely paralyzed, the wrists dropped, and the arms could not be raised. After bathing at Lourdes on May 17 the left hand and arm recovered power, and the right limb followed on the 20th, only a little weakness remaining.

With the remarkable and unsurpassed candour which characterizes Dr. Gasquet, the commentary is made that in view of the fact that plumbism has been known to cause hysteria, it is conceivable that the case was due to the influence of the mind on the body. Still he feels that "the

immediate recovery of this patient after such a long course of fruitless treatment is in any case most remarkable."

Dr. Gasquet's own experience, which is much more important, is also given. Suspicions which Dr. Gasquet had entertained before his visit were removed. Of instances actually seen by the writer was one of sympathetic ophthalmia, the right eye having been previously destroyed by injury, and another apparently had had glaucoma, for which double iridectomy had been unsuccessfully performed. They both suddenly recovered their sight while at the grotto, and on coming to the Bureau were able to read without difficulty. In reference to these cases no reliance can be placed upon the reputed recovery without more detailed information. As to the case of supposed sympathetic ophthalmia, an ophthalmic surgeon informs us that in some instances of injury destroying one eye, a condition indistinguishable from hysterical amblyopia is met with in the fellow eye. Restoration of sight in such a case would be easily explicable. In the second case we incline to the opinion that the blindness could not have been caused by glaucoma, the existence of which Dr. Gasquet himself recognizes as doubtful.

In one instance a man, *æt.* 29, fell from a ladder on his abdomen thirteen years ago, and was very ill afterwards, and, indeed, never recovered, the abdominal symptoms becoming aggravated sixteen months ago, followed by pain, tenderness, distension, vomiting, and occasional melæna. Tubercular peritonitis was diagnosed at the hospital of Oudenarde, Belgium. Moreover, he had had pleurisy and peritonitis. At Lourdes Dr. Gasquet saw him carried down to the baths, too ill to allow of more than sponging the abdomen with water. Severe pain followed, and something must have happened as the abdomen became soft, free from tenderness and pain, and so much smaller that his drawers, which before fitted him, were now 11·81 inches too large for him in girth. His weakness and long disuse of his legs made walking difficult, so he was carried back to the hospital at Lourdes, where he made a large meal, which gave him no pain. When Dr. Gasquet saw him two days after "there was no sign of illness about him, except some uncertainty of gait, and even this had passed away before he left Lourdes three days later, when he seemed perfectly well."

Dr. Gasquet considered that in the great majority of cases

that came for examination after visiting the shrine "there was decided improvement, and often complete recovery. Excluding for a moment a few cases to which I will return presently, the improvement was not more than could conceivably be produced by the action of the mind on the body. These patients might be divided into two classes, in one of which the symptoms were purely neurotic, and where complete recovery was the rule, and another category of persons in whom examination easily detected the persistence of organic disease, but whose general condition was greatly improved. Of the first class—the simply nervous cases—the most numerous examples that I saw were what is called hysterical paraplegia and paralysis."

Dr. Gasquet concludes his article by stating that he believes he has made out a case for inquiry on the part of those who can afford the time to do so. "Miracles," he justly observes, "are not worked to order, and if they were, it is always possible to take refuge in the unknown, or to ask for further evidence. But at least every unprejudiced visitor will see at Lourdes much that is very well worth seeing, and may be sure of a cordial welcome and every facility for studying the material that will be so abundantly provided for him."

For ourselves we are very sensible of the admirable spirit in which our colleague discusses the subject, and although, as he will anticipate, we are not convinced of a supernatural element in these recoveries, we consider any record by a competent and candid observer like himself as an important contribution to psycho-physics.

A Dictionary of Medicine. Edited by Sir RICHARD QUAIN, Bart. Longmans, Green, and Co. 1894.

This new edition of a well-established work will be welcomed heartily. True it has grown in bulk, but it has not outgrown the compass of usefulness, and we trust that the editors of future editions, which are certain to be called for, will look carefully to the maintenance of a moderate size-limit. It is undeniable that workers innumerable are in the field, and the fruits of their labours astounding in the mass, but they will boil down, and we would suggest that it should be a cardinal point that they do boil down within the limits of 2,518 pages. Let no future edition point to a growth in size as a merit.

To criticize this work even superficially would demand of both time and space more than can be accorded. We can do little else, therefore, than welcome these two volumes, guaranteed, as they are, by the names of the editor and of the sub-editors, Drs. Frederick Roberts and Mitchell Bruce, and a distinguished list of contributors. In the *additional* list of contributors we note a goodly array of names, which ensures that the more modern aspects of medicine, and in particular of surgery, shall have received adequate treatment. It would be invidious to select names, for in each department we should find notable gaps; this could not be otherwise, and it must suffice to say that the names selected are, for the most part, thoroughly representative.

The type has been increased in size, a distinct advantage, and fresh illustrations have been introduced; in spite of this latter, however, the pages of the Dictionary are very scantily illustrated. In how far graphic illustration could be further introduced at the expense of some of the letterpress we hesitate to suggest, for it would increase greatly the expense and would make the keeping of the book within its present size-limits more difficult. If this matter should be considered in a future edition, let it be decided that the illustrations be good, however simple—indeed, other things being equal, the fewer the lines the better. The illustrations in the present edition are, on the whole, good, some of them are excellent, and it is not on their account that we raise the point of simplicity of outline, but in regard to the possibility of keeping down the price whilst increasing the number of cuts.

Quain's Dictionary, we have no doubt, will prove as popular in the future as it has in the past.

Pain, Pleasure, and Æsthetics. By HENRY RUTGERS MARSHALL, M.A. London: Macmillan and Co. 1894. Pp. x., 364.

This interesting book deals in a comprehensive way with pleasure and pain, with their place in psychology, their physiological equivalents, and especially with the part they play as the basis of æsthetics. Psychologically pleasure and pain are not regarded as separate elements of mind, either as emotions, feelings, or sensations, but rather as general attributes of all mental states. In this connection there is an interesting discussion of the relation of feeling and

sensation, and the change in meaning which these terms have undergone in psychology is pointed out.

A large amount of attention is devoted to physiological questions in their bearing on the nature of "algedonic" states, using here a term coined by the author to serve as an adjective corresponding to pleasure and pain. A theory of their physical basis is proposed and developed with considerable fulness. Pleasure is supposed to arise in connection with any mental state whenever the physical activity accompanying this state involves the use of surplus stored force—whenever the energy called into play is greater than that habitually called forth by the stimulus. Pain, on the other hand, occurs whenever the energy called forth is less than the habitual amount—when the organism is incapable of reacting completely to the stimulus, an indifferent condition occurring whenever the energy is equal to the demand. Among the numerous facts brought forward by the author in his discussion of the theory there is an almost complete absence of any derived from mental pathology.

The author's theory of æsthetics is based on his views of pleasure and pain, and great importance is attached to the revival of algedonic states. Objects are considered beautiful which produce states of mind permanently pleasurable in revival, ugly when permanently disagreeable in revival. In all parts of the book the views of others are stated clearly and criticized with force and insight, and one gains from it a good idea of current opinions on one of the most difficult branches of psychology.

Myxœdema, Cretinism, and the Goitres. By EDWARD BLAKE, M.D., M.R.C.S. John Wright and Co., Bristol. Simpkin, Marshall, and Co., and Hirschfeld Bros., London.

This contribution to the study of the interesting pathological group included under the above heading is decidedly speculative, and in its perusal it will be necessary to keep in mind the quotation with which Dr. Blake introduces his book: "The very nerves and sinews of knowledge consist in believing nothing rashly" (Epicharmus, circ. cent. xv. B.C.).

We live in the days of toxins and anti-toxines, and a subtle chemistry investigates the general and special malevolence of the minute organisms of disease; this is a salutary swing of the pendulum, but it is sure to out-swing the limitations of wisdom, and we think that such is the case here. Thus, when we read "that Grave's disease is

an autotoxis most frequently caused by the absorption of purulent products, the process being *aided* rather than *induced* by the toxins of terror and shock;” that the same products cause rheumatism, myxœdema, a psychosis such as mania, or a neurosis such as epilepsy, according as these poisons act upon the medulla oblongata, or abolish the functions of the thyroid or invade the cortex; and, further, when we learn that chorea results from a slower invasion of a more dilute form of the same poison, we are compelled to agree with the author that much of this is hypothetical, and we should accept it as a premature rather than a provisional pathology.

We are ready to admit that Dr. Blake gives evidence of having spent much thought upon the subject, and he is well acquainted with the work of recent investigators, but he impresses us as given to generalization unwarranted by the data at his command. For instance, as the result of interference with katabolic processes and eliminations, we find classed together the following disorders:—Indigestion, gout, rheumatism, chorea, goitre, neurasthenia, skin disease, hysteria, neuralgia, and mental alienation. The causal interference, it is said, may be with or without the intervention of micro-organisms. The diseases above enumerated form a very motley crew, and we are reminded of the classification of diseases which we are presented with on the labels of nostrums past and present. Can any good purpose be served by such methods? We might ask what is meant by “skin disease.” Dr. Blake’s aërobic and anaërobic transformations are a little obscure, and the application of these terms, is it quite justified? (see pp. 31, 32.)

On p. 47 we find, in a paragraph on Graves’ disease, the following quotation:—“Dr. Suckling brought before the Midland Medical Society, on February 8th, 1893, the case of a woman, æt. 42, in whom paraplegia followed the existence of Graves’ disease,” and immediately upon this, without any further description, there follows this statement: “Having regard to the age and sex of the patient, we may easily understand that both morbid expressions had a common origin in some overlooked pelvic trouble.” If such reasoning be admitted, we may, indeed, easily understand anything and everything, but we shall end by comprehending nothing.

Dr. Blake’s book is attractively published, the type and in particular the illustrations are excellent, but we regret to say that the argument is loose and the conclusions not justified.

Introduction à la psychologie expérimentale. Par ALFRED BINET. Avec la collaboration de M.M. Philippe, Courtier and V. Henri. Félix Alcan, éditeur. Paris, 1894.

The object of M. Binet and his fellow-workers in the Sorbonne laboratory (Paris), in presenting this small work to the public, is to describe the principal methods employed in psychological research and to define the scope and field of experimental psychology. It is but 15 years since Wundt opened his laboratory at Leipzig—the first of its kind,—and already we are told that there are no less than 30 of these laboratories for the study of psychology scattered about the globe (16 of which are in America); and, thanks to the introduction of scientific methods of experiment, psychology has disentangled itself from a mass of confused philosophy and metaphysics, and is to-day in a flourishing condition. While pointing out that, in its wide acceptation, introspection is the basis of psychology, the author carefully differentiates the parts played by observation and experiment in the pursuit of psychological knowledge. Observation is the art which consists in studying a psychological phenomenon such as it is, or such as it presents itself to our judgment, with its characters and the conditions surrounding it; experiment, on the other hand, supposes that a relation has been discovered between a psychological phenomenon and another phenomenon over which we have control, and by means of this relation it endeavours to modify one of the two factors, so as to determine the effects of the modification upon the other factor. The first part of the book is thus devoted to the methods of experiment, and includes studies of sensation, movement, memory, and psychometry; the second deals with the methods of observation, and treats of the psychological inquiries made by means of questions and answers—by schedules.

M. Binet reminds all students at the outset that it is by patient and carefully limited investigations rather than by wide or far-reaching researches that we can hope to increase our definite knowledge of any psychological phenomena; and it is to the poring over details that we must attribute the splendid results obtained from the study of sensation, concerning which our knowledge is foremost.

It is worthy of note that for one volume of observations we find ten works on grand theories.

In describing the methods of investigating the subject of external sensations—the best known in psychology,—M. Binet lays stress on the importance of selecting as subject for experiment, one who possesses a well-developed psychological sense, and who should not be treated as a mere automaton; it is by careful inquiry into the subject's states of conscience, often varying with the conditions of the experiments, that the mechanism of the localization of sensations has been appreciated. In the chapter on movement we find a clear and brief description of the various graphic methods in use.

In several important psychological works very little is said concerning researches on memory, and yet many interesting points have been already determined. The author justly warns the reader here against accepting the simple conception of memory as the reproduction of a sensation, and as having its foundation or basis in material or dynamical modifications impressed on a cell which has been previously stimulated. Memory is the reproduction of a complex group of conscious states, having for object the cognizance of something external, so that in memory there is included a judgment. Four important methods of research are defined—the method of description, the method of recognition, the method of reproduction, the method of comparison. Sight, muscular sense, judgment, etc., are factors introduced in one or other of these methods and determine their differences.

Chapter VI. is devoted to ideation. By the experimental method, two phenomena especially may be studied—(*a*) the nature of ideas (images and general ideas) and (*β*) their mode of suggestion—that is the conditions under which they arise. With reference to the phenomenon of the association of ideas, Binet pays a tribute to the masterly manner in which it has been treated by English psychologists (Mill, Bain, Spencer, etc.). At the Sorbonne laboratory three kinds of experiments especially have been made in the study of the association of ideas:—1. When the subject is allowed full liberty of creating mental associations. 2. When time limits are imposed; full liberty is given to the subject of creating associations, but the time given for this exercise is limited. 3. The series of representations of images, which the subject must associate, is determined beforehand.

A number of experiments is necessary in order to eliminate the part played by chance; and one condition, which the author considers as indispensable in all of them, is a careful

questioning of the subject after each association as regards his sensations, and concerning the reason which determined him to select a particular association and no other.

Psychometry constitutes one of the most advanced subjects of laboratory psychology, with psycho-physics; they require the most delicate instruments, so that they may be said to be the two classical researches of the psychological laboratory. The author shows the nature of the experiments to be made, and with reason refers to the need of experience and practice on the part of the experimenter. Moreover, patience, so characteristic of the German worker, is a *sine quâ non* on the part of those who would solve problems which require the assistance of the chronometer. Reaction-time, association of ideas'-time, etc., are touched upon in this chapter. While psychometry may not have fulfilled the expectations of enthusiasts, it enables us to study the effects of habit and of fatigue, to increase our knowledge of certain forms of attention, etc.; and its extension to the analysis of various mental states in the insane has produced results which are so far encouraging.

Methods of observation in psychology still hold the larger place in those works on psychology which are most sympathetic to the experimental methods, and when properly carried out will, no doubt, add considerably to our knowledge, just as they have been of use in the past. The author classifies them into three kinds:—

(1.) Personal observation, *i.e.*, the introspection which the psychologist exercises upon himself.

(2.) Collective introspection.

(3.) The study of subjects into whose minds we endeavour to read by observation of their words and behaviour. This method includes the study of customs, habits, languages, etc., and the study of people—the “*Völkerpsychologie*” of the Germans. M. Binet reviews the various advantages and drawbacks of these methods, and explains the method of inquiry by circulating schedules (“questionnaires”), pathetically bemoaning the indifference of the public, especially in France, to these questions.

In conclusion, the author condemns any tendency on the part of psychologists to unduly cherish certain methods of inquiry to the exclusion of others; each method has its own value and its own application. The dominant idea in all psychological researches should be the autonomy of experimental psychology. Experimental psychology pre-

supposes no special solution of the great problems of life, and has in itself no spiritualistic, materialistic, or other tendency; it is a natural science and nothing more.

As a plea for the careful study of experimental psychology, as a valuable introduction to the subject, and as a guide to its methods and to an appreciation of its scope and potentialities, we heartily commend M. Binet's work.

La famille névropathique. Théorie tératologique de l'hérédité et de la prédisposition morbide et de la dégénérescence.
Par CH. FÉRÉ. Paris: Félix Alcan, éditeur. 1894.

The relationship of nervous diseases to various so-called diatheses has long been known, but it remained to explain many exceptions in hereditary transmission. M. Féré shows in this valuable book that these exceptions, known as dissimilar heredity and collateral heredity, are found in teratological families which are often pathological. What is really inherited are errors of nutrition, producing different effects during the embryological period according to the period at which they occur. Errors of development cause a morbid predisposition—many facts prove it. Thus hereditary troubles or accidents of evolution bring about a progressive destruction of the characters of the race—that is, they induce degeneration.

The importance of predisposition in the causation of disease is becoming more and more recognized, and, in consequence, trauma, toxicity, etc., are relegated to a secondary rank; "alcohol, for instance," as Féré remarks, "is but the touchstone of the equilibrium of cerebral functions." Viewing heredity in its broad aspect, one discovers clearly relationships hitherto but little suspected, and, on the other hand, certain factors long considered momentous in etiology dwindle into insignificance. Thus, one observes various neuropathic manifestations, which might be termed preparatory, in the generation preceding the truly insane; we find in the genealogical tree members who are enthusiasts, fanatics, eccentrics, inventors, rakes, etc., etc.; while we find confirmatory proof, drawn from a study of healthy stocks, that consanguinity acts only by accumulation of bad heredity in producing insanity; and unfortunately psychopaths seem to seek one another.

Dissimilar heredity and collateral heredity must be especially investigated; for examples of direct heredity, as

in suicidal mania, are decidedly the exception among the degenerate.

Looking at general paralysis in the light of a disease common among the degenerate, Féré has collected much evidence pointing to its relations to other insanities and to nervous diseases (epilepsy, hysteria, paralysis agitans, locomotor ataxy, etc.); and to those who lay great stress on overwork, drink, sexual excess, etc., as its causes, the author would reply that the predisposed are just those who give way to various excesses: "Ne fait pas d'abus vénériens qui vent;" and commenting on Jacobson's statistics, who finds in 1,000 non-general paralytics 39 suffering from syphilis, and in 1,000 general paralytics 399, he asks: "May we not conclude from these that general paralytics expose themselves freely to the risks of syphilis?"

In Chapter III. we find much food for reflection in the remarks concerning the relationship of crime to vice and insanity. "Vice, crime, and insanity are only separated by social prejudice; they are united by their common character of fatality; and if we hesitate to accept their intimate relationship, it is not for want of scientific proof, but on account of the practical consequences which are so obvious to the mind." Degeneration and atavism must be carefully distinguished, and the frequent association of vice and crime with the neuroses, and especially with epilepsy, insanity, and physical deformities, constitutes a strong presumption in favour of the pathological or teratological theory of crime as against the theory of atavism.

In discussing the neuropathic branch of the nervous family, paralysis agitans, Graves' disease, chorea, the various tics, etc., are considered, and the part here played by similar and dissimilar heredity; we also find a careful summary of the hereditary associations of senile trembling, Thomson's disease, megrim, neurasthenia, neuralgia, asthma, Raynaud's disease, and scleroderma.

The chapter on the influence of heredity in toxic or infective diseases of the nervous system is very suggestive, especially as regards the question of specificity; and the author points out the importance, as regards prognosis, of defining as far as possible the shares of neuropathic predisposition and of the determining infective agent respectively.

Chapter VIII. deals with the relationship of tuberculosis and arthritism to nervous diseases. The author considers that it is as conditions of degeneration that neuropathy, scrofula, tuberculosis, and arthritism are found variously

combined in certain families, and under varying circumstances these respective manifestations are evidenced.

The absence of resemblance and hereditary characteristics, dwelt upon by Morel as a great characteristic of neuropathic families, is emphasized by Féré.

The well-established association or coincidence between nervous diseases, diseases of nutrition and somatic deformities in the same families throws light on the nature of heredity, and the author enumerates many examples of teratological heredity published in scattered medical records—harelip, eye-troubles (coloboma, microphthalmia, etc.), spina-bifida, abnormalities of the hands and feet (webbed-fingers, club-foot), hemophilia, ichthyosis, etc. The combination of various malformations (*e.g.*, harelip with infantilism, congenital intra-orbital cysts with inguinal hernia, etc., etc.), moreover, excludes the idea of a pathological lesion, and is in favour of their developmental origin; and when we investigate the question of the association of neuropathies with malformations (retinitis pigmentosa in deaf mutes, facial asymmetry, ear deformities, digital abnormalities, etc., in the insane) we find that those subjects, whose nervous system is more seriously affected, are those in whom malformations are most marked and numerous.

Dissimilar heredity is quite as frequent in teratology as in pathology, and the author says: "From the point of view of psychology, the family of the degenerate resembles somewhat the brood of a hen in whose nest the various birds of the farmyard, with a few birds of prey (their worst enemies) had laid their eggs."

In Chapter XVI., Féré relates interesting experiments performed on the incubation of eggs, which exhibit the absence of relation existing between the varieties of degeneration found and their causes, and prove that the characteristics observed first by Morel in the descendants of the degenerate are here artificially reproduced—dissimilarity in the same family and the similarity of dissimilar types in various families.

Degeneration, the characteristic, which unites the members of a morbid family, has its unmistakable stigmata, differentiated from accidental intrauterine deformities on the one hand, and from pathological malformations on the other, and due to errors or interference of evolution. These physical and functional stigmata are enumerated at length in Chapters XVII. and XVIII.

After a long discourse through eighteen lengthy chapters, accompanied with the depressing ring of degeneration, it is satisfactory to find the author striking a joyful note in the concluding chapter—Prophylaxis. The transmission of pathological characters, fortunately, is not invariably fatal, and as the influence of bad or insufficient nutrition on arrest of development is held by the author to be of paramount importance, so we are enjoined to hopefully consider the possibility of resisting degeneration by favouring the nutrition of generators and localizing the nutrient activity.

“*La famille névropathique*” is certainly one of the most original and suggestive works yet written on the subject of heredity.

Weismannism once more. By HERBERT SPENCER. Reprinted from “*The Contemporary Review*,” with a postscript. London: Williams and Norgate. 1894.

In this short pamphlet Mr. Spencer recapitulates in brief the whole of the case he has made out in favour of the doctrine of acquired characters opposed by Weismann, to which is added more evidence, in favour of his views, which has recently come to light.

In the first place Mr. Spencer recalls certain propositions to which no reply has been made: the inability of accounting for differences in tactile discrimination by natural selection, the degradation of the little toe, etc.—the arguments for which were given at length in former papers (“*Contemporary Review*”). Then he shows that to other propositions, the replies given by his opponent are invalid, *e.g.*, the impossibility of explaining by natural selection alone the co-adaptation of co-operative parts.

Professor Weismann fails to show that the special structures of the different individuals in an insect-community (*e.g.*, ants) are not due to differences in the nurture they receive, and introduces insuperable difficulties in the way of accepting his own explanation of the occurrence. At the same time, while Mr. Spencer thinks the admission absurd that there can take place numerous correlated variations in different and often remote parts (which must take place simultaneously or else be useless), he by no means denies that variations and selection have produced in insect-communities certain effects such as Mr. Darwin suggested.

Finally, as the arguments against panmixia found in the "Rejoinder to Professor Weismann" are unassailed, Mr. Spencer asks that the verdict should go against Professor Weismann by default, and that the evidence collected by Mr. Darwin and others, regarded by them as proof of the inheritance of acquired characters, should be reinstated.

As regards the additional evidence brought forward, Mr. Spencer refers to Professor Grassi's experiments on termites, showing that some of the various forms are due to feeding; and to the information published by Dr. Havelock Charles in the "Journal of Anatomy and Physiology" (October, 1893, and April, 1894) concerning the differences between the leg-bones of Europeans and those of the Punjaub people. Among other passages quoted, we find the following:—"The markings (*on the bones*) are instances of the transmission of acquired characters, which heritage in the individual, function subsequently develops."

In conclusion, Mr. Herbert Spencer holds definitely that, though the transmission of acquired characters cannot be the sole factor in organic evolution, yet it is a factor and an all-important one. He also wisely points out that a grave responsibility rests on biologists in respect of this great question, since wrong answers lead, among other effects, to wrong beliefs about social affairs and to disastrous social actions.

This is a reprint that should be circulated widely.

A Practical Manual of Mental Disease. By Dr. E. RÉGIS.
Translated by H. M. BANNISTER, M.A., M.D. Utica,
1894, 8vo, 692 pp. London: Baillière, Tindall, and Co.,
King William Street, Strand. Price 10s.

The original of this volume having been reviewed in the columns of this Journal, little remains to be added in regard to the translation.

The translation has been literal, and has been so successfully accomplished that few in reading it would suspect the fact.

The printing and type are remarkably good, reflecting great credit on the Utica press, from which it emanates.

While fully recognizing the great merits of the work, which is an excellent presentment of French views on

mental medicine, we incline to think it is open to the criticism of having attempted too much. The condensation of so wide a system into one volume of small size has in some instances led to scantiness of treatment, and a too captious critic might say that in place of being a *multum in parvo*, as intended, the terms of this phrase might be reversed. Such a criticism, however, would be too sweeping, for in the majority of subjects the condensation has not affected thoroughness, and has nowhere diminished the clearness of expression.

The work is, indeed, worthy of the commendation which has been given it by Professor Ball in his preface to the original edition, and is a useful addition to the literature of mental disease. We commend it to our readers.

PART III.—PSYCHOLOGICAL RETROSPECT.

1. *English Retrospect.*

Asylum Reports for 1893.

(Continued from July, 1894, p. 457.)

We propose to glance at various reports, which reach us, in the same way as we treated them last year, viz., by divisions as far as possible, separating county and borough asylums from registered hospitals, England from Scotland, and so forth. Last year we endeavoured to make a complete review in alphabetical order, but we found then that much delay was caused by late arrivals.

Some English County and Borough Asylums.

Is it not possible that all reports should be for a "history" year, and not for a financial or county or borough year? At present there is absolute chaos. One Visiting Committee reports to the County Council in October, and its report deals with matter referred to in the Medical Superintendent's report of the same date. The figures in the latter deal with a collection of admissions, discharges, etc., totally distinct from those dealt with by the same authority in the tables of the Association, which run from January to December. We particularly note a case like this; for it proves that there is no necessary connection between the date of a report to a County Council and the end of the financial year on March 31. Then it may be that the report of the Visiting Committee and Medical Superintendent and the Association tables all march properly together—but we

may also find included in the volume a Commissioners' report for an antecedent or even a subsequent year. Of course the report of any authority can be made as well and conveniently on one date as another, if it is intended to stand alone and be for local benefit only. But we must believe that the spirit of progress is so alert as to lead Visiting Committees to desire a comparison between their own charge and those of other authorities; this being so, we can assure them that each and every one can do a great service by insisting on its report containing the facts, the whole of the facts, and nothing but the facts which occur between January 1st and December 31st of each year. We have hope that this can be brought about by energetic representations on the part of the Medical Superintendent. There is another direction in which similarity is desirable, but perhaps hopeless; this is the size of the reports. At present a collection of reports is indeed a ragged regiment, impossible to marshal into binding order, difficult even to tie up with string. Instead of there being an inducement to keep the items together to form a valuable work of reference, there is every temptation to let them go their own way. The great majority appear to find demy 8vo. to be suitable.

Derby Borough Asylum.—Dr. Macphail notes that the character of the insanity in those admitted was more favourable to recovery than in previous years, but that cases took longer to get well. Mental depression succeeding an attack of influenza is noted six times as a cause.

No less than one-third of the total accommodation is filled with out-borough patients, yielding a profit of £1,200, and in consequence repeatedly applications for admission of private patients have been refused. These facts show that a local authority can do worse things than build far ahead of its immediate requirements.

We note that urinals on the male side are being superseded by pedestal w.c.'s.

The lectures given by the medical officers have been resumed this winter, and we have every reason to feel satisfied that this is time and trouble well spent. A more intelligent interest is now taken by the staff in their work; being educated to observe, they are more helpful to the medical officers in the treatment of individual cases; and above all, we are building up a recognized service of trained attendants and nurses, whose willing and cheerful co-operation in the care and treatment of the patients I heartily acknowledge.

Dorset County.—We must commend Dr. Macdonald for taking what we consider to be a proper view of a Medical Superintendent's report. He takes pains to instruct his county in many matters that should be brought before the laity. When the laity has such matters referred to its judgment, their interest, enlightenment, and hearty co-operation will follow assuredly. He discusses the question of increased lunatics in the county, and comes to the conclusion that the undoubted increase cannot be

accounted for by accumulation only. The Committee, by-the-bye, are inclined to attribute it to the increasing popularity of asylums. But we think that Dr. Macdonald's views are probably right, if we grasp them correctly:—in a purely rural county, without manufacturing centres, the set of the tide is partly *nil*, and what there is is ebb. This tells in two ways, firstly, but little fresh blood to obviate the destructive tendency of close marriage; secondly, the departure, in obedience to well-known demographic laws, of the hearty and sane to more active centres. Thus degeneracy is induced, and when induced is not diluted as it should be under ordinary circumstances. This latter consideration opens up serious reflection. How can we follow the effects of emigration and immigration? Does this interchange affect different parts of one kingdom or county, or is it an exchange between kingdom and kingdom? A solution of these questions, in their local application, is necessary to our arriving at a true verdict of increase or non-increase of insanity as an occurring disease.

Glamorgan County.—Dr. Pringle adverts to the difficulties of dealing with idiots, and asks whether, if one county cannot build a special and separate institution for itself, two or three could not combine. Dr. Worthington, of Hants, as mentioned in our retrospect last year, took the same line, but has had to fall back on the resources of his own county. Anyhow, we can see from various signs in various parts of the country that the question is becoming a pressing one. Some day, perhaps, Parliament will put a little compulsion into the provisions of 49 and 50 Vict., the Act for “giving facilities” for care, education, and training of idiots and imbeciles.

General paralysis again is a large element in the admissions, and in reference to this Dr. Pringle states that such cases “are products, as a rule, of vicious and intemperate living,” and that the high ratio “indicates an alarming amount of degrading vice.” We cannot agree with him in this. It is a terrible thing to say of a general paralytic (as a man once said), “there goes So-and-so but for the grace of God.” We do not for a moment suppose that Dr. Pringle looks at it in this way, but we think that on medical grounds it is well to avoid a too precise opinion on a still debatable matter. Further on he draws attention to the fact that with him 15·4 per cent. of Celtic admissions and 18·5 per cent. of Saxon admissions were paralytics. We have been led to believe that Celts in Inverness never become paralytics. But we have never heard that Celts there or elsewhere are more free from vice than their neighbours. Is it not, then, likely that an additional condition is to be sought to account for this high ratio?

Gloucester County.—Mr. Craddock, in a lengthy and instructive report, gives figures from which it appears that the ratio of lunacy (both intra- and extra-asylum) to sanity in the county closely corresponds to that for the whole of England, with the

result of an increase of eight per cent. beyond the increase in the population. He expresses no opinion as to the increase in "occurring" insanity. The large amount of £2,500 was earned in respect of the excess created by the greater weekly sum paid for out-county and private patients. Referring to the latter class we find the following opinion :—

It would, I am convinced, be desirable if some scheme could be devised for keeping them in wards of their own, apart from the ordinary pauper patients. They do not mix well; the private patients are many of them dissatisfied themselves, and a cause of discontent among the paupers with whom they associate. The fact that they are allowed to wear their own clothing (the only distinction that is made between the two classes) is a badge regarded by the wearers as of superiority, and disliked correspondingly by the wearers of county clothing. The small extra payment made on their behalf is in no way representative of the extra trouble they entail, and their friends as often as not appear to imagine that for the sum of 15s. per week a patient ought to be entitled to enjoy in a county asylum as much luxury and as good surroundings as the payment of four or five guineas per week in a chartered hospital or licensed house would command.

Lancashire County. Prestwich.—This asylum is, we believe, still the only one that has taken advantage of sect. 26—to board 80 of its patients in the Rochdale Workhouse. We learn from the Committee that the arrangement has been found to work without friction.

Pressure on the accommodation, vast as the latter is, has led to remarks both on the part of the Visiting Commissioners and of the Medical Superintendent, which are worthy of careful study. The following is an extract from the report of the former :—

It looks as if the annexe would ultimately become, equally with the main building, a receptacle for the insane of every description, for which purpose, we need hardly say, it was not built. The pressure, however, for years brought to bear by local authorities upon the Home Secretary and our Board to sanction huge asylums for mixed classes of the insane, exhibits no abatement, and there seems to be now no limit to their size. Opinions may, we think, differ; indeed, we know very well that they do differ widely on the wisdom of bringing together large masses of troublesome lunatics on one spot, where more must be decided by deputy than appears to be safe, and where the eye of the Medical Superintendent—even an exceptionally able man (not always to be got)—cannot possibly check abuses in treatment of the patients or detect waste in the administration of the institution.

Mr. Ley, believing that the type of insanity of the present day is becoming less and less amenable to medical treatment, shortly reviews various proposals to decrease pressure or to tend that way. He says that it is clearly impossible to limit the asylum to curable cases, for in the nature of things a large proportion of applications must be incurable. He does not believe that the difficulty will be solved by the retention of chronic cases in the workhouse (this being, of course, under ordinary circumstances, and not under sect. 26), nor with boarding-out in families, nor in farm colonies, all for the same reason, that only ten to twelve per cent. are fit for treatment under these conditions or any

of them. The plan which commends itself to him is the building of institutions specially designed for the chronic class, thereby relieving the asylum of a lot of material which hampers its legitimate work. This plan, which is in general idea like that obtaining in London, is yet unlike it in that Mr. Ley would have the acute and chronic blocks under one head, or, at least, in close relation to each other, while in London the two classes of institutions are under different management. Again, too, the leading idea of separating curable from chronic is the one that has largely given shape to the recent additions at the neighbouring Whittingham Asylum, but there is a curious contrast in the working out of the plan. As stated above, Mr. Ley looks for benefit in subtracting the chronic from the curable, while at Whittingham the idea is to keep the curable from mixing with the chronic. This is an important difference. Either plan is proper to be conscientiously tried, but we think that the Whittingham plan has this special advantage, that there will be less danger of the curable being swamped eventually by the chronic.

Mr. Ley, referring to the large proportion of general paralysis, attributes its causation chiefly to the struggle for existence in teeming populations under unfavourable conditions, social and hygienic.

City of London.—Stone.—Last year we remarked on the many zymotic troubles which had beset Dr. White. This year, though these were continued in the early months in a modified form, yet since the new drainage was completed there has been complete freedom.

Dr. White again reproduces the facts relating to admissions, recoveries, deaths, and residence in his very convenient chart form. We would venture to suggest that it would be possible and desirable to work the particulars on to one chart even as meteorological facts are often rendered. We feel sure that the result would be so useful that other asylums would follow his lead.

The training of attendants and nurses on the lines of the Association scheme is carried on with energy.

Monmouth, Brecon, and Radnor Joint Asylum.—It is noted that the new Act, in that it permits a relieving officer to depute his duty of conveying patients to the asylum, has tended to limit the amount of "history" received with the patient.

The question of dissolution of the present Union has been mooted, and is now awaiting the decision of the Home Secretary.

The weekly charge here is 7s. 7d., so that the ultimate cost to the unions is 3s. 7d.

Somerset County.—The works for the new asylum are progressing fast, but it is noted that something will have to be done to meet the urgent condition of affairs that has arisen from overcrowding and will continue to increase before the new buildings are ready for occupation. A condition more favourable to

recovery in the mental state of those admitted was a good deal discounted by a low death-rate.

Dr. Wade having found that many inaccuracies had crept into Tables III. and IV. has had them carefully revised and amended. The trouble that he has been put to will assuredly earn him the thanks of all who have statistical accuracy at heart.

Stafford County.—Burntwood.—Dr. Spence, in referring to a notable increase in the admissions, deals with the question whether the increase in lunatics is due to cumulative insanity on the one hand or to occurring insanity on the other hand. He seems to adopt the view that, when all has been said and done by way of argument, yet it is impossible to avoid the conviction that at least some part of the increase cannot be accounted for in the manner suggested by those who take a hopeful view of the situation. He considers that high pressure and hereditary taint are the chief causes, and he fears that an increase of the latter is to be looked for if men and women who are in other respects harmless are discharged having still power to injure humanity by handing on the taint.

We note that on a certain day there were among the 643 residents only 12 general paralytics, but there was also the enormous proportion of 121 epileptics. The latter figures would appear to give point to his remarks about hereditary transmission. Hitherto we have had only two aspects of the "beer in asylum" question—beer or no beer? The adherents on either side promise to be as earnest in the advancing of their views concerning this matter as some are on other important questions, such as open doors, etc. But there appears to be a third course midway, which Dr. Spence has taken. This is to give beer to those who will be the better for it, for dietetic or other reasons, and to withhold it from those who will be the worse for it. Someone seems to have disapproved even of this cautious procedure, but we feel sure that when it is compared with either of the extremes there is just as much common sense and a deal more independence about it.

In adverting to the training system, in fostering which Dr. Spence has rendered such signal service as Registrar, he makes the following remarks:—

The systematic training of asylum nurses is still in its infancy, but the idea has been received with marked approval, and without doubt will make as rapid progress and confer as much benefit upon those suffering from mental disorders as the training of hospital nurses has done and is doing to patients suffering from other bodily ailments. A small grant from the funds at the disposal of the Technical Instruction Committee of the County Council, in order to defray the expenses in connection with these most useful and valuable classes, would be very welcome indeed, and such an expenditure would be quite in accordance with the spirit of the Act of 1889, as not only will the insane in asylums benefit by the care of specially trained nurses, but the general public will likewise derive the advantage of having at their call when required a number of men and women thoroughly capable of taking charge of cases of mental disorder occurring in private houses.

Sussex, Haywards Heath.—West Sussex has left East Sussex and Brighton, the former partnership being dissolved as far as it was concerned. Nevertheless the removal of most of its patients has not freed the asylum from over-crowding and fear of over-crowding. It is one of those asylums that has put its patients out, five here, ten there, and so on. It is to be hoped that strenuous endeavours will be made to remedy such a condition of affairs, which entails hardship on all concerned, especially the relatives of patients.

Dr. Saunders states that in consequence of this crowding the guardians of a neighbouring union were approached and lent willing ears to a proposal to rent some of the workhouse wards; but the requirements of the Lunacy Commissioners entailed alterations too costly to make it worth while to go further.

Worcester County.—This report is always pleasant reading as it breathes goodwill between all connected with the management of the asylum.

The training of nurses, which had been instituted by Dr. Cooke, has met with substantial proof of support on the part of the committee, who have contributed £25 for the purchase of books, diagrams, etc., and contemplate the award of prizes.

Dr. Cooke has had to fight one of the silly little battles that is forced on Medical Superintendents by Lunacy Law. A patient was due to be dealt with under section 38 at the end of his second year of residence. As he was on trial during the last month, with every prospect of being discharged, the usual renewal certificate was not signed. But five days before the expiration of the year, that is less than "seven clear days" before the date for the order to lapse, he was brought back, having gone wrong again. It was, of course, necessary to discharge and also to re-certify him, but then the question arose as to whose business it was to procure the fresh order. Dr. Cooke reports:—

I communicated with the Commissioners again and obtained from them the following expression of their opinion on the three points I placed before them:—

"The statement of particulars which accompanies the reception order does not appear to form part of the order. The particulars should, however, be substantially supplied.

"In the event of a reception order lapsing, and the patient still requiring asylum treatment, the course to be pursued, and which the Commissioners understand to be generally adopted, is to inform the Relieving Officer of the union in which the asylum is situate that the reception order has lapsed, or is about to lapse, and that the patient is still of unsound mind, and request such Relieving Officer to take steps under the Act to procure a fresh reception order. The statement of particulars can be filled in by the Relieving Officer from information supplied by the Asylum Clerk. The union to which the patient may be returned as chargeable should be the union from which the patient was originally sent to the asylum, or the union (if any) in which, since reception, the patient may have been adjudged to be settled."

Yorkshire, East Riding.—The Committee report that the accommodation afforded by the asylum is probably sufficient for some

time to come. Under such satisfactory conditions Dr. Macleod can give a placid and contemplative opinion on the vexed question of the increase in insanity. He allows, of course, that there are more lunatics in asylums, but does not consider that it is proved that lunacy is on the increase. The figures relating to the East Riding certainly do not show this to be so, and it is to be remembered that this is almost a purely rural county to which would apply the remarks made in connection with the Dorset Asylum.

2. *German Retrospect.*

BY WILLIAM W. IRELAND, M.D.

On the Dreams of the Blind.

There is a paper with this title in the "Zeitschrift für Psychologie und Physiologie der Sinnesorgane," 25th October, 1894, by Friedrich Hitschmann. He became blind in the third year of his life, but is still able to distinguish between light and darkness. He never dreams of seeing, and does not share the fancy of the poets that the spirit, freed during sleep from bodily restraint, can realize the gift of sight. He tells us that the blind in general have weaned themselves from their deficiency, and feel themselves in an accustomed and natural condition. They have not that painful longing for light which those who have all their senses sometimes poetically ascribe to them. Naturally their dreams are compounded of the other sensations, especially the impressions of hearing. The blind dream much of voices, by which the persons of their acquaintance are recognized, whereas the seeing often dream of faces and figures; sometimes animals, especially dogs and birds, seem to the sightless to have human voices, and to be gifted with speech. A blind man who travelled home once a year used to dream of the journey by rail. In this case the dreams were made up of the lumbering of the wheels, the whistle of the locomotive, the feeling of fresh air through the open windows, and the smell of the food sold at the station.

Mr. Hitschmann tells us that while the dream world of the blind is poor in sensory images, it is rich in abstract phenomena. It is characteristic of their dreams that the sleeper often feels himself a spectator as if he witnessed a play in a theatre. He seems to witness novels, dramas, or philosophical lectures. I suppose these appear to come through the ear, for he tells us that he never dreams of handling a book for the blind, or of using his writing apparatus. Seeing people, however, seldom dream of reading and scarcely ever of writing.

In the "Vierteljahrschrift für Wissenschaftliche Philosophie," Band. xvii., 3, Mr. Hitschmann considers the influence of art upon

the blind. They enjoy music to the full, and also lyrical poetry. The blind take an especial interest in dialogues, novels, and dramas where the effect does not depend too much on the *mise-en-scène*. They have an especially good judgment on the effect of words and rhythms of poetry.

The Cortex Fibres in Idiocy.

Dr. Klinke has applied Vulpinus' method of studying the cortex of the normal brain by counting the tangential fibres in the examination of twelve diseased brains ("Archiv. für Psychiatrie," Band xxv., Heft. 2). Seven of these were cases of idiocy, two of senile dementia, two of simple insanity, and one of general paralysis. Sections were taken from the first and third frontal and first temporal gyrus of the left hemisphere, and from the third frontal, the anterior median convolution, and the occipital lobe of the right hemisphere. The preparations were coloured by Weigert's method.

The principal conclusions given by Klinke are: General disorders of nutrition, such as are observed in idiots and after early epileptic attacks, keep back the development of the tangential fibres. The number of the fibres is somewhat diminished in age, but much more so in dementia senilis. In dementia paralytica the number of the fibres can be smaller than with some idiots. The diminution in the fibres in idiots' brains is dependent upon the age in which the injury to nutrition took place. The average number of fibres is not the same in different portions of the brain. They are most numerous in the median convolution of the right hemisphere, and next in number in the right occipital lobe. The frontal lobe is most affected by a diminution in the number of the fibres, and the outer tangent fibres suffer most.

Curious Case of Microcephaly.

Dr. Hermann Pfister has given ("Allgemeine Zeitschrift," L. Band, 5 Heft) a description of a case in which the brain was abnormally small, with rare variations in the convolutions. This was a woman who reached the age of 48 without attracting any particular attention. She led a regular life, and her intelligence does not seem to have been below the common. Towards the end of the year 1891 she was seized with restlessness, painful ideas, and delusions that she was being mocked and calumniated. She was admitted into the Psychiatric Clinic at Freiburg, in Baden, where she died in five months of typhus abdominalis and pneumonia. The head measurements were —

Circumference	470 m.m.
Longitudinal diameter...	160 "
Bi-temporal	135 "
Bi-parietal	125 "

The brain with the membranes were found to weigh 900 grammes. On examining the convolutions, the inferior pre-

central sulcus was found to run into the ascending ramus of the sylvian fissure. This is especially marked in the left hemisphere, where there is a fissure which divides the brain from the first frontal gyrus to the base of the sylvian fissure. The second temporal sulcus ran into the occipital fissure. This abnormality is said to be rare. It does not, however, appear that there is any symptom, mental or otherwise, accompanying such abnormalities, and, indeed, unless the sulci were very deep, this could scarcely be expected.

The author considers the question how far the intellectual activity is connected with the size of the brain. He gives the normal weight in German brains as 1,375 grammes for men and 1,245 grammes for women, and observes that the brains which weigh from 150. to 300 grammes less than these standards generally belong to weak-minded persons. On the other hand, some very heavy brains have been found which belonged to persons not distinguished for superior mental capacity. He mentions a Berliner named Rustan whose brain weighed 2,222 grammes, and that of a mulatto 45 years old which weighed 1,830 grammes; but it is doubtful whether either of these brains was healthy. According to Krause, Rustan's brain, judging from the cranial capacity, should not have weighed more than 1,885 grammes. On the other hand, there have been men who have shown great intellectual energy and power with brains of moderate weight. We must not forget that we cannot separate these portions of the brain which regulate motor or vegetative functions from the intellectual ones. It thus seems hopeless to measure intellectual or moral power by the difference of a few grammes of brain tissue.

Dr. Pfister has collected a large number of statistics about the size of the brain in race, sex, and age, but he does not appear to lay much stress upon them.

Weakness of the Heart in Idiots.

Dr. Wulff, of Langenhagen ("Allgemeine Zeitschrift für Psychiatrie," li. Band, 2 Heft), tells us that atrophy or hypoplasia of the heart has been frequently observed to attend chronic diseases, such as tuberculosis, cancer, dysentery, and chlorosis, but that the only case which he has found in literature in which the smallness of the heart has been noticed in the weak-minded, and its significance pointed out, has been published by Hagen. If Dr. Wulff will do me the honour to look at pp. 44 and 72 of my book on "Idiocy and Imbecility" he will find reason to modify this statement.

Dr. Wulff himself has made an important contribution to the subject in showing the comparative smallness of the heart in idiots in a precise and scientific form. He observed this condition in 123 cases which he examined. In weighing hearts he cuts off the great arteries as closely as he can, as these vessels within

the pericardium make up about 10 per cent. of the weight of the organ. Dr. Wulff's paper is illustrated by diagrams and tables which bring out the general truth that the heart in imbeciles is smaller in proportion to the weight and height of the body than in insane persons. He asks, Is the smallness of the heart the result of a common cause, or is the heart deficiency in some cases the cause of the brain weakness? He observes that the smallness and weakness of the heart in idiots is general, and not the result of atrophy or degeneration following disease. With idiots the brain is also, in proportion to the weight and height, smaller than in sane people, but the diminution of the heart does not go parallel with the diminution of the brain. The diminished size of the heart is greater in proportion than the diminished size of the brain, hence Wulff supposes that in some cases, although the blood supply may be sufficient to afford nourishment to the brain so as to enable it to grow to a certain size, the heart does not send enough for the development of the finer nerve elements, or for the excitement and maintenance of normal mental activity.

Singular Case of Nocturnal Epilepsy.

Under this heading Dr. Lehmann describes ("Allgemeine Zeitschrift für Psychiatrie," li. Band, 2 Heft) a young woman, the child of a drunken father. Weakly in general health, she had been subject to epileptic attacks from the third year. Her education had been defective. At school she was ill-behaved and addicted to stealing. When fifteen years old she had been punished for theft, and at the age of sixteen was sent to the asylum at Werneck. She was found to be of deficient intelligence, idle, rude, dirty, and given to stealing worthless things, but full of promises of amendment and lavish in religious professions. In her physical appearance it was noted that the left half of the face seemed to have more nervous power than the right. She was subject to epileptic fits, which only came on during sleep. She opened her eyes with a fixed stare, and stretched one arm or one leg stiffly out. This attack did not last longer than from five to ten seconds, after which she awoke. According to her statement the fits were always preceded by a dream. She thought that a man lay beside her and asked her to lie farther back as he wished to lie in the place where she was. After this she awoke, knowing that she had a fit. Sometimes it appeared as if there were several men. The female attendants, thinking this a case of demoniacal incubus, advised her to repeat a prayer, which, however, failed to avert the attack. Finding her readily hypnotized, Dr. Lehmann threw her into this condition, and suggested the hallucination of a man lying beside her, but this failed to bring on a fit. Dr. Lehmann tells us that he has searched the neurological literature of the last five years without being able to find a similar case. He will find some cases cited in

the "Centralblatt für Nervenheilkunde," No. 13, 1883. He considers the singular feature of the case to be a complex hallucination taking the place of an aura. To me it seems stranger that the girl should be aware that she had been visited by an epileptic attack.

Forms of Lunacy Treated as Sorcery.

Dr. Snell, in a learned paper on this subject ("Allgemeine Zeitschrift," 1. Band, 3 and 4 Heft), tells us that the prosecution of witches commenced about the second half of the thirteenth century in the South of France, whence it spread over Europe. The search for witches gained its highest fervour in Germany about the end of the sixteenth and first half of the seventeenth century. It seemed to be dependent on the belief that people could make a league with the devil and thus gain the power to cause storms, drought, disease, and death to men and cattle. This notion took a very deep hold upon the popular mind, and is not yet entirely eradicated in some rural districts. Pushed on by their fears accusers gave voice to their suspicions, and the wretches named were dragged before prejudiced tribunals and sent to the stake. Dr. Snell tells us that as many men suffered as women. No station and no age were spared. An old man of ninety-five and a child of one year old perished at the stake under this dismal superstition. In some cases a confession was extracted by torture; in others the sorcerer made a voluntary confession. These were, naturally, people deranged in mind. Dr. Snell gives one instance of a girl in Altmark, who confessed in the year 1671 that she had met with a man clothed in silk, but very much deformed in the feet. This person, whose name need not be mentioned, induced her to renounce God and give herself to him. He brought her a great knife, and told her to kill a man with whom she had a quarrel. As she refused to do this the tempter threatened to strangle her. She was brought before the faculty of law at Helmstedt, and as she persevered in her confession the learned men sentenced her to imprisonment for life, with such keeping as was necessary. From the details of the process there appears to be no doubt that this poor girl was subject to melancholy and hallucinations, and was inclined to commit suicide. The witch hunters were suspicious of all peculiarity, and people had to be very careful of their conduct. Women who avoided men, and lads who avoided the company of girls, were in danger of being suspected of sorcery.

The following atrocity was perpetrated in Spain before the institution of the Inquisition. In the year 1359 Martin Gonzalez asserted that he was the brother of the Archangel Michael, the first truth, and the ladder of heaven—that the place which Lucifer had lost was destined for him. He mounted daily into heaven and descended into hell. The end of the world would soon come, then he would fight with and overthrow the Antichrist, whereby he would hold in his hand the cross and crown of thorns of Christ.

The Archbishop of Toledo made vain efforts of conversion, and finally caused the lunatic to be burned alive.

A physician called Dr. Eugen Toralba was brought before the Inquisition in 1528. He stated that he had communicated with a spirit called Zekiel, who was like a blonde boy. He said that they had ridden together upon a stick from Valladolid to Rome in about an hour's time. He pointed out Zekiel to other people, but no one could see him. The Inquisition thought Zekiel must be a bad spirit, whereas the doctor was inclined to think more favourably of him. The unfortunate physician was put upon the rack, under which he was induced to declare that perhaps Zekiel was a bad spirit. After being confined for three years he was ordered to be imprisoned during the pleasure of the Inquisitor-General, but he was set free at the instance of the Admiral of Castile.

It was generally melancholiacs or paranoiacs who got into trouble with the witch searchers, but sometimes maniacs were laid hold of. The judges and inquisitors were of course aware of the existence of lunacy, though their differential diagnosis was sometimes defective. As may be supposed they often failed to distinguish the subtler forms of hysteria. Some hysterical women were thus condemned as witches, but more of them were treated as possessed and allowed themselves to be exorcised. I am inclined to think that sometimes persons were seized upon the statements of lunatics and of hysterical women. In some cases the accusations were the outcome of simple malice. Once accused it was difficult to escape.

Apparently Dr. Snell has not read Dr. W. T. Gairdner's instructive pamphlet, in which the learned Professor has described "The Case of a Modern Witch Medically Investigated."* In her were noted many of the symptoms on which the witchfinders laid so much stress—a weird appearance, unsociable ways, mental despondency, and extreme dulness of the mucous and cutaneous surfaces, so that the prick of a pin could scarcely be felt.

Self-Accusations.

Those who have studied the original records of the trials of witches do not find it easy to account for all the prosecutions by simply treating the accused as insane. In Scotland the parties sometimes appear as having come forward with a voluntary confession made to the Kirk Sessions or Presbyteries, and which they attested with their signatures. Torture was never used by these Church Courts, nor did all of these self-accusers seem insane in other ways. Probably we find the analogue of some such wretches in those deranged persons who make accusations against themselves to the police or magistrates. It occasionally happens that persons in whom no mental derangement had been previously noticed have

* "Insanity: Modern Views as to its Nature and Treatment." Glasgow, 1885.

a fixed idea, and accuse themselves of some crime with many appearances of probability.

Dr. W. N. Ergolski has described two such cases ("Archiv. Psychiatrie," Bd. xxi., Heft 2, quoted in "Zeitschrift," Band 1., Heft 6).

The first was a man 26 years old. He worked in a spirit shop, and drank heavily. He was troubled with depression, fear, and mental anguish, and had hallucinations of sight and hearing. He accused himself of having embezzled a hundred roubles belonging to his employer. After a searching inquiry it was found that nothing of the sort could have happened. He was sent to an asylum, and the melancholy and hallucinations soon disappeared, but he persisted in the idea that he had embezzled money.

In the second case, a countryman, 47 years old, accused himself before the Court of having killed his wife. The investigation and examination of the body showed no traces of a violent death. It was evident that she had died of a strangulated and gangrenous inguinal hernia. The man said that he felt relief after making this confession. He was sent to an asylum, but nothing was found unsound in his mental condition, save this one fixed idea. It appeared that about the time of his wife's death the man had been troubled with alcoholic melancholia. MM. Séglas and Brouardel have an instructive paper on this subject, entitled "Persécutés Auto-accusateurs et Persécutés Possédés," in the "Archives de Neurologie" (No. 82, December, 1894.)

Suicide in the Prussian Army.

In the "Allgemeine Zeitschrift für Psychiatrie," li. Band, 1 Heft, there are some statistics about the prevalence of suicide in the Prussian Army. The writer observes that the number of such acts rises with the development of the culture of nations, while race, descent, religion, and the seasons of the year are not without influence. In winter the number of suicides is at the lowest, and in June it is at the highest. These generalizations hold good in the military as well as in the civil populations. The Austrian and Prussian armies lose more through self-murder than those of other nations. In the German army, from 1876 to 1890, the number of suicides was 6.33; in the Austrian, 12.53; in the Italian, 4.07; in the French, 3.3; in the Belgian, 2.44; in the English, 2.09. The writer observes that the number of suicides in the British army in India and the Colonies is not reckoned. I do not know why this should be, but I venture to say that if the number of suicides amongst the Mussulman soldiers in India, or any Mahomedan State be counted, it will be found to be very much smaller than in the European armies mentioned. The nature of religious belief has more effect upon the frequency of suicide than any other factor, and if an increase of culture be accompanied by acts of self-murder, this is no doubt owing to the tendency of modern education to increase scepticism. How far the restraints of

discipline and other hardships of military service may tend to increase self-destruction is not made clear. Suicide is twice as common amongst the non-commissioned officers as amongst the common soldiers. We are told that only 1·5 per cent. of the suicides in the Prussian army can be traced to harsh treatment. I have seen the contrary asserted in a German Socialistic paper.

The writer in the "Zeitschrift," however, observes that since 1880 the proportion of suicides in the Prussian army has sunk from 7·6 in the 1,000 to 4·52, whilst suicides have at the same time steadily increased in the civil population. This diminution of voluntary deaths in the army has been accompanied by a marked improvement in military hygiene. We are also told that the German military surgeons are better instructed in psychiatry, and are more careful to keep out of the ranks weak-minded young men, or those who show proclivity to insanity. And no doubt, if such neurotic recruits be excluded, or be promptly invalidated, this will diminish the tale of suicides in the army.

Auto-Intoxication as a Cause of Insanity.

Dr. D. E. Jacobson ("Allgemeine Zeitschrift," lv. Band, 2 Heft) begins his paper by observing that the human body is a laboratory of poisons, from whose effects it is continually being saved by the activity of the physiological secretions and excretions. When these are hindered, or when the poison stuffs are produced in unusually large quantities, there results what has been styled by Bouchard an auto-intoxication. Dr. Jacobson inquires how the accumulation of such products in the blood may be the cause of insanity. He finds that an uræmic condition, following on diseases of the kidney, may be the cause of delirium and convulsions. Several authors have already described a "folie Brightique." This may be owing either to the altered blood supply acting upon a brain already predisposed to insanity, or to a long continued action of the blood charged with a poison upon the brain. The delirium may accompany the usual symptoms of uræmia, or the insanity appears as a species of vicarious symptom replacing the others. Dr. Jacobson finds in all the cases which he has examined the same type of insanity. There is acute delirium, with hallucinations, but sometimes the patient is stupid and depressed, or melancholy. The insanity subsides along with the improvement in the renal symptoms. The first case described he regards as typical. The patient, a young man of nineteen, suffered from chronic nephritis. He had symptoms of uræmia whenever he tried to depart from the milk diet. On the 28th of November he fell into a somnolent condition, followed in the evening by strong convulsive fits, which implicated the whole body. During these attacks he remained conscious, but felt no pain. Next day he felt much mental anguish, and began to be delirious. There were at the same time startings in the muscles of the face. During the course of the night the delirium increased. The

patient raised himself in bed, shouted, had hallucinations, and did not seem to know where he was. From this time there was a maniacal delirium, with hallucinations, which lasted three weeks, after which his condition improved in every way, and in four weeks he was discharged as a convalescent. Two years after he reappeared, troubled with the renal symptoms, but there was no return of the insanity.

Dr. Jacobson next considers auto-intoxication from liver disease.

The ancient Greek physicians noted the effects of bile in the blood upon the disposition, the slow pulse, the depressed irritable character, and sleeplessness. The writer then details a case of insanity, lasting for above a month, which was met with in the Asylum of St. Ann's, the principal symptoms being depression, unceasing murmuring, and restlessness. Dr. Jacobson then considers those derangements of the mind which result from abnormal processes of fermentation in the digestive canal. They often cause headache, depression and sleeplessness. Some physicians have described dyspeptic coma. A disordered state of the digestive organs is sometimes the cause of melancholia, instead of being merely associated with it. In such cases the defective action of the kidneys, diminishing their eliminative power, sometimes goes along with the morbid condition of the blood, the diseased products of digestion acting deleteriously upon the brain.

Dr. Jacobson describes the case of a "48 year old married cheesemonger" affected with catarrh of the stomach for several years. This ended in insanity. The most prominent symptoms were acute delirium, with hallucinations. Dr. Jacobson finds these toxic insanities dependent upon agents of chemical or organic origin to have all a common type, characterized by acute mental confusion (*Verwirrtheit*) in one of its many forms.* This is a somewhat vague expression, and to my mind he has not clearly made out the type, nor is he helped by the observations of others. In British Guiana Bright's disease is very common, and it has been observed that many patients admitted into the asylum at Berbice with albuminuria are demented, with no history of an acute stage, "as if the functions of the brain were gradually impaired by the altered condition of the blood, in such a manner as to produce a state of dementia without any previous acute mental disorder."†

* Recent German writers on insanity make use of three expressions, *Wahnsinn*, *Verrücktheit*, and *Verwirrtheit* to denote three stages of mental disintegration which are especially met with in progressive paranoia. In the first, *Wahnsinn*, there are delusions, perhaps accompanied with hallucinations, which take more or less systematized form, and abide in the mind. In *Verrücktheit* the relation of the ideas or mental images is less rational, and mental impression is fleeting. In *Verwirrtheit* the incoherency of word and action is much increased, and the relation of ideas and hallucinations to one another is still more incongruous. There is a crowd of words destitute of any rational association. Cf. "Dict. of Psychological Med."

† See "British Guiana Medical Annual and Hospital Reports," Demerara, 1891, p. 104.

3. *Retrospect of Normal Psychology.**

By HAVELOCK ELLIS.

German Psychological Laboratories.

The first psychological laboratory was established by Wundt at Leipzig about fifteen years ago. There are now four in Germany, sixteen or more in America, two in England, while France, Italy, Switzerland, Belgium, Holland, Denmark, Sweden, and Roumania each possess one. M. Victor Henri has recently been examining the present position of the German laboratories ("Les Laboratoires de Psychologie Expérimentale en Allemagne," "Revue Philosophique," Dec., 1893). Wundt's, founded in 1878, is still the most important. It consists of eleven rooms, and is fully supplied with instruments for the investigation of the various forms of sensation, the duration of mental processes, the time-sense, etc. Wundt's assistants are Külpe and Meumann, and last year there were 22 students. The laboratory is always open (except on Sundays) all the year round, and the student spends six or sometimes twelve months familiarizing himself with the apparatus and serving as a subject for experiment before himself undertaking any investigations. An original investigation seldom occupies less than six months, usually over a year. The results are published in Wundt's "Philosophische Studien." During the past year there have been studies made of colour perception and quantitative relations of colour contrasts, of geometric illusions, of the appreciation of distance by movement of the arms, of the sensation of taste, the time-sense, the influence of rhythm on the pulse and respiration, on associations, on the production of vibrations from one ear to the other, and on some aspects of the æsthetic emotions.

The Göttingen laboratory was founded in 1879 by Müller. For some years it was Müller's private property, but is now subsidized, as is Wundt's laboratory. There are five rooms, and so far as apparatus is concerned the laboratory is even better off than that at Leipzig; but there are very few students, only two last year. This is attributed partly to the difficulties made at Göttingen over receiving a psychological thesis for the doctorate, and partly to the fact that this laboratory is still little known. Investigations carried on here are published in "Pfüger's Archiv" and in the "Zeitschrift für Psychologie u. Physiologie d. Sinnesorgane."

* The remarkable progress which is now being made in psychological investigation by strictly scientific methods is tending to bring psychology into line with psychiatry. The psychologist's work is, therefore, constantly becoming of greater interest to the psychiatrist, and it is proposed to summarize from time to time some of the current work in normal psychology.—[ED. "J. M. S."]

The Bonn laboratory was established in 1888 by Martius, to whom it belongs. There are seven excellent rooms, and the apparatus are the same as at Leipzig; in fact, the laboratory, on the whole, resembles that at Leipzig, though on a smaller scale, and its work is published in the "Philosophische Studien." There are, however, not many students, for the same reasons as at Göttingen.

The Berlin laboratory was founded a few years ago by Ebbinghaus. It has no regular subsidy, and is chiefly organized for psychological demonstration. There were eight students last year, but no original work has yet been done. Ebbinghaus hopes that the laboratory will soon be extended, and that original work will be produced.

Psychology in America.

Dr. Henry de Varigny, an accomplished biologist whose scientific interests are by no means confined to his own special department of biology, has lately published an attractive volume concerning the matters that drew his attention during a visit to the Chicago World's Fair ("En Amérique: Souvenirs de Voyage et Notes Scientifiques," Paris: Masson, 1894). Being already acquainted with the United States, he had a keen eye for novelties, and one of the matters which chiefly impressed him was the recent advances in experimental psychology. He devotes an interesting chapter to the laboratory of experimental psychology at the Exhibition. This was under the management of Professor Jastrow, and to some extent indicates the psychological resources of Professor Jastrow's own University of Wisconsin. The laboratory contained a full supply of psychological apparatus, which was exhibited in action for anyone who desired; M. de Varigny was especially interested in Jastrow's automatograph. This is a glass plate resting on three metal balls, thus rendering it extremely mobile, and prolonged to a vertical point, which registers every movement on smoked paper. The subject places his hand on the plate, and the slightest unconscious movement of the hand is then registered. This apparatus has already yielded many interesting results regarding the influence of mental action in producing involuntary movement. The laboratory was not, however, set up at Chicago merely to exhibit instruments, but to obtain a valuable body of psychological data, with the help of those members of the general public who were willing to submit themselves to tests of their tactile sense, muscular sense, memory, rapidity of perception, muscular skill, etc. In a few months' time Professor Jastrow will probably have worked out his results, and they will be of considerable interest, both to the student of normal and of abnormal psychology.

Another French writer has also lately published a detailed description of one of the leading American psychological laboratories (Marcel Bandouin, "La Psychologie Expérimentale en Amérique,"

"Archives de Neurologie," July, 1894). This time it is the laboratory which forms the chief part of Clark University, Worcester, Mass., as it at present exists, and which Baudouin compares to the great anthropological laboratory at Paris. It is presided over by Professor Stanley Hall, who, while not an active psychological experimenter like Jastrow, has a very distinguished reputation for originality and initiative, and has done more than anyone to guide the new psychological movement in America, more especially in the applications of psychology to education; he has also taken great interest in criminal anthropology. The psychological department of Clark University was founded in 1889, and is here described as a model of its kind. It consists of four sections:— (1) Laboratory of neurology, with two rooms; (2) laboratory of anthropology, with two rooms; (3) educational museum; (4) laboratory of psychology proper, consisting of four rooms. It is richly supplied with instruments of all kinds, and there is an excellent library. There were 18 students during 1893; they remain three years, and eventually become professors of psychology elsewhere. Many valuable studies have come from this laboratory, and, as is well known, the "American Journal of Psychology" is edited by Stanley Hall, and issued from this University. The programme of the psychology course for 1893 included anatomy and physiology of nervous system (Hodge), experimental psychology, including reflexes, sleep, hypnotism, automatism, memory, attention, etc. (Sanford), morbid and abnormal psychology, including idiocy, criminality, genius, insanity, hysteria, etc. (Donaldson and Hodge), anthropological psychology, including religion, primitive arts, childhood, old age, etc. (Chamberlain and Boas), æsthetics and ethics, including music, painting, literature, and the laws of motility and will (MacDonald and Gilman), the history of psychology (Stanley Hall), and the applications of psychology to education and co-education, moral and mental hygiene, etc. (Burnham and Hall). Professor Stanley Hall fully realizes the connection between normal and abnormal psychology, and although these courses are intended primarily for students of normal psychology he takes his students every week to the lunatic asylum. Is it too much to hope that the time is not far distant when no one will venture to enter upon the psychological study of the insane without giving some attention to the normal psychology of the sane? Mental phenomena must be approached from both sides to be rightly understood, and the psychologist has led the way which the alienist must sooner or later follow.

The Psychology of Emotion.

It is only within recent years that a sound and coherent physiological theory of emotion has become possible. Until recently it has always been taken for granted that an emotion is primarily a psychic process which may produce some secondary physical disturbance. Even introspection and self-examination are enough to

show that this cannot be taken for granted; in a sudden shock or start, so brief that the phenomena can be analyzed immediately, for instance when one unconsciously approaches a large mirror in the dusk, it will be found that there is first a brief vague period of uncertainty, then a bound of the heart concomitantly with the feeling that a stranger is in unpleasant proximity, followed by the recognition of one's own reflection. The whole process may take place in about a second, and it is practically impossible to decide whether the feeling of emotion or the cardiac disturbance comes first; all that can be said is that they seem to be synchronous. According to a theory which is now rapidly gaining ground, and which is of the greatest interest to the alienist, the psychic emotion does *not* come first, the vaso-motor and motor disturbance follows directly on the perception, and the emotion in consciousness is a secondary result. The physiological investigations of Mosso with the plethysmograph, etc.—showing that external impressions produce vaso-motor disturbances so delicate that in their slighter forms they never reach consciousness—have chiefly paved the way for what is now usually called the vaso-motor theory of emotion, although Mosso did not himself formulate it. This was done about ten years ago by Professor William James, of Harvard, and Professor Lange, the Danish physician, working independently of each other, but both stimulated by Mosso's researches.

In "Mind," where Professor James first stated the theory, a criticism of it has lately appeared (D. Irons': "Professor James' Theory of Emotion," January, 1894). Unfortunately, however, for the writer of it, the problems of modern psychology require something more than a merely logical equipment; they require a very considerable physiological and even pathological equipment, of which Mr. Irons is obviously innocent. He takes for granted that "coarse" physical disturbances cannot produce "delicate" emotions, regardless of the fact that the physical disturbances may be too delicate for the psychic apparatus to register. And he also assumes, without even question, that melancholia has no physical basis. It is evident that a writer with such notions is not competent to discuss the nature of emotion. Something else is required than mere logical quibbling.

Of far greater value, because experimental in character, is a contribution to the same subject by Dr. Paul Sollier, the author of the remarkable book, "Psychologie de l'Idiot et de l'Imbécile" ("Recherches sur les Rapports de la Sensibilité et de l'Emotion," "Revue Philosophique," March, 1894). Dr. Sollier, after briefly describing the theory of James and Lange, refers to a case of general anæsthesia which he has had the opportunity of investigating. According to the vaso-motor theory, as James recognized from the first, any extensive degree of anæsthesia should diminish emotionality. This case was that of a man with bad nervous heredity, who had been gradually invaded by anæsthesia until

there was complete abolition of tactile sensibility on the skin and mucous membranes, analgesia, complete loss of muscular sense, loss of feeling in stomach, rectum, and bladder, disappearance of cutaneous and tendinous reflexes, and an advanced degree of paralysis of movement and speech. Sollier found that psychic apathy was extreme; the absence of emotion was, indeed, almost absolute, and had developed parallel with the anæsthesia. Nothing gave him either pleasure or pain; even the assurance that a cure was possible produced no sort of reaction. He loved nobody and hated nobody. The sight of his wife entering the ward alone gave him a fleeting emotion—"a blow in the stomach," as he expressed it—but this immediately passed, and he was indifferent to her presence. It occurred to Sollier that the investigation of an artificially suggested anæsthesia might throw fresh light on the question, and with this object he carried out several series of hypnotic experiments on two subjects, at the same time taking pneuographic tracings of their reactions to emotion under various conditions of suggested anæsthesia. This article is chiefly taken up with a full account of these experiments, with a reproduction of the respiratory tracings. Some of the replies, Sollier found, were absolutely similar to those given by the man with general anæsthesia. He did not attempt to abolish the whole of the visceral sensibility, as there might possibly be risk of stopping the heart and respiration, but suggested that the organs should continue to act, but that the subject should not feel them. He found in one subject that when sensibility was completely abolished she was no longer capable of experiencing emotion; in the other subject the anæsthesia produced was less deep, and a slight degree of emotional susceptibility persisted. Peripheral sensibility was found to be of far less importance in the causation of emotion than visceral sensibility. Sollier here recalls those hysterical cases with visceral phenomena, especially anorexia (involving anæsthesia of the stomach, etc.), in which, also, there is great loss of emotional susceptibility. He finds that his experiments "fully corroborate the opinion that the part of organic visceral sensibility, better called cænæsthesia, predominates in the production of emotion." Sollier finally suggests that there is identity of mechanism between emotion and the muscular sense. One is the conscious perception of voluntary movements, the other of involuntary movements. The whole paper should be read, although it must be borne in mind that such experiments with hypnotized subjects, while very suggestive, are always too uncertain to carry much weight, taken alone.

Finally Mr. James, in a very fair and moderate paper ("The Physical Basis of Emotion," "Psychological Review," Sept., 1894), sums up the present state of the question, duly considering all the arguments which have been brought for and against the vasomotor theory. More facts are needed, and the alienist, by

bringing forward careful observations of pathological emotional states, and the organic conditions—sensory, vasomotor, visceral, etc.—associated with such states, is probably in the best position to supply the evidence required.

Hallucinations among the Sane.

The latest publication of the Society for Psychical Research ("Proceedings," Part xxvi., Aug., 1894) opens with the address by the President, Mr. A. J. Balfour, an admirable plea for the scientific study of the psychic phenomena which he regards as rudimentary beginnings of senses, "beginnings never developed and probably never to be developed by the operation of selection." The greater part of the volume (not less than 400 pages) is devoted to the "Report on the Census of Hallucinations" by the committee appointed at Paris in 1889, and presided over by Professor Henry Sidgwick. The report deals with 17,000 answers obtained by 410 collectors. All the precautions possible in the case of a census so extended were adopted. A considerable proportion of the collectors were trained psychologists or medical men; it was found that the more scientific collectors obtained a percentage of affirmative answers somewhat over the general average, not, however, as regards visual hallucinations, but auditory and tactile, showing that the difference was merely due to their care in inquiring for the more trivial phenomena. The committee have carefully considered the circumstances of each case wherever possible, and transferred over 500 affirmative answers to the negative side. After these and other corrections it is found that the percentage of affirmative answers is 9·9 (men, 7·8; women, 12·0). Visual hallucinations are in a great majority, the auditory much less numerous, while the tactile form only a small proportion. In most of these respects (but not in the preponderance of visual phenomena) the census agrees with the results of a much less extended investigation carried out by Mr. Gurney some years ago. An attempt has been made to exclude hallucinations occurring in the course of disease, but a very large number remain in which the subject was suffering from worry or anxiety, or a certain degree of ill-health; these cases were sifted by Dr. Myers. So far as possible, also, pseudo-hallucinations (*i.e.*, those not fully externalized) and *illusions hypnagogiques* (in the half awake state) are excluded. It was found that hallucinations tend to assume familiar forms, and that a state of repose (like lying in bed) predisposes to their appearance. The committee conclude that the great bulk of hallucinations are central and not dependent on the condition of the sense-organs. It should be added that a considerable portion of the latter part of the report deals with phantasms of the dying and similar phenomena, and the committee "hold as a proved fact" that (as they emphasize it)

"between deaths and apparitions of the dying person a connection exists which is not due to chance alone."

It cannot be expected that all these conclusions will carry general conviction. It is to be regretted that the committee was not so constituted as to carry weight with the profession which until recently cherished the idea that hallucinations came exclusively within its own sphere. The only medical member (Dr. Myers) died before the report was completed. Some degree of searching medical inquisition (though the difficulty of this in most cases must be admitted) would have added to the value of the cases. Persons known to the collectors as once within an asylum have been excluded, but there are many insane persons in the community who in their own opinion, and often in that of their friends, are in good health. It would be interesting to know what connection, if any, there may be between hallucinations and the condition of puberty, menstruation, the menopause, etc.—points not once mentioned. In reading these cases one constantly desires more precise information regarding the physical and mental condition of the subject at the time, information which is usually difficult to obtain.

The report is admirably drawn up and a large part of the evidence on which it is founded is reproduced; it is full of interest and suggestion to everyone who is concerned with either normal or abnormal psychology.

Paramnesia.

Paramnesia or false memory—the illusion that the experience one is now passing through had happened to one before—has recently been much studied by psychologists, though it has scarcely yet received any satisfying and definite explanation.

Lalande ("Des Paramnésies," "Revue Philosophique," Nov., 1893) found of 100 persons interrogated, 30 knew the phenomenon in a form which seemed to exclude any confusion with a mere imperfectly recognized resemblance to a real experience. He does not regard it as pathological. The key is to be sought in a double perception, at first unconscious, then conscious. He thinks the first perception may sometimes be an unconscious telepathic impression.

Dugas ("Sur la Fausse Mémoire," "Revue Philosophique," Jan., 1894) brings forward a number of cases from life and literature, and after expounding one or two theories which he had adopted and then found insufficient, he concludes that we are still ignorant, and must be content to bring forward new facts. He does not believe that the phenomenon is pathological, but he adds that it seems to be allied to neurosis. He has usually found it in persons whose intelligence is above the average, persons with a strain of originality, and it sometimes appears to be hereditary.

PART IV.—NOTES AND NEWS.

MEDICO-PSYCHOLOGICAL ASSOCIATION.

A General Meeting of the Medico-Psychological Association of Great Britain and Ireland was held on November 15th, at the Rooms of the Association, 11, Chandos Street, Cavendish Square, under the presidency of Dr. Conolly Norman, F.R.C.S.I.

The minutes of the last General Meeting were read and confirmed.

ELECTION OF MEMBERS.

Dr. MERCIER said one of the candidates for admission as ordinary members was described as "Emil Wilhelm Lindell, M.D., Univ. Upsala, Assistant Physician, Royal Asylum, Gothenburg, Sweden." As a point of order he wished to call attention to the fact that by their Rules the only persons eligible for the membership of the Association were "registered medical practitioners." He wished to know, before proceeding to the election, whether Dr. Lindell was a "registered medical practitioner."

Dr. HACK TUKE said he was only a registered medical practitioner abroad.

Dr. MERCIER submitted that "registered" meant on the English register.

The PRESIDENT said he was afraid he must rule that "registered" meant on the Register of the United Kingdom. He (the President) explained that the only exception was in the case of honorary and corresponding members. These could be elected only at Annual Meetings. Dr. Hack Tuke undertook to convey to Dr. Lindell that it was proposed to put his name forward for election as a corresponding member at the next Annual Meeting.

The ballot was then taken for the election of Henry Edmund Blandford, M.A., M.D., B.Ch., Univ. Dubl., Portland House, Bedford Park, Croydon, and Edward H. O. Sankey, M.A., M.B., B.C., Cantab., Resident Medical Licensee, Boreatton Park Licensed House, Boreatton Park, Baschurch, Salop.

The PRESIDENT declared that these gentlemen were elected members.

PRESENTATION TO LIBRARY.

Dr. HACK TUKE said Dr. Sankey, of the Oxford County Asylum, had presented to the Association Library, which was now being formed, an entire set of the Journal. Members would be aware that in regard to the first volume it was impossible to procure it, and the second and third were extremely rare. Dr. Sankey had the whole set, and when he (Dr. Tuke) visited the asylum in the autumn he was good enough to say that he would present the whole of them to the Association. That had been done, and therefore he proposed that the best thanks of the Association be presented to Dr. Sankey for his valuable donation. To other members, and especially those who had published works of their own, he would venture to say, "Go thou and do likewise."

Mr WHITCOMBE, in seconding, said it was most important that they should acknowledge a gift of that kind. He was sure they would at any future time be just as grateful if other members would give volumes to the library.

The resolution was carried by acclamation.

COMMITTEE ON CRIMINAL RESPONSIBILITY.

Dr. MERCIER, in the absence of Dr. Orange, President of the Committee, reported that the Committee, which was appointed at Bristol, was in communication with the Parliamentary Bills Committee of the British Medical Association, which was set in motion at the same time. Without entering into details, he might say matters were progressing very satisfactorily, and there was every prospect of the two Committees acting in harmony with one another in bringing about a change in the law.

INTERCURRENT DISEASES AND INSANITY.

Dr. GOODALL read a paper by himself and Dr. Bullen on this subject.

[This will appear, along with the discussion, in a future number of the Journal.]

A paper was then read by Dr. Campbell, of Rainhill, on "The Breaking Strain of the Ribs in the Insane."

[This paper, a demonstration on the subject by Dr. Mercier, and the discussion which followed, will appear in a subsequent number of the Journal.]

MEETING OF THE SCOTCH DIVISION.

A meeting of the Scotch Division of the Association was held in the hall of the Royal College of Physicians, Edinburgh, on Thursday, 8th November.

Dr. Batty Tuke, senior, and afterwards Dr. J. A. Campbell, occupied the chair. The others present were Drs. Bruce, J. Cameron, Campbell Clark, Clouston, Fox, Havelock, Hay, Keay, Ireland, Carlyle Johnstone, T. W. McDowall, Middlemass, Mitchell, Oswald, G. M. Robertson, Skae, Urquhart, Watson, and Turnbull (Secretary). After the minutes of the previous meeting had been read and approved,

Dr. URQUHART, on behalf of the committee appointed to consider the question of provision for aged and infirm officials, reported "that there is necessity for further information than they at present possess, and the committee suggest that they should be empowered to obtain skilled actuarial opinion." As the proposed expenditure is not within the powers of a Divisional Meeting, it was, after discussion, resolved, on the motion of Dr. Urquhart, seconded by Dr. Campbell Clark, to direct the Secretary to forward the report to the Council for consideration, with a recommendation from the Scotch Division in favour of it.

Dr. W. R. Dawson, Assistant Medical Superintendent, Farnham House Asylum, Finglas, Dublin, was duly elected to the membership of the Association.

HÆMATOPORPHYRINURIA FOLLOWING ADMINISTRATION OF SULPHONAL.

Dr. OSWALD read notes of a case of hæmatoporphyria following the administration of sulphonal. The full text will be found in the December number of the "Glasgow Medical Journal." The patient was a woman in whose urine hæmatoporphyrin appeared after about 2,200 grains of sulphonal had been given in three months. The clinical symptoms were similar to those that have been described by other reporters. The urine was of a deep claret colour and gave the characteristic spectrum of hæmatoporphyrin. The case ran to a fatal termination in about ten days, but before death there ensued a progressive paralysis of the voluntary muscles. A post-mortem examination was made, and the liver and kidneys were found to be fatty. Dr. Oswald referred to the *modus operandi* by which sulphonal acted as a hypnotic, and advanced a theory that the fatal result in cases of hæmatoporphyria might be due to accumulative action of the sulphonal affecting the adrenals and leading to such a destruction of blood and to such an accumulation of the decomposition products of hæmoglobin as to give rise to serious effects on the nervous system and to death. He ventured to dissent from the excessive praises with which asylum physicians were loading sulphonal, and believed it to be by no means a harmless drug. Its use had been much advocated in cases of *folie circulaire*; but while undoubtedly lessening the excitement and perhaps shortening its duration it had seemed to him to leave the patient less bright and clear intellectually during the period of well being. He referred to other reported cases, and especially to the excellent paper by Dr. Priestly in recent numbers of the "Medical Chronicle."

(Dr. Oswald's paper was read by *special request*.)*

The CHAIRMAN (Dr. Campbell, of Carlisle) said they were much indebted to Dr. Oswald for his careful account of the case that had come under his observation. He himself was not in a position to say very much in regard to the effects of sulphonal, but he had read Dr. Percy Smith's paper, which had been quoted by Dr. Oswald. He (the Chairman) held that the hypnotics that produced paralysis were not the very best to use for their patients. He hoped some would give their experiences, more especially as to the action of sulphonal on the kidneys that Dr. Oswald had alluded to.

Dr. CARLYLE JOHNSTONE complimented Dr. Oswald on the excellency of his paper. Hæmatoporphyria was quite a new thing to him. He had never met with a case of it. He had used sulphonal very freely and had never had any deaths or serious illness in cases treated with it. The urine had not been systematically examined in his cases; but no change in it had ever been observed, and he fancied that hæmatoporphyria could not have escaped his notice had it been present. His experience of sulphonal had been recorded, and he had seen little reason to change his views as to its advantages and disadvantages since his paper on the subject was published. In recent acute and curable cases he had found it a most excellent drug; but he considered that it should be used with the greatest care, and that when it was given repeatedly its administration should be frequently interrupted so as to avoid the dangerous effects of accumulation. Particular attention should be paid to the regular action of the bowels. Quite recently, in a case of melancholia with sleeplessness, he had found a single dose of forty grains sufficient to induce sound refreshing sleep for nearly seven nights. He was of opinion that in many of his cases recovery had been distinctly accelerated, if not actually effected, by the cautious use of sulphonal. Replying to Dr. Ireland, Dr. Johnstone said that for a fairly robust case forty grains was his average dose, though he usually began with thirty; twenty grains was seldom sufficient to induce sleep. In chronic cases he gave doses of ten to twenty grains daily or twice a day.

Dr. IRELAND asked if there was any other case recorded where a narcotic other than sulphonal had been the cause of hæmatoporphyria.

Dr. OSWALD said there had only been one case produced by tetralol.

Dr. CLOUSTON said that at Morningside they had had three cases of hæmatoporphyria succeeding and accompanying the administration of sulphonal. Most unfortunately they did not, he was afraid, examine their cases quite so thoroughly before or after death as Dr. Oswald had done. He believed the first case on record occurred at Morningside. At that time Dr. McMunn had never heard of the existence of hæmatoporphyria in connection with sulphonal. They sent the urine at first to the Royal College of Physicians' laboratory, and Dr. Noel Paton was not able to give them any information on the subject. They then sent it to Dr. McMunn, of Birmingham, who reported that it was hæmatoporphyria. It was a case of *folie circulaire*, and during one of the excited periods the woman, who was rather past mid-life, was taking from forty to sixty grains of sulphonal for a considerable time with great apparent benefit. Dr. Robertson, who was in charge, reported that the case was feeling very ill, and she had exactly the clinical symptoms which Dr. Oswald had described, but there was no paralysis though the woman was much reduced. The urine was red with hæmatoporphyria, exactly the colour Dr. Oswald had shown. He showed the urine at a post graduate clinic five years ago. So far as he remembered the woman got over the worst symptoms of the attack, but was never the same again. It was months, he thought, before she died—two months at least. He was safe in saying she got rid of the hæmatoporphyria and the acuter troublesome clinical symptoms. A post-mortem examination was refused. Another case was one of sleeplessness and excited melancholia with bronchitis and pneumonia. The attack of hæmatoporphyria was slight and passed off at once, and if

* We take this opportunity of stating that under ordinary circumstances all papers read at the meetings of the Association become *de facto* the property of the Association. In the present instance we understand that the author had already arranged for the publication of his paper elsewhere when he was requested by the Divisional Secretary to read it at the above meeting, neither being aware at the time of the understanding we have referred to.

there were bad effects they were unable to distinguish them from those of pneumonia and bronchitis. She lived a month or two after the hæmatoporphyria was seen. His experience of these cases had been so unfavourable that undoubtedly he had been more careful in the administration of sulphonal ever since. But he had not given up the use of sulphonal—far from it. One simply gave directions in every case for the urine to be examined carefully, and they watched the cases more carefully than before. Regarding the use of sulphonal, he was surprised to hear Dr. Oswald say that in cases of *folie circulaire* it lengthens the period of excitement and stupefies the patient, because he had found that if sulphonal had been in any way beneficial in arresting excitement it had been in certain cases of *folie circulaire*. They had had three cases, each extremely excited, wildly maniacal during the excitement, and the tendency to those periods of excitement had been arrested in a most marked way by sulphonal, and the excitement had never come back. In regard to the use of sulphonal, he might say he had at present a curious case of chronic excited melancholia of several years' duration. They tried a great many modes of treatment, and at last sulphonal was given in small doses, about twenty grains, never more than twice a day, commonly only once. The result was that instead of the patient being a miserable melancholic, groaning, restless, excited, very troublesome to manage, whenever she got sulphonal she was extremely elevated, emotional, and laughed. He called them in this case "laughing powders." No two glasses of the best champagne ever changed a man's emotional condition so much as the twenty grains of sulphonal did in this case. Dr. Oswald had rendered service to their department and also to general medicine by this careful paper.

The CHAIRMAN asked if this condition of the urine had ever been noticed by any observer in cases where sulphonal had not been used?

Dr. OSWALD said it had, but he confined himself to the cases in which sulphonal had been used. Many cases of hæmatoporphyria had been recorded as following in the course of acute diseases—rheumatism and pneumonia.

The CHAIRMAN asked if it also followed the administration of drugs such as turpentine?

Dr. OSWALD said he was not aware of that. Replying to Dr. Carlyle Johnstone he gave details as to the doses and total amount of sulphonal given to the patient. It so happened, he said, that the clinical clerk on duty at the time took a special interest in the case, and on the treatment side of the page there was marked down the amount of sulphonal she had every day.

Dr. ROBERTSON supplemented what Dr. Clouston had said in regard to the cases at Morningside. In one case hæmatoporphyria had occurred so very early after the adoption of sulphonal that they did not quite recognize at the time that the symptoms were due to it, and imagined it might be an accidental complication of the disease. Certainly it did not occur to them that the sulphonal was such a very important element in the case. The case was one in which vomiting and pain in the abdomen and great collapse were about the only symptoms. The diagnosis was so undecided that Professor Greenfield was asked by Dr. Clouston to see the case. At that time they thought something neurotic was wrong with the woman. Dr. Greenfield made a fresh examination, and they all knew the care with which he examined patients, and his opinion was that she was suffering from extreme debility. Before this he (Dr. Robertson) had discovered the pigment in the urine, and had applied all the ordinary tests to it without making anything of it. He pointed out to Dr. Greenfield the pigment in the urine, which was to be seen with the naked eye. This did not enter into their calculation as to the nature of the disease; they seemed to regard it as a symptom, but not a very important one. That was the reason they did not attach so great importance to the case at the time of its occurrence, for it was only afterwards that they suspected sulphonal had anything to do with its causation.

Dr. CARLYLE JOHNSTONE asked how much sulphonal had been given at that time.

Dr. ROBERTSON said a pretty large dose—thirty or forty grains for two or three months. The other case was one of adolescent mania. Her excitement had lasted so long that they tried to reduce it with sulphonal. She took a small dose, not

more than thirty grains a day, and did not take it for over a fortnight. This case was noticed to have hæmatoporphyrinuria. The symptoms were, however, obscure, and they were put on a false track because she commenced to bronze, and they concluded this was a case of supra-renal disease. She gradually passed through all the symptoms of supra-renal disease, and gradually got weaker and died. At the post-mortem there was actually seen well-marked supra-renal disease. Dr. Oswald had regretted there was no record or observation on this point, but here was a case where definite observation had been made. In no case was there an alteration in the reflex observed. If there had been any great change it would probably have impressed itself upon his mind. The first case had also well-marked cardiac disease, but he thought she had had that for a considerable period. In spite of the fact that he had seen the two cases of hæmatoporphyrinuria, both of which cases died, and granting that both cases were set up by giving sulphonal, which at that time did not occur to them so strongly as now, even yet he regarded sulphonal as one of the most useful drugs in the pharmacopœia, but he observed its action most closely.

Dr. URQUHART said that only one case had occurred in Perth, and it was of an obscure nature. Dr. Stirling had been called to see an elderly woman, who was reported as dying. He observed that the urine was of a bright, cherry-red colour, and sent it to Professor Weymouth Reid, of Dundee. There was a history of private and continued dosing with sulphonal, and the spectroscope revealed the presence of hæmatoporphyrin. The patient died within a few hours after having been brought under medical observation, and the case could only be imperfectly reported in the "British Medical Journal." One case, under sulphonal at Murray's Asylum, presented suspicious appearances, the urine having been of a brownish colour, but examination failed to demonstrate hæmatoporphyrin. He valued Dr. Oswald's careful paper as rendering it necessary that they should regard all these powerful drugs with suspicion, and to consider well whether they were not acting in a harmful manner even while procuring sleep and rest. As Dr. Carlyle Johnstone had previously insisted, constipation must be prevented during the use of this valuable remedy, and special care should be exercised in the case of women.

Dr. WATSON said he had had a very large experience of sulphonal, but he had not observed any of the symptoms recorded by Dr. Oswald. He quite agreed with Dr. Urquhart, however, in thinking that one great value of this paper was to make them more watchful in the use of sulphonal and drugs of that nature. He had derived great advantage from the use of sulphonal, especially in senile cases, not only in the poorhouse proper, but in the hospital wards of which he had had charge.

Dr. CAMPBELL CLARK said he had appreciated this paper very much, and felt that Dr. Oswald had struck a note of warning it was well for them to bear in mind in treating patients with sulphonal. The unfortunate thing was that though they had this note of warning, and noticed this change in the urine, it might be too late. The important question for some future observer to study was to find a note of warning which was struck in time to prevent these injurious effects ensuing.

Dr. TURNBULL said he had used sulphonal pretty largely, and sometimes for long periods in the same case, but had not met in his own practice with any case of hæmatoporphyrinuria, though he had seen one instance of it in another asylum. Some years ago, when he first began to use sulphonal, one of his patients after taking it had severe gastro-intestinal irritation, feverishness, and general symptoms similar to those described in Dr. Oswald's case, but without any paralysis. At that time attention had not been drawn to the possibility of a renal complication, and the urine was not specially examined; but he thought the very marked colour change in the urine which accompanied hæmatoporphyrinuria could hardly have escaped observation if it had been present. The patient had an anxious illness, but ultimately recovered, and is still alive, and there has been no permanent bad effect from the use of the sulphonal. Indeed, the main effect in her case is an indirect moral one. She has such a lively recollection of her sufferings during her illness after sulphonal that she will try to control herself during her attacks

of excitement rather than be dosed again with the powders. He (Dr. Turnbull) had more frequently met with the intoxicant effects of sulphonal shown in motor tremulousness and ataxy, and had, of course, always taken these as an indication for stopping the drug. The conclusion he drew from the occurrence of hæmatoporphyrinuria was that it is advisable to examine the urine and ascertain that the kidneys are acting healthily before giving sulphonal in any case. For a similar reason he generally avoided its use in senile cases. He had noticed that many of the recorded cases in which the renal complication appeared were cases of melancholia. He used it very seldom in melancholia, but mainly in maniacal excitement, especially in cases of recurrent attacks. He concurred with Dr. Carlyle Johnstone in thinking that with due precaution in its use sulphonal is a very valuable aid in the treatment of insane cases.

Dr. OSWALD, in reply, said that his remarks as to the danger of sulphonal had not met with much approval. He acknowledged that it was a very useful hypnotic, but he would point out that even after single doses hæmatoporphyrin had been found in the urine, not in such quantities as to give the naked eye appearances, but sufficient to give the characteristic spectrum. He failed to see the good of giving in cases of insanity, where the blood was already in a deteriorated condition, a drug which produced in the urine a blood-decomposition product. He was interested in Dr. Clouston's cases, not having previously heard of their occurrence, although a case was reported from the Royal Edinburgh Infirmary in 1890 by Dr. Wyllie. He asked if either of the cases showed any of the symptoms of the physiological effects of sulphonal prior to the appearance of hæmatoporphyrin in the urine. He believed that the fatal results in some cases were due to a cumulative action of the drug.

Dr. ROBERTSON said that in the chronic case the patient appeared as if drunk, the other case was not so affected. He asked what Dr. Oswald inferred from the clinical symptoms of paralysis that appeared before death. Were they developed before hæmatoporphyrinuria occurred?

Dr. OSWALD said that in cases where moderate doses were given they had often as a result symptoms of muscular inco-ordination. To his mind now the presence of these symptoms indicated that the physiological action of the drug was taking place, but in other cases no such symptoms occurred, and there might then be a cumulative action of the drug on the organs having to do with blood metabolism. He held to what he said regarding the effects of the drug in cases of *folie circulaire*. He granted that the periods of excitement were often shortened and their intensity lessened, but believed these results were bought at too high a price, for in some cases of this condition he had seen treated by sulphonal the result was a marked dulling of the intellect during the periods of well being, and a distinct deterioration of the general mental condition. What Dr. Robertson had said about the occurrence of Addison's disease in one of the Edinburgh cases was of great interest to him. He believed that the seat of the mischief was in the adrenals, and this was confirmed by the views of the function of these organs held by Bouchard and MacMunn. He thought he would be able to show that administration of sulphonal in large quantities led to distinct changes in these organs, and their intimate relations with the nervous system might also have a bearing on the causation of hæmatoporphyrinuria.

THYROID FEEDING.

Dr. LEWIS C. BRUCE read a paper on "The Effect of Thyroid Feeding in some Forms of Insanity," which appears at page 50 of this number of the Journal.

The CHAIRMAN said they were all much obliged to Dr. Bruce for his interesting and original paper. If he mistook not, the value of the paper was already attested by the authorities of Edinburgh University, who he believed had awarded Dr. Bruce a medal for his thesis. He had listened to the paper with great attention, and he was glad to have heard it.

Dr. KEAY said that having heard Dr. Macphail at the Annual Meeting of the Caledonian Medical Society read an account of the results obtained by him and Dr. Bruce from the use of thyroid in certain cases of insanity, he had taken the

opportunity recently of trying the drug in one case of his own. This was a very bad case of climacteric melancholia—a chronic and apparently hopeless case. He gave her tabloids of thyroid, beginning with six tabloids or 30 grains, and gradually increasing the dose to 60 grains daily. This was continued for about a month. No very great improvement in the mental condition followed, though she did seem a little brighter, but there was a striking improvement physically, shown by a moist skin, increased temperature and pulse (both were subnormal before the drug was commenced), increased weight, and markedly improved appetite. Before the treatment was commenced there was difficulty in getting her to take food, but now, as the nurse puts it, “she roars for her food whenever it appears in the ward.” The drug never produced in this case any great degree of fever, the temperature only rising to 100°, and the pulse to about 80°. There was no doubt that many of these chronic and seemingly incurable cases would be benefited by putting them to bed, taking their temperature and pulse regularly, giving them tabloids, say, of sugar, and paying them much individual attention, but he was convinced that there was more in the use of thyroid gland than mere treatment by suggestion.

Dr. IRELAND said that those who had an opportunity of examining a great many of the insane should be careful to note the condition of the thyroid glands. He had not made many dissections, and was sorry that he had neglected that point. It might save them using this remedy in a somewhat empirical manner if they knew in what cases the thyroid gland was diminished in size or weakened in function. They should look out for indications for giving the thyroid food, especially as some physicians in Edinburgh had found it a dangerous remedy. Dr. Bruce had, as it were, experimented on the verge of safety, and had thus given them some indications which might help them to avoid the risk of poisoning by the use of the gland. What Dr. Bruce had observed bore considerable resemblance to symptoms in exophthalmic goitre, which, indeed, might be due to enlargement of the thyroid. The increased secretion from the gland might do harm, just as deficiency might be followed by symptoms of mental derangement. In one case of mongolian idiocy he had given the gland now for a year. He had no case of cretinoid idiocy, as it was a very rare form. The result, as a whole, had been very satisfactory. Of course he used other means, and it was always difficult to know to what remedy one should attribute improvement. But this case had improved much more rapidly and continuously than any one he ever treated. He did not note fever or anything particular about the pulse, but the child became a good deal more lively and intelligent, and, in fact, a little more mischievous. The skin, which was often dry and branny in mongolian idiocy, was improved in softness, and the growth of the hair seemed to be increased. The child had grown a great deal and began to speak. He was never confined to bed or irritable. He (Dr. Ireland) got the gland fresh from the butcher, and gave it himself. He did not see why he should go to the chemist to get a preparation of tabloids. Some of the glands were tubercular, and he rejected them on that account. He supposed these tabloids were not subject to the action of heat, and he would be afraid to give crude tuberculin to a child, especially as he knew that cases of mongolian idiocy generally died of phthisis.

Dr. McDOWALL said that in one of general paralysis, with very marked ichthyosis of the whole skin, it suggested itself to him that as Dr. Bramwell had been successful in the treatment of psoriasis with tabloids he might try them. He did so with a remarkable result. The skin was now almost like that of a young child. Nearly all the scales and tubercles had disappeared, and the skin was very soft and fine for a man between forty and fifty. There had been no effect on the general paralysis. The man had been confined to bed for several months now, and was advancing slowly towards death, but they had not been able to satisfy themselves that he had either been benefited or made worse. The other case was a young man whose portrait he published a number of years ago—one of twins from the Wooler district, congenital imbeciles, and so remarkably alike in configuration and facial appearance that they were constantly confounded. They were most easily identified by one having a slightly larger thyroid. During the

ten or twelve years he had been in the asylum the thyroid had grown enormously, and the neck was one of the largest he had ever seen. As an experiment they tried him with thyroid extract in the form of tabloids. The result had been remarkable; the diminution in the course of three or four weeks had been very marked indeed. Dr. Murray, so well known in connection with this subject, had told him that this effect on the thyroid had been observed by others. Dr. Ireland had said that the thyroid extract seemed to simulate symptoms of exophthalmic goitre. Dr. Murray was of opinion that this was due to the excessive secretion of some substance which seemed to stimulate the action of the heart.

The CHAIRMAN said that at Garlands they had used thyroid treatment for lupus with most marked success. The patient upon whom they used it had in the early part of the treatment alarming attacks of feverishness, which rather frightened them for some days. Her lupus then remarkably improved, and her face was now look-at-able, which before it was not. About the size of the thyroid—in Cumberland they had a larger amount of goitre, but it was rarely among men—in fact, they only occasionally saw it among men. One of the men had his goitre treated with iodide of potassium; it got less. The man then got frightfully ill, and they thought he would have died, but he recovered, and his thyroid remained of normal size.

Dr. HAVELOCK said that he had followed with great interest accounts of the success attending the treatment of myxœdema and sporadic cretinism by the administration of the thyroid gland. About a year ago it occurred to him that among the 600 inmates of Montrose Asylum there might be a considerable number of cases where the mental symptoms resembled those often associated with myxœdema, and that these cases would be benefited by thyroid treatment. He then selected ten suitable cases, and began cautiously to administer a reliable preparation of the gland, having the temperature regularly taken and the patients under his personal observation. He failed, however, to get the results he anticipated; perhaps this was due to an insufficient dose being given, as directly a patient showed signs of cardiac or pulmonary distress, fever, or other alarming symptoms, the further administration of the gland was stopped. In three or four cases, from giving what he then considered an over-dose, he induced symptoms of fever, cardiac distress, and slight œdema of the lungs. He happened to remember the subsequent history of two of these cases. One was that of a young Irishman, who laboured under a form of melancholia with hebétude and partial stupor, and had refused to speak for several months. Soon after the treatment was commenced the youth had a feverish attack, and then began to brighten up, and in the course of a few weeks passed into a state of mild exaltation, the chief features of which were hilarity and talkativeness. He has since made an excellent recovery; whether promoted by the treatment is by no means certain, but the patient, when asked whether the medicine did him any good, replied: "Oh, yes, doctor; it brought back my spirits." The other case was that of a young lady with primary dementia, who had an alarming feverish attack, accompanied with œdema of the lungs, after a short course of thyroid treatment. In this case there was not the least subsequent improvement in the mental state. In yet another case, that of a Shetlander labouring under chronic melancholia with hypochondriasis, a few days of thyroid treatment changed the mental state into that of active melancholia, with noisy excitement and strong suicidal tendency. When the treatment was discontinued, this patient gradually returned to his usual state. A much more extended series of observations must be made before any trustworthy conclusions can be drawn regarding the benefits to be derived from this drug in cases of insanity.

Dr. CARLYLE JOHNSTONE said that at Melrose they had made use of thyroid feeding a year or two ago. With the possible exception of one case, none of his patients had benefited to any appreciable extent so far as their mental condition was concerned; but he was not prepared to say that the extract had been used in the careful and systematic way described by Dr. Bruce. In one case of stuporose melancholia the patient became much enfeebled and emaciated under its use,

fever set in, and the mental symptoms were rather worse than before. The drug was stopped, and a week or two afterwards the patient (who had been looked on as almost a hopeless case) began to improve, and in a short time made an excellent recovery.

Dr. CLOUSTON said this new treatment was founded on physiological and chemical lines. Several patients in Morningside were undergoing the treatment now. As to the power of the thyroid to produce fever, and after that an irritative reaction, no one would doubt after seeing patients so treated. This was a mode of treatment that added to their therapeutic resources, and would, he believed, lessen the amount of insanity.

Dr. BRUCE said he might be in error, but he had understood Dr. Keay to say that he was administering thyroid in the case he mentioned for an indefinite period. Thyroid feeding should not be continued for more than nine or twelve days at the very outside when the dose given was sixty grains per day. Too prolonged treatment tended to unduly exhaust the vital energies, so that the period of reaction was less beneficial. One of the most notable results of reaction was the increased desire for food. Some of the patients during this period ate three times as much as an ordinary person. Several patients who had to be fed artificially before and during treatment, during the reaction, took food voluntarily and gained weight. He mentioned as an example of this a case of resistive melancholia, who was fed artificially for two months. In spite of treatment, he steadily lost ground and was apparently dying from exhaustion. As a last resort, one thyroid tabloid was given with each meal (15 grains per day), and this dose was continued for three days. On the third day the patient, whose skin had always been dry, broke out into a profuse perspiration; the following day he took food voluntarily, and since then has taken his meals regularly and with appetite. Doubts had been expressed as to whether suggestion or thyroid extract was the cause of the beneficial results in these cases, but he said there was little proof of suggestion ever curing serious mental disease. There was a case just now in Morningside undergoing thyroid feeding, whose desire was to end life. In spite of his desire not to recover, he had, as the result of treatment, gained 12lbs. in a month. He denied that the treatment was empirical; so long as they followed nature's methods, such treatment could not be empirical. At present he only advocated thyroid treatment in patients who had not benefited by the ordinary routine treatment of insanity. In such cases it is only just to give the patient a chance of recovery by inducing a feverish condition and hoping for a beneficial result during the reaction subsequent to the fever. In addition, however, to the reaction, there appeared to be cases which benefited by the direct action of the drug on the central nervous system. Recovery in several patients dated from an early period of treatment, and would appear to have been due to the blood carrying the active principles of the ingested thyroid extract to the nerve cells and fibres, and inducing in them a more healthy action or supplying some substance necessary for their proper functional activity.

REPRESENTATION ON COUNCIL, ETC.

Dr. TURNBULL submitted the following motion:—"That the Divisional Secretary be instructed to place the *nomination of members recommended to fill vacancies on the Council caused by the retirement of Scotch representatives, and to fill the Divisional Secretaryship*, on the list of business at the Spring Meeting each year." He said that under the rules of their Association, as they were all aware, the preparation of the official list of nominations for vacancies on the Council, etc., which was to be submitted to the Annual Meeting for consideration, was placed in the hands of the Council, and it was outside their power as a division to trench on that matter. But the Council had always been most courteous in desiring to learn the wishes of the Scotch members in regard to the representation from Scotland, and in giving effect to them. In practice it came to this—that any Scotch member who happened to be present at the Council meeting in London was asked to say what nominations should be made from Scotland. This was rather haphazard, as it gave the views of only one or two members, and it

might happen that no Scotch member was present at the Council meeting to make the desired suggestion. The aim of the present motion was that the matter should be put regularly on the agenda paper at the Spring Meeting, in order to elicit an expression of the views of the members generally, and any conclusion come to could then be forwarded to the Council as a suggestion. Of course it was entirely in the power of the Council to accept or reject any suggestion so made.

Dr. CAMPBELL CLARK seconded the motion. He was glad Dr. Turnbull had brought the matter up. He (Dr. Clark) had always strongly contended that they ought to have some better way of arranging about their representation on the Council, and that it would assist the Council in filling up nominations if they had an indication of the feeling of Scotch members on the subject. In this way also they would be able to induce the men in this division to take an interest in the work.

Dr. CLOUSTON asked if it was competent for the Half-yearly Meeting to take up this business and make the recommendation? He coincided with Dr. Turnbull in the object aimed at, but they had a large number of new rules, and should be careful to keep within the lines laid down by them.

The CHAIRMAN said that Dr. Turnbull pressed very hard at the General Meeting to have power given to the divisions to nominate directly their own representatives, but he was defeated. He thought the present proposal was a very proper one, and within their powers as a division, and it received his hearty support.

The motion was then put to the meeting and unanimously adopted.

EPILEPSY WITH APHASIA.

Dr. HAY read "Notes of a Case of Epilepsy with Aphasia." The paper will appear in a subsequent number of the Journal.

MEETING OF THE IRISH DIVISION.

A Divisional Meeting of the Association in Ireland was held at the Cork Asylum on October 25th, 1894. Dr. Drapes was called to the chair, on the motion of Dr. O'Neill. There were also present Drs. Finegan, Oakshott, Scanlan, and Oscar Woods (Secretary).

The SECRETARY read letters of regret for non-attendance from the President, Drs. Patton and Garner.

The following candidates, whose names appeared on the circular calling the meeting, were balloted for and elected members of the Association:—

Charles E Fitzgerald, M.D., F.R.C.P.I., Surgeon Oculist to the Queen in Ireland.

John Lentayne, B.A., F.R.C.S.I., Medical Visitor of Lunatics to Court of Chancery.

Henry Marcus Eustace, M.B., M.Ch., B.A. (Dublin), Assistant Physician Hampstead and Highfield Asylum, Glasnevin, Dublin.

Edward W. Griffin, M.D. and M.Ch., R.U.I., L.M., R.C.P.I., Assistant Medical Officer, District Asylum, Killarney.

Wm. T. A. Scanlan, M.B., M.Ch., B.A.O., Royal University (Locum Tenens), Assistant Medical Officer, District Asylum, Cork.

Louis Buggy, L.R.C.S.I. and L.M., R.Q.C.P.I., Assistant Medical Officer, District Asylum, Kilkenny.

The SECRETARY regretted that the attendance was not larger, and as the divisional meetings for Ireland had not been held at regular periods he would be glad of an expression of opinion from those present as to their work for the future. For his own part he thought that, in addition to one meeting to be held in Dublin about May in each year, another about October should be held at one of the district asylums. Even if the attendance was small, good work might be done by visiting the different asylums, exchanging views, seeing recent improvements, examining interesting cases, &c.

Dr. FINEGAN thought it desirable that at least one of the annual meetings

should be held in an asylum, where pathological specimens could be easily exhibited, and cases under actual treatment in the asylum of an interesting nature might be examined by the members of the Association, who could offer advice and detail their experience of similar cases. I believe that practical work of this kind would stimulate the medical officers in Irish asylums to do more useful work than they are at present disposed to attempt. The two important cases which the members had the opportunity of seeing to-day in the wards proved the value of these remarks, and the observations made strengthen the opinion in the course the Hon. Secretary had already decided to adopt in the treatment of the cases.

Dr. O'NEILL said—I think it most desirable, in the interest of the Association and for the benefit of the members, that at least two, if not three, meetings should be held annually in asylums. A good deal of useful information is to be gained by seeing the working of each asylum, and comparing notes as to the advantage of the mode of administration. It may be argued that it is a difficult matter to bring a number of men together (some having to come long distances, taking up a good deal of time), but now that asylums, with few exceptions, have assistant medical officers, I think with a little management and timely arrangement this difficulty should not stand in the way of our having successful meetings, and it is the duty of every member to do his part in trying to make them so.

After some further discussion it was unanimously decided that two divisional meetings should be held annually in future, one in Dublin and one at an asylum, the next meeting to be held at the College of Physicians, Dublin, in May.

Dr. FINEGAN read a paper on the "Treatment of Tuberculous Diseases in Asylums."*

The CHAIRMAN having alluded to the practical value of Dr. Finegan's paper, remarked that in order to institute a just comparison between the mortality rate from phthisis in Scotch and Irish asylums respectively, the relative mortality amongst the sane in the two countries should be also stated, otherwise the conclusions might be misleading. Dr. Finegan seemed to have a rather high proportion of phthisical cases. In Enniscorthy the mortality was much the same as amongst the sane population, and at the present time he was not aware of a single case presenting the overt symptoms of phthisis, but this was of course an unusual state of things. He had some doubts as to whether the modern system of heating (often superheating) asylums were not to a certain extent responsible for increasing the amount of lung affection generally, by "coddling" patients who were quite unaccustomed to such high temperatures in their own homes, and he considered that the moderate amount of phthisis in Enniscorthy Asylum was probably in great part due to the fact that owing to inadequate day-room accommodation the patients were obliged still to use airing courts as day-rooms to a large extent, and therefore to lead an out-of-door life.

Dr. WOODS believed that much might be done to lessen the mortality from phthisis in asylums. Many improvements had been effected in Irish asylums of late years; much had been done to increase the temperature of the wards; the medical staffs of asylums had been largely increased; only a few asylums were now without assistant medical officers; the number had been increased in the larger asylums, and by a more careful individualizing of cases great benefit to the health of the patients should result.

Dr. OAKSHOTT read notes of a case of intracranial abscess, and exhibited photographs.*

Dr. WOODS read notes of two cases of insanity due to fracture of the skull. The patients were shown and carefully examined by the members. In one case the patient had been in the asylum for about two years; the injury, however, had occurred many years since; epilepsy had supervened, and Dr. Woods did not think much would now be gained by the trephining. The second case was that of a young, strong female patient, who had received a fracture of the skull

* See footnote p. 175.

many years since, and was now in the asylum suffering from acute mania. Dr. Woods stated that after a consultation it had been decided that this was a fair case to trephine with a prospect of a good result. He hoped to have the operation performed as soon as possible. All the members present agreed as to the advisability of trephining.*

Dr. DRAPES read a paper on a remarkable case of morbid sensory phenomena of an explosive or epileptiform character, the result of old injuries to the head.

A vote of thanks having been passed to the Chairman, the meeting adjourned.

MEETING OF THE BRITISH MEDICAL ASSOCIATION AT BRISTOL (JULY-AUGUST, 1894).

(Continued from "Journal" for October, 1894).

The work of the Section of Psychology was varied and interesting. The papers read were in many cases of practical importance, and were followed by excellent discussions.

The Inaugural Address by Dr. G. Fielding Blandford on "The Prevention of Insanity" touched upon most points connected with causation, the accumulation of chronic cases, the effect of the 4s. grant upon asylum populations, the rapid rate at which we live in civilized life, and the increase of neurotic affections generally. He dilated upon the means of checking the apparent increase in numbers of the insane in proportion to the population. Dr. Blandford expressed his conviction that insanity is to be prevented chiefly by limiting its propagation through the union of affected persons, and he deservedly condemned the concealment of insanity in one of the contracting parties prior to marriage. Dr. Blandford most wisely and boldly protests against a couple continuing to breed children if one of the parties becomes insane and recovers. "I have given," he says, "such advice over and over again. Some are wise enough to follow it; others do not, and I could point to some disastrous instances where it has not been followed. People can adopt precautions and limit their families without the slightest hesitation if it is convenient for their pockets, or their comfort or amusements. Ought they not much more to do it when the health and reason of the wife are at stake, when children may prove a curse instead of a blessing, or may by their number and the anxiety attendant on their maintenance and education cause the father's breakdown, and so reduce the whole family to a state of pauperism?" Dr. Blandford anticipates that he shall be told that medical men ought not to interfere with the relations of the sexes, and endeavour to limit the number of children. His reply would be that the physician who holds such views does only half his duty towards his patients under such circumstances.

The discussion following the address was carried on by Drs. W. Lloyd Andriezen, Henry Blake, Shuttleworth, Rees, Phillips, Goodall, Conolly Norman, Sir Frederick Bateman, Arthur Finegan, Bonville Fox, Wigglesworth, Hack Tuke, C. Mercier, Batty Tuke, J. S. Bolton, T. Outterson Wood, Seymour Tuke, and Fletcher Beach. Warm assent was accorded.

A paper by Dr. Savage on "Neurasthenia, its Etiology, Pathology, and Treatment," served as the introduction to a discussion in which the consensus of opinion was in favour of overstrain, the result of overwork, or long-continued worry acting as the cause. Drs. Mickle, Ralph Browne, Wilberforce Smith, Norman Kerr, W. Lloyd Andriezen, R. H. Cole, and G. F. Blandford joined in the discussion.

A discussion on "The Status of Assistant Medical Officers in Lunatic Asylums" was introduced by Dr. C. Mercier, who touched upon the alleged grievances complained of. 1. That assistant medical officers are chosen for other than medical qualifications. 2. That their pay is insufficient. 3. That

* These papers will appear in a future number of the Journal.

their promotion is slow. 4. That they are in a position of excessive subordination and serfdom. Drs. Conolly Norman, Goodall, and Lloyd Andriezen discussed the subject, but no conclusion was arrived at.

Drs. Shuttleworth and Fletcher Beach read papers on points connected with the education of feeble-minded children, and the defects and diseases of school children. Drs. Wiglesworth and Mickle made remarks, and Dr. Shuttleworth replied.

Dr. Lionel A. Weatherly and Dr. Mercier each contributed a paper on "The Law in Relation to the Criminal Responsibility of the Insane." These papers and the discussion which followed were a distinct feature in the work of the section. The subject was one of great interest to members of the Association connected with the care and treatment of the insane, and in order that everything that could be said on the purely legal side of the question should be heard several men of light and leading in the law were invited and were present to take part in the discussion.

Dr. Weatherly is to be congratulated upon the clear, forcible, and yet moderate manner in which he laid the subject before the meeting, going back to the year 1843, when the judges gave their celebrated answers to the House of Lords in *McNaghten's case*, and comparing the dicta of the judges at that time with the judicial opinions of recent date, he showed that in the light of the advance of knowledge and experience in mental diseases the time had arrived when the dicta of 1843 should be reconsidered and modified. Dr. Mercier supplemented Dr. Weatherly's paper with observations upon "How the Law came to be as it is," and "The Objections to the Present Law." Mr. Pitt-Lewis, Q.C., M.P., in a speech of some length, concluded by suggesting that members of the Association should rather look to the Court for Consideration of Crown Cases Reserved for reform than to the Legislature, and that a more liberal interpretation of the word "*know*" would give it a wider meaning in harmony with the law of Scotland. Sir Frederick Bateman, Mr. Ernest Hart, Mr. C. H. Cross, Dr. Savage, Mr. Goodwin Norris, Dr. R. H. Noot, and Dr. Batty Tuke also joined in the discussion, and the following resolution was passed unanimously:—"That in the opinion of this meeting the present law relating to the defence of insanity in criminal cases as laid down by the judges in 1843 is not in accord with modern mental science, and should be reconsidered." Then another resolution was passed, also unanimously:—"That a committee be nominated to confer with the Parliamentary Bills Committee of this Association and with the Committee appointed by the Medico-Psychological Association to consider the best method of obtaining the earliest possible action of the House of Lords or any other means as they deem advisable, and that the following be appointed members of the Committee:—Drs. Orange, Nicolson, Conolly Norman, Blandford, Savage, Ernest Hart, Weatherly, and Mercier." (See p. 164.)

IN THE SUPREME COURT OF JUDICATURE.—COURT OF APPEAL.

ROYAL COURTS OF JUSTICE.—MONDAY, 18TH JUNE, 1894.

Before the Master of the Rolls, Lord Justice Kay, and Lord Justice A. L. Smith.

WILLIAMS v. BEAUMONT AND DUKE.—JUDGMENT.*

The Master of the Rolls—In this case the plaintiff has brought an action against two medical men, and the form of the action is trespass, or false imprisonment, or anything you like, but the real cause of action is that they had given a certificate that he was a lunatic, the consequence of which was that he was detained in a lunatic asylum. In giving that certificate that he was a

* [In accordance with the intention expressed at the conclusion of the Report of the trial of *Williams v. Beaumont and Duke*, we now insert the official Report of the judgment.—Ed. J.M.S.]

person who ought to be removed to a lunatic asylum it cannot be doubted that they were acting in pursuance of the Lunacy Act, 1890. That Act says that for anything done in pursuance of this Act they shall not be liable to any civil or criminal proceedings, either on the ground of want of jurisdiction or any other ground, if such person has acted in good faith and with reasonable care. So that the medical men in the position of these two defendants are not to have a case tried against them upon an assertion that their opinion given as medical men was wrong, so that they may have to enter into a contest as to their opinion with the opinion of other medical men. They are not to enter into a contest under which a jury, or the tribunal which has to determine the case, is to say whether their opinion was right or wrong, because assuming it to be wrong, still they are not to be liable to any civil or criminal proceedings if they acted in good faith and with reasonable care. That is the whole of the law. Now that was only a defence to the action before this section of this Act of Parliament was passed. They must have submitted to meet the action; they must have pleaded to that action that they had acted in good faith and with reasonable care. But the Act goes further than that, and gives them a further protection. If they did that in such an action the jury would be bound to find, or the Judge to direct, judgment in their favour; but this Act goes further, and says that under certain circumstances they shall not be put to that trouble, annoyance, and expense, because it says "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"—and that is really the ground of action in this case, for the plaintiff has no cause of action at all unless it was that by reason of that certificate he was sent to a lunatic asylum; that is his ground of action; he has no other; but "If any proceedings are taken against them for the signing of such a certificate such proceedings"—that is the action here—"may, upon summary application to the High Court or a Judge thereof, be stayed upon such terms as to costs or otherwise as the Court or Judge may think fit, if the Court or Judge is satisfied that there is no reasonable ground for alleging"—what? not "no reasonable ground for alleging they were mistaken," but "for alleging want of good faith or reasonable care"—that is to be done by summary process. Now this case falls clearly within the section, where the real cause of action is for their signing that certificate. First of all if it went to trial, and they could prove that they acted in good faith and with reasonable care, the action could not be maintained against them. But, secondly, they have this further protection, that if they can satisfy a Judge, or the Court, that there is no reasonable ground for alleging want of good faith or reasonable care, then that Court or Judge may stay the action. Here the case having been before a Judge at Chambers he declined to stay. It came by appeal before the Divisional Court, and they have stayed the action. They have stayed the action because they were satisfied that there was no reasonable ground for alleging want of good faith or reasonable care. The Divisional Court were satisfied there was no ground for it. Now there is an appeal to us. What is the question before us on the appeal? The question before us, and the only question, is "Can we differ from those Judges when they said that they were satisfied?" If we do we can overrule their decision; if we do not we cannot overrule their decision. What is the state of the case? Here is a man who (I do not see that there is any doubt about it) sometimes did have a drunken bout, which lasted for a time. Then the doctors first of all have come to the conclusion that when men do have those drunken bouts it is not uncommon that for a certain time afterwards they are insane. One of the forms which that insanity takes is that of melancholia, a well-known form of insanity. Sometimes I suppose it takes the form of raging madness, which is a different thing. This took the form of melancholia. What is one of the most ordinary results of people suffering under melancholia? Why, that they should have an inclination to commit suicide. That is well known. Now the man was

brought before Dr. Beaumont. Dr. Beaumont examined him, and it is not denied he examined him for a long time—for an hour and a quarter. He says that he took such means as are in a doctor's power of inquiring as to the state of his physical health and as to the state of his mental health. I suppose he asked him questions, and he talked and spoke with him. The doctor came to the opinion that the man's conversation was rambling. The man says, "Oh, no, I did not ramble; I was only so weak that I took a long time to say what I had to say"—about as like rambling as could well be—he was rambling in his talk. But that is not what the doctor acted upon. The man said to the doctor that he was depressed after these drinking bouts, and that he had an inclination in his mind to commit suicide. If a man says that, and if the doctor then found that he was, according to his symptoms, suffering from melancholia after a drinking bout, what was the doctor to do? It is said that the doctor ought to make inquiries. Sometimes he ought, but if the case is so clear to a doctor that he does not want to make inquiries there is no law which says that he is to make inquiries as a matter of course when he is satisfied. Here the doctor did take the precaution of making inquiries. The man said that he had been living with his sister-in-law. Well, the doctor sends for the sister-in-law. She appears, and she appears to be a respectable woman; she appears to be a kind-hearted woman, to have kindly feelings towards him. She says he had lived with her from February to October, which is a fact not denied. It certainly is a symptom of extreme kindness on her part. She says, "Yes, when he is sober he is a sane man, and he does nothing wrong; but when he gets drunk, and after he recovers from a drunken fit, then he has had whilst he was with me this same sort of thing. He has threatened to commit suicide." I do not comment on what he had threatened to do to her. She says, "He had strange ways, and had become so disagreeable that in October I decided I could not keep him in my house any longer." She seems to have had children—daughters, and therefore she could not keep him in her house. She told that to the doctor. The doctor having seen her believed her, and why should not he believe her? Then you have it that he believed that which was stated by her, and he heard that which was stated by the man, and he examined the man, and upon those facts he came to the conclusion that the man was, at all events for the time, insane, and might do himself a mischief. Then he says, "I thought it was my duty under those circumstances" to do what?—not to keep him in the workhouse where there were no sufficient means of dealing with such persons, but to send him to a lunatic asylum, where they have the means of treating him, and where, when they have treated him and they feel it safe to let him go, then they will let him go. Now this man says that the doctors of the workhouse were malicious; they had a spite against him. "My sister-in-law who has told them things is a woman they ought not to believe; she is a woman without credit; she is a woman who has committed misdemeanours;" he does not say when or where or how. He finds fault with the workhouse. I do not know anything about the workhouse; that was not the doctors. He says all these things. But this case has been inquired into for twelve days. The doctors have had to run the gauntlet of that inquiry. That inquiry has been held, and the result of that inquiry is an absolute statement by the person who inquired into the matter—an impartial person, at all events, after all the evidence on both sides has been put before him, has come to the conclusion that these doctors did act with good faith, and acted with reasonable care. Now all these facts are put before the judges in the Divisional Court—what the doctor says this man said to him, what the sister-in-law said of him, the doctor's own statement of what they did and the examination they made of him—Dr. Beaumont not acting solely on his own view, but calling in his superior officer, Dr. Duke—they two, after consulting together, coming to this conclusion, there being no possibility of suggesting to anyone's mind that they were not acting otherwise than in good faith; you have two doctors whose skill, generally speaking, is not impugned, after consultation coming to that conclusion you have an

inquiry (for that is before the case came before the judges) which has lasted twelve days, in which the impartial moderator, or tribunal, or whatever you please to call it, has come to the conclusion that the doctors did act with good faith, and that they acted with reasonable care. Can we say after that that he was wrong, and can we say when the man desires to go on with an action upon the very same ground, and to try this case all over again, that the judges were wrong when they say they were satisfied that there was no ground now, at all events, for his persisting in saying that these doctors acted without good faith, or that they acted without reasonable care? So far from disagreeing with them, I think that no person who hears an impartial statement of that state of things so put before the Divisional Court but must come to the same conclusion that this is only obstinate persistence by an obstinate man who seems to have for years found fault with everybody and everything, with everybody who had anything to do with him, for he must be satisfied that he has no ground for persisting in these charges, and that therefore the learned judges rightly stayed the action. This appeal must be dismissed.

Lord Justice Kay—I entirely agree. I think the learned counsel has done everything which could be done for his client, and has argued this case with great ingenuity and certainly with a very considerable amount of courage; because, if it were not that Mr. Justice Kennedy in Chambers had come to a different conclusion, I should certainly say that upon the facts as they are now made clear to us; no one could reasonably doubt that these two doctors whose conduct is impugned have acted with good faith and reasonable care. Counsel was careful to say that he did not impugn their good faith, and that the only thing which he now complained of was that they had not acted with reasonable care. Now the very short outline of the facts which it is necessary to refer to now is this. In February this man, whose occupation seems to be that of a journalist, getting casual employment on newspapers from time to time, was living with his sister-in-law, who says that she kept him from that time down to the 12th of October. During that time his conduct was so strange, and from time to time he gave way to his propensity for drinking to such an extent that at last she was obliged to refuse to keep him in her house any longer. He then roamed about the streets for three days, during which time he himself says he got little or no food; but he did get a certain amount of liquor to drink, and then he applied to be admitted to the casual ward of Lewisham Workhouse on the 16th of October. On that day he was seen by the medical officer, Dr. Beaumont, and I read, really with the most perfect belief in the statement, what Dr. Beaumont says. He says, "I was struck by his dejected, haggard appearance, and I proceeded to make a careful examination both physically and mentally. In the course of long rambling speeches he told me the idea of self-destruction continually haunted him, and that his sister-in-law, Mrs. Rebecca Williams, was his only friend, and asked me for permission for her to visit him, which permission I forthwith gave. At the time of such examination he displayed very many of the symptoms of melancholia supervening on long-continued alcoholism. On the same 16th day of October, 1893, I had a long interview with the said Mrs. Rebecca Williams, who informed me that the plaintiff had resided with and been kept by her from February until the 12th day of October, 1893" (that is the same month of October when this examination took place), "when she was compelled to refuse to allow him longer to remain in her house owing to his extraordinary and irrational behaviour. She further gave me information as to instances of unreasoning and unprovoked violence towards herself and her daughters, of threats of suicide and other acts which could not in my opinion be other than the outcome of a disordered mind." Then he goes on to say that she spoke very affectionately of him, and he formed the opinion from seeing her that she was a most respectable person and was actuated by kind feelings towards her brother-in-law. There is an answer to that, of which I will read a short paragraph. "When the defendant examined me on the 16th October, 1893, in the receiving ward of the workhouse, I was suffering from exhaustion

and physical weakness caused by want of food and by exposure. I informed the defendant that I had been sleeping in the open-air for three nights, and that I had previously had rheumatic fever, and that I feared it was coming on again. I informed him that I had had no food except a biscuit and a piece of cheese for two whole days. He examined me in the receiving ward, having two sheets of foolscap paper in his hand taking notes," and so on. Now, putting all those facts together, what is the clear result, even stopping there, if that were all? Here is the medical officer who sees a man in a state of utter exhaustion, very haggard, depressed to the last degree for want of food and from the result of reaction after drinking, and which man tells him, to use his own words, that the idea of self-destruction continually haunts him. It is said that he asked to be allowed to see his sister-in-law, and he sent a note to the sister-in-law, and the sister-in-law came the very same day. The medical man sees the sister-in-law, and she confirms exactly the opinion he had formed himself. She tells him that this man had threatened self-destruction while he was living with her between February and October. What was the medical officer of the workhouse to do under these circumstances? What he did was this: he called in his superior officer, Dr. Duke, he told him all he knew, and Dr. Duke himself examined this man for a quarter of an hour on the same 16th of October. They saw him again and again between that date and the 18th, when he left the workhouse, and, looking to the circumstances, they came to the conclusion that there was danger of his destroying himself. They took what seems to me to be the only possible course for them to take under the circumstances. There was not proper accommodation at that workhouse for a lunatic, and under the 24th Section of the Lunacy Act, 1890, their duty then was to have him sent away to a proper lunatic asylum, which they did. They called in a magistrate, the magistrate saw him, he had the account from Dr. Beaumont of Dr. Beaumont's investigation of his case, and he signed the necessary order for the removal of the man to a lunatic asylum, stating in the answers to the proper inquiries, which are put in the form required by the Act, that he was suffering from unsoundness of mind produced by alcoholism, and which took the form of suicidal tendencies. Under that certificate he was sent to the lunatic asylum. Well, by this time, I suppose, under the treatment he had received in the workhouse, he was getting somewhat better, and when he was examined at the lunatic asylum the doctors there did not find any trace of unsoundness of mind, and as soon as the rules of the institution would permit he was discharged from the asylum. He now brings this action against the two medical officers of the workhouse, and the broad answer is, "What on earth did these doctors do but that which they must do?" Just suppose that they had not taken the precaution of sending him away from the workhouse to a lunatic asylum, where he could have his case properly investigated and, if necessary, be cared for as a lunatic, and suppose the man had fulfilled his threat of committing suicide. Upon whom would the blame have been thrown—and would it not have been justly thrown—but upon those two medical men whose duty it was to take every precaution which the law enabled them to take to prevent his carrying out that threat? I do not see that they could take any course but that which they did take. Now, there was an inquiry before a medical man, Dr. Downes, an inspector appointed by the Local Government Board, into the whole circumstances attendant upon the certifying the plaintiff as a lunatic and his removal to the asylum. On that inquiry Mrs Rebecca Williams was among the witnesses summoned, and Mrs. Williams, giving evidence—the effect of which is stated in one of these affidavits—as to the condition of her brother-in-law, says that when he was not excited with drink or suffering from melancholia from the results of a drinking bout, he was very kind and well-behaved, and perfectly sane; but that when he was under the influence of drink he behaved in such a manner that she could not keep him in her house any longer. She does not deny, and she is not asked, as far as this evidence goes, whether or not it was true that he had threatened to commit suicide while he was staying with her.

She does not seem to deny that in this evidence, and it is beyond all question that they could not deny that he had made these threats while he was living with Mrs. Williams. That confirms the statement of the doctor as to what Mrs. Williams said to him, and which, of course, confirmed the belief to which Dr. Beaumont, the doctor in the workhouse, came from hearing the rambling talking of this man himself, in which he spoke of the idea of suicide continually haunting him. It seems to me that it is clear the doctors did that which it was their absolute duty to do, and that they acted with all reasonable care in this matter. They are not now impugned with any want of good faith. I see in the plaintiff's affidavit put in in this matter there is some suggestion of want of good faith on the part of the doctors. Counsel, however, very properly drops that entirely, and now we have to consider whether this is not an action which ought to be stayed. It is an action brought by a man in a condition of utter pauperism against two doctors occupying a position which, of course, is of the greatest possible value to them—a man who could not pay the costs if this action fails, and the question is whether this is not a most proper case to be dealt with under this Section 330 of the Lunacy Act, which provides that, "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 sub-section mentioned" (all of which are proceedings for the purpose of getting a person admitted to a lunatic asylum), then "such proceedings may, upon summary application to the High Court, or a judge thereof, be stayed upon such terms, as to costs or 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." Are we to let this action go on by a pauper against two medical men—against their character there is not the slightest ground for suggesting anything whatever—when it is plain that if the action fails the plaintiff will not be able to pay a penny of the costs, and when the evidence before us is such as I have described, which satisfies me completely that there was no want either of good faith or reasonable care. The answer is, this is the very case to which this section of the Act was directed—the very sort of thing—a case in which the action ought to be stayed by summary order. I confess I think that the Divisional Court was perfectly right in the order which they made, and that this appeal ought to be dismissed.

Lord Justice A. L. Smith—I only wish to add one word on account of the difficulty which Mr. Justice Kennedy got himself into by looking at the different causes of action which are supposed to be set out in this statement of claim. It seems to me it is immaterial what the plaintiff sets out in the statement of claim, whether he alleges trespass, breach of duty, or what not. Of course the judge will read the statement of claim, but in my opinion it is his duty to see what is the substance of the cause of action which a man has against the defendant before him, and if he comes to the conclusion that the action is a proceeding taken against a doctor for something done in pursuance of the Act, and not for something done outside the Act, then it is his duty to adjudicate whether there is reasonable ground for alleging want of good faith or reasonable care. I think my brother Kennedy got into that difficulty, and probably reading from what Mr. Justice Henn Collins says in the Divisional Court, that Court came to the same conclusion as I have, that if my brother Kennedy had not hampered himself with reading the statement of claim, and then thinking it was a common law action which he could not deal with under this section, he would not have gone wrong.

The Master of the Rolls—The appeal is dismissed with costs.

Mr. Herbert Smith (instructed by Mr. Curtis) was counsel for the appellant; and Mr. H. D. Greene, Q.C., M.P., and Mr. Dodd (instructed by Mr. Savage) appeared for the respondents.

EXAMINATION FOR THE CERTIFICATE OF PROFICIENCY IN NURSING.

At the November examination for this certificate 122 candidates presented themselves for examination. Of this number 95 were successful, 15 failed to satisfy their examiners, while the result of the examination of 12 of the candidates has not yet come to hand.

The following is a list of the successful candidates:—

Derby Borough Asylum.—*Males*: Henry Gutteridge, William Fowler, John Harrison, James Hendry. *Females*: Mary Glenn Bostock, Mary Wright.

St. Luke's Hospital, London.—*Females*: Florence Edith Bryant, Edith Mary Blakely.

Winson Green Asylum, Birmingham.—*Male*: Charles Edmunds. *Females*: Selina Baker, Julia Maria Darby, Maria Edmunds, Fanny Mary Houlston, Emily Simson.

County Asylum, Stafford.—*Males*: William Charles Conway, William T. Grainger, George Goodwin, George Humfress, George Stephenson.

East Riding Asylum, Beverley.—*Females*: Alice Augusta Blake, Edith Jessop, Camilla Weeberg.

Borough Asylum, Plymouth.—*Male*: William Bouch.

County Asylum, Rainhill, Lancashire.—*Males*: Oswald Bond, Charles Clarke, Henry John Hayes, Samuel Perkins, Walter Randolph Sharp Robinson, Edward Stone, Edwin Trowell, Alfred Willis. *Females*: Clara Hannah Bates, Elizabeth Billing, Ethel Mary Butcher, Ellen Cousins, Alice Georgina Evans, Sarah Huck, Mary Raine, Eleanor Robins.

Borough Asylum, Hull.—*Males*: John McIntosh, Charles Richard Miller, Francis Sheed. *Females*: Annie Dudgeon, Annie Farr, Annie E. Rogers, Esther Tulloch.

County Asylum, Winterton, Durham.—*Males*: George Anderson, Robert Gallagher, Isaac Lewis, Henry Moore, Thomas Phillips. *Females*: Annie Chipchase, Margaret Dolan, Marion Johnstone.

Bethlem Royal Hospital, London.—*Males*: Charles Ball, John Chittenden, William P. Macarthy, William John Redaway, Francis John Steel, Arthur Santer. *Females*: Annie Esther Bailey, Agnes Jones, Annie Larkman, Letitia Lott, Theresa Winifred McIntyre, Janet McIntyre, Ada Martha Whibley.

West Riding Asylum, Wakefield.—*Males*: Charles Bedford, Edgar William Clifton, Alfred Ellis, Edward Harrison. *Females*: Sarah Ann Bradshaw, Sarah Cox, Hannah Mary Holder, Mary Maria Fox, Eliza Lister, Elizabeth Pratley, Alice Sygrove.

Hoxton House Asylum, London.—*Males*: Arthur Ernest Gibbs, Eli James, James Johnson, Henry Stubbings, Charles John Wilson. *Females*: Emily Hartland, Ellen Riches, Marion Riches, Edith S. A. Riches, Amie Witton.

District Asylum, Cork, Ireland.—*Females*: Bridget Geraghty, Mary Kenepick, Hannah Killiber, Kate Mulqueeny, Mary Ellen Murphy, Annie Hogan, Julia O'Brien.

QUESTIONS.

1. Give an example of a long bone—a short bone—a flat bone. What are the most obvious symptoms of fracture of a bone?
2. Name the different kinds of joints found in the human body, and give an example of each.
3. In applying a bandage why do you commence from below upwards? What would be the result of reversing the process?
4. How do veins differ from arteries in structure? What is the difference between arterial and venous blood? How would you arrest bleeding from an artery and from a vein?
5. What are the functions of the skin? In washing a helpless patient what precautions would you take?

6. What is a high temperature? What is a dangerously high temperature? Give some simple means for reducing temperature.
7. Mention the leading symptoms of Epileptic Insanity.
8. What points should be particularly attended to in using a stretcher for the carrying of a disabled patient?
9. Give three examples of Insane habits, and mention how you would deal with them.
10. If you are sent to take charge of a patient in a private house, what points should you attend to in the general arrangement of the rooms?
11. Mention some of the delusions which are most frequently seen in Insane patients, and say how you should act in regard to them.
12. If a patient chokes while taking food, how would you act until medical aid arrives?

Three hours allowed to answer this paper.

The questions are valued at 10 marks each: two-thirds of the possible total of marks are required to pass.

The next examination will be held on Monday, the 6th day of May, 1895, and candidates are earnestly requested to send in their schedules duly filled up to the Registrar of the Association not later than Monday, the 8th day of April, 1895, as this is the last day upon which, under the rules, applications for examination can be received.

For further particulars respecting the various examinations of the Association apply to the Registrar (Dr. Spence, Burntwood Asylum, near Lichfield), addressing letters in the first instance to 11, Chandos Street, Cavendish Square, London, W.

SIR ARTHUR MITCHELL'S RESIGNATION OF HIS SEAT ON THE SCOTCH LUNACY BOARD.

We cannot allow Sir Arthur Mitchell to retire from his office without expressing our appreciation of the manner in which he has fulfilled his important duties. He has done much more; he has, in fact, developed a system. The "Insane in Private Dwellings" embodied this system, and helped to produce a remarkable and far-reaching effect.

We do not, of course, maintain that Sir Arthur invented the treatment of patients in families, nor do we pretend that there are not disadvantages as well as advantages in this mode of providing for the insane. But we can honestly say that this system has proved to be a great boon to Scotland, and that when carried out in the judicious manner in which it has been under the Lunacy Board of Scotland it has been a success, and that as an object-lesson it has effected great good elsewhere.

That this plan, if not pursued in the manner which, thanks to Sir Arthur Mitchell, it has been, will fail and may be mischievous, we fully believe, but this fate applies, more or less, to all systems adopted.

To Sir Arthur Mitchell, who has been a leading spirit on the Board since its foundation, it must be an immense satisfaction to witness the vast improvement which has taken place in the condition of the insane in Scotland since 1857, the year in which the Scottish Lunacy Act passed, and he became a Deputy Commissioner.

Those who are old enough to remember the stirring events which led up to the establishment of the Board in Edinburgh, originating in the historical visit of the "American Invader"—Miss Dix—followed by the Blue Book Report on Scottish Lunacy, cannot but feel that the result has been highly satisfactory, and that Scotland has achieved a remarkable work, in which efficiency and economy have been wonderfully displayed.

Prominent have been the private dwellings, the use of which has largely tended to enable the Scots to escape the production of large pauper asylums.

It would, however, be unfair to England, with her enormous population, to contrast her monster institutions with those on the other side of the Tweed; but it may well be that we still have a lesson to learn which we have not sufficiently studied in this respect. In any case, the greatest merit is due to Sir Arthur for what he has done in his own land, where the habits of the people appear to favour the treatment of the insane outside asylums to a larger extent than is supposed to be possible in England.

In saying this we do not overlook the valuable services of other members of the Board—Sir James Cox, Dr. W. A. F. Browne, and Sir J. D. Wauchope.

The esteem in which his judgment and experience has been held was shown by his appointment in 1880 to be a member of the Commission on Criminal Lunacy (England), over which Mr. Leonard Courtenay, M.P., presided.

As a member of a Departmental Committee on Irish Criminal Lunatics, to which he was appointed in 1885, and as Chairman subsequently of a Commission to investigate Irish Lunacy Administration altogether, his well-matured opinions have been of the greatest value.

Doubtless the Bill to which we look forward will to no small extent be due to the wisdom and counsel of Sir Arthur Mitchell.

Justly has the Government conferred marks of honour upon Sir Arthur in recognition of his many services.

In 1886 the order of Companion of the Bath was conferred upon him by Mr. Gladstone, and in the following year that of Knight Commander of the Bath by Lord Salisbury. His researches in archæology are well known. He was appointed Professor of Ancient History in the Royal Scottish Academy, and H.R.S.A. in 1878; also Rhind Lecturer in Archæology about the same period. We have reviewed in this Journal his remarkable work, "The Past in the Present," of which both Mr. Gladstone and Mr. Bright have made use in their speeches.

But we must stop, for it occurs to us that happily we are not writing Sir Arthur's obituary. On the contrary, we look for many contributions from his pen in future years, the result of his ripe experience and judgment.

Correspondence.

MR. ERNEST HART ON HYPNOTISM.

To the Editors of "THE JOURNAL OF MENTAL SCIENCE."

GENTLEMEN,—At a time when there is a danger of the important subject of hypnotism being disparaged, and when some appear disposed to ignore what is true therein in consequence of the frauds committed in its name, in common with most nervous affections, it may be well to recall the unobtrusive but important work done with regard to hypnotism by the Committee of the British Medical Association, and the valuable discussions which took place at Leeds, Birmingham, and Bournemouth, when facts were stated and opinions expressed which left no doubt upon the minds of those who were present that the phenomena of hypnotism were not only genuine, but of very considerable value. Among the many able opinions to which utterance was given, none appeared to me more emphatic and lucid in their character than those expressed by Mr. Hart at Bournemouth, and therefore I ask you to be good enough to reprint them:—

"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 cookshop 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 dozens 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."

In regard to the fraudulent simulations of nervous phenomena one cannot but recall the extraordinarily successful deceptions which have been practised upon hospital physicians, even those of the greatest distinction. Many will remember the famous case of a patient in a Metropolitan hospital who cleverly simulated a form of paralysis a few years ago, and took in the very elect. This ingenious person went from hospital to hospital imposing upon a succession of eminent neurologists, meanwhile doing justice to the excellent dietary provided by the various charities for so "interesting" a case, the patient laughing in his sleeve at the acute diagnosis of a disease which in reality had no existence. Further, it is a fact well known to ourselves that a distinguished surgeon at one of our hospitals pretended to have an epileptic fit in one of the wards, and while the bystanders, lay and professional, were commiserating his condition, which they regarded as only too real, he became suddenly well and laughed in their faces.

I am, yours truly,

A UNIVERSITY GRADUATE.

London, December 13th, 1894.

Obituary.

JAMES WILKES, Esq., LATE COMMISSIONER IN LUNACY.

We record with regret the death of Mr. James Wilkes, at the ripe age of 83, who for so many years held the office of Commissioner in Lunacy, to which he was appointed upon the recommendation of Lord Shaftesbury in 1855. He received his medical education at the General Hospital, Birmingham, and at King's College, London, and became a Member of the College of Surgeons in 1835, and a Fellow in 1854. In 1841 he was elected Medical Superintendent of the Stafford County Asylum, where he remained until his appointment to the commissionership. He resigned his office as a paid commissioner in 1878, but up to the time of his death retained a seat at the Board as an honorary member, and, while health and strength remained, attended regularly and rendered a valuable public service. In this, as in all stages of his career, he was remarkable for the highly conscientious and painstaking discharge of the duties which devolved upon him.

THE "WESTMINSTER REVIEW" AND PRIVATE ASYLUMS.

The number for December contains a reply to an attack on Private Asylums in a previous number of the same Journal. The attack was made by an ex-M.P., Mr. W. G. Corbet, well-known for his essays on the increase of insanity in this country. There appears to have been of late a recrudescence of the bitter feeling against these establishments. A remarkably coarse and ignorant attack recently appeared in one of the London evening papers, which, however, only made itself ridiculous by taking as an illustration of the ill-deeds done by Private Asylums, an institution which is a Registered Hospital!

The reply to Mr. Corbet's article has happily fallen into hands able to repel the attack, those, namely, of Dr. Pietersen. The language is calm and dignified, and as the writer had all the facts at his command there was no occasion for him to do more than bring them into prominent relief. The paper has reached us while the Journal is going through the press. We cannot therefore do more than refer our readers to the "Westminster Review" itself. The stigma which still attaches to licensed houses and their proprietors adheres to them with singular tenacity, on the principle, we suppose, of once giving a dog a bad name.

MEDICO-PSYCHOLOGICAL ASSOCIATION.

The next General Meeting of the Association will be held on the third Thursday in February, 1895, at Worcester. Further details will be given in the circular to be issued later on.

FLETCHER BEACH,
Hon. General Secretary.

THE SCOTTISH DIVISION

Of the Association will hold a Meeting in Glasgow on the second Thursday in March next.

A. R. TURNBULL,
Divisional Secretary for Scotland.

SOUTH-WESTERN DIVISION.

The Spring Meeting of the South-Western Division will be held at Bristol on Thursday, April 4th, 1895.

P. W. MACDONALD,
Divisional Secretary.

Appointments.

BATHURST, LULLUM WOOD, M.B.Lond., M.R.C.S., L.R.C.P., appointed Assistant Medical Officer at the London County Asylum, Hanwell.

EASTERBROOK, CHARLES C., M.A., M.B., C.M., appointed Third Assistant Medical Officer to the Royal Asylum, Morningside, Edinburgh.

GOODFREY, C. G., L.R.C.P., L.R.C.S.Eng., L.F.P.S.Glas., M.R.C.S.Eng., appointed Acting Medical Superintendent to the Ballarat Lunatic Asylum, Victoria, South Australia.

MACDONALD, G. B. D., M.B., Ch.M.Aberd., appointed Assistant Medical Superintendent at the Woogaroo Asylum, Queensland.

PAWLETT, T. L., L.R.C.P.Lond., M.R.C.S., appointed Junior Assistant Medical Officer to the Cornwall County Asylum, Bodmin.

WATT, NEISH PARK, M.A., M.B.Edin., appointed Assistant Medical Officer to the Royal Lunatic Asylum, Dundee.

THE JOURNAL OF MENTAL SCIENCE.

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PART I.—ORIGINAL ARTICLES.

*A Review of the Influence of Reflex and Toxic Agencies in the Causation of Insanity and Epilepsy.** By F. ST. JOHN BULLEN, former Pathologist and Assistant Medical Officer, West Riding Asylum, Wakefield.

The object of this paper is to present in concise form recent views upon the influence of Reflex Stimulation and Toxic Agencies upon Insanity and Epilepsy. For the most part these will be dealt with together, although the influence of reflex irritation will of necessity be chiefly confined to epilepsy. With regard to both insanity and epilepsy, cases will occur in which it is impossible to decide whether a reflex or toxic condition originates the mischief. It must not be supposed that these views are novel, except in their development. Both Abercrombie and Henry Monro long ago discussed these theories. The latter acute observer, in his "Remarks on Insanity" (1851), dwells at length on both toxic and auto-toxic origins of insanity, and his views even at the present day may be considered with interest and advantage. Since this time there has been a continual increase of experimental and clinical evidence lending support to the theories advanced. It is the purpose of this paper to state dispassionately the accumulated observations upon this subject. Some apparent contradictions arise at the outset; amongst these are—

(1) Any given disorder may survive the removal of its supposed cause.

(2) Given in two different cases the operation of precisely similar morbid conditions, the same results are certainly not invariably met with.

* Read before the Brit. Med. Assoc., 1894 (Psychology Section).
XLI.

(3) Undoubtedly a neuro-psychosis may arise without any ascertainable causation, reflex, toxic or otherwise.

These contradictions, however, admit of an explanation. Firstly. Interference with causal conditions of a disorder is often so late that the complications and functional disturbances have become permanent and organized. Secondly. The power of resisting with success the morbid influence varies not only in different individuals, but at different epochs in the life of the same person. Thirdly. Our knowledge hardly allows us at present to negative the existence of causes in their very nature most difficult of detection.

The intimate relationship between the functions of the nervous system and those of the rest of the body compels us to consider their interdependent action. Legrain expresses himself thus* :—"There is no substance which, introduced accidentally into the circulation, does not affect in some way the cerebral functions. All functions are connected the one with the other, and in certain intoxications which are not altogether psychical we observe secondary intellectual disturbances." It is, however, at once admissible that of these two sets of functions either may be disturbed by the other. The following problem must first be dealt with :—What are the relations of insanity towards (1) primary brain disease and to (2) disturbed cerebral function, the result of some deleterious material existing in the circulation? Taking "delirium" to denote the latter condition, this part of the question may be thus expressed: What is the relation between insanity and delirium, acute and chronic?

True insanity is by the majority of alienists considered to be dependent upon a primary neuro-centric disease. This is the more intelligible because the brain, as the seat of mental action, appears to father all its perverted functions. And most would insist that there is a marked distinction between delirium and insanity. To estimate this properly it needs us to review the stated characteristics of delirium. These include the merely functional character of the mental disturbance, the excitation of this by factors outside the brain, the transient character of the malady, and the type of symptoms (mental confusion). Whether all or any of these features constitute a criterion of delirium requires consideration. Cases classed under "acute insanity" are un-

* "Poisons of the Mind," Art. "Dict. Psy. Med.," Tuke.

doubtedly sometimes functional disturbances only, are but transient, may be of confused and delirious type, and probably are sometimes due to microbic action directly or indirectly. Again, if delirium is definable as an aberration of mental function produced by the influence of toxic matter in the circulation, then it must be admitted that there can hardly be any characteristic symptomatology, since the type of mental symptoms will be modified according to the particular poison, its dosage, and the complications brought about by the effects of generally disturbed metamorphosis. Nor can the transient character of delirium be urged as a feature, for the toxine or its results may be ineradicable.

If it be possible to draw any distinction between delirium and insanity, this can only be done through an accurate knowledge of the conditions occasioning each. If by delirium we signify a morbid mental state produced by a poison generated without the brain, and existent only during the activity of the poison, we shall on the other hand define insanity as the result of some pathogenic process originating in the brain itself. There is, however, a third title required under which to group those cases in which the toxic materials have occasioned organic change, and, therefore, in which mental disorder persists after the disappearance of the exciting causes. Such cases may be classified as toxic insanities; they are often merged into the group of chronic insanities. They should rather be termed toxic mental degenerations.

The distinction of these various classes is not a matter of pathological interest alone; their true nature is a guide to their treatment. And since the probability of self-poisoning by various materials generated in and by the individual is become worthy of serious consideration, it is highly necessary that "insanities" of toxic origin should be differentiated. And this is what is left to be attempted.

From the clinical standpoint the fact has to be recognized that mental aberration, acute or chronic, can be induced by the action of poisons, either generated by the individual or imported into the system, and apart from any primary brain change. However we may regard acute delirium in relation to acute insanity, there is little doubt that the toxine, which in overwhelming dosage may produce the former, will in smaller and longer repeated doses cause a systematized mental disorder. The action of alcohol is an example of this,

and perhaps another instance may be afforded by shock and chronic worry. Shock, a severe and therefore painful stimulus to the nervous system, and which is sometimes followed by delirium and even insanity, is, as we know, now generally viewed as an arrest of normal metabolic processes with subsequent toxæmia.*

Probably the alkaloidal products are very deleterious, and under circumstances of violent excitation their toxicity may even be enhanced. Be that as it may, any delay in the prompt removal of the katabolized tissue must be gravely prejudicial to the healthy activity of nervous function.

It is certain that no structure can carry out its duties properly unless the products of its work are effectually removed as soon as produced. Thus there should be a well-preserved balance between the leucomaines formed and the competency of the means employed for their removal. And this is maintained in a normal brain, and not only during sleep. The unfortunate person who suffers from worry has a condition of chronic brain irritability which allows no respite. Stimulation of nerve tissue, whilst constant, is imperfect; there is neither time for perfect metamorphosis, nor for complete removal of the effete material; waste products accumulate, the scavenging system of the nerve centres at first hypertrophies in answer to the increased demands made upon it, and finally becomes incompetent. From this accumulation auto-toxis may ensue, and irreparable mental deterioration result.

Just as over-frequent stimulation of the brain may bring about the preceding condition, so over-fatigue of body can produce a state of mental depression similar in its pathology. Lagrange † states that "the peasants show transitory melancholia at the beginning of autumn, induced by the excessive labour of the harvest, short sleep, and poor dietary." The injurious influence of excessive muscular fatigue may also be found in cases of acute insanity, where intense motor agitation is present. Here over-loading of the system with the toxins of "surmenage" may result, and in some cases turn the scale, so far as the patient's mental or even bodily recovery is concerned. The typhoid character of many cases of acute delirious mania or melancholia is very probably due to intoxication with the products of rapid tissue waste.

* H. M. Roger, "Arch. de Physiol.," 1893.

† "Physiol. des Exer. du Corps."

With the purpose of ascertaining the existence of toxic matters in the organic fluids of the insane, research has been made by numerous observers (notably Régis and Lavaure, Voisin and Péron, Mairet and Bosc). The majority have investigated the urine chiefly, but the excessive difficulty attending organic analyses of this kind prepares us for the varying results obtained. Space forbids quotation *in extenso* of the opinions arrived at by these various observers, nor until more unanimity is attained can we draw any conclusion, but that there may be found in the urines of the insane a more or less pronounced variation from the normal toxicity. From Lucini's experiments with the injection of urine from healthy and diseased persons into frogs and toads, it appears that the toxic effects are in relation to the amount of urea, salts, extractives, and leucomaines present. Hence the increased toxicity of urine in cases of insanity may afford inference of the kind or quantity of the abnormal matters present. Perhaps the results of MM. Mairet and Bosc's* experiments may be worthy of quotation, as showing the state to which our knowledge has advanced. The urinary toxicity of the insane persons chosen for experiment was found to be increased in cases of melancholia, and in proportion greater as agitation was a feature. It was also augmented in melancholia with stupor, persecutory insanity, and mania agitans. A normal amount was found in "quiet mania," and a subnormal amount in purely stuporose and senile conditions. The following are stated as the toxic properties which the urine of the insane possesses, in addition to those of normal urine: hypo or hyperthermy, anæsthesia, auditory hyperæsthesia, diminished reflexes, psychomotor disturbance and agitation.

Other observers, be it said, have found only diminution of the toxic constituents of the urine. As Bouchard has found the toxins in the blood vary in amount inversely to those in the urine, the above condition indicates faulty elimination. Régis and Lavaure have asserted that the toxicity of the urine is changed in two ways, *i.e.*, lessened in mania and increased in melancholia, and that in the former state its injection into animals produces excitant and convulsivant effects; in the latter depressant. It is, however, necessary to mention that their statements have been adversely criticized by Séglas and Ballet. Researches into the urine

* "Journal des Soc. Sci.," Nov. 11th, 1891.

of epileptics have also been made. Here, again, assertions are antagonistic; according to some, toxic matters in the urine are reduced prior to a fit. It is, on the other hand, said that they are increased before the convulsive attack. Griffiths is said to have separated a toxic convulsivant base from the urine of epileptics.* Haig has found that the excretion of uric acid is much diminished before an epileptic seizure, the fit and subsequent mental depression corresponding to a larger excretion; the fit being thus due to the previous retention. His views have not received corroboration by Herter and Smith as regards attacks of "grand mal," but they have observed a continuously high uric acid excretion, apparently related to seizures of "petit mal."†

We are familiar with the views of Haig concerning the relation of lithiasis to mental depression. He instances in support of his argument the frequent despondency accompanying *Morbus Brightii*, also alternating melancholic and gouty attacks. Other writers have recorded corroborative evidence. Lithiasis, according to Haig, may be induced by anything which causes defective oxygenation of the blood. These statements may be considered together, with the results of researches into the blood of the insane. The inference to be drawn from the latter is that very often a lowered proportion of red corpuscles or hæmoglobin, or both, is found. Under these last conditions, according to Gautier, substances of the character of leucomaines or ptomaines accumulate in the blood.

Brieger has found certain ptomaines and vegetable alkaloids to be nearly or quite identical in nature and constitution. Some of these latter, as we know, have a special affinity for nervous tissue, and produce delirium and other mental disorders. And this is regarded by some as lending proof to the view that ptomaines resembling these alkaloids, and which may be present in the circulation, can create similar disturbances. Brouardel and Boutmy, indeed, claim to have discovered, in cases of rheumatic tetanus, progressive paralysis and imbecility, substances having all the characters of the putrefactive alkaloids, and experimentally proved to have a deleterious effect upon the nervous system.

Amongst other attempts to find in chemical processes an explanation of mental disturbances should be noted that of Sir B. W. Richardson, who indicated that mercaptan, or

* "Mercredi Méd.," Aug. 3rd, 1892.

† "N. Y. Med. Journ.," Aug. 20th, 1892.

sulphur alcohol, might be produced within the body, and be accountable for melancholia and other neuroses (this substance experimentally causing intense depression). His theory, so far, has received no corroboration, and has been adversely commented on by Dr. Farquhar.

We shall now shortly allude to the various channels by which it is considered that auto-toxis may occur, dealing first with the gastro-intestinal tract and liver. Mention may be made in passing of the popular (though none the less true) association between dyspepsia and despondency, and between hepatic insufficiency and hypochondriasis. It is not needful to detail the morbid events which attend upon a faulty digestion. The modes of systemic poisoning *viâ* the alimentary tract have been summarized by Ayres.* They are, absorption of microbes, ptomaines, either or both, of noxious gases into blood, and retention of leucomaines.

The moment the barrier which the liver, in health, according to recent observations, interposes between these deleterious materials and the general circulation, is withdrawn, there occur all the needful conditions of dyspeptic poisoning, followed by headache, oppression of mind, languor, loss of memory, and sleepiness. Hence the increased danger of infectious maladies and the greater tendency to delirium, the result of alcohol, emphasized by Roger. Klippel, Régis, and Lavaure and others uphold the views that forms of visceral insanity, which they term hepatic and renal, are distinctly referable to auto-intoxication.

Not only as a result of hepatic insufficiency may unaltered peptones, sugar, and leucomaines be retained in the circulation, but intestinal waste material, also free lithic acid, and other urinary products; whilst uric acid and sugar are not only in themselves prejudicial, but, according to Calabresi, lessen the bactericidal power of the blood.

Drs. Herter and Smith have shown evidence of the occurrence of excessive intestinal putrefaction in cases of epilepsy, and also of the relationship between the degree of the putrefaction and the epileptic seizure. If this be so, it is possible that the cortical discharge in these cases is directly dependent upon the defective quality of blood supplying the centres. Reference to the injurious influence of constipation must not be omitted. Bouchard has experimentally

* "Med. News," July, 1891.

demonstrated the poisonous activity of the fæces, and abundant clinical evidence exists of sapræmic intoxication originating from decomposing fæcal matter. Newington and Farquharson have recorded cases of mental disorder, the apparent result of copræmia, and relieved more or less promptly by treatment of this. The serious consequences of any interference with the eliminating function of the kidneys have, to many observers, suggested renal insufficiency as having a large share in the causation of mental disorder. Attempts have been made to show a relation between renal disease and insanity by setting forth an increased percentage of lesions of the kidneys, found post-mortem in the insane, over that noted in general hospitals; also a greater frequency of albuminuria amongst lunatics. For several reasons these views will not be discussed here. Christian's grouping of cases of mental disorder dependent upon *Morbus Brightii* as instancing their mutual relationship, may be alluded to.* He divides them into two classes (a) Uro-toxic; effects produced by direct toxic action and lowered bodily nutrition; (b) Vascular; arterio-capillary-fibrosis influencing the brain as the rest of the body. This condition of cerebral arterial fibrosis, together with cardiac and renal morbid changes, constitutes of course the recognized condition, chronic brain atrophy.

There is but little to be recorded concerning the influence of lung disease in the causation of insanity. We know that the latter may follow pneumonia as it may an exanthem, but since pneumonia itself is regarded by many as the effect of a vagal neurosis, the connection of it with insanity as a causal agent is doubtful. The work of Drs. Clouston and May (of Philadelphia) dealing with the relationship between phthisis and insanity well repays perusal. There is, however, but scanty evidence to warrant the assumption that products of pulmonary disease may affect mental disorder, although no reason is evident why these should be excluded from similar potentialities in this direction possessed by other *materies morbi*. Bezançon suggests that the tachycardia occurring in pulmonary tuberculosis may be due to a vagal neuritis caused by the toxins of the bacillus tuberc. or staphylococci, and quotes a case supporting this view. Perhaps there may be forms of mental disorder evoked by the action of these toxins on the central nervous system,

* "Journ. Amer. Med. Assoc.," Vol. xii., No. 12, 1889.

corresponding to the insanity with multiple neuritis termed "Psychosis Polyneuritica," and which has been ascribed to toxins evolved from gastro-intestinal and other sources. Chantemesse describes cases of aphasia and hemiplegia more or less transitory, occurring in the course of acute pneumonia. These, he believes, are neither hysterical nor organic in nature, but due either to direct action of toxic microbes on the nervous centres or to contraction of the Sylvian artery induced. These inquiries of Chantemesse have some interest in relation to the so-called congestive seizures of general paralysis, a variety of mental disease which has been regarded by some French authorities as having an infective origin, and being in fact a chronic toxæmia.

Diseases of the Pelvic Organs in Women, and Morbid Conditions associated with Child-Bearing.—Probably more discussion has taken place concerning the influence of these states upon the mind than has been held in respect to diseases affecting any other organs in the body. Especially in America has prominence been given to this subject, and in many instances the attempts to connect the special diseases of women and insanity have been obviously over-strained. We may, however, give due value to the opinions of Dr. Skene,* who expresses his belief in the important influence of organic diseases of the sexual organs in causing insanity and in retarding recovery from it. He affirms that much relief will accrue in cases of insanity, fairly recent in origin, from the cure of the pelvic trouble which has been the exciting cause. Notable amongst those in this country who have held similar views are Robert Barnes and More Madden. The latter, several years ago, expressed his opinion that many cases detained in asylums were instances of reflex cerebro-spinal irritation from neglected pelvic disorder. Barnes, Kouth, and Madden have quoted many cases in their own practice, and that of others, in which even chronic forms of insanity have been cured by gynecological treatment. Against the allegation that such cases are more often those of hysteria than real insanity, Barnes urges that "even hysteria is not an independent entity; it is a symptom, and it is certain in many cases that hysteria is the forerunner of insanity."

There are, on the other hand, many skilled observers who

* "Diseases of Women," 1892, p. 989.

do not admit that disorders of the pelvic organs are capable of causing insanity. Because, if this were so, pelvic disorders should be found amongst the insane with greater frequency. Wigglesworth has met these objections in his valuable and original paper on Uterine Disease and Insanity.* He writes: "That such diseases are common enough among the population at large without giving rise to insanity is no argument against their having this effect in persons of unstable nervous organizations." He draws the conclusions that uterine abnormalities are more common amongst the insane than is generally supposed, and that the failure to recognize them must result in cases, at one time capable of cure, eventually passing beyond the possibility of this. Various other opinions from both gynecologists and psychologists might be quoted, but no more complete and careful observations than those of Dr. Wigglesworth can be given. When pelvic disease is claimed as a cause of insanity, its method of action is by (1) direct irritation, (2) constitutional exhaustion from pain, chronic discharge, etc. There is yet, perhaps, a third mode, viz., chronic infection *viâ* lesions of the genital organs. There may be but a difference in intensity between the poison in puerperal septicæmia and that of the insidious toxæmia resulting from cervical erosions, lacerations, etc. Resistance to invasion doubtless differs in the two cases. It is true that to this theory of a chronic infection the objection can be raised that, if there is sufficient septic matter absorbed thus to cause or precipitate an attack of insanity, there would be enough to produce more serious local consequences. Of the extent to which oöphorectomy has been carried in America for the expected cure of certain forms of insanity, we are well aware. Hystero-epilepsy appears to have been benefited, but no decidedly satisfactory results in any numbers balance, as yet, the serious nature of the operation. Passing over the subject of functional derangements of the pelvic organs and the widespread symptoms they occasion, and with these the influence of menstrual epochs upon insanity and epilepsy, also of uterine displacements (of which many cases have been put on record), we must now consider the nature of the psychoses of child-bed and lactation.

Puerperal fever is now recognized as a toxæmia. Bourget has found highly toxic bases in the urines of patients

* "Journ. Men. Sci.," Vol. xxx., p. 510, Jan., 1855.

suffering from this disease. There is no need to detail here the reasons which have led to the belief that puerperal insanity is an infectious psychosis; it may be accepted that such is, at present, the generally received view. Apart from the existence of lesions by which septic absorption may occur, there is, doubtless, a constant risk of auto-intoxication in both the pregnant and suckling woman. Under the first condition, she is burdened with the toxins of the foetal organism in addition to her own. During the period of lactation, she has to encounter at first the saturation of her blood by the products of involution of the uterus, its appendages, and the heart, whilst her power of elimination and resistance is diminished by the nutritional drain of suckling. Equally probable is the view that eclampsia arises from a definite toxæmia, whether during pregnancy and from poisons uncombated by the liver, or from saturnism, copræmia, etc. Tarnier upholds this theory, and has given experimental proof. The lactational psychoses may indicate different modes of origin according to the stage of the post-parturient period at which they occur. Those following closely upon child-birth probably arise from the surcharging of the blood with products of involution. Other forms, appearing after a lapse of some months and preceded by evidence of impaired general health, are likely due to the accumulation of toxins in the system which inevitably succeeds prolonged exhaustion. How frequently degrees of this last condition must exist can be seen at a glance from the tables of causation given in Bevan Lewis' text book. The more frequent occurrence of these lactational psychoses at from the sixth to the tenth week (about the termination of uterine involution) may be legitimately referred to the gradual saturation with toxic material, and explains the greater seriousness of cases happening at a late period. Toulouse affords examples of mental disorder excited during lactation by insignificant causes, and expresses his belief that auto-infection accounts for lactational as for puerperal psychoses.

Allusion would have been made to the influence of inter-current disorders upon insanity but that the subject has been more fully dealt with in a joint paper by Dr. Goodall and the present writer.

Having said so much concerning toxic insanities, toxine-produced epilepsies must now receive attention.

Epilepsies and epileptiform convulsions, differing as they do mainly in extent, depth, and locality of area involved, indicate that the question of the determinant of a convulsive discharge is the prime one for our present consideration.

Many epilepsies show plain evidence of the stamp of a congenital imperfection of nerve structure, the unstable constitution of whose elements requires no excessive stimulation to excite a morbid discharge. All degrees of differing construction and stability, up to the normal, are to be met with, as also all varieties of discharge. But with the epilepsies dependent upon developmental arrest we have less concern than with those which may be inferred to result from nutritional impairment of the cell nucleus. Just as the characters of toxic insanities have been supposed to be those of a general diffuse disturbance of mental action, so it might be conjectured that the toxic epilepsies would be convulsions of a similarly irregular kind. But it is necessary to remember that the path of a convulsive discharge is largely determined, at any rate when some general disturbing agent is at work, by the readiness of transit procured by physiological currents. So that it may not follow that, because a specialized form of epilepsy exists, its causation may not be a poison which is circulating equally throughout the whole nervous system. As acute and chronic cerebral toxæmia may be represented by symptoms of delirious confusion and systematized delusion respectively, so epileptic discharges may in their nature be general and indiscriminate, or specialized and recurrent according to the rapid or retarded administration of the poison. It is important to note that the nuclear vacuolation of the cortical cells, which Bevan Lewis considered the physical basis of epilepsy, has been ascribed with much reason by A. W. Campbell to a toxæmic condition. As it is important to compare insanity with delirium, so it is to regard epilepsy and eclampsia in their mutual relations. The latter has been separated from epilepsy because it is merely a transient condition of recognized toxic origin. Thus it has been viewed as a functional disease, and has been disassociated from what is considered an affection of organic origin. So far as clinical symptoms are concerned, the diagnosis between epilepsy and eclampsia is often very difficult; even albuminuria in the latter case no longer serves as a clue, since some observers maintain that albumen is always found in the urine passed by epileptics after a paroxysm.

The point for consideration is whether toxic materials in the circulation can be in any number of cases the cause of what is known as true epilepsy (when there is no predisposition to it), as they can of eclampsia. That they may excite epilepsy there is no doubt whatever. Pierre Marie has gone so far as to regard idiopathic epilepsy as an infectively-originating disease, and has, with Lannois, advocated treatment in accord with this. Féré has remarked that reflexly-produced convulsions in neurotic children or the eclampsia of scarlet fever may end in true epilepsy.

Reflex Causations of Insanity and Epilepsy.—It now remains to consider the above. In many instances it will be found that cases classed as “reflex” are really of the nature of toxæmia. Brown Séquard, in 1861, asserted that various forms of insanity and delirium might be caused by irritation of centripetal nerves or by alterations of the blood, and adduced proofs. His views have received apparent confirmation from time to time, but on the whole the consensus of opinion seems to be that such causes rarely have effect apart from a mental predisposition. Such, too, is the common impression with regard to epilepsy. Nevertheless there are but few who will not concede an important position to the so-called “reflex” theories of causation in the production of the cerebral and spinal neuroses. And certainly there is no excuse for an insufficient acquaintance with these theories, since the evidence of the benefits conferred on the neuroses by the removal of reflex irritation is shown with fair conclusiveness in very many cases. We will now glance in succession over the various organs and regions of the body, from the disturbance of whose functions reflex neuroses have been occasioned.

Disorders of the Visual Organs.—The influence of errors of refraction upon the production or excitation of epilepsy has been investigated by Wigglesworth and Bickerton, Dodds, Stevens, Starr, Hern, and others. The important paper of the first two authors* space forbids us to quote at length. The majority of the 151 patients examined by them were of too old standing for any treatment to be effectual; but in seven cases of epilepsy, uncomplicated by mental degeneration, two were relieved and three cured by correction of the ocular defect. Errors of refraction existed in about 45 per cent. of the cases. Dodds, more recently, has found astig-

* “Brain,” January, 1889.

matism to be present in epileptics to the extent of 26 per cent. more than in normal persons. He claims good results from treatment; the minor part only remained unbenefited. These two investigations are the most important. W. S. Colman, in a recent paper,* records cases of retinal and choroid mischief in which definite hallucinations existed, and cites similar cases. It must be confessed that a much larger series of cases than at present chronicled, showing a relation between epilepsy and ametropia, is needed to form a definite opinion. At present this question must be considered as under discussion.

Aural Disease.—Examples of a relation between aural disease and epilepsy or insanity have only been found sparsely. Such scarcity of evidence is hardly to be expected, both from a consideration of the cerebral complications of ear disease and the intermediate position occupied by Menière's disease between epilepsy and the latter. Cases showing an association between aural disease and the neuroses have been described by no few, but cannot be given here. The post-mortem records of Beliakoff† show that in 100 lunatics, otitis had presumably existed in 12·5 per cent. This number is too small to warrant any conclusions. Valuable information is contained in Ormerod's‡ article upon ear disease and epilepsy. According to this, ear disease may excite fits either by reflected irritation or by setting up disease in the Rolandic area of the cerebrum. Out of 100 cases of suppurative otitis media no less than seven had genuine epileptic seizures. (The usual ratio of epileptics to the total population is less than this.) Colman, in the paper before quoted, records three cases of labyrinthine disease associated with hallucinations. These were not confined to aural kind. He cites four other instances. Régis has published details of five cases of unilateral hallucinations manifestly caused by lesion of a special sense on one side.

Nasal Diseases.—The relation of these to the neuroses has been discussed fully by Burnett,§ who has also given the literature of the subject; it will, therefore, not be further discussed here. Other cases will be found in the bibliography of this paper. Laryngeal epilepsy can only receive

* "Hallucinations in the Sane," "B. M. J.," May 12th, 1894.

† "Archiv. de Neurol.," Paris, 1892.

‡ "Brain."

§ "Diseases of the Nose and Throat."

passing notice, as comparatively few instances are to be found, and some of those recorded appear to be instances of vertigo rather than true epilepsy.

Dental Disease.—The influence of this has been recognized for many years, and numerous cases illustrating this are to be found. The *modus operandi* appears to be by (a) direct irritation; (b) septic absorption. The elaborate communications of the fifth nerve and its supposed influence on the vaso-motor centre in the medulla explain the widespread disturbances which may arise from its irritation. It is important to recognize the influence of chronic septic absorption from carious teeth, as this, of course, may exist quite apart from pain.

Genital Disorders in the Male.—Dr. Althaus recorded the cases of several epileptics with phimosis who were circumcised.* From the results he concluded that it was doubtful whether the fits were ever a consequence of the peripheral irritation occasioned by phimosis, but that the propriety of the operation was certain. Several cases have been recorded in which improvement in forms of psychic and other neuroses has resulted, but evidence of the equal importance of peripheral irritation of the male genitalia in affecting the nervous system is not forthcoming to the same extent as in the female.

Several other causes have been assigned for the production or excitation of insanity, epilepsy and epileptic convulsions. These need not be dwelt upon, inasmuch as the cases recorded are not numerous.

Conclusions.—It has been impossible to incorporate in this brief paper the numerous cases illustrative of the views stated. These have, therefore, been separately compiled for the Journal, together with the various theories upon the subject, which it is hoped will prove of service to those working in this field. Although there may be little that is new to us in the foregoing, yet we cannot too often picture to ourselves the variety of ways in which morbid nervous action may be originated or excited. And whatever credence may be given to some of the theories stated here, yet it is doubtless of great importance to investigate systematically every organ and region of the body, with the object of discovering a relationship between the existing neuroses and disordered bodily function. Notwithstanding the finding of

* "Lancet," February 16th, 1867.

this connection and the successful treatment of the disorder, we must not count definitely upon a cure, and this for reasons too obvious to need quotation. Time and careful observation alone will decide the importance of the various circumstances which have been described in producing mental and convulsive disorders. Certainly it is necessary to study the pathology of insanity from another point of view than that of morbid anatomy. The late Dr. Moxon observed that "spying into the brain with the highest object glasses is something like using extra big spectacles to examine the closed edges of a book you are wanting to read but cannot open."* Without echoing these sentiments unreservedly, we must lay stress upon the importance of the study of organic chemistry in the insane. In the words of Sir William Aitken, "it is by chemical combined with biological and bacteriological methods that we must look for the discovery of the many factors in the causation of disease, and for the power of preventing or removing it."

Lunacy Administration in Berlin and in Scotland, with Special Reference to the Care of the Insane in Private Dwellings.
By JOHN SIBBALD, M.D., Commissioner in Lunacy for Scotland.

(Concluded from page 13.)

The Supervision and Management of the Patients in Private Dwellings.

The way in which the boarding-out system is administered at Berlin is the result of experience. Its present form differs in some respects from the arrangements made at the commencement of the experiment. It is unnecessary to describe the gradual evolution of the system, the way in which cumbrous regulations were eliminated, and in which greater efficiency was given to the arrangements; but it is proper to recognize the great capacity as an administrator which has been shown by Dr. Sander, to whom, as director of the asylum, the development of the system has been chiefly due.

When a patient is to be entrusted to a guardian a formal agreement is entered into between the Asylum Committee and the guardian, by which the guardian comes under obligations, in return for a certain monthly payment, to give

* "Pilocereus Senilis."

suitable maintenance and care to the patient and to make certain reports at regular periods in regard to his condition, and to carry out the orders of the asylum authorities in regard to him. The asylum authorities provide clothing, but everything else is to be supplied by the guardian. One of the provisions in the agreement requires the guardian to come to the asylum for his pay at the beginning of every month, and to bring the patient at the same time. This rule is enforced in the great majority of cases; but it is not insisted on in certain cases, as, for example, when the residence of the guardian is at a great distance from the asylum, when the patient has obtained regular employment which would be interfered with, or when it is known that the patient has a strong objection to visiting the asylum.

The most important part of the management is the inspection of the homes. This is entrusted to one of the assistant physicians of the asylum. From 1887 to 1890 it was conducted by Dr. Otto, now physician in chief to the Herzberge Asylum, and since 1890 it has been in the hands of Dr. Bothe. The medical inspector has, under the general control of Dr. Sander, the chief work of administration. In consultation with his colleagues in the asylum he selects the patients to be boarded out, and the guardians to whom they are to be sent. He sees the guardians and the patients on the occasion of their monthly visit to the asylum. He visits the patients at their homes generally once every month; in some cases not so frequently, but in some cases as often as once a week. He inquires at these visits into all the circumstances of the patients, the kind of accommodation they are furnished with, the food they receive, the work they do, the extent to which they share the family life of the household, and everything in their behaviour which bears upon their fitness for life in a home. He also inquires into the behaviour of the guardians towards the patients, whether they treat them kindly and judiciously, and whether they exercise effective supervision over them. He investigates any complaints, and determines whether the patients are to be transferred to other homes or brought back to the asylum. He fixes and alters the rates of payment, and he instructs the guardians as to the best modes of dealing with the patients.

In the case of some patients supervision is exercised by the police in addition to that of the medical inspector. The patients thus supervised, says Dr. Bothe,* were partly

* "Familiale Verpflegung," p. 82.

patients whose admission to the asylum had been occasioned by specially dangerous acts, and partly patients who had been handed over to the asylum by the criminal courts. The first group included mostly alcoholists, who had been repeatedly in the hands of the police for ill-treatment of their wives or children. This supervision was exercised by the police with great discretion, so that it did not come to the knowledge of the patients; and this exceptional supervision was in no way objected to from the medical side. "On the contrary," continues Dr. Bothe, "it was regarded as a valuable supplement to the medical supervision, and a guarantee rather for the success of the boarding out."

The ordinary medical treatment of the patients is, by instruction of the Armen-Direction, conducted by the medical officers for the poor, when the patients are resident within the municipality. In the case of patients in country districts an arrangement is made by the asylum with a local practitioner to undertake the duty. For the treatment of serious illnesses the patients are, if possible, replaced at once in the asylum.

Dr. Bothe gives full information as to the cost of boarding out in Berlin. The payments to guardians run generally from about 20 to 30 shillings a month. The average payment in the year 1891-92 was under 22 shillings a month. The total average daily cost in marks per head is given below.

				Marks.
Payment to guardians ...	...	...	...	·709
Clothing ...	...	...	...	·102
Medical treatment ...	...	...	...	·173
Medicines ...	...	...	...	·044
Christmas gifts ...	...	...	...	·013
Administration ...	...	...	...	·163
				<hr/>
Total ...	...	...	..	1·204

This represents an average cost of about £22 for each patient during the year 1891-92; and it compares favourably with the cost per patient in Dalldorf Asylum for the same year, which was over £38.

The rate at which the boarding out has grown will be seen from the fact that the number of patients in private dwellings at the beginning of the statistical year 1887-88 was 34, at the beginning of the year 1892-93 it was 183, and at the end of that year it was 209. The "movement of popula-

tion," to use the French phrase, is shown by the figures for the year 1891-92, the most recent figures which are given. At the beginning of this year there were 130 patients in private dwellings; there were 254 boarded out during the year, 107 were taken back to the asylum, and 94 passed out of the supervision of the asylum. Of these 94, 41 were freed from supervision of any kind, 2 were handed over to their relatives, and 51 were handed over to the Armen-Direction, that is, to be dealt with as ordinary paupers.

The position of the patients handed over to the Armen-Direction deserves special notice. As many as 51 were so handed over in the year 1891-92. The asylum authorities consider themselves bound under the arrangement made in the year 1885 to hand over to the administrators of ordinary pauperism every patient whose condition does not seem to require the supervision of officials acquainted with the management of the insane. The practical outcome of this view has been that when a patient has been boarded out, and has done well for a period of twelve months, his liberation from further supervision by the asylum officials is taken into consideration, and it is only when there seem to be important reasons for this special kind of supervision that it is continued.

According to Dr. Bothe* it was necessary to be very ready to hand patients over to the Armen-Direction, "even when a favourable result could not be certainly looked for," because "the conviction that a patient requires a continuance of the supervision of the asylum authorities can scarcely be brought home to the Armen-Direction without such experimental proof." He animadverts strongly on the unsuitability of the Armen-Commissionen to supervise the management of patients suffering from insanity. They do not like the duty. "The trouble occasioned by the frequent changes of residence of restless patients, with the failure to recognize that such things must be treated with consideration when dealing with the insane, lead," he says, "frequently to the transference of the patients back to the care of the asylum authorities." The Commissionen, he says, do not understand the necessity for dealing differently with the insane from the way in which they deal with the ordinary poor. They reduce the money allowances which the asylum authorities had thought necessary to secure such provision for the patients as would keep them out of the asylum; and

* *Op. cit.*, p. 133.

“the Armen-Direction,” says Dr. Bothe,* “sought in vain to control the injudicious parsimony of the Armen-Commissionen, which was not unfrequently the cause of the patients being replaced in the asylum.”

Results of the Boarding Out.

The boarding out system, as it is managed in Berlin, is said by its administrators to be of great use in the case of many patients whom it is proposed to discharge as recovered. The cases are those of patients who, after being discharged from the asylum, do not know where to turn for help in re-establishing themselves in the outside world. By being boarded out in favourable circumstances they are given a breathing time, during which they may see persons who have known them, and who may be able to help them to find work. Dr. Bothe states that the boarding out system has been found of quite remarkable benefit in such cases, and the Berlin experience seems to deserve the attention of those in this country who are interesting themselves in the “After Care of the Insane.”

Dr. Bothe† concludes his account of the Berlin experiment with the following remarks:—“We feel justified in saying that the undertaking, which in its objects and aims we have just described, has succeeded far beyond what we were entitled to expect. We have seen that in the further development of the family treatment we have been able to provide outside the asylum for a large percentage of patients who had previously been thought to require to be in the asylum; and this has been done in a way which has been conducive in the highest degree both to the welfare of the patients and to the interest of the community which bears the cost. The boarding out has fulfilled its primary object, which was the unburdening of the asylum by facilitating the removal of patients who could not be handed over directly to the administrators of ordinary poor relief. In the enlarging of its primary purpose of providing for a considerable proportion of the insane poor of the city outside the asylum, it has included the regular removal of those patients also who can only be temporarily out of the asylum. The development resulting from this enlarging of the primary purpose is the characteristic peculiarity of the Dalldorf boarding out. The transference of patients who had become tranquil and were no longer in need of asylum treatment, from the asylum

* *Op. cit.*, p. 134.

† *Op. cit.*, p. 140.

to the families of relatives or strangers under further observation on the part of the asylum, has been practised in other places; and entirely tranquil patients, in whose condition a change is no longer to be expected, and whose permanent need of aid is beyond discussion, are only removed from the Dalldorf Asylum to private dwellings under the asylum supervision when exceptional circumstances make it necessary, and then only for a short time till the removal to ordinary poor relief is practicable. For the administrators of ordinary poor relief have always been in a position to provide for such completely chronic cases as have reached a state of persistent mental debility. No occasion has arisen for the establishment of a special system of boarding out in connection with Dalldorf Asylum in order to provide for this class of patients. Both before the institution of the boarding out, and after it, they have received ordinary outdoor relief under the supervision of the Armen-Direction without inconvenience to the administration of these authorities, and with benefit to the patients.* In establishing and developing a system of family treatment in connection with the asylum, the Dalldorf authorities have rather had in view its application to patients who might be conditionally liberated during the tranquil stages, even though brief, of periodic maladies.

“This conception of the idea of boarding out which has been evolved in the development of the system from being a small appendage of the asylum to being a vigorous and independent department of Berlin lunacy administration, has not been created by a single stroke. It has been developed gradually, with much labour, and in the course of years, and obstacles to its progress have not been wanting. Like every new system, the boarding out has had difficulties enough to overcome. There is nothing in the world that is without defects, or in regard to which objections, and well-founded objections, may not be raised. It is matter of experience that it is only by the overcoming of difficulties that a new system can assert itself and grow. It is not to be regretted that this is so, for it is in this way that a new creation can best demonstrate its fitness to exist. At all events the advantages offered in so many respects by the

* This statement by Dr. Bothe must be received with some reservation in view of the specific complaints he makes elsewhere of the unsatisfactory dealing with the insane by the Poor Law Authorities — especially by the Armen-Commissionen.

boarding out are great enough to induce former opponents to become its friends."

Dr. Bothe adds that "the pole round which the development of the boarding out revolves is the fact, which indeed is undisputed, that there are patients in asylums who do not require to be confined in institutions, though they are not in the ordinary sense fit to be discharged. What is wanted is to show that those who do not necessarily require asylum treatment may with advantage be provided for outside the asylum if special precautions are taken for placing them in circumstances suitable to their condition; and the means of doing this is obtained by the organization of a boarding out system."

II. LUNACY ADMINISTRATION IN SCOTLAND.

The Scottish System of Administration a Complete System.

The foregoing account of the recent development of the treatment of the insane poor in private dwellings in Berlin has been confined almost entirely to a mere description of the work which has been done. Everything partaking much of the character of critical discussion has been avoided. It will be useful now to try to estimate the value of the work and to indicate the place which it occupies in relation to lunacy administration as a whole. This may be conveniently done by comparing the Berlin system with the present Scottish system. The Scottish system is chosen because it is the only one in which all the insane poor of a whole country, whether in institutions or in private dwellings, are under one authority specially charged with the supervision of everything that pertains to the care and protection of the insane, and because both the length of time it has been in operation and the number of persons with whom it deals are sufficient to yield useful experience. The Scottish system has now been in operation for thirty-seven years, and the number of the insane poor in Scotland on 1st January, 1894, was 11,041, of which number 8,476 were in establishments for the insane and 2,565 were in private dwellings. It is not necessary for the present purpose to refer to the history of the system. It will be sufficient to state the arrangements at present in force, and in doing so I shall, in order to facilitate comparisons with the Berlin system, omit all reference to those arrangements in Scotland which have

only to do with private patients, that is to those not maintained wholly or partially by public funds.

Description of the Scottish System.

a. System of Relief of the Poor.

There are two authorities concerned with the care of the sane poor, one central and one local. The central authority, called the Local Government Board, has the general control of all Scottish poor law administration. The local authority is the Parish Council.* There is a Parish Council for each parish, which is the smallest unit of administration in Scotland, and corresponds to a Gemeinde in Germany, or a Commune in France. The Parish Council collects the poor rate, which forms the fund out of which the general cost of relieving the poor is defrayed. Each Parish Council has a paid official, called the inspector of poor, and it is the duty of the Council, through the inspector of poor, to provide for the maintenance of every poor person who is unable to maintain himself. As part of this duty it has to provide for the insane poor. In all questions which relate to its duties under the Poor Law it is under the control of the Local Government Board; but in all questions relating to its duties under the Lunacy Law it is under the control of a central authority, called the General Board of Lunacy.

b. System of Lunacy Administration.

Besides the Parish Councils there are two authorities concerned with lunacy administration, the General Board of Commissioners in Lunacy and the District Lunacy Boards. The General Board consists of five members, an unpaid Chairman, two unpaid Commissioners, who are lawyers, and two paid Commissioners, who are physicians. There are two physicians not members of the Board, who are called Deputy Commissioners, and who are wholly engaged in the inspection of patients in private dwellings. This Board has the superintendence of the way in which the insane are provided for in all parts of the country. Its duties relate to the care of the insane of all classes, both rich and poor, but its duties in regard to the rich do not at present concern us. It has the superintendence of the insane poor in whatever

* These two authorities are here designated as the Local Government Board and the Parish Council, because the functions hitherto performed by the Board of Supervision and the Parochial Boards are in consequence of recent legislation being transferred to authorities having these designations.

manner they may be provided for, whether in establishments or in private dwellings. The District Lunacy Boards have the management of the District Asylums. Scotland is divided into twenty-five Lunacy Districts, each district having, as a rule, a District Asylum.* The District Lunacy Board has, under the supervision of the General Board, the entire management of its asylum and of the patients who are in the asylum. The inhabitants of the district are assessed for the funds required for the erection and furnishing of the asylum, and for adding to it, and for keeping it in repair. The cost of managing and maintaining the patients is borne by the Parish Councils, who each pay to the District Board according to the number of patients they have in the asylum.

The relation of the different authorities to one another will appear if we keep in view the two aspects in which every patient must be regarded who is insane and who is not possessed of means sufficient to provide for his support. One of these aspects concerns the judging of the validity of his claim for public support, the fixing of the persons who may be, more or less, liable for his maintenance, and other questions relating to Poor Law administration. These are questions which require to be dealt with by Parish Councils whenever relief is granted, whether the person relieved be sane or insane, and they are dealt with under the control of the Local Government Board. The other aspect concerns the way in which, being an insane person, he is to be provided for, and this question is dealt with under the control of the General Board of Lunacy. One of the first of these questions is whether the patient requires to be sent to an asylum. If this is requisite the patient is sent to the asylum of the district to which he belongs, and while in the asylum the patient is under the care of the District Board of Lunacy, subject to supervision by the General Board. The District Board and its officers have no responsibilities and no duties in regard to a patient before his admission to the asylum, nor after his removal from the asylum. If the patient does not require to be sent to the asylum, or if after having been for a time in the asylum he ceases to require asylum treatment, though still insane, he is

* There are some exceptions to this statement, such as in the case where a District Board has contracted with the Directors of a Royal Asylum for the care of their insane; but these exceptions do not affect the general principle of the administration, and they need not be taken into consideration here.

provided for in a private dwelling by the Parish Council under the control of the General Board of Lunacy. This account of the relations of the different authorities to one another will make it easy to understand the details of administration relating to patients in private dwellings in Scotland.

Patients in Private Dwellings.

It will be understood from what has been said that there are two ways in which an insane person may become one of the class of persons registered on the books of the General Board of Lunacy as "Pauper lunatics in private dwellings." One way is when the parochial authorities think it unnecessary to send him to an asylum, and the other is when having been in an asylum for a time he is thought to be in a condition which makes further detention in the asylum unnecessary. In the first case the Inspector of Poor makes a full statement to the General Board according to a prescribed form, and accompanied by two medical certificates, showing the manner in which the patient is to be provided for. The certificates, besides certifying to the insanity of the patient, also certify that the manner in which it is proposed to provide for him is suitable to his condition. If the statement and the certificates are regarded as satisfactory by the General Board, the arrangement is sanctioned. In the case of a patient removed from an asylum a similar statement requires to be made by the Inspector of Poor, but the medical certificates are not required, as the fitness of the patient for a private dwelling has been sufficiently ascertained before his removal from the asylum. After the sanction of the General Board has been obtained the position of the patients removed from asylums is the same in every respect as that of patients who have never been sent to asylums. Every such patient comes under inspection by the medical officer of the General Board called a Deputy Commissioner, whose special duty it is to visit the insane in private dwellings. They must also, besides receiving any special medical attendance which the case may require, be visited four times a year by a local medical officer and twice a year by the Inspector of Poor. At each of these visits these officials enter in a book kept in the house a report on the condition of the patient, the way in which he is provided for, and the way in which the person in charge of the patient performs his or her duties. This book is shown to the

Deputy Commissioner at his visits, and he makes a separate report on each patient, which he sends to the General Board. The Deputy Commissioners, who are two in number, generally visit once a year, but oftener in some cases.

The reports of the Deputy Commissioners deal with the whole circumstances of each case, the mental and bodily condition of the patient, the suitability of the patient for a private dwelling, the accommodation provided, the food, the clothing, the character of the household, and the way in which the duties of the guardians are performed. He also inquires into the adequacy of the money allowance given by the Parish Council. When making his visit he points out any defects which he may see in the arrangements and any improvements which he thinks should be made. A statement dealing with these is embodied in his report to the Board.

After receiving the report of the Deputy Commissioner upon a case, the General Board takes such steps, if any steps seem necessary, as will do what is requisite to make the condition of the patient satisfactory by calling for an alteration in the mode of management, the providing of additional comforts, a change of residence, or a change of guardianship. Where removal to an asylum seems desirable this is ordered. There is seldom any difficulty in obtaining such changes as the Board think desirable, a letter to the Inspector of Poor being generally sufficient. Among other means of influencing Parish Councils there is what is known as the Government Grant. This is a contribution towards the cost of maintenance of the insane poor given out of the general taxation of the country, amounting as a rule to about one-half of the cost. This money is not paid to a Parish Council in respect of any patient who is not in the opinion of the General Board suitably provided for, and it is withheld in the cases where the instructions of the Board are not carried out.

Patients who are not sent to asylums are generally kept under the care of relatives; but many of those who are removed from asylums are placed with strangers. Relatives are in all cases preferred, if relatives entirely suitable can be found; but, as may naturally be expected, the proportion placed with relatives is by no means so large as in the case of patients who have never been in asylums. When placed with strangers the patients may be placed in each house singly or in groups. A group under one guardian and

under one roof cannot be more numerous than four patients, and it is only after special inquiry that it is allowed to consist of more than two. In regard to the groups, it may be noted that the Berlin authorities have also found it desirable to limit the number of a household group to not more than four.

The patients whose position has been described constitute the class of patients registered as patients in private dwellings and included among the 2,565 patients described in the Annual Reports of the Board as in private dwellings on 1st January, 1894. There are, however, in addition, a small number of patients in private dwellings who, although on the asylum books, are not actually resident in asylums. The way in which they come into this position will be understood from the following statement:—They may come into this position in two ways: (1.) They may be liberated “on probation;” that is, doubts having been felt as to their fitness for discharge from the asylum, their names are kept on the asylum books, and they are with the sanction of the General Board liberated conditionally for a definite period, and at the end of that period they may be either brought back to the asylum or removed altogether from asylum connection. They may also be replaced in the asylum at any time during the period of probation if they prove unsuitable for treatment in a private dwelling. The period of probation never exceeds a year. It will be seen that, though the asylum authorities have no control over these patients while they are out of the asylum, there is to some extent a resemblance between this system of discharge on probation and the system of boarding out at Berlin. The other way (2) of removing patients temporarily from asylums has a rather greater resemblance to the Berlin system. It differs from what is called removal “on probation” by being limited to a period of twenty-eight days, and by not requiring the sanction of the General Board. The superintendent of an asylum may allow a patient to be “temporarily absent” for not more than twenty-eight days on his own authority, and during that time the patient remains to a certain extent under the asylum administration. Patients temporarily absent are not reported to the General Board, and no record is kept of their number except in the daily registers of each asylum. Their number cannot, therefore, be given here. The average annual number of patients liberated “on probation,” as given in the Reports of the

General Board for the ten years 1883-92, was 122 for the whole of Scotland.

III. THE POSITION OF THE INSANE POOR IN PRIVATE DWELLINGS IN BERLIN AND THEIR POSITION IN SCOTLAND COMPARED.

Sufficient has now been said to make those unfamiliar with the Scottish method of dealing with the insane poor in private dwellings perceive the chief directions in which its principles differ from those adopted by the Berlin authorities. A few words may now be said in regard to these differences.

The Differences between the two Systems.

The chief points of difference are :—

1. In Scotland the whole of the insane poor maintained either wholly or partially at the public cost, whether in asylums or in private dwellings, are under one superintending authority. In Berlin there is no authority which has the superintendence of the whole of the insane poor. A large number are under an administration which deals with them in the same way as ordinary paupers.

2. In Scotland the administrators of asylums have nothing to do with the care of the insane in private dwellings, the persons in charge of patients in asylums and the persons in charge of patients in private dwellings being kept quite independent of one another. In Berlin the supervision of patients in private dwellings, so far as they are under lunacy administration at all, is managed as a branch of asylum administration.

It was said when describing the Scottish administration that patients on probation in Scotland were in a position somewhat resembling that of the patients boarded out in Berlin; but it must not be lost sight of that their position is different in a very important respect. They are wholly removed from asylum supervision; the parochial authorities are responsible for them, and they are supervised in the same manner by those authorities and by the Deputy Commissioners as those patients are who are sanctioned by the General Board to remain permanently in private dwellings.

The most important difference between the two systems lies in the fact that there is nothing in the Berlin system which corresponds to the administration of the General Board of Lunacy in its dealing either with patients who

have never been in an asylum, or with patients who, having been in asylums and being still insane, have been wholly removed from asylum supervision. These patients were, as we have seen, no less than 2,565 in number on 1st January of this year (1894), and there must be a large number of a similar class in Berlin. Patients of this class are dealt with under the regulations of the *Öffentliche Armenpflege* in the same manner as ordinary paupers. This is the great defect in the Berlin system, and it is one which is inherent in the system, and cannot be removed by any mere development on the lines hitherto pursued. This is clearly shown by the history of the experiment. The experiment originated with the authorities of the Dall-dorf Asylum, and the skill and earnestness which have been shown by Dr. Sander and his coadjutors appear to have secured all that it was possible for the administrators of an asylum to effect. But the more fully we recognize their ability and earnestness the more completely does the result show that no mere extension of asylum administration can develop into a comprehensive system of dealing with the insane in private dwellings. The asylum authorities found at the outset that they were obliged to trench upon the province of the *Armen-Direction*. That authority, with praiseworthy liberality, it is true, agreed to hand over to them the management of a certain limited class of the insane poor, including in that management such Poor Law matters as the amount of money to be paid to their guardians. The patients thus handed over to the asylum authorities are somewhat vaguely defined in the minute of agreement as those patients still requiring supervision by a physician accustomed to deal with the insane (*"Geistes-krankte bei denen eine psychiatrische Aufsicht nothwendig bleibt"*); and these, we have seen, only numbered 209 on 31st March, 1893. To place under the Asylum Committee the large number of patients who remain in the hands of the *Armen-Direction* would be inadvisable, and it would be impracticable; for there are already indications of friction between the *Armen-Commissionen* and the asylum authorities even under the present restricted conditions. This friction would certainly be so serious as to cause a break-down of the whole arrangements if the interference of the asylum authorities were carried much further.

Dr. Bothe speaks of the boarding out at Berlin as being now "a vigorous and independent department of Berlin

lunacy administration." This description is not, however, strictly applicable to what has been done at Berlin. The true position of the matter is that the administration of the Dalldorf Asylum has been modified so as to permit of the carrying out of certain views of Dr. Sander and the present Asylum Committee. If these gentlemen changed their views so as to make them regard boarding out as undesirable the "department" would come to an end. If Dr. Otto were not, as he is understood to be, a cordial supporter of Dr. Sander's views the boarding out would not be in operation in the western half of Berlin, which is connected with the Herzberge Asylum. The regulations consented to by the Armen-Direction and other authorities do not make boarding out a necessary part of lunacy administration; they do no more than render it possible. The practice of boarding out is not, therefore, an independent part of Berlin lunacy administration, and though this in no way derogates from the credit due to the Asylum Committee and their officers, it must be kept in mind when discussing the position of the question at present.

Care of the Insane in Private Dwellings not a Branch of Asylum Administration.

The results of the Berlin experiment may be regarded as demonstrating the impossibility of arriving at a complete system of providing for the insane poor in private dwellings by a mere extension of asylum administration. But there are reasons which, even if it were possible, make it undesirable to arrive at a complete system in this way.

It is not an advantage to a patient living in a private dwelling to be under asylum administration. It is an advantage indeed to a patient on leaving an asylum to feel that he has ceased to have any connection with asylum life, and that he is no longer associated with asylum inmates. His mind should be diverted as much as possible into new channels, which are suggestive only of sane ways of thinking and doing, and for this end the separation from the asylum should be as complete as possible. Asylum officials also are not specially suited to superintend patients in private dwellings. The business of conducting the treatment of patients in asylums is quite different from what should be aimed at in private dwellings. Asylum methods are to be avoided as much as possible, and the qualities which may make a man an excellent asylum officer do not necessarily

fit him for the supervision of patients outside the asylum. It is for many asylum officers difficult when engaged largely in asylum work to change their mental attitude as they ought to do when dealing with outdoor work. Dr. Sander and Dr. Bothe appear to be able to do this, but the contrary will be the general rule.

The placing of the selection of the homes for the patients in the hands of the asylum authorities has obvious disadvantages. It introduces considerations which, in the interests of the patients, it is well to avoid. The choice of a home should have in view the placing of the patient as much as possible in a position similar to the position which it is desirable he should have occupied if he had been of sound mind. The fitness of the surroundings to promote bodily and mental health should also be kept in view, and the locality should be one which will permit of efficient supervision by the guardian without subjecting the patient to irksome restrictions. When the selection of the homes is in the hands of the asylum officials, who are the inspecting or supervising authority, a consideration of a different kind is brought into play; this is that the home must be within convenient distance from the asylum. This not only limits injuriously the field of selection, but it must lead to the formation of aggregations of insane persons in particular districts. An asylum medical officer could not undertake the supervision of patients widely scattered over an extensive district. The formation of large aggregations is, however, very undesirable. To foster such aggregations would be contrary to what has been learned from Scottish experience, and it would be to read unintelligently the lessons taught by the experience at Gheel. We have learned from that experience the benefit to many patients which treatment in private dwellings affords, but we may also learn at Gheel the disadvantages which attend the accumulation of a large number in one locality. The number should never be so large that the insane residents form a considerable proportion of the population. It has been found best that the homes should be widely scattered among village and rural populations. Where the patients can be placed with relatives or with persons who take a friendly interest in them such persons should be always preferred if their character and circumstances are suitable. This also leads to a distribution of the patients over a wide area, and it would be unsatisfactory if the necessity for nearness to the asylum should prevent the administrators of the boarding out from

exercising their judgment freely and selecting the most suitable homes and the most efficient guardians, wherever they may be found.

In the foregoing account of what has been done at Berlin, and the subsequent discussion, it has been thought desirable to point out that a large part of the problem of providing satisfactorily for the insane poor in private dwellings remains still unsolved by the authorities, but it is cordially recognized that an excellent piece of work has been done, and it is of good omen for the future of lunacy administration in Berlin to find such high authorities as Dr. Sander, Dr. Bothe, and Dr. Otto clearly recognizing that a considerable portion of the insane do not require detention in an asylum, and may be properly provided for in private dwellings.

Impressions of a Flying Visit to a Dutch Asylum. By M. D. MACLEOD, M.B., East Riding Asylum, Beverley.

The asylum of Meer-en-Berg is pleasantly situated on a sandy plain close to the village of Bloomendall, within three miles of Haarlem, on the immediate borders of the Great Sand Dunes of the east side of North Holland. This plain, which extends more or less to the North Sea, is supposed to be one of the ancient mouths of the Rhine, now filled up, and close beside it is the ruin of the large castle of Brederode, the seat of the once powerful Counts of that name.

The approach to the asylum is through pleasant grounds in which on the right is a detached Protestant chapel. In the grounds are the residences of the medical officers, some of them being arranged for married men.

The staff at the time of my visit consisted of the Director, Dr. Van Deventer, and six assistants, one of whom, Dr. Kam, I had the pleasure of meeting.

The number of patients, I was informed, in residence at the time of my visit, was 1,330, a number which I gathered from Dr. Van Deventer was considered too large to be assembled in one asylum.

The asylum is divided roughly into two large buildings, the old and the new building (the latter opened some months ago), and presents a pleasing elevation of a distinctly national style.

I was ushered into a large entrance hall, the recesses of which were apparently utilized as visiting rooms, and shortly after sending in my card was pleasantly received by Mrs. Van Deventer, who informed me that the Director was then engaged, but that she would be pleased to accompany me until he was at leisure.

To my great relief Mrs. Van Deventer was quite conversant with English, as were Dr. Van Deventer and Dr. Kam. In all ordinary conversation we were able to get on fluently, but I had occasionally a little difficulty in explaining myself when it came to technical matters.

The wards struck me as spacious and lofty, full of light and air, scrupulously clean and free from odour, but somewhat plain according to our English standard.

The female patients were neatly dressed in what I recollect as a print blouse, with a girdle and a dark stuff skirt, neat and serviceable, but somewhat too uniform. The men's dress was also somewhat uniform, but was tidy and warm. The patients had a good healthy colour, and appeared as if well fed and contented. I saw few special dresses in the wards. The infirmary patients appeared to me to be all dressed in a soft blue dress, something like what our sick soldiers wear.

The beds were everywhere clean and warmly furnished. Most of the mattresses I saw were filled with "sea grass," a crisp, elastic vegetable fibre.

The general demeanour of the patients was quiet and free from excitement, and most were employed in some industrial work, such as sewing or knitting. The morning was wet, so nearly all were in the wards. As far as I could judge the main features of the insanity were melancholic and demented. I saw few excited patients, and those that were so exhibited more a species of restlessness than the noisy talkativeness of excited English. This might be a reflex of the general placid demeanour of the inhabitants of the country.

I saw no mechanical restraint in use, but seclusion or separation seemed to me not at all uncommon.

The sanitary arrangements were somewhat primitive, but caused no offence to the senses.

There was little or no machinery in the laundry, most of the washing being done by hand. Chloride of lime was apparently used for the clothes, as also I noticed in a large public steam laundry (fitted with English machinery), which

I visited in another part. The mangle for the clothes was the most primitive thing I saw. It was a square box on rollers in a frame somewhat similar to our old hand mangles, but instead of a handle and straps it was moved backwards and forwards by two women at each end, who pulled and pushed with dextrous energy—a splendid employment, it struck me, for excited women. The kitchens were not adequate to the size of the building, but were in a beautiful state of order. There were two back kitchens in which men and women worked separately.

The patients dined in their wards, and in the “state” portion of the asylum I saw many of them at dinner, sitting down to a neatly served and savoury stew of potatoes, cabbage and stock. This dinner was in ample proportions and seemed to be appreciated.

The nursing staff was numerous, and were dressed in a neat nursing uniform with one exception, a nurse who wore the picturesque national costume with gold “helmet” and head side ornaments.

I gathered that the nursing staff had undergone improvements during the last eighteen months, and that great efforts were being made in this direction. Up to a recent date nurses and attendants were obliged to sleep in the same room as the patients, but now they had to a large extent sleeping rooms apart. Female nurses among the male patients were evidently the rule.

There is a concert-room for entertainments in the old building, and a Catholic chapel, both finely decorated by a homicidal patient, who before admission killed several of his family. I saw him at work in the chapel, where he had painted a grand altar-piece, in which there was prominent a male figure, the only one I understand he had painted, his chief work being female heads and busts.

The workshops were full of industry, and in the carpenter's shop many new articles of furniture were being made for the wards in a neat and workmanlike style. One article struck me as being a good one, and it was one of a kind I do not recollect having seen before. It was a large cupboard for each ward, divided internally into locked pigeon holes, so that each patient could retain their own little possessions. The idea struck me as excellent, but I omitted to inquire who kept the keys.

The side rooms were built in rows with a passage and a door on each side. They looked to want the light of an

outside window, and its attendant benefits of ventilation and freshness. This system appears to be unfortunately reproduced in the new asylum.

My time being very limited I saw but little of the newer part of the asylum, but what I did see impressed me as being clean, airy, and comfortable.

The accommodation for second and first class patients was excellent, and on quite modern lines. The wards were comfortably furnished, and abounded with billiard tables, pianos, books, and other means of recreation. One gentleman, who was described as quite a dement, was playing in his ward in a most excellent style, while others of the patients were grouped round listening with apparent pleasure.

The vegetable gardens struck me as in a high state of cultivation, and were very neatly kept. As we were leaving the gardens we met a young active nurse with six female patients going to get the potatoes for the next day.

In the grounds we met an official described as a policeman. He belonged to the asylum, was dressed in a police uniform, with side arms, and was evidently a sort of outdoor inspector. A similar official, I gathered, patrolled the grounds at night.

I received the utmost courtesy from Dr. and Mrs. Van Deventer, and from Dr. Kam. Dr. Van Deventer has only been Director of the asylum for eighteen months, and it is very evident, even to a casual spectator, that a continuance of the skill and energy he has brought to bear upon the asylum has worked great reforms in its internal economy, and that a continuance of such will remedy the defects (chiefly structural) which the Meer-en-Berg Asylum still suffers from.

Dr. Van Deventer is apparently an immense favourite with the patients, and his cheerful, energetic presence in a ward produced a distinctly pleasing impression. He gave me the impression that he had the great qualification for the cure of the insane—that he loved them all.

Dr. Van Deventer is an ardent hypnotist, and showed me two epileptic out-patients who came at intervals to be hypnotized, with, I was told, amelioration of their complaint. Time did not allow me to enter into this.

I made few or no notes, and these impressions are written from recent memory. As far as they go they are accurate. I was told phthisis was uncommon, and was surprised to

find that in a hard spirit-drinking population "gin drinker's" liver was very rare. This was explained by the fact that the "stuff" the people drank was good of its kind.

The Meer-en-Berg Asylum has left a pleasing impression on my mind, and I remember little I could adversely criticize beyond the structural arrangements.*

The Spastic and Tabetic Types of General Paralysis. † By R. S. STEWART, M.D., D.P.H.Camb., Deputy Medical Superintendent, County Asylum, Bridgend, Glamorganshire.

(*Illustrated.*)

As a rule general paralysis is characterized by well-defined spinal symptoms and pathological changes, and, looked at from this point of view, the cases which pursue what may be called a normal course group themselves broadly into two fairly-defined but unequal divisions, presenting more or less distinctive features as regards onset, course, duration, and pathology. The type which is associated with locomotor ataxia is a well-recognized one, and it appears to me that in all the other cases the features which predominate during the progress of the affection indicate a correspondingly close relationship, clinically and pathologically, with that variety of spinal disease termed primary spastic paraplegia. In a small proportion the features are indicative of a combination of these two types, but it will be found that primarily such cases belong to one or other group, the combination of symptoms being of relatively late occurrence.

The following remarks are based upon the observation of 317 general paralytics admitted to the Glamorgan County Asylum during the ten years 1884-93, of whom 227 have died.

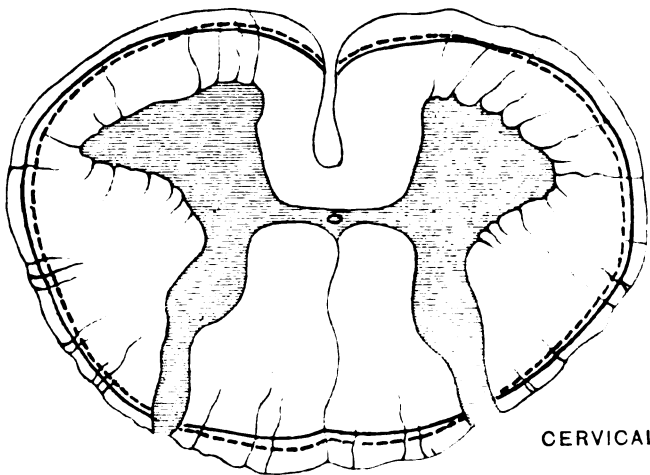
The proportion belonging to each group is, as already mentioned, an unequal one. Eighty-five per cent. were of the spastic type and 15 per cent. of the tabetic type. This proportion for the tabetic type is practically identical with that given by Bevan Lewis in an analysis of 44 cases, viz., 15.9. ‡ The higher percentage of 20, given by Thomsen, § is most likely explained by the fact that it includes all those cases in which changes in the posterior columns were found, but which were probably not all pure cases of locomotor

* For description and plan of Meer-en-berg in 1853, see "Asylums of Holland," by Dr. Haak Tuke.

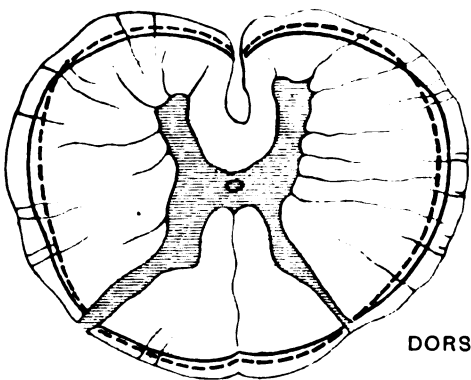
† Paper read at Bristol Meeting of the British Medical Association, July, 1894 (Psychology Section).

‡ "Text Book of Mental Diseases."

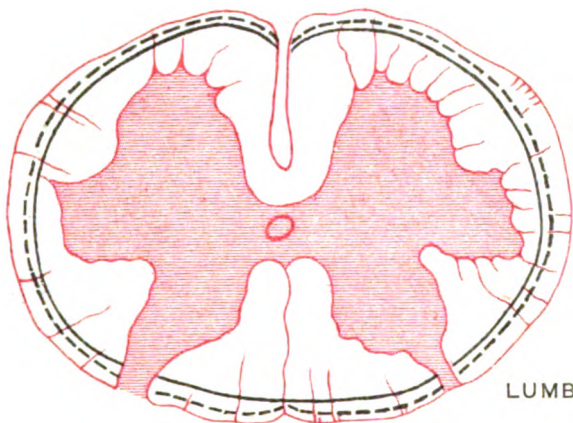
§ "Archives de Neurologie," May, 1891.



CERVICAL.



DORSAL.



LUMBAR.

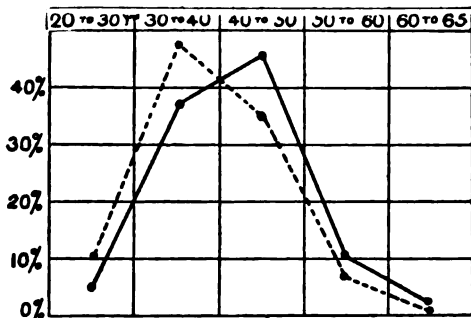
TRANSVERSE SECTION OF THE SPINAL CORD (MAGNIFIED 6 TIMES) SHOWING THE NORMAL SHAPE AND DIMENSIONS (TINTED), AND THE ATROPHY AND ALTERATION OF THE SHAPE IN THE SPASTIC (-----) AND TABETIC (——) TYPES OF GENERAL PARALYSIS

TO ILLUSTRATE DR. STEWART'S PAPER.

ataxia, all changes of posterior columns not being synonymous, as Marie* has lately pointed out, with tabes. It may, therefore, be fairly assumed that 15 per cent. of all cases of general paralysis are associated with locomotor ataxia. A remarkable uniformity prevails as regards the sexes, the proportion in each class being exactly identical.

I now proceed to refer to some of the points in which these two types differ. Dealing first with the age at the onset of the affection, I find that while the average age for the total number of general paralytics is 39, the spastic type commences on the average at 38, and the tabetic at 41. A still more striking diversity was found by Thomsen, who gives the average ages of 416 cases as respectively 30 and 41. This difference is more evident when the ages at onset are taken in groups. In this way it is found that the period of life at which the spastic type is most common is between 30 and 40, while in the tabetic variety it is between 40 and 50. Arranged in periods of 10 years the percentage of cases in the two types is as follows:—

	20-30	30-40	40-50	50-60	60-65 years.
Spastic cases ...	10.1	47.9	34.5	6.7	0.8 per cent.
Tabetic cases ...	4.1	37.4	45.9	10.4	2.1 „



A certain similarity is traceable as regards the age at onset between these two types of general paralysis and the corresponding spinal affections; lateral sclerosis, as is shown by Gowers,† being much more frequent than locomotor ataxia during the decade 20-30, and much less common during the decade 40-50.

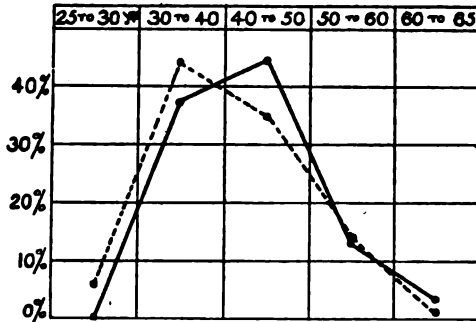
In the main the age at death in these two types presents features corresponding to the above, the maximum number

* "La Semaine Médicale," March 30th, 1894.

† "Diseases of the Nervous System," Vol. ii., p. 330.

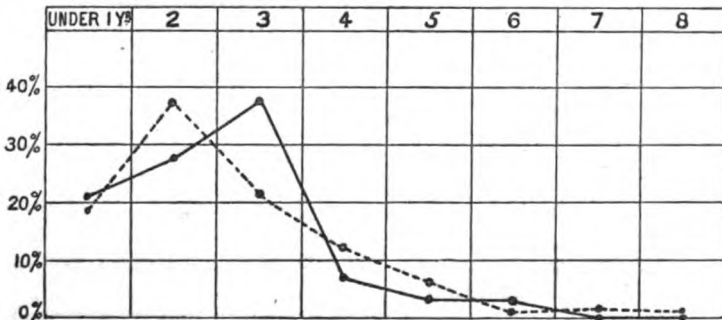
of deaths occurring in the spastic variety in the fourth decade, and in the tabetic variety in the fifth, as is seen in the following table:—

	25-30	30-40	40-50	50-60	60-65 years.
Spastic cases ...	5.6	44.6	34.5	14.2	1.0 per cent.
Tabetic cases ...	0.0	37.5	44.8	13.8	3.5 „



With regard to the duration of the disorder in the two types, a distinct difference exists. In the spastic variety the maximum number has a course of from one to two years, while in the tabetic type the maximum number has a duration of from two to three years. Arranged in table form, the figures stated in percentages of total deaths of each type are as follows:—

	Under 1	2	3	4	5	6	7	8 years.
Spastic cases	18.3	37.1	21.3	12.8	7.1	1.5	1.5	0.5 per cent.
Tabetic cases	20.7	27.6	37.9	7.0	3.4	3.4	0.0	0.0 „



It will be observed from the above that no tabetic case has a duration of over six years (though this, I may remark, happens exceptionally, one case having terminated fatally

since these figures were compiled, in which the duration was $8\frac{1}{2}$ years) and that the duration in two per cent. of the spastic cases is over six years. Taken generally, the tabetic cases have a longer duration than the spastic. This fact has a certain relationship to the next point which I take up, viz., the occurrence of congestive seizures. I find that these, under which I include the partial or general epileptiform and the apoplectiform attacks, and the transient paralyses, are more common in the spastic type than in the tabetic. Thus, of the total cases followed up to their termination, 72 per cent. of the spastic cases had these seizures at one time or another during their course, while in only 65 per cent. of the tabetic cases was their occurrence noted. My own observation leads me further to the conclusion that these seizures are a more pronounced feature in the spastic type, alike as regards their time and frequency of occurrence and their number. Many of the tabetic cases in their later stages become complicated with symptoms of lateral sclerosis, and in such cases the occurrence of congestive seizures is by no means rare, but so long as they retain the features of uncomplicated tabes but few attacks occur. As an illustration of this difference I may mention that a seizure ushers in the affection, forms the initial feature, in 22 per cent. of the spastic cases and in only 11 per cent. of the tabetic cases. This on consideration does not seem surprising, for in the spastic type the affection manifests itself first in the psychomotor domain of the central nervous system, and is, therefore, more likely to be associated with symptoms of a motor order, the contrary holding good of the tabetic type.

This same incidence of the affection serves also to explain another peculiarity which exists between these two types. It is well recognized that the tabetic type of general paralysis is, as a rule, characterized by a mental condition in which melancholia predominates, and the converse is the case in the spastic type. The following figures are, of course, only approximate, but they give a fair general idea of the predominant mental conditions:—

	Mania.	Melancholia.	Dementia.
Spastic cases...	56	4	40 per cent.
Tabetic cases...	37	30	33 „

This marked preponderance of maniacal states in the spastic, and melancholic states in the tabetic type has been noted by Bianchi and Bettencourt Rodrigues.

So far I have dealt only with differences in clinical phe-

nomena manifested by these two types of general paralysis, but pathologically as well as clinically there exist certain manifest distinctions. Clapham* has shown that the average brain weight of general paralytics for both sexes is less than the average for the insane in general. Not only is this so in the cases which form the basis of this paper, but it is also found that the average for the spastic cases is in general not inconsiderably less than that for the tabetic. The great majority of the deaths occur between the ages of 30 to 50 years, and the average for this period may be taken for purposes of comparison.

Average weight of Brain (30 to 50 years) in ounces.

	Male.	Female.
Normal	47.5	42.5
All classes of insane ...	46.0	43.0
General paralysis	43.1	41.3
Spastic general paralysis ...	42.7	41.3
Tabetic general paralysis ...	46.0	40.7

The tabetic female cases number only three, and are hardly sufficient to be of value, but the difference in the average weight between the male spastic cases (110) and the tabetic (15) is very striking, all the more so in face of the fact that the duration is shorter in the former than the latter, and indicates a greater intensity of the morbid process which results in atrophy.

The spinal cord was examined in 42 cases, and both as regards its weight and measurements certain differences manifest themselves. The comparisons with the normal are given in the following table, in which the weight is stated in drams avoirdupois, and the transverse and sagittal measurements are given in millimetres.

	Weight (drams).	Measurements (millimetres).					
		Cervical.		Dorsal.		Lumbar.	
		Tr. 14	Sag. 10	Tr. 10	Sag. 8	Tr. 12	Sag. 9
Normal	16 to 24						
	M. F.						
All classes of insane ...	19.2 16						
General paralysis	16.38 13.56	13.2	8.8	8.5	7.5	10	8.6
Spastic general paralysis...	16.43 13.56	13.1	8.8	8.5	7.5	10	8.7
Tabetic general paralysis...	16.21	13.7	8.6	8.6	7.3	9.8	8.1

* Tuke's "Dictionary of Psychological Medicine," Vol. i., p. 166.

From the foregoing figures it will be observed that there is, so far as weight shows, a very unmistakable atrophy of the whole spinal cord in general paralysis—an atrophy, too, which is much more pronounced than that which takes place in insanity in general, and that the wasting occurs to a greater extent in the tabetic than in the spastic type. A comparison of the measurements as an indication of the atrophy that takes place shows that the rule, with only one exception, is that in the spastic type the wasting manifests itself in a relatively greater diminution of the transverse dimensions of the cord, while, oppositely, the diminution of the sagittal dimensions in the cervical, dorsal, and lumbar regions in the tabetic variety is greater than in the spastic variety. In general terms the tendency is in the spastic variety to lateral shrinkage of the cord, in the tabetic type to antero-posterior flattening. The greater diminution in both dimensions which is shown to take place in the lumbar region in general paralysis associated with tabes is only what one would expect, seeing that it is here the affection first manifests itself. The shrinkage of the lateral columns, which is the essential feature of spastic paraplegia, results in an alteration of the outline of the cord in the direction of greater diminution of the transverse dimension, while in tabes the wasting of the posterior columns results in a relatively greater diminution of the antero-posterior dimension.

There are other points of distinction in addition to those mentioned which I have not touched upon. My object has been to show, by indicating the more salient features, that in general paralysis we have two types or varieties, one occurring in association with posterior sclerosis, the other associated, secondarily in point of time, with symptoms pointing to sclerosis of the lateral columns, and the changes found upon microscopical examination of the cord, in my opinion, fully bear out this view.

The relationship to each other of the cerebral and spinal affections is a point which I have not taken up. My own view, which is in harmony with that of Gowers, is that the spinal affection forms a part of the widely-spread morbid process that constitutes general paralysis, and that the cerebral disorder arising during the course of tabes and the lateral sclerosis occurring in general paralysis are not secondary in the ordinarily-accepted sense of the term.

The atrophy and alteration of shape of the cord are shown

in the accompanying Plate; the normal cord (magnified 6 diameters) being represented by the tinted outline, the cord in the spastic variety of general paralysis by the interrupted outline, and that of the tabetic variety by the continuous outline. The age at onset and at death, and the duration of the spastic (.....) and tabetic (—) types, are diagrammatically indicated in the charts at pp. 223-4.

*Tuberculous Disease and its Treatment in Irish Asylums.**
By Dr. FINEGAN, District Asylum, Mullingar.

Within recent years we have experienced a marked advance in our knowledge of tuberculous disease. We are now in a position to consider its varied phases from a scientific standpoint, and to recognize its influence in the course of other maladies the pathology of which may be less obvious. Its relation to mental disease has engaged the physician's special attention for many years, and even prior to the organization of psychological medicine the intimate association which is now acknowledged to exist between tuberculosis and insanity was well known to contemporary writers. It has, however, been reserved to recent authors to classify the symptoms and signs which may guide us with tolerable accuracy to diagnose a case of phthisical insanity by the character of the mental disease coming under our observation.

That tuberculous disease predisposes to insanity, and inversely that insanity predisposes to tuberculous disease, we must recognize as facts of common observation, and I am inclined to believe that this marked association of the two diseases is to some extent induced by the surroundings and conditions of life in an asylum. In Ireland, where the inmates of asylums enjoy a comparative immunity from general paralysis, and where, on the other hand, an appalling majority of the deaths are due to pulmonary and general tuberculosis, we have an extensive field open for investigation, and we may draw some interesting comparisons from the mortality statistics of the asylums in other countries.

On examining the Lunacy Blue Books in the three divisions of the kingdom, I was unable to find sufficient detailed information for purpose of comparison in the English Commissioners' official report, but on tracing the proportion of

* Paper read at the Irish Divisional Meeting, held at Cork, Oct. 25, 1894.

deaths from consumption between the Scotch and Irish asylums the result was somewhat startling in view of the preponderance of tuberculous disease in the mortality of Irish asylums. For example, I will compare the official returns in Ireland for the one year 1892 with those of Scotland (there being no marked variation in the annual mortality statistics in the two countries during the past quinquennium). It will be observed that out of 671 deaths in Scotch asylums, 84, or 12·5 per cent., were caused by pulmonary tuberculosis, whereas of the 995 deaths occurring in Irish asylums, 259, or 26 per cent. (more than double), were due to this same disease. From these figures it would appear that Irish asylums must own to the unenviable reputation of being veritable culture media for tuberculous poison when compared with those of the sister country. However, when we scrutinize the general mortality in the asylums of the two countries the advantage must be credited to Ireland, owing, no doubt, to the very few cases of general paralysis coming under treatment in the latter.

As general paralysis has been truly described as the plague of British asylums, so in Ireland we are forced to contend with a pestilence in that of tuberculosis not less formidable. Fortunately, however, the recent development of medical science in the treatment of this disease holds out some hope of cure, and as our knowledge in this direction is advancing, we must wait in anticipation of a specific, availing ourselves at the same time to the fullest extent of rational means of hygienic and dietetic treatment.

I now come to the gist of this brief paper, and submit the point which I am anxious to hear discussed by the experienced members of this Association. Do we, who are mainly responsible for the medical treatment of the insane in asylums, avail ourselves to the fullest extent of the resources which modern science teaches to be of paramount importance in the cure of pulmonary consumption? I fear not. And why not? Apparently in consequence of the monetary expense it would involve. The entire architecture of our Irish asylums would require remodelling; many of their existing sites should be abandoned, and special buildings be provided for the necessary isolation and hygienic treatment of tuberculous disease.

With existing means at our disposal I maintain it is quite impossible to hope for a high proportion of cures. The majority of our asylums are flagrantly overcrowded. Many

of them were erected half a century ago (when the principles of hygiene were imperfectly understood) of unsuitable materials, and in localities incapable of adequate subsoil and general drainage. Others are situated in the centre of densely populous manufacturing towns, by no means celebrated for salubrity.

With time we may reasonably hope through an educated laity, to obtain many reforms, but in anticipation of this future good, it appears to me that much may be done irrespective of any radical structural changes in our asylums, to check in some degree the existing prevalence of tuberculous diseases. If we are in accord with the recent view that we have in tuberculosis to deal with a highly infectious disease, I fail to see why the practice of rigid isolation should not be universally adopted in asylums for the care and treatment of the tuberculous insane. We have observed such inmates to be characteristically unclean of habit, as evidenced by their disposition to expectorate on the walls of the dormitories, floors of day rooms, and even their clothing and bedding do not escape pollution from sputum which is pregnant with living bacilli. We have also experienced how consumptive patients induce others by the example they show in the pernicious habit of covering their head while in bed with the blankets.

A recent admission to an asylum, who may be young, susceptible, and have a constitution already enfeebled by nervous influence, when placed in constant association with phthisical patients, who of themselves must prove centres of infection, stands but a slight chance of escape from imbibing, and eventually propagating in his own system the fatal bacillus. It would then be rational to infer that a material benefit should result from a rigid isolation of all cases of incipient or pronounced phthisis in a special department of our asylums. Such a department would obviously demand the most approved system of cross and roof ventilation, with filtered air inlets, and adequate extracting flues. An abundance of sunlight should also be a primary consideration, as Koch has taught us from experiment that direct sunlight is absolutely destructive to the tubercle bacillus. Food, furniture, and the nursing staff for such an isolation ward, would be matters for special selection, and facilities should be provided for the disinfection of clothing, linen, and so on.

There are few asylums even in Ireland where the arrange-

ment here proposed could not be carried out, independent of the erection of any special detached building.

If it be conceded that the theory of the contagiousness of phthisis be not a mere fallacy, it must be admitted that the precautions of isolation, disinfection, and perfect hygienic conditions are an absolute necessity, not only as a means of preventing an extension of the disease, but with the view to strengthen the constitution, and increase that all-important resisting power in the physical condition of tuberculous subjects. The medical officers in some asylums may consider that our ordinary infirmary wards afford adequate facilities for the isolation and general treatment suggested, but the practice, which I regret to know is but too common, of treating in the same ward cases of acute pneumonia or bronchitis, in close proximity to a case of advanced pulmonary phthisis is scarcely desirable, if not positively dangerous.

The idea of devoting special establishments solely to the treatment of tuberculous diseases is now universally appreciated. There are several institutions of this kind distributed throughout England and Scotland, and one is now in process of erection for Ireland. France can boast of no less than ten special hospitals, built on carefully selected sites by the sea coast, and equipped with all the modern appliances which can afford relief in the treatment of tuberculous disease. The public at large are becoming aware of the danger to be apprehended from the sanitary condition of a residence inhabited by a consumptive patient, inasmuch as the municipal authorities at Manchester, Oldham, and other towns in the north of England have directed their sanitary officer to gratuitously disinfect any private residence where this disease exists. Our friends across the Atlantic go a step further. In New York, for instance, the Board of Health has passed a resolution in favour of compulsory notification in all cases of tuberculous disease, but an extreme has been reached in the State of Pennsylvania, where a society has been organized to prevent the spread of tuberculosis, and in the leaflets containing instructions to the members it is advised that the unhappy subjects of tuberculous disease should, as a matter of precaution, strictly avoid shaking hands with their friends or relations !

The Effect upon Mental Disorders of Intercurrent Bodily Disease.
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We propose in this paper to deal with the subject of the effects produced upon mental disorders by intercurrent bodily disease. The theme is an old one, but we feel justified in calling attention to it afresh, partly because it is at present prominently before the minds of many alienists, partly since those who have concerned themselves with it—in this country, at any rate—have principally been content with the mere indication of the facts observed. The pathology of the subject, the domain of experimental research and scientific speculation, remains comparatively unexplored. Our literary survey leads us to conclude that but little has been written upon this subject of late years.

With Nature's experiments in the present sphere of inquiry, most of us have some acquaintance. It becomes necessary to ascertain whether we cannot produce by Art similar, and even better, results; whether it may not be possible to bring under control and subordinate to the purposes of systematic cure those agencies which, accidentally introduced with some chance malady, are capable of producing in cases of insanity the profound changes which we have from time to time witnessed. In this connection it is appropriate to recall to mind the opinion expressed by Dr. Clouston some years since, to the effect that we shall some day be able to inoculate a septic poison, and get a safe and manageable counter-irritant and fever, by means of which acute attacks of insanity will be cured. This conception, in an extended form, is acquiring increasing prominence in the minds of many asylum physicians. Its realization is possibly the most practical aim of our laboratory work.

For many years the method of "counter-irritation" has been in vogue as a means of treatment in acute mental disorders, especially, probably, of the affective kind. Various chemical means of "irritating," sometimes inflaming, the skin and subcutaneous tissues of the cranium, and of parts remote therefrom, have been employed. Such results as have accrued have been explained on theories of "metas-

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tasis," of "antiphlogism," and of "reflex action." We believe that this mode of treatment is rapidly falling into disuse; in fact, that it has practically been abandoned. This opinion is strongly supported by the speakers in a discussion upon the employment of counter-irritants (seton, antimonial ointment, etc.) which took place at a meeting of the Psychological Association of the Rhine Provinces just two years ago.

We doubt whether, even when any beneficial results are obtained by the methods in question, such results, as a rule, outlast the condition of local stimulation. They resemble rather the temporary "rousing" result of transient pain. At any rate, they are by no means comparable to the results of general diseases or of spontaneous inflammation, even, we believe, when such a radical measure as blistering of the scalp has been adopted. In fact, it is hardly likely that we shall get level with Nature on such cheap terms as have hitherto been proposed. To apply a blister is—as the late Dr. Moxon would have said—"tawdry easy." We need more pains, more investigation. We must consent to a more profound study of the *rationalis* of cure in these cases, and found our methods on a more scientific basis.

A review of the literature of this subject brings out prominently the diversity of the bodily disorders which are capable of influencing mental disease existing in one form or another. Amongst these are the acute infective fevers (*e.g.*, scarlet fever, measles, variola), typhoid, erysipelas, ague, cholera, acute rheumatism, pneumonia and pleurisy, astuma, influenza, gout, cellulitis, and carbuncle. More specifically, effects (curative and ameliorative) have been observed in certain forms of mental disorder, in the course of which certain somatic diseases have supervened. For example (to quote from records and our own experience) they have been noted in epilepsy, as following the disturbance consequent upon inoculation with attenuated rabies virus, or after an attack of typhoid or erysipelas, or acute infective fever; in melancholia after erysipelas or gout; in mania (acute and chronic) after erysipelas, extensive cellulitis, or during an attack of thrombosis of a lateral sinus; in general paralysis (ameliorative only, of course) after extensive cellulitis; in stupor after acute inflammatory processes. Doubtless our hearers will be able to supply many more specific instances from their own experience.

We are disposed to think that the beneficial effects occur

mainly in the affective disorders (mania, melancholia) and in stupor, and to a small extent only in the delusional insanities. Upon this point further information would be of interest.

For a bibliography of the subject we would refer to an article by Lehmann ("Zeitschr. f. Psychiatrie," 43 B., 3 H.). This summarizes the literature up to 1886.

Recently Drs. Macphail and Bruce ("Lancet," October 13, 1894) have recorded results sufficiently favourable to attract attention, which were obtained by them in various forms of mental disorder by the administration of thyroid gland extract. These observers worked on the theory that the febrile disturbance attending the thyroid treatment might be productive of mental amelioration, or even might bring about a cure, and their experiments appear to have had a measure of success. Whilst applauding the spirit in which their investigation was undertaken, we are not disposed to consider the procedure sufficiently radical. The report states that "a true febrile condition was produced in nearly every case," but we are not told what the temperature produced in the various cases was, and the information as to the degree of malaise and fever appears to us inadequate. But further, in our opinion it is by no means ascertained how far the mental alteration brought about in cases of insanity by intercurrent bodily disorders is due to the attendant fever, or to the action of a circulating toxine. The fever (*i.e.*, increased tissue-change, with increased production and increased loss of heat) is the manifestation of the poison, the evidence of its presence in the system. It is possible that the "feverish condition" observed (to quote an expression employed by the writers referred to) merely co-exists with the mental condition noted; the two may have a common cause—*i.e.*, the circulating poison.

In this connection an observation of Lannois ("Rev. de Médecine," June, 1893) may be quoted. It relates to a case of epilepsy, in which the fits ceased during an attack of erysipelas with a temperature of 104-105·8°. Five weeks after this attack a fit occurred. Subsequently the patient was attacked by typhoid fever, the temperature rising to 105°. Nevertheless, she had 2-4-6 fits daily. Lannois therefore concludes that the effect of acute intercurrent disease on epilepsy is not due to pyrexia, but to the toxine produced in the disease in question. In the case quoted, according to him, the toxins of erysipelas and typhoid respectively had different effects upon the epilepsy.

In an article dealing with the subject of the present paper ("Journal Mental Science," April, 1893) one of us sought to examine the question as to whether the beneficial effects often observed in cases of insanity (especially recent and acute) in which cellulitis had supervened were due mainly to the local or the general disturbance. Various experiences, it was argued, went strongly to show—if they did not, indeed, prove—that these effects are due to the systemic disturbance, or something more profound than a mere inflammation. But no one, as far as we know, has as yet endeavoured to solve this question by the means there suggested, to which we shall later on allude.

In connection with the beneficial results often following upon an attack of erysipelas in cases of acute insanity, it is of interest to note the statement of Emmerich, to the effect that tuberculosis and diphtheria are also sometimes benefited by injection with the germ-free filtrate of erysipelas cocci, so that the introduction of certain toxins has a beneficial result in certain existing somatic disorders of bacterial origin; and similar results are to be observed when the same products are introduced in certain cases of mental disorder. If we may regard the beneficial results witnessed in the somatic disease as due to a neutralization of the toxin of the disease bacterium by the toxin introduced artificially, a similar explanation might conceivably be extended to the analogous instance of the mental disease. It must, however, be admitted that the number of mental disorders in which a sober, scientific use of the imagination will permit the conception of a bacterial origin is at present very limited (such as acute delirious mania, puerperal insanity). In the great mass of instances we can at present, invoking the agency of a toxin, merely regard the effect produced on the mental disorder by the engrafted disease as due to the direct action of the toxin introduced upon the brain-tissues (using this term, for the moment, comprehensively).

If the *modus operandi* of a salutary erysipelas is difficult to explain in the case of mental disorder, it is scarcely less so in that of malignant disease. The existence of a causative micro-organism in some cases of malignant disease is believed in by some, but has not been established to the general satisfaction. The cases of amelioration or cure of a mental disorder by an attack of erysipelas are sufficiently remarkable; so also are the like instances relating to the neoplasm.

In these, too, we can, if so minded, wax eloquent in hypothesis. We may incline to think that the sporozoon of carcinoma is destroyed by the penetrating toxine, even as—according to Emmerich—anthrax bacilli disintegrate in presence of the filtrate of erysipelas cultures; or we may speak of a “modification of perverted growths,” a “modification of nutrition.” Probably these general and indefinite expressions are all that our present state of knowledge will justify. Such expressions may be employed with as much reason in the attempt to explain the cure or amelioration of a mental disorder. We may say that the effect of the toxine of an engrafted disease—such as erysipelas—is the production of a “modification in the nutrition” of the cerebral tissues. Under this expression may be included an increased metabolism, dependent on a quickened circulation, and an increased activity of the depurative function. By this means permanent benefit might be expected to follow, not only in the acuter forms of insanity, but also in those more chronic varieties in which we apprehend that a gradual substitution (progressing to a certain stage) of lowly-organized tissue for essential elements is in progress. In the latter case benefit could, of course, only be expected when the formation of such tissue had not advanced so far as to forbid the restitution of the damaged nerve elements after its removal.

In certain instances of mental disorder, in which there is possible bacterial basis, it may hereafter be legitimate to invoke, in explanation of the beneficial results of an intercurrent bodily malady, some more definite *modus operandi* than that of a modification of nutrition. It may be shown that the causative virus is counteracted by the virus afterwards introduced. We may mention certain instances of mental disturbance in which organisms regarded as causative have been found.

In a case of acute delirious mania, Rasori (“Centralbl. f. Bakt.”) describes an organism (bacillus) which he finds in the subarachnoid fluid and between the cortical cells.

Bianchi and Piccinino (“Annali di Neurologia,” 1893) report a case of acute delirium, in which they found in blood drawn during life a bacillus which they regard as the cause of the disease. Bezzonico (quoted by Levinstein-Schlegel in his “Griesinger”) states that Briand has found bacilli in the blood in three out of seven cases of acute delirium (not connected with a specific fever). Buchholz has also found

organisms in such cases, though he has been unable to obtain cultures of them.

In the case of a girl who died in a severe attack of chorea—a condition in which symptoms of mental disturbance are common—Pianese (quoted in “*Rev. Neurolog.*”) succeeded in isolating a bacillus from the spinal cord, injection of which into animals gave rise to marked symptoms of cerebral and spinal disturbance, the latter bearing resemblance to chorea. Cultures from the brain and spinal cord of these animals gave the same bacillus, which was confined to the nervous system.

Recently Pelizzi (“*Rivista Sperimentale di Freniatria*,” 1892) and one of the present writers (“*Journal Mental Science*,” 1894) have independently described a coccus in the blood-extravasate of hæmatoma auris, and Pelizzi’s work goes to show that this is—at any rate in some cases—the cause of that affection. Further inquiry is needed to ascertain whether this view is well founded, and it is important also to examine the recent blood-extravasate upon the inner surface of the dura mater in cases of general paralysis—a disease in which othæmatoma often occurs—to see if these cocci occur in it also. This leads us to consider the pathology of the apoplectiform or congestive seizures occurring in general paralysis: it is possible these may be due to microbic action. Chantemesse has described attacks of hemiplegia and aphasia occurring during acute pneumonia (and in other toxic or infectious diseases), which he ascribes either to direct action of microbes on the nerve-centres, or to contraction of the Sylvian vessels or their branches, produced by their agency.

The not uncommon occurrence of such affections as othæmatoma and cellulitis in the course of general paralysis seems to indicate that micro-organisms find a favourable soil in the degenerate tissues of the paralytic, and flourish and produce local disturbance to a degree and with a frequency unknown in conditions of health. But if microbes are capable of producing these evident results upon visible parts of the body, why should they not also have an influence upon the cerebral tissues? We have already referred to possible disturbances in the blood-vascular system of the brain, and it seems to us that—quite apart from the pathogenesis of the main disease—certain of the phenomena noticed in the course thereof (such as epileptiform and apoplectiform seizures, or even attacks of emotional disturbance after remissions) may well be due to the morbid influ-

ence of adventitious organisms which have gained access, and are enabled to flourish, by reason of the lowered vitality of the cerebral in common with other tissues.

In regard to puerperal psychoses we will only say, what has doubtless occurred to many, that these are prominent amongst the mental disorders in which an infectious origin is suspected. We are not aware of any experimental work upon this subject.

Lastly, whilst dwelling upon this topic of the toxic origin of mental disorders, and of phases of such disorders, we cannot pass by the interesting observations lately made in connection with the injection into animals of the urine of the insane. The subject is treated of in Prof. Bouchard's lectures on *Auto-Intoxication in Disease*, also by Mairé and Boscq ("*Annales Méd.-Psychologiques*," 1892-1893), and others. It has been found that maniacal urine injected into an animal produces excitement, and even convulsions, whilst that of melancholiacs causes mental depression, restlessness, and stupor. D'Abundo ("*Rivista di Freniatria*") has obtained similar results with the blood. The mental disturbance would appear to be produced by some noxious substance circulating in the system.

In some quarters various mental disorders and phases of disorder have been ascribed with over-much confidence, as it seems to us, to the action of supposed toxins produced in the intestinal canal by the decomposition of its contents. We consider that it is at present necessary to adopt an attitude of reserve towards hypotheses of auto-intoxication, although in the last volume of "*Allgem. Zeitschr. f. Psych.*" Jacobson, of Copenhagen, has an able article in support of such theories.

The problems which have been touched upon in this paper appear to us of such practical moment that we should wish to see in progress a thorough and systematic clinical and experimental investigation, conducted by skilled workers in our several asylums, with a view to their elucidation. In place of the haphazard, occasional, meagre, and often uncritical statements concerning the effects of intercurrent maladies or mental disorders which we have hitherto permitted ourselves, it would be most useful to have careful clinical records, from several sources, of the relations between somatic diseases (local and general) and disorders of mind in which they have occurred. We know of no better illustration—if, indeed, any is needed—of the value of collective investigation than the monumental work of the German

physicians upon influenza, in which are recorded its forms and caprices, and the rest of its acts, and all that it did—and left. In this country, with its motto of “More haste!” we can scarcely hope to rival German thoroughness. But a collective clinical investigation of the special kind here advocated is not too much to expect. The supplementary experimental investigation we shall ere long be justified in looking for also, now that the laboratory is coming to be an integral part of the asylum.

A research we would commend to the early attention of asylum pathologists is that dealing with the mode of cure in cases of acute insanity in which a diffuse or severe cellulitis supervenes. We should much like to see the results of injection, in graduated doses and with due precautions (after the manner described in an article in the “*Journal of Mental Science*,” 1893, already referred to), of the filtered products of the organism causing the cellulitis.

The development of the acute hospital system in the several asylums, upon the basis adopted at Whittingham and Wakefield, is most desirable in our opinion. We heartily endorse Dr. Wallis’s observations, in his last report at Whittingham, in respect to the desirability of concentrating attention upon the acute block, and of associated work there by the medical officers and the pathologist. For the elucidation of the problems connected with the influence of intercurrent maladies on mental disorders the association of the trained clinician and the laboratory worker, skilled in the methods of bacteriology and organic chemistry, is particularly needed.

In the meantime, whilst we await the realization of the hospital-cum-laboratory conception, these inquiries *can* be prosecuted. The Conjoint Laboratory is open to investigators. We trust that it may be possible for some asylum medical men to get such leave as will permit the carrying out of experimental work there, with a view to providing us with means by which we may imitate the beneficial effects of bodily disease upon mental disorder.

Dr. SAVAGE said they must all have been struck by the observations made by Dr. Goodall in relation to the effect of intercurrent diseases on insanity, an effect which there were few of them who had not had occasion to observe. There were one or two points that were rather interesting to be considered. In his own experience certain cases had definitely improved when there had been intercurrent diseases and certain others had not. He agreed with Dr. Goodall in believing that simple cases of mania, melancholia and stupor, were much more likely to be improved by intercurrent disease than degenerative cases, or cases of

delusional insanity. On the other hand, some of the most marked cases of temporary improvement he had ever seen had been cases of general paralysis of the insane, and that fact left a very difficult point to be cleared up, as to the possible improvement in function, notwithstanding progressive decay of the organ. There was a man at Bethlem many years ago who, having passed steadily through the first and second stages of general paralysis, was looked upon as a marked and typical case of the third stage. The man was partly paralyzed. He was seized with epileptiform seizures lasting some 48 hours or more, during which time he bruised himself a great deal. Here it was important to recognize what Dr. Goodall had referred to, that not only in febrile disorders, but also in some disorders where there was a large amount of cellulitis, improvement occurred. In this case there was a very large amount of inflammation giving rise to four or five very large abscesses. It was a question whether the patient should be allowed to die with the abscesses full or not. It was decided that the five abscesses should be evacuated, and a large amount of pus was removed, and from that time the man steadily improved up to a certain point, at which he still remained, though he was still a general paralytic. He had passed typically through the first, second, and into the third stage. There was no doubt this was a case in which, owing to the intercurrent of other disease, a retrogression of the symptoms of general paralysis had taken place. The only other point he wished to refer to was the relationship of these intercurrent diseases to acute cases of mental disorder. First of all he would say it was his experience, but he would like to have it confirmed or corrected by that of others, that if a patient suffering from acute mental disorder of the affective type who had only been ill for quite a short period was affected by scarlet fever, typhoid, or the like, the improvement which almost certainly would take place would only be temporary; so that if a patient had been suffering from acute mania for two or three weeks, and then got an attack of typhoid, the symptoms of mania might be arrested for the time, but on recovery from the typhoid or rheumatic fever he would pass again into acute mania or melancholia, as the case might be. If on the other hand he had been ill three or four months, the chances were that after the attack of the acute intercurrent disease the symptoms would not return. This was one of the most difficult problems with which they had to deal. They would see a man who had been suffering from chronic insanity for many years have an attack of pneumonia, and that chronic dement appeared for a certain number of days to be perfectly sane and reasonable, only to relapse again afterwards. Another point he would enforce from his own experience was that the improvement depends upon one of two things—either upon acute pain or rise of temperature. He was quite sure that it did not depend upon rise of temperature solely, nor did it depend upon pain solely. He remembered one case especially in which a patient who had been extremely maniacal developed toothache with inflammation of the jaw. He suffered very great pain for some days, and during the time of this pain his mental state improved. Other cases were seen to depend very much upon temperature, and he had noticed cases in which as soon as the temperature was 103° or 104° the mental symptoms cleared up, and when the temperature fell to normal the mental disorder recurred. As for experimental treatment, he had often wondered whether counter irritation in former days as applied by the rod, and in later days as applied by blisters, had not something to reckon upon. Possibly seeing that certain injuries were followed by certain improvements, there was more reason in it than they were inclined to admit. Unfortunately, however, his experience of very large blisters had not been satisfactory, and whilst agreeing with Dr. Goodall in saying they could follow nature, as far as blisters were concerned they were rather crude, and did not give the results they would like.

Dr. MICKLE said the point had been raised whether, in a case of mental disease which was supposed to be of a microbic origin, a cure might be effected by the introduction of other toxins and microbes. There were no doubt many cases of nervous disorder which were the outcome of intoxication of the system by microbes, and taking that, and also the second fact, that many microbes were

either antagonistic to one another or enhanced the effect of each other, it followed, putting the two things together, that in given cases in which mental disease was the result of intoxication, either it might be made worse or might be improved by the introduction of other toxins. There was a possibility of such a result, because in experimental microbial intoxication of animals it was found that the introduction of other microbes would in some instances increase the effect of the poison, or neutralize it to a certain extent. He was not speaking, of course, of the introduction of the anti-toxin of a particular microbe as neutralizing the toxin; that was another matter altogether; but considering that many nerve lesions and mental disorders were so produced, the suggestion thrown out by Dr. Goodall was well worth consideration. With regard to the effect, on disease of the brain, of fever occasioned by inflammatory affection, he held that it is sometimes beneficial. When one considered the enormous effect of fever upon the organism, the tremendous amount of change induced, and the excessive amount of waste that occurred, it would be seen that there must also be some very marked effect upon the nervous centres. Not only so, but the idea that disease of the brain could be cured by the effect of fever, or of inflammatory affections accompanied by inflammatory fever, was quite analogous to what was already known in other cases, such as the cure of inveterate chronic skin disease by the setting up of inflammatory affections, or by fever. If the skin could be so cured why not the brain? A further point was raised by the paper, as to the effect in like cases of injuries, and the inflammation following injuries. One saw that occur occasionally; that an inflammatory affection following an injury led to the recovery of the patient. He knew the case of a man with chronic insanity who went for a carriage drive. The carriage was upset, and the man was thrown on to a heap of stones, with the result that his head was much damaged. A great deal of inflammation followed, but the man's insanity had recovered before his scalp had. He would not, however, suggest that lunatics should be treated as a rule on the same lines as that case, in which, however, the result had been most extremely favourable.

Dr. WARNOCK said he had had cases under his care in which intercurrent disease had affected illusional insanity favourably, but in others it had not. In one case a man came in 1887. He had delirium. After a time he developed an inguinal hernia. Then he got the idea that he was being poisoned, and he used to vomit a good deal. He gave considerable trouble. He would not wear a truss, and the vomiting he put down to the poisons given in his food. This went on year after year; they could not get him to adopt any cure for the hernia. Last year there was a difficulty about the hernia, and he had to stay in bed. Eventually he allowed them to put a truss on, and from that time onward he had no vomiting. If the subject was now mentioned of his being poisoned he got angry about it, and almost denied that he ever suggested that he was poisoned. Another case of illusional insanity was that of a woman, who imagined that various things were done with her. She had attacks of gall-stone, jaundice, pain, and collapse, and whenever this happened she thought she was being confined, and that during the night the child was removed by the attendants. Next day she blames us with having done all this without her knowledge, and she elaborates it by stating the attendants are men dressed up, and are the cause of her being in the family way. There was another case of a man who had piles very badly, who had the idea at night that there was unnatural intercourse had with him. Dr. Goodall had spoken of the more ordinary case, where an acute attack of disease affected the insanity. This was a thing met with again and again, and even since receiving notice that this paper was to be read he had had one or two such cases. One was a case of acute mania, which came in three weeks ago, or less than that. The case gave a great deal of trouble. On going round one morning the attendant drew attention to a swelling on the knee, and said the patient was very gouty that morning. It proved to be erysipelas of the knee. The man was put to bed and kept quiet. In a very short time pus formed, and from that time forward he got quite well both mentally and physically. In another case of melancholia, which commenced in 1888, the patient during the last few weeks had a carbuncle, and

when he got over that he was so well that his friends were able to take him home. In another case a man who had maniacal attacks sometimes had gout. When he had the gout the maniacal attacks would go off very quickly, but in other cases they would last a long time.

Dr. DOUGLAS said the experience of those who approached the subject from the point of view of general practice was quite the opposite to that of Dr. Goodall, viz., that disease was due to insanity, and that he looked upon it as curative. In his own practice some diseases appeared to have induced insanity; for instance, in cases of inflammation of the lungs he had seen mental disease arise, and in cases of puerperal fever it was very well known that this was the case. There was also another class of cases which were very interesting, but in which it was difficult to say how far the insanity was due to one cause or the other—he referred to insanity after operation. He could recall two cases of his own in which there was amputation of the breast for malignant disease, and those operations were followed by mental disease. It seemed strange that that which cured should also cause, to a certain extent, of course; but the study of this subject would not be complete unless that other view of the picture was also looked at, and the two required to be considered together. He rose in hopes that some one might be induced to say something with regard to that point.

Dr. LLOYD ANDRIEZEN referred to cases in his own experience where chronic weak-minded and slightly-demented patients had brightened up considerably under intercurrent attacks of facial erysipelas, lobar pneumonia, cellulitis with or without suppuration, and other febrile and septic (toxic) conditions. But on the other hand, many cases of such brain disease, or cases of melancholia, stupor, adolescent and other manias, and the alcoholic and chronic degenerative psychoses, showed no improvement from intercurrent affections of the sort mentioned. Of course, it was a natural tendency in human nature, whenever improvement in the course of an insanity occurred, and especially if such improvement was of a startling, even though evanescent character, that it should be recorded; whereas cases on the other side of the account were very liable to lapse. Results would thus apparently be obtained which really came out with a balance on the wrong side of the account. From his own observations he was inclined to believe that improvement occurred only in a small minority of cases, and that in several of these it was also temporary and fleeting in character. The reason for this he would discuss later. At the outset of our inquiry we would not only have to eliminate such fallacies, but to exclude a large and important group of the insanities in which investigations of their aetiology and pathogenesis would seem to indicate that toxic factors are absent as causal or even casual agents. I refer to the hosts of idiocy, imbecility and congenital weak-mindedness, congenital moral, social, and sexual perversions, cases of so-called *folie héréditaire*—the subjects of early mental obsessions, of irresistible insane impulses, of systematized delusions, whether of the simple or polymorphic types, and of so-called moral insanity (*folie raisonnée*). The whole hosts of these presented chiefly in their own persons, and frequently in their parents, both the psychical and physical stigmata of degeneracy. Passing from these to cases of general paralysis, or to those insanities due to disease, not only in the brain and nerve-tissue proper, but in the vascular and nutritive elements which also enter into the constitution of the nervous system, such as many types of the alcoholic insanities, those due to saturnism and those associated with cardio-arterial diseases (atheroma, endarteritis obliterans), including syphilis, the pathological conditions which underlay these insanities were so wide-reaching, so complex, and often so profound as to make us hesitate before we can ascribe such remissions and intermissions as we see in their course (when intercurrent disease affects the patient) to the actual toxic action or toxic products set free by such-disease. And, further, when, as Dr. Savage stated, we see improvement of a temporary kind occur in chronic demented who, while otherwise apathetic, heavy and stupid, may in the course of some fever or febrile disturbance utter such phrases or sentences, or be able to converse in a manner, and for a moment in a way that is veritably startling even to the experienced alienist, does not that

same experience tell us that a moment after he may relapse to the same hopeless and helpless fatuity which is the real expression of his atrophying or degenerated nervous system? In such cases we have no indication to look for serious practical results from imitating the method of nature by producing intercurrent inflammations and fever, and thus hoping to ameliorate the dementia. Toxins, like uric acid, have been invoked of late to explain the phenomena of natural sleep, of headache, migraine, of epilepsy, of depression of spirits, of exaltation, of cardiac anxiety, of gout and rheumatic affections, and apparently of the most opposite and contradictory phenomena of health or ill-health which a person might exhibit during his life. I can only envy the intellectual dexterity which has enabled certain observers to deduce all these effects from one single condition, *i.e.*, uric-acidæmia. But in the insanities, at any rate, when one penetrates beyond the superficial symptomatology it is to find a thousand and one roots from which the disease grows; from hereditary and chronic degenerative vices of nervous and bodily organizations of the most protean and teeming forms which one or both parents or other ancestors may exhibit, from toxic agents—and here we are on safe ground—like alcohol, morphia, lead, the miasma of soil-water and atmosphere (cretinism combined with degeneracy), diseased food (pellagra), from essential neuroses or psychoses in the parent, like slight paranoia, epilepsy, chorea, hysteria, often with their accompanying physical (somatic) stigmata. Take all these vast groups away, and even out of what remains the presence of bacterial and toxin-producing agents as a causative factor must be small. For where adequate causes—vices of heredity and adequate stresses of life—can be found in the history and antecedents of the patient to account for many of the insanities, the *modus operandi* of these should be more minutely investigated. It is in a way unfortunate that so much stress should be laid on the last word of the phrase, acute delirious *mania*. It was a grave acute delirium with fever, and as serious as typhoid or other fevers. It was a grave bodily disease *complicating* or occurring on the basis of an insanity which had been previously existing. Just as any specific fever (typhoid, erysipelas, influenza, epidemic cerebro-spinal meningitis, and other such) can occur during the course of the various insanities, so *delirium acutum* may occur in alcoholic, syphilitic, general paralytic, epileptic, and melancholic or debilitated neuropathic and maniacal subjects, amongst which last come puerperal cases. Its pathology is thus a complicated one, and this, I think, mainly accounts for the diversities of the lesions described in the few recorded cases in medico-psychological literature of patients dying from *delirium acutum*. Therefore I think the examples of the puerperal and acute delirious fevers have of themselves only an indirect bearing on our theme. A few words with regard to the *modus operandi* of intercurrent fevers, etc., in brightening up the intellect of patients. We know that in periodical attacks of mild mania, or in the early effects of alcohol, or, again, in those hypnotic and allied states when the brain can be aroused, stimulated and quickened in certain emotional and intellectual spheres, that there will often be a quickness and vigour of flow, a versatility, a bizzarie, and a richness or pseudo-richness of ideas and conceptions which to the observer may sometimes seem almost marvellous. An individual in his life will come into contact with and see, hear, or otherwise experience more things than he can possibly remember by voluntary effort, and yet the incidence of disease or the disturbance of dreams, etc., will often conjure these past images up in fruitful abundance and with a vividness that is sometimes astonishing. Is it surprising, then, that under the influence of some febrile or toxic condition that is evoked by fever, alcohol, opium, or other drugs, or during recurrence of maniacal excitations of the brain, that a stupid patient should repeat poetry or prose, things he may have heard or read before; that the arithmetical stupid should, *pro tem.*, show mathematical brightness; that extraordinary inventions should be made, or even striking artistic creations (comedies, paintings, etc.) should be evolved from the brain which is in a state of seething erethism? (An excellent chapter on this topic is found in Lombroso's "Man of Genius," p. 161 *seq.*) And even in a weak-minded or early-demented case a febrile toxic or other rousing-up and excitation of nerve-currents throughout the whole brain

will occasionally issue in the expressions and thoughts they may utter or the things they may do which seem too clever and too brilliant for such a patient. So in the same average man there might be a brightening-up of the faculties temporarily from disease, alcohol, etc., and if from febrile disease the concomitant acceleration of tissue metabolism in brain and body, the quickening of the circulation, all point to the increased vital and physico-chemical activities going on in the organs, so that often such individuals would waste if the process continued. It was natural, therefore, that in a dement or a melancholiac, etc.—whose brain tracts and channels were more or less undergoing slight fatty or other degenerative changes, both in the dynamical connections of nerve-cells and in their internal nutrition—that under the exciting stimuli of the fever process, or certain toxic and septic agents, those partially blocked or difficultly pervious tracts, centres and channels of brain-tissue might be forced and even flooded out, so the individual utters or does something which is rational, brilliant, startling, and the last thing to expect, if one did not know that the mechanism in the brain for such conduct, though clogged and degenerating, was still there, and not organically destroyed. If it be—and this explanation seemed to him most reasonable—that the above was the *modus operandi* of the intercurrent disease on the brain, e.g., in evoking into temporary activities mechanisms yet undestroyed, it would be obvious that the subject assumes a different aspect, in which, however, there would still be ample field for investigation.

Dr. GOODALL, in reply, said the views he put forward in his paper had in the main been confirmed by the various speakers. The discussion had shown two things: first, that cases such as he had referred to were well known to most of them; and, secondly, that the subject was at present largely hypothetical and theoretical, and the experimental field had not yet been thoroughly opened up. Dr. Savage agreed that affective cases were more improved than others. He (Dr. Goodall) was first led to consider this subject by the very graphic description he used to hear from Dr. Savage, in Bethlem, with regard to the effect of alternating neuroses and of intercurrent disorders, and the case quoted as having occurred in Bethlem was one of which he (Dr. Goodall) had a distinct recollection. He had seen a similar case in which hyoscyamine was injected, but it must have been with a dirty syringe, for very extensive cellulitis was set up, but the result was that the cellulitis did more good than the hyoscyamine. He was not disposed to think that acute pain had such a pronounced effect as the circulation of some noxious or poisonous substance or a high temperature. He was ready to admit that either high temperature or toxins would produce some considerable results, but acute pain would, he thought, only produce minor results. With regard to blisters, Dr. Savage also agreed that the day of blisters had practically gone by. In reply to Dr. Mickle's question, he really was not in a position to say whether it was high temperature or the toxin that produced the result. The subject was altogether *sub judice*. He only knew that in some cases the temperature was very slightly raised when the effect was very marked. In some of the cases observed the temperature was only 99 or 100, whereas the effects were very marked. He thought there must be something else in those cases. Dr. Andriezen had inquired whether there was any case of insanity where improvement had not occurred when acute disease supervened. He did not know of any such record. It certainly should form part of an investigation, and such cases ought to be included with the others. Dr. Andriezen was rather inclined to destructive criticism, and spoke much of the narrowing of the field in which good could be done. He was inclined to think that, notwithstanding, the field was pretty extensive, including as it did acute mania and melancholia, stupor, and general paralysis (amelioration). In conclusion, he thanked the members for the attention given to his paper.

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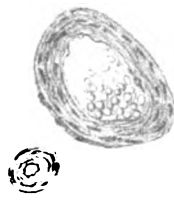
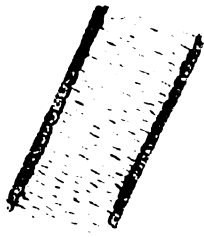


Fig 1.



Fig 2.

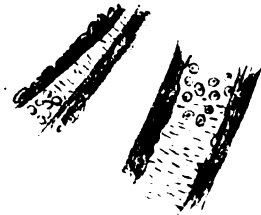


Fig 3.

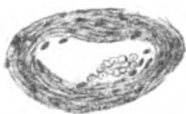
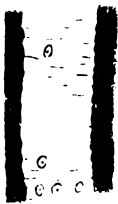


Fig 4.

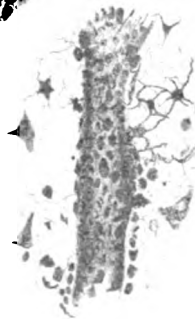


Fig 5.



Fig 6.

TO ILLUSTRATE DR. BRISTOWE'S PAPER.

EXPLANATION OF PLATE.

- FIG. 1.** Vessels of pia in contracted granular kidney (× 420 diam.)
- FIG. 2.** Vessels of pia in health (× 420 diam.)
- FIG. 3.** Vessels of pia in general paralysis with healthy kidney (× 420 diam.)
- FIG. 4.** Vessels of pia in general paralysis with contracted granular kidney
(× 420 diam.)
- FIG. 5.** Vessels of cerebral cortex in contracted granular kidney
(× 600 diam.)
- FIG. 6.** Vessels of cerebral cortex in general paralysis with healthy kidney
(× 600 diam.)

The Relationship between General Paralysis and Chronic Renal Disease. Illustrated. By HUBERT C. BRISTOWE, M.D., Assistant Medical Officer, Somerset and Bath Asylum, Wells. (Read at the S.W. Division, Dec. 13th, 1894).

Whilst studying the pathological changes met with among those dying insane, I was much struck by the large number of cases in which chronic renal disease of a more or less advanced state was present. This led me to work out, from the post-mortem records of the Somerset and Bath Asylum, the percentage of chronic renal disease noted in such cases. But whilst engaged in these inquiries my attention was especially called to the number of general paralytics presenting this condition, and I proceeded, therefore, to collect all the cases of general paralysis of which the records were sufficiently trustworthy. In this way I collected 75 cases, and of these only nine were free, or apparently free, from renal disease. Of the 66 cases remaining 51 had what must be considered well-marked granular kidneys, and the other 15 had diseased kidneys which were most probably granular, though in a less advanced degree. One of these latter cases had renal calculus. In other words, only in 12 per cent. of the cases were the kidneys apparently healthy, and we may, I think, take it that almost all the remainder (88 per cent.) had granular disease of the kidney. I do not suggest that this is the usual percentage, but among the cases of one asylum it is sufficiently remarkable.

I then proceeded to work out the frequency of chronic renal disease in persons dying of other forms of insanity, and found that out of 688 cases 380 (or 55·872 per cent.) presented this condition, making a difference in this respect between them and general paralytics of nearly 33 per cent. These figures are of extreme interest. But it is now only my intention to discuss the relationship between chronic renal disease and general paralysis of the insane. The other point must be left for some future occasion.

The extreme frequency of contracted granular kidney in general paralysis puts out of court entirely a mere accidental relationship, and shows that there must be some pathological connection between the two. I do not pretend to be able to state definitely what that relationship is, but I shall attempt to show in what direction my own observations have led me.

For the accurate study of this matter I have first examined the vessels of the pia mater and cerebral cortex in patients who have died of well-marked granular kidneys. Then I have examined vessels from those dying of general paralysis with chronic kidney disease, and finally I have been able to investigate similar vessels in two patients who died of general paralysis without apparent renal lesions. The rareness of this occurrence has rather hampered my observations. I regret that no portion of the kidneys from these cases were kept for microscopic examination. But although desirable from the point of view of accuracy, the omission of such examination makes but small difference to my general conclusions.

I shall not devote much time to the changes that take place in the vessels of the kidney, but briefly state that in contracted granular disease the vessels become thickened, especially their inner and middle coats, and that there is a tendency to the occlusion of some of them, due to the progress of endarteritis obliterans.

The changes which take place in the heart and systemic arteries are of exceeding interest. There is a rise of tension in the arterial system generally. The arteries become thickened, more especially in their middle and outer coats, though as a rule the middle coat suffers most. As a result of this thickening and increase of tension the heart has more work thrown upon it, and an extra impediment to overcome. If the condition of the patient is sufficiently good—and mark those words “sufficiently good”—hypertrophy of the left ventricle takes place.

The next thing to be considered is the change which takes place in the smaller arteries, and for this purpose I have chosen the vessels of the pia mater. They are easy of examination, and can be got at in all cases. There is a marked thickening of the middle coat, and to a less extent of the adventitial. But in all the thickening is well marked (Fig. 1).

Before passing on to the vessels of the cerebrum it would be as well to investigate the changes in the heart and arteries in general paralysis. As a rule, in this disease there is no hypertrophy of the left ventricle. But we know that clinically there is to be found a marked rise in the arterial tension. Before the days of the sphygmograph Milner Fothergill spoke of “the hard pulse of increased arterial tension” in general paralysis “such as characterizes

chronic Bright's disease." But far more recently than this the whole subject has been investigated by Bevan Lewis with the aid of the sphygmograph. I cannot do better than quote his own words:—"It requires but a slight familiarity with the pulse tracing of chronic Bright's disease to recognize in the sphygmogram of general paralysis a miniature reproduction of the same curves. I say a miniature copy advisedly, for if *cet. par.* a high percussion stroke be given to these, we should get a tracing very similar, if not identical with that characteristic of arterio-capillary fibrosis. And it is herein that the distinction between the two tracings becomes apparent. The tracing in chronic Bright's disease gives evidence of very high arterial tension, the percussion impulse indicating compensatory hypertrophy of the ventricle."* From this it is clear that in all respects except the results of the hypertrophy of the left ventricle the condition of the arterial beat is much the same in general paralysis as in chronic Bright's disease. It is now clear why I laid stress a short space back on the words "sufficiently good." Hypertrophy of the left ventricle does not take place if the nutrition is poor, and in general paralysis, at all events after the earlier stages, there is marked impairment of nutrition. Again I may ask, why do we not find hypertrophy of the left ventricle in cases of general paralysis where chronic renal disease is well marked? As regards the arterial system, thickening of the vessels and increase of tension are generally admitted. I have examined the vessels of the pia mater in health (Fig. 2), in general paralysis where contracted granular kidney was present (Fig. 4), and in general paralysis where it was apparently absent (Fig. 3). The latter two, as may be seen, are not only much alike, but present a marked similarity to the vessels in simple chronic renal disease. Nor would it be possible, from looking at the vessels, to say which belonged to which. In all there is marked thickening of the middle and, to some extent, of the adventitial coat.

The smaller cerebral vessels in health present a regular appearance equally stained by reagents and scattered at comparatively rare intervals, the nuclei of the cells of which the blood-vessel, or, in fact, here it might be called the capillary, is composed. The nuclei in these vessels are, as a general rule, spindle-shaped, with their long axis in the

* "Teachings of the Sphygmograph," "Journal of Mental Science," Vol. xxvii., pp. 3 and 4.

direction of the vessel. In contracted granular kidney this condition is changed. The nuclei become much more numerous, and of a more rounded shape, and in some places there is actual proliferation of round cells in their neighbourhood (Fig. 5). On transverse section the same thing is seen: a large increase of the deeply-stained nuclei. In some cases, apparently in those vessels where the disease is more intense, these nuclei become exceedingly numerous and lose their definite outline altogether, and leave an irregular, darkly-stained channel, in which with difficulty their outline can be detected. And here the outline of the vessel itself becomes irregular, and spider cells may often be seen in connection with them. The transverse section of the vessels shows that the proliferation of cells exists in the inner coat quite as much as in the adventitial coat or perivascular space.

In general paralysis the vessels present very similar appearances; and the changes which take place in them vary from these to a more marked degeneration.

In the early stages there is apparently simple increase of the nuclei of the vessel wall, and a rounding of their outline. In the more advanced cases the nuclei are so numerous that in some parts they appear more as a conglomerate mass than anything else (Fig. 6). The outline of the vessels is irregular, and darkly stained nuclei can be seen at their edges. But the same vessel may present both of these conditions. In the place where these nuclei are specially numerous there may often be seen small brown masses of what is probably hæmatoidin. The next stage shows the vessel still more irregular in outline; the nuclei are ill defined, and the vessel wall itself is darkly and irregularly stained. The last stages show the vessels uniformly but darkly stained, and no nuclei can be detected in their walls; and in frequent connection with them spider cells may be seen. These vessels also when stained with osmic acid show fatty degeneration in their walls. It is exceedingly difficult to get transverse sections of these vessels, but from examination of them it is clear that increase of nuclei takes place not only in the adventitial coat, but also in the inner ones. And it also becomes obvious that there is marked thickening of the whole vessel wall, including the adventitial coat. A single blood-vessel in the various stages of disease may often be seen.

I have also examined the vessels of the spinal cord in

similar cases, but the results are not satisfactory owing to the impossibility of preparing specimens by the fresh method. But those prepared by ordinary methods show exactly the same appearances as are seen in sections of the brain prepared in a similar way. I have purposely omitted referring to the dilatation of the perivascular spaces so often mentioned by observers, as I have been unable to discover it in sections prepared by the fresh methods (see Figs. above).

Let us now compare the condition of the blood-vessels in general paralysis and contracted granular kidney. In the early stages of both—by early stage I refer to the extent of disease found in the vessels—there is, then, increase of nuclei with a corresponding (to some extent) increase of cells; this progresses still further until a regular fibrosis takes place. But this never appears to advance so far in chronic renal disease as in general paralysis. Obviously, then, in the latter disease something further takes place, and this something further appears to be a complete degeneration of the vessel wall. And, moreover, as seen by transverse section, many appear to be occluded.

Bevan Lewis, in his "Text Book of Mental Diseases," speaks of "the enormous development of nuclei along the lymph sheath," and he further states that "the perivascular lymph channels are the site of a nuclear proliferation and segmentation of protoplasm often so enormous as to entirely conceal the enclosed vessel from view."* By perivascular lymph channel must be understood a potential space between the tunica adventitia and the tunica media, which is not lined by endo- or epithelial cells; and by adventitia must be understood a delicate fibrous coat, and not a dense one as met with elsewhere. If this space, then, is to be filled by proliferated protoplasm and nuclei, or, in other words, cells, do they start from the cells which form the vessel walls or from transuded leucocytes? I am myself inclined to believe that this proliferation of cells takes place in other coats besides the adventitial, and that in the early stages, at all events, there is an actual increase of cells in the muscular and endothelial coats. This opinion is borne out by the examination of transverse sections of these vessels, where it is obvious that there is as much increase of the cells in the inner coats as in the adventitial. And, further, the cells in the early stages are often found to retain their

* "Text Book of Mental Diseases," pages 493 and 494.

fusiform shape. Finally, the condition in chronic renal disease is much the same as in general paralysis. I may here state that I have not discussed the condition of the vessels in general paralysis with renal disease and general paralysis without, separately, because there appears to be no obvious difference between the two. In the later stages of general paralysis the adventitial coat and perivascular space become filled with cells; some from proliferation of the cells forming the wall, and some probably from transuded leucocytes. After a while these cells lose their outline and form, and leave nothing but a thickened and uniformly stained vessel wall, with some fatty degeneration and an irregular outline. In other words, the process here described is practically the same as takes place in any chronic inflammatory condition, and leaves behind it a true fibrosis.

I shall now attempt to describe the pathological process which takes place in the vessels, and briefly trace the results on the general brain substance. It has been shown by Heidenheim, Starling, and others that the cells which form the capillary walls actually take up the nutrient plasma of the blood and secrete it again for the nourishment of the surrounding tissue. Further, it has also been shown that the amount of this secretion is dependent on the extent of blood pressure, and that it can also be influenced by the presence of poisons in the blood stream. We know as a law in pathology that increase of tissue takes place according to the amount of work to be done by it. We start, then, with an increase of blood pressure, caused either by chronic renal disease or the presence of some poison in the blood. Either of these conditions is sufficient to cause an increase of secretion by the capillary walls. This increase of work must cause increase of the cell elements of the wall, and the increase of pressure in the vessels generally will lead to increase in the thickness of the vessel walls from the strain thrown on them, and thus can be accounted for the increase of cells in the different layers of the vessel wall. The increased secretion of nutrient plasma requires increase of the lymphatics to carry it off. This hyperplasia of the lymph connective tissue has been too well described by Bevan Lewis in his "Text Book of Mental Diseases" for me to attempt to add to it. The vessels then become thickened and inflammation is started—for it obviously is a chronic inflammatory trouble; proliferation of the cells takes place generally, together with transudation of leuco-

cytes. In advanced cases there must even be small hæmorrhages, which account for the hæmatoidin present in the adventitial coat. This inflammation is of a slow character, and the ultimate change is fibrosis of the vessel walls, and probably even complete blocking of the lumen in some cases. The inflammatory products round the vessels also become organized, and finally form contracting fibrous tissue of the ordinary kind, and this further presses on the vessels and interferes with their functions. Thus is brought about a true cirrhosis, such as is found in the kidney or liver. This is the view which was held by Wigglesworth. Curiously enough he added this remark: "Though in several cases of the series taken for comparison with general paralysis the insanity had extended over many years, in none of them was there the smallest evidence of connective tissue increase, nor in our experience have we met with this in any cases other than general paralysis, except in cases of chronic Bright's disease."*

There is one more clinical point which must be considered, and that is the condition of the urine in general paralytics. Dr. J. Turner, who investigated the urine in these cases, stated that "albumen was absent in all but a few, and in these existed in the merest traces, and only during certain times of the day."† Unfortunately he omits to tell us the specific gravity. In the early stages of this disease, there is as a rule nothing worthy of remark. In the late stages it is different; but then the urine is much more difficult of examination. When any is wanted for testing it must be drawn off. And at the same time it is impossible to estimate the amount passed per diem—a point of almost as much importance as the presence or absence of albumen itself. In three bed-ridden cases which I was able to examine, the specific gravity was 1003, 1007, and 1013, and in one case a trace of albumen was present. I do not suggest that any conclusions can be based on three cases. I simply wish to make it understood that clinical signs of chronic renal disease may be present, and yet unobserved owing to the difficulties of examination.

The frequent presence of chronic renal disease in general paralysis, and the curious similarity of the blood-vessels of the pia and cerebral hemispheres in the two diseases, lead us to the question: What relation do these two diseases

* "Journal of Mental Science," Vol. xxviii., page 480.

† "Journal of Mental Science," Vol. xxxv., page 34.

bear to one another? There are three possible views which are worth discussing. The first is that the chronic renal disease is responsible for the increase of arterial tension throughout the body, and that as a result of this there is general thickening of the arteries; that the increase of tension causes increased transudation through the capillaries of the cerebrum, and that the further lesions which follow are dependent on this transudation and thickening of the vessel walls; in fact, that the kidney disease is the prime factor of all the further trouble. That this is probably incorrect is shown by the fact that in some cases of general paralysis there is no apparent sign of kidney disease, and this shows that at all events general paralysis must in many cases commence before the kidney trouble.

The next view is that an arterio-capillary fibrosis is the commencement of both diseases, in fact, that they are both manifestations of a common condition. It was long ago suggested by Gull and Sutton that arterio-capillary fibrosis is a general disease of the vascular system in which the kidneys share. Although this is not generally accepted, is it not possible that it may after all be correct?

The third view, and one which goes hand in hand with the preceding, is that both diseases have a common cause. This common cause may act directly on only one set of organs, *i.e.*, the arteries and capillaries. Speaking of chronic renal disease, Coats says, "We have to look for an irritant," and further, that there are indications "that the irritant is carried to the kidneys by the blood."* Is it not possible that the same poison which induces chronic renal disease may also induce general paralysis? Perhaps the converse of this may be more accurate. What this poison is I cannot say, nor can we be sure that more poisons than one may not produce these conditions. That in some persons chronic renal disease should be the sole result of the irritant, whilst in others general paralysis is superadded, suggests that the ordinary cause of chronic renal disease is not the ordinary cause of general paralysis; but that the poison which induces general paralysis is capable of causing chronic renal disease also.

I do not pretend to say which of these views is correct, nor indeed to say that any one of them is. I only suggest them as possible, and I may add probable, explanations. The last view is the one I favour most.

One last point which may very properly be considered, is

* "Manual of Pathology," J. Coats, page 683.

whether the convulsions so commonly met with in general paralysis are uræmic in origin? Out of 41 cases in which well-marked granular disease of the kidney was present only 41·5 per cent. had convulsions, whilst in the 9 cases in which renal disease was apparently absent 6 cases had convulsions, or 66·6 per cent. In some cases of course I am inclined to admit that the convulsions may be uræmic, but in the majority of cases I doubt it.

The main points I would then lay stress on are:—(1.) The frequency of contracted granular kidney in general paralysis. (2.) The similarity of the changes in the blood-vessels in both diseases, and the fact that they often cannot be distinguished one from the other. (3.) The two diseases are curiously inter-dependent, and in all probability have a common origin.

Dr. NICOLSON (Chairman) desired to make one or two remarks, which he hoped might be considered as offered rather in a suggestive than a critical spirit. Important as it was to sift the various conditions so closely interwoven in a complex question such as this, he wished to ask how far the differential features which had been indicated bore relation to the sex of the patients. Especially important was it that the nature of the poison which might influence the vessels in conditions of chronic renal disease and general paralysis should be elucidated. Dr. Bristowe had said that the kidneys in some cases of general paralysis were found free from advanced organic change, and his own experience (the Chairman's) was that there were a great many cases showing chronic renal disease not associated with general paralysis. As to how far it might be entertained that the same degenerative change produced either disease independently or the two conditions reacted one upon the other, it was impossible to hazard an opinion. He was glad to be able to speak in terms of the highest commendation of the work which Dr. Bristowe had produced, and he was sure the meeting would offer him their warmest thanks.

Dr. MERCIER said he joined very heartily in the note of praise sounded by the Chairman. The paper was thoroughly practical and founded upon definite observations, and it argued well for the success of the divisional meetings if this paper was a sample of those to be offered in the future. The observations contained in it were noteworthy. On the one hand there was an enormous number of cases of chronic renal disease occurring without any apparent association with general paralysis, and on the other hand they had a certain number of cases of general paralysis in which there was no evidence of renal disease, and in the third place, as Dr. Bristowe showed, a large proportion of cases of general paralysis in which renal disease was present. These facts seemed to indicate that, firstly, there was no necessary connection between renal disease and general paralysis, but, secondly, there was a connection of some kind between them, inasmuch as the association of renal disease and general paralysis was exceedingly common, although the converse was certainly rare. It was at present premature to propose any theory with regard to a connection between the two conditions, because they were as yet ignorant of the initial pathological change. It might be that it was due to a poison circulating in the vessels, or to some initial vice in the constitution of the individual, and that it was merely a form in which the decay inevitable in advancing life showed itself. At any rate, the facts placed before them would serve as an excellent basis for numerous observations in the future, and the paper should be commended to the attention of the various scientific workers throughout the kingdom.

Dr. WEATHERLY wished to ask what was the percentage of persons who were alcoholics found in these cases of chronic renal disease and general paralysis. So

far as he remembered, Dr. Bristowe had not mentioned whether he considered that alcoholism and general paralysis moved hand-in-hand to some extent, in view, too, of the fact that chronic renal disease was one of the principal outcomes of alcoholism.

Dr. STEWART had had experience of several cases of chronic alcoholism which had passed into general paralysis, and which had shown evidence of chronic renal disease. Although the number of his observations was not sufficiently large to draw any conclusion from, it was large enough to be striking.

Dr. BRISTOWE thanked the meeting for their cordial reception of his paper. He would answer as briefly as possible the queries put in connection with it. Firstly, as to the relation of sex. Out of 71 odd cases there were only four female general paralytics, and he could not say that there was anything especially notable about these. Secondly, with regard to a poison as a causal agent, such idea was suggestive only. The view given by Dr. Mercier that the degenerative change might only be a part of a general decadence of the body tissues was probably the correct one. In answer to Dr. Weatherly, he regretted that the statements on the part of patients or their friends in Somerset were so unworthy of acceptance as to make it unsafe for him to answer his question. He would much like to see statistics from other asylums dealing with the number of cases with chronic renal disease who died of general paralysis.

*The Breaking Strain of the Ribs of the Insane.** An analysis of a series of fifty-eight cases tested with an instrument specially devised by Dr. C. H. Mercier. By ALFRED W. CAMPBELL, M.D., Pathologist, County Asylum, Rainhill, Lancashire.

In the spring of 1893 we received from Dr. Mercier an instrument specially devised by that gentleman for the purpose of automatically registering the breaking strain of the human rib. It was accompanied by a letter, in which we were requested to experiment with the instrument on as many cases as possible and furnish him with the result. By that letter we were at the same time informed that he had sent similar instruments round to other asylums with a like supplication, and that he looked for the co-operation of a number of colleagues in enabling him to collect a number of cases sufficient to constitute a foundation for an accurate statistical record—a record which would, among other things, settle once and for all in which varieties of mental disorder it is that we are to look for ribs possessing a low breaking strain.

On account of the medico-legal importance of the question of the frangibility of the ribs of the insane, this scheme, needless to say, immediately received our hearty approval. A few preliminary trials proved, to our minds, the efficacy of the instrument, and I forthwith undertook the investigation, the results of which I propose communicating.

* Paper read at the Quarterly Meeting of the Medico-Psychological Association in London, on November 15th, 1894.

Now it will doubtless be a matter of surprise that I, and not Dr. Mercier, am introducing this subject. This apparent incongruity I must hasten to explain. Before I commenced the investigation it occurred to me that it would be important as one went along testing the strength of the ribs, to also effect a microscopic examination of portions of the ribs tested; for by so doing one could not only ascertain upon what architectural features the strength or weakness of any given rib depended, but also check the accuracy of mechanism of this novel and untried instrument. The results obtained from this combined research were extremely gratifying, indeed far exceeded my fondest anticipations, and in a conversation which I had with Dr. Mercier at the Bristol Meeting of the British Medical Association, I communicated some of the results of this special research to him, whereupon he mentioned that his requests had not met with the response that he expected, and as I appeared to be the only one who had devoted particular attention to the subject, insisted upon my coming before you.

For details concerning the mechanism and method of application of the instrument the reader is referred to another page, whereon a full description by the inventor himself is to be found. Here I would only mention that in every case which I tested, I adopted the method of procedure recommended by Dr. Mercier; that is to extract a certain length of the eighth pair of ribs, and to test the breaking strain of one of these lengths against the convexity, of the other against the concavity. It must be noted that in each instance I tested the same portions of the same rib in precisely the same manner, in order that greater uniformity and accuracy in the compilation of the statistical record might be obtained. For microscopical examination, about an inch of bone was sawn off from near the cartilaginous end of each rib. The pieces were decalcified in the usual mixture of chromic and nitric acids, hardened in spirit, embedded and cut in celloidin, and the sections were stained with—(1) picrocarmine; (2) hæmatoxylin and eosine; (3) safranin; and (4) iodine green. The two former are the most favourable stains. The breaking strain of the ribs of fifty-eight cases was tested in the above manner; these were made up as follows:—Eighteen cases of general paralysis of the insane; twelve of senile dementia; nine of melancholia; eight of dementia, consecutive to mania or melancholia; four of epilepsy; two each of organic dementia, delusional insanity and chronic mania; and one of acute mania. A

successful microscopic examination was effected in ten cases of general paralysis; eight of senile dementia; five of melancholia; four of dementia; two of epilepsy; two of organic dementia; and one each of delusional insanity, chronic mania and acute mania, making a total of thirty-four.

In the first place, as to the question, "What are the forms of insanity which are accompanied by a low breaking strain of the ribs?" I regret to say that at this juncture I cannot venture to offer any definite answer. It is patent that fifty-eight cases is a totally inadequate number to base a statistical enumeration upon, and that until we collect returns amounting in the aggregate to some thousands of cases, it would be premature to present a positive statistical statement. However, to satisfy curiosity and to encourage others to endeavour to augment our statistical record, I will, with your indulgence, briefly disclose what a tabular analysis of the cases I have put to the proof so far indicates. Most of the following points, I might mention, one would anticipate from one's previous knowledge of osseous degenerations in the insane.

(1). The breaking strain of the ribs of general paralytics is considerably below the normal standard. Taking the breaking strain of the eighth rib of a healthy adult male as equivalent to 62lbs. against the convexity, and 65lbs. against the concavity,* I find that the ribs of the 13 male general paralytics I have examined show an average breaking strain of 44·8lbs. against the convexity, and 44·4lbs. against the concavity.

(2). In cases of senile insanity the breaking strain is exceedingly low; this is particularly evidenced in the case of females, for taking the breaking strain of the eighth rib of a healthy adult female as 29lbs. against the convexity, and 30lbs. against the concavity,† my six female cases of senile dementia yield the extremely low average of 11·8lbs. against the convexity, and 11·3lbs. against the concavity.

(3). In most of the varieties of insanity the breaking strain is diminished. The average breaking strain of the 58 cases tested is in the case of the 35 males 41·04lbs. against the convexity, and 42·14lbs. against the concavity; and in the case of the 23 females 20·68lbs. against the convexity, and 20·90lbs. against the concavity.

(4). Sex is an important factor in reducing the breaking

* This is merely a provisional standard founded on an experimental examination of the eighth ribs of six sane cases dying in hospital either of accidental injuries or rapidly fatal disease.

† The average of five sane females dying in hospital of acute diseases.

strain. The female rib would seem to be as nearly as possible half as strong as the male.

(5). The breaking strain of the rib varies proportionately with the age of the individual. It increases steadily from youth upwards till about the age of 35, when it reaches its maximum, and it progressively diminishes with senescence.

(6). In these experiments the difference between the breaking strain against the convexity and that against the concavity was not so great as I expected. In the majority of instances the breaking strain against the concavity was the greater, but the excess was not a large one.

Microscopical Examination.—Turning in the next place to the microscopic examination of the ribs tested, and the results obtained therefrom, I would at the outset state *that in every instance in which the breaking strain was ascertained to be a low one, I was able to demonstrate some deficiency in the structures which go to constitute the architectural strength of the bone,* and thereby I, in a measure, checked the accuracy of Dr. Mercier's instrument.

Now we may take it that the main factors upon which the strength of the rib depends are—

a Its size and shape.

β The thickness and toughness of its investing periosteum.

γ The thickness and density of the investing rim of compact bone.

δ The thickness, number, and complexity of arrangement of the medullary bone septa.

ε Certain chemical properties common to all bones which afford cohesive and elastic power.

Concerning the last-mentioned chemical properties I am not qualified to speak, as I did not carry out a systematic chemical examination of any of my specimens, and therefore I cannot state how much strength depends upon these properties, nor to what extent they were increased or diminished. All the other factors, however, being anatomical ones, one was able to determine their condition with the aid of the microscope.

a The size and shape of the rib.—Obviously a rib of small size and circumference will offer less resistance to a breaking strain than a large one. This fact accounts for the low breaking strain of the ribs of females and of the atrophied ribs of the senile insane. Again, a rib which is ovoid or rounded in form will offer more resistance than one which is flattened. Here we have another reason why the ribs of women should be weaker than

those of men, for the female rib is in my experience almost without exception flatter than the rib of the male (Fig. 6). Lastly, when the investing rim of compact bone and the bony trabeculæ of a rib become eaten away by an excessive action of the processes of absorption over those of deposition, the sides of the rib collapse, and it assumes a flattened form. Such ribs are extremely weak.

β Thickness and toughness of the periosteum.—Though it is difficult to compare the thickness of the periosteum in different specimens, yet it does appear that thinning of this structure takes place coincidentally with thinning of the compact bone.

γ Thickness and density of the investing rim of compact bone.—The main strength of the rib is doubtless subservient to this. Should thinning of this rim of compact bone take place a coincident fall in the breaking strain of the rib invariably occurs, and it is a significant fact that of all the specimens which I have taken from the insane I have few which do not show some such diminution in the thickness of this compact bone. It is, as a rule, best marked in cases of senile dementia and advanced general paralysis. The most extreme thinning I ever saw was in a case of chronic mania (Fig. 7).

Another condition which interferes with the integrity and strength of the compact bone is what is termed "*osteoporosis*;" this really consists in a spacious dilatation of the Haversian canals brought about by absorption of the immediately surrounding bone. The spaces thus formed frequently attain a great size; some I have seen with a longitudinal diameter of 2 mm.; they become filled with marrow substance, and, when numerous, veritably give the bone a spongy appearance. This change I have found to be an invariable accompaniment of senility; specimens from cases of late dementia and advanced general paralysis also show it well. In my collection the sections which show the change most markedly were taken from a female, *æt.* 57, dying of general paralysis (Fig. 4).

δ Stoutness, number, and complexity of arrangement of the medullary bony septa.—My observations tend to show that whenever absorption and osteoporosis attack the investing rim of compact bone, a like change affects these trabeculæ; they become thinner, break through in places, and, on transverse section, the meshwork presented by these septa appears far less complex than that of the normal rib; indeed, fields may occur in which there is an entire absence of them. Many of my sections demonstrate that the trabecular absorption commences in the inner segment of the rib. I would

finally mention that in all cases in which a marked absorption of the cancellous bone had taken place, the marrow was invaded by fat cells. In some senile ribs the whole marrow space seemed to be occupied by fat, whereas in the healthy adult rib, on the contrary, but little is to be found.

Description of Drawings.—The accompanying figures will serve to elucidate most of the microscopic changes referred to in the text; in all of them a correct representation of the osseous components of the rib, as seen on transverse section, has been mechanically effected with an Abbé camera lucida drawing apparatus. The imagination, therefore, has been precluded from playing any active part in their production. An aplanatic lens magnifying ten diameters was employed.

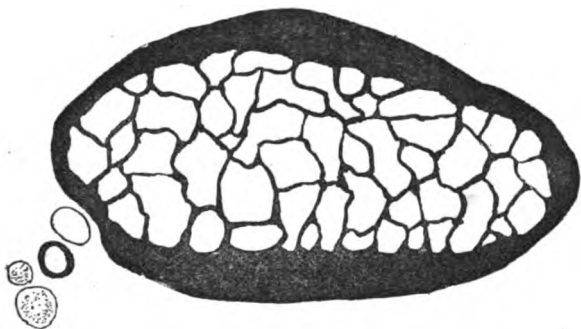


FIG. 1.

Figure 1.—Transverse section of the eighth rib of a healthy adult male, made at a point situated between two and four inches from the attachment of the costal cartilage. The section is seen to be of ovoid form, indented at one end (the inferior border) for the accommodation and protection of the intercostal vessels and nerve (these are represented to the left of the figure) and somewhat pointed at the other (the upper border). The outer surface, which in the drawing is uppermost, is somewhat more convex than the inner. With reference to the investing rim of compact bone it is to be noticed that it is comparatively thin at the extremities of the section, but of great depth at the sides, and that that composing the inner segment is distinctly thicker than that of the outer. The actual average measurements of the compact bone on section in this case were $\cdot 323$ mm. at the ends, $\cdot 887$ mm. through the inner segment, $\cdot 820$ through the outer, and the total average was $\cdot 724$ mm. The cancellous trabeculae are seen to be stout, numerous, and complexly

arranged. The breaking strain of this rib was 60lbs. against the convexity and 65lbs. against the concavity.

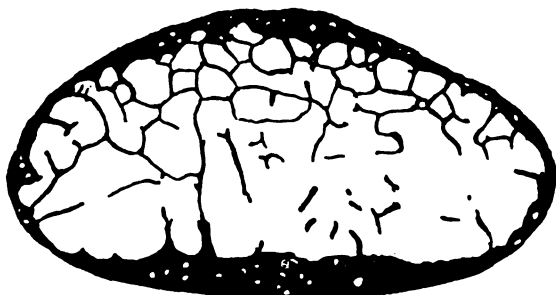


FIG. 2.

Figure 2.—Transverse section of the eighth rib of a male general paralytic, *æt.* 59, dying in the second stage (No. 6 of Table). The oval shape of the rib as seen on transverse section is well preserved. The outer segment (that which is uppermost in the figure) and the extremities of the investing compact bone are seen to be greatly reduced in depth, the inner segment having in great measure escaped. The average measurements were $\cdot 153$ mm. at the ends, $\cdot 442$ mm. through the outer segment, $\cdot 867$ mm. through the inner segment, and the total average $\cdot 527$ mm. The outer segment is also markedly osteoporotic. A striking feature is the deficiency of bony trabeculæ in the inner half of the section as compared with the outer. It may occur to some that this is an artificial product of careless section cutting, but I am convinced that this is not the case, as all the portions of rib which I examined were cut while firmly embedded in celloidin, and thick and thin sections show the change equally distinctly; also during the process of decalcification the ribs were manipulated with the utmost care. The most rational surmise seems to be, that when absorption of the cancellous trabeculæ occurs, the first to succumb are those situated in the inner segment of the rib. I do not venture to supply reasons showing why this should be so. It is to be remarked that in this case the breaking strain against the convexity was 54lbs. and against the concavity 38lbs. This preponderance of the breaking strain against the convexity over that against the concavity is quite unusual—possibly the reversal of matters is to be attributed to the deficiency of cancellous trabeculæ in the inner segment of the rib.

Figure 3.—From a male general paralytic, *æt.* 36, dying in the final stage (No. 4 of the Table). An advanced stage

of what was seen in the drawing of the last section is here represented. Extreme thinning of the rim of compact bone, particularly in the inner segment and at the ends, and an

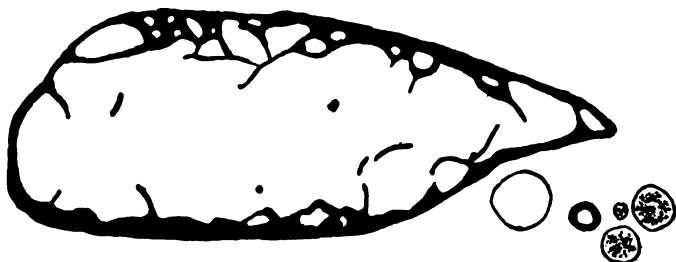


FIG. 3.

almost complete disappearance of the trabeculae, are obvious ; and in consequence of these changes the section has assumed a flattened shape. Some large osteoporotic cavities are visible in the outer segment of the ring of compact bone (that which is uppermost in the figure). In spite of the fact that the compact bone only averages $\cdot 323$ mm. in depth—less than half the thickness of the normal rib—the breaking strain, 60lbs. against the convexity and 45lbs. against the concavity, is not a low one, but it is to be again observed that the breaking strain against the convexity is greater than that against the concavity.

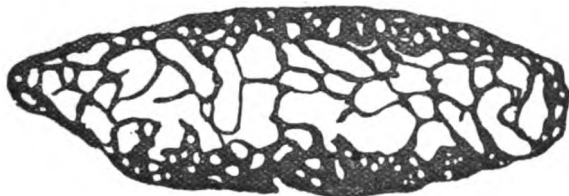


FIG. 4.

Figure 4.—From a female general paralytic, $\text{aet. } 57$, dying in an advanced stage of the disease (No. 15 of the Table). The condition termed osteoporosis is admirably illustrated by the ribs of this individual. Dozens of cavities of varying dimensions are visible in the compact bone of the inner and outer segments. The flat shape of the section is characteristic of the female rib. Though by osteoporosis much compact bone has been absorbed, still it is not, strictly speaking, diminished in depth. Its average measurement is $\cdot 595$ mm. The breaking strain was 25lbs. against the convexity and 30lbs. against the concavity.

Figure 5.—Transverse section of the eighth rib of a female senile dement, æt. 71 (No. 29 of the Table). The section is remarkable for its small size and curious irregular shape. The rim of compact bone is of very unequal thick-



FIG. 5.

ness. The trabeculae are few in number, and are not complexly arranged. The breaking strain of this rib, as may be readily imagined, was very low, viz., 15lbs. against the convexity and 10lbs. against the concavity.



FIG. 6.

Figure 6.—Also from a female senile dement, æt. 66 (No. 27 of the Table). The section is of the flat shape so characteristic of the female rib. The rim of compact bone is reduced in thickness, especially in the outer segment (which in the drawing is uppermost). A number of trabeculae have also disappeared, and those that remain have a tendency to run from side to side. The breaking strain was exceedingly low—10lbs. against the convexity and 5lbs. against the concavity. The shape, the thinness of the compact bone, and the paucity of trabeculae, account for its weakness.



FIG. 7.

Figure 7.—Transverse section of the eighth rib of a male, æt. 55, who suffered from chronic mania (No. 57 of the Table). This case is of historical interest, since it formed

the subject of a coroner's inquest. The story runs as follows:—One evening the patient, who was exceedingly feeble, slipped and fell heavily, partly on his back and partly on his right side, on the floor of the dormitory in which he slept, and a few days after the fall, died. At the autopsy eight recently-broken ribs were found on the right side, those from the fourth to the eleventh inclusive being fractured at or about the neck, and those from the fourth to the eighth inclusive being in addition broken in the neighbourhood of the angle. Examining the ribs more closely, one found that they could be snapped with the greatest ease with one's fingers, and on account of their softness could be readily sliced through with a knife; furthermore, on testing their breaking strain with Dr. Mercier's instrument, one ascertained that it was, for a male, exceeding low—20lbs. against the convexity and 15lbs. against the concavity. In the case of no other male in my series has a lower breaking strain been registered. All these points one was able to adduce as evidence at the inquiry, and since there was no suspicion of foul play, a unanimous verdict of accidental death was recorded. It is obvious that the extreme uniform reduction in thickness of the rim of compact bone (its average thickness is only .255 mm.), the absorption of the medullary trabeculæ, and the flattened shape of the rib were proportional with, and accounted for, the great diminution in the breaking strain. Another point that such ribs might be extensively fractured by such a fall this could not possibly possess a high breaking strain, and consequent upon the latter two changes, that a rib such as omitted, is that they had so lost their elasticity that on testing their breaking strain it was found that they bent somewhat like the classical green stick, instead of fracturing with the clear snap of the healthy elastic rib. From this it is clear that the amount of displacement of the ends which occurs at the site of fracture in these ribs is insignificant; since such is the case, and since, furthermore, on account of the softness of the bone, crepitus cannot be elicited, the diagnosis of fractures of such ribs during life is rendered uncommonly difficult.

NOTE.—For those who desire to read details concerning the various cases, I have appended the following table, in which they are arranged in groups according to the mental disorder. Since in addition to mental and nervous disease, all chronic wasting affections must exert a marked influence on the nutrition of the bones in common with other tissues (to what extent a larger record alone can show), I have in each case given the cause of death as ascertained post-mortem, and the state of nutrition of the patient. Also, in order that the influence of stature may be reckoned with, I have added the height and shoulder circumference of each individual.

TABLE showing the sex, the age at death, the mental condition, the cause of death, the breaking strain of the 8th pair of ribs as indicated by Dr. Mercier's instrument, the thickness of the compact rim of bone of the ribs, the height, the shoulder circumference and the state of nutrition in the individual cases; along with a microscopic report and remarks.

Number.	Sex.	Age at Death.	Mental Condition.	Cause of Death.	Breaking strain in lbs.		Thickness* of compact rim of bone in Millimetres.				Height.	Shoulder Circumference.	State of Nutrition.	Microscopic Report and Remarks.
					Against Convexity.	Against Concavity.	At End.	Outer Segment.	Inner Segment.	Average Thickness.				
1	M.	41	General Paralysis. Dementia.	Lobular Pneumonia. Subdural Hæmatoma.	83	34	.196	.327	.441	.326	66in.	34in.	Fair.	The ribs are of large size. The investing compact rim of bone is diminished in thickness in its whole circumference, but the outer or subcutaneous segment has suffered more than the inner or pleural segment. Osteoporotic changes in the rim are very pronounced. The medullary caseous septa are eaten away partially and fall in number and complexity of arrangement. The marrow contains an excessive quantity of fat.
2	M.	40	G.P. Dementia.	Acute Lobar Pneumonia.	30	20	.170	.255	.442	.306	67in.	38in.	Well Nourished.	Ribs of large size. Investing compact, bony rim is moderately thick in places, but in others extremely thin and apparently eaten away from within. The trabecule are distinctly deficient, and where they are most wanting there is an excessive deposit of fat in the marrow. The 5th, 6th, and 7th left ribs show ununited fractures close to sternal end.
3	M.	39	G.P. Final Stage.	Empyema. Early waxy degeneration in Organs.	19	23	.357	.637	.627	.544	68in.	36in.	Moderately Good.	Ribs of small size, but possessing a thick rim and stout, well-arranged trabecule. Commencing osteoporosis is seen all round the rim. There is no excessive deposit of fat in the medulla.
4	M.	36	G.P. Final Stage.	Lobular Pneumonia.	60	45	.221	.262	.446	.328	71½in.	36in.	Spare.	Ununited fractures around which considerable callus is thrown out are seen at the sternal end of the 5th, 6th, and 7th right ribs. Longitudinal sections show considerable osteoporosis and thinning of the compact bone.

CASES OF GENERAL PARALYSIS.

5	M.	43	G.P. Final Stage.	Acute Military Tuberculosis.	43	36	.231	.493	.408	.391	98In.	36In.	Fair.	Ribs of good size. Rim considerably reduced in thickness; the outer segment is noticeably more osteoporotic and thinner than the inner. Concentric arrangement of lamellae very distinct. A marked deficiency in the number and thickness of the trabeculae and an excess of fat cells in the marrow. Pretty specimens of osteoporotic thinning; this is most marked in the outer segment and at the ends. The medullary trabeculae in the inner half of the section strikingly deficient. No excess of fat cells in the marrow.
6	M.	59	G.P. 2nd Stage.	Gastric Ulcer. Lobular Pneumonia.	54	33	.153	.412	.867	.527	68In.	37In.	Moderately Good.	No microscopic examination.
7	M.	39	G.P. 1st Stage. Mania.	Gastric Ulcer.	55	55	—	—	—	—	96In.	32In.	Much Wasted. Good.	No microscopic examination.
8	M.	38	G.P. 1st Stage.	Acute Lobar Pneumonia.	55	80	—	—	—	—	67In.	36In.	Good. Wasted.	No microscopic examination.
9	M.	29	G.P. 1st Stage.	Convulsions.	60	60	—	—	—	—	87In.	38In.	Good.	No microscopic examination.
10	M.	32	G.P. 2nd Stage.	Acute Lobar Pneumonia.	43	43	—	—	—	—	53In.	36In.	Wasted.	No microscopic examination.
11	M.	54	G.P. Final Stage.	Acute Lobar Pneumonia.	37	36	—	—	—	—	67In.	34In.	Emaciated.	No microscopic examination. A partially united fracture of neck of left femur.
12	M.	33	G.P. 2nd Stage.	Empyema.	49	52	—	—	—	—	99In.	37In.	Good.	No microscopic examination.
13	M.	45	G.P.	Acute Lobar Pneumonia.	40	50	—	—	—	—	95In.	34In.	Wasted.	No microscopic examination.
14	M.	46	G.P. Mania.	Convulsions.	44	44	—	—	—	—	65In.	35In.	Poor.	No microscopic examination.
15	F.	57	G.P. Dementia.	Chronic Cystitis. Waxy Organs.	25	30	.374	.697	.646	.596	65In.	31½In.	Wasted.	Ribs brittle but not soft—of fair size but somewhat flattened form. Excellent specimens of osteoporosis, but the depth of the compact bone is not diminished to any extent. The trabeculae fairly well represented. A slight excess of fat cells in the marrow.
16	F.	33	G.P. Dementia.	Acute Lobar Pneumonia.	38	45	.544	.561	.860	.663	62In.	32In.	Poor.	Ribs of large size, but flattened shape. The investing ring of concentric arrangement of the lamellae very clear. There are indications of commencing osteoporosis and early absorption of central septa. There are not many fat cells in the marrow. Compact bone fairly thick at sides but very thin at ends. Commencing osteoporosis visible, particularly in the outer segment. Trabeculae very deficient. A great excess of fat cells in the marrow.
17	F.	48	G.P. Dementia.	Chronic Bright's Disease.	16	18	.170	.459	.459	.391	60In.	31In.	Emaciated.	Very small ribs. Marked osteoporosis and trabecular wasting. Compact bone thicker in inner segment than outer. A slight excess of fat in marrow.
18	F.	37	G.P. Dementia.	Phthisis.	26	26	.357	.340	.463	.391	—	28In.	Emaciated.	

* See footnote on p. 299.

TABLE showing the sex, the age at death, the mental condition, the cause of death, the breaking strain of the 8th pair of ribs as indicated by Dr. Mercier's instrument, the thickness of the compact rim of bone of the ribs, the height, the shoulder circumference and the state of nutrition in the individual cases; along with a microscopic report and remarks.—(Continued.)

Number.	Sex.	Age at Death.	Mental Condition.	Cause of Death.	Breaking Strain in lbs.	Thickness* of compact rim of bone in Millimetres.					Shoulder Circumference.	State of Nutrition.	Microscopic Report and Remarks.
						At Ends.	Outer Segment.	Inner Segment.	Average Thickness.	Height.			
19	M.	77	Senile Dementia.	Senile Decay.	20	26	136	340	408	323	71in.	Fat.	Cartilages of ribs partially ossified. Compact bone very unequal in thickness. At the centre of the sides it is of good depth, but at the ends exceedingly thin, and in addition osteoporotic. The septa are delicate and few in number.
20	M.	77	Senile Dementia.	Pleurisy.	35	31	204	323	408	323	65in.	Good.	The rim somewhat thin all round, most markedly so in the outer segment. There is no pronounced osteoporosis and the lamellar arrangement is well preserved. Cancellous trabeculae few in number. An enormous deposit of fat cells in the medulla.
21	M.	58	Senile Dementia.	Senile Decay.	35	50	—	—	—	—	—	Fair.	Cartilages of ribs partly ossified. No microscopic examination.
22	M.	61	Senile Dementia.	Lobular Pneumonia.	28	39	221	289	340	289	65in.	Fair.	Ribs of small size. Compact bone thin all round. Osteoporosis distinct. Central septa deficient. An excess of fat in the marrow.
23	M.	67	Senile Dementia.	Senile Decay.	48	55	294	578	782	544	67in.	Fair.	Ribs of large size. Compact bone thick—inner half thicker than outer. Ends thin. Distinct osteoporosis. Trabeculae thin. An enormous excess of fat in the marrow. Old united fracture of 7th left rib.
24	M.	62	Senile Dementia.	Phthisis.	43	27	—	—	—	—	66in.	Wasted.	Cartilages of ribs ossified and tough. No microscopic examination.
25	F.	54	Senile Dementia.	Lobular Pneumonia, Chronic Bronchitis.	9	14	340	204	323	255	—	Good.	Very small ribs. Rim of irregular thickness, but not markedly thinned anywhere. Some large osteoporotic cavities. Trabeculae thin in places. A moderate excess of fat in the marrow.
26	F.	64	Senile Dementia.	Lobular Pneumonia.	8	7	—	—	—	—	60in.	Fair.	Ribs very soft—readily cut with a sharp knife or snapped with the fingers. No microscopic examination.

CASES OF SENILE DEMENTIA.

CASES OF SENILE DEMENTIA.

Age	Sex	Diagnosis	Senile Decay.	Measurements	Remarks
27	F.	66	Senile Dementia.	—	Very Thin.
28	F.	92	Senile Dementia.	5 187 204 374 255 14 204 289 357 289 57in. 15 10 785 425 561 561 66in.	Good. 31in. 33in.
29	F.	71	Senile Dementia.	15 10 785 425 561 561 66in.	Thin.
30	F.	77	Senile Dementia.	15 20 — — — — 59in.	Thin.

CASES OF MELANCHOLIA.

Age	Sex	Diagnosis	Senile Decay.	Measurements	Remarks
31	M.	45	Acute Melancholia becoming demented.	44 50 262 561 833 565 67in.	Emaciated.
32	M.	24	Acute Melancholia.	53 56 289 578 918 629 66in.	Thin.
33	M.	32	Chronic Melancholia.	50 52 — — — — 72in.	Thin.
34	F.	35	Acute Melancholia.	17 15 323 374 561 425 — —	Emaciated.
35	F.	36	Acute Melancholia.	17 15 595 714 816 687 62in.	Fair.
36	F.	21	Acute Melancholia.	46 35 — — — — —	Wasted.
37	F.	62	Chronic Melancholia.	15 18 — — — — 62in.	Good.
38	F.	25	Acute Melancholia.	15 20 — — — — 61in.	Emaciated.
39	F.	55	Acute Melancholia.	18 15 262 340 476 374 65in.	Obes.

TABLE showing the sex, the age at death, the mental condition, the cause of death, the breaking strain of the 8th pair of ribs as indicated by Dr. Mercier's instrument, the thickness of the compact rim of bone of the ribs, the height, the shoulder circumference and the state of nutrition in the individual cases; along with a microscopic report and remarks.—(Continued.)

Number.	Sex.	Age at Death.	Mental Condition.	Cause of Death.	Breaking strain in lbs.					Thickness of compact rim of bone in Millimetres.					Shoulder Circumference.	State of Nutrition.	Microscopic Report and Remarks.
					Convexity.	Akralist Convexity.	Concavity.	At ends.	Outer Segment.	Inner Segment.	Average.	Thickness.	Helght.				
40	M.	46	Dementia.	Pericarditis. Phtthisis.	26	26	136	170	187	170	63in.	33in.	Thin.	the investing compact rim is greatly thinned, indeed, in places near the ends almost completely eaten through. The thinning is most marked in the subcutaneous segment of the rim. The medullary septa are exceedingly delicate and many have quite disappeared. A great quantity of fat is deposited in the marrow. Cartilages ossified. Rim of normal thickness at the sides, but thin at the ends. There is little osteoporosis. The Haversian spaces and arrangement of the lamelle healthy. Septa numerous and stout. No microscopic examination.			
41	M.	63	Dementia.	Empyema.	71	53	136	612	765	544	68in.	36in.	Good.	Large ribs. Cartilages ossified. Rim of normal thickness at the sides, but thin at the ends. There is little osteoporosis. The Haversian spaces and arrangement of the lamelle healthy. Septa numerous and stout. No microscopic examination.			
42	M.	30	Dementia.	Phtthisis.	24	35	—	—	—	—	67in.	33½in.	Emaciated.	No microscopic examination.			
43	M.	45	Dementia.	General Tuberculosis.	35	60	—	—	—	—	67½in.	38in.	Fair.	No microscopic examination.			
44	M.	41	Dementia.	General Tuberculosis.	47	50	—	—	—	—	63in.	32in.	Thin.	No microscopic examination.			
45	M.	53	Dementia.	Phtthisis.	23	24	340	340	476	391	71in.	34in.	Thin.	Ribs of small size, of fair thickness as regards compact bone, but markedly thinner and more osteoporotic in outer segment than inner. The concentric arrangement of lamelle not distinct. Very few fat cells in the marrow.			
46	M.	43	Slight Dementia.	Cerebral Abscess.	55	60	322	816	684	714	65in.	40½in.	Good.	Ribs of good size and oval shape. Investing osseous rim thick, of almost equal depth at sides, the outer the thicker. No osteoporosis. Trabeculae stout, numerous, and complexly arranged.			
47	F.	42	Dementia.	Phtthisis.	25	34	—	—	—	—	59in.	29in.	Thin.	No microscopic examination.			

CASES OF DEMENTIA SECONDARY TO MANIA OR MELANCHOLIA.

TABLE showing the average breaking strains in the various mental disorders.

	MALES.		FEMALES.	
	Against Convexity.	Against Concavity.	Against Convexity.	Against Concavity.
Cases of General Paralysis ..	44·8lbs	44·4 lbs.	26 lbs.	39·74 lbs.
Senile Dementia ...	43·3 "	42·5 "	11·8 "	11·3 "
Melancholia ...	49 "	52·6 "	21·3 "	19·58 "
Dementia sec. to Mania or Melanch	43 "	41·74 "	25 "	34 "
Epilepsy	40·5 "	42 "	34·5 "	31 "
Organic Dementia ..	23 "	42 "	14 "	12 "
Delusional Insanity	40 "	40 "	27 "	32 "
Mania	26 "	29·5 "	17 "	15 "
Total Cases ..	41·04 lbs.	42·14 lbs.	20·68 lbs.	20·90 lbs.

TABLE showing average breaking strain in decades.

	MALES.		FEMALES.	
	Against Convexity.	Against Concavity.	Against Convexity.	Against Concavity.
10-20 years.	--	—	—	—
20-30 "	45·6 lbs.	50·3 lbs.	26 lbs.	23·3 lbs.
30-40 "	43·41 "	45·58 "	24·8 "	26·6 "
40-50 "	42 "	44·2 "	20·5 "	26 "
50-60 "	35 "	34 "	24·2 "	24·2 "
60-70 "	47·4 "	43·5 "	11·75 "	10·5 "
70-80 "	27·5 "	28·5 "	15 "	15 "
90-100 "	—	—	14 "	12 "

Observations by Dr. Mercier.

Dr. MERCIER said this very interesting subject was first brought to his mind very forcibly by an inquest. In his early days he was medical officer of a large workhouse, and had occasion to send a patient to one of the Lancashire asylums. The superintendents of the Lancashire asylums were at that time very arbitrary gentlemen, and when the patient arrived the superintendent would not take him in. An interval of two days ensued before room could be found in another asylum to which he was sent. Before going to the first asylum he was very carefully examined, but before going to the second the examination was not repeated, owing to the fact that he (Dr. Mercier) was crippled in both hands by an accident. When he got there it was discovered that he had about 12 ribs broken. Death ensued, and there was an inquest and a post-mortem. He attended them, and before the coroner was able to say that the ribs were extremely brittle. The coroner's comment was, "Oh, yes, I dare say." As a matter of fact he could take the ribs up in one hand and break them off again and again in pieces of half an inch or an inch with his thumb. They were extremely brittle, but he was very much impressed by the fact that it was impossible to make the coroner or jury believe that they were abnormally so. They seemed to associate together the brittleness of the rib with the toughness of the story, and to consider that they were inversely proportional to one another. It occurred to him that it would be a very good thing if one could devise an instrument by which the actual breaking strain could be measured. Many investigations had been conducted with regard to this quality of ribs, and ribs had been decalcified, weighed before decalcification and afterwards, and the breaking strains endeavoured to be deduced in that way. It had always occurred to him that instead of adopting this method and guessing from the results whether the rib was fragile or not, it would be better to break the rib and to determine how much force was required, and that with a full series of experiments made in that way they would be able to go before a coroner with a good face and to say, "These ribs are brittle, and to this extent, that they break with a force (as in the exceedingly interesting case Dr. Campbell had brought forward) of something like one-twelfth of that required to break a normal rib." That was something for a

coroner and jury to lay hold of. The instrument was exceedingly simple. Before explaining it he wished to express his very great indebtedness to Dr. Campbell, an indebtedness which he shared to a certain extent with the rest of the Association, although his was by far the greater, for the extremely interesting and prolonged series of experiments he had made, not only with this instrument, but for having supplemented them with microscopical sections and preparations. The observations were not as numerous as he could have wished, seeing that he had distributed several of these instruments to different asylums, and also to the large London hospitals. He had explained in every case the object of the observations requested to be made, but was, he feared, unable to exert sufficient eloquence or influence to induce anybody else but Dr. Campbell to look upon the matter in the same light that he did, for no observations had been made with the other instruments so distributed, or if they had been made he could only say the observers were singularly diffident in producing their results, because he had written to them again and again without receiving any reply whatever. He must make one exception. He sent one instrument to the West Riding Asylum, and a representative of that asylum was present in the person of Dr. Andriezen to describe what observations had been made there. Nothing could possibly be simpler than this instrument. It had a stirrup at one end and a screw at the other, and between these was a spring which registered the number of pounds pressure exerted. The bone, the eighth rib, as Dr. Campbell had said, was put through the stirrup resting on the fork of the machine; the screw was then turned till the rib broke. He originally made the instrument capable of testing up to 300lbs., but as a matter of fact the toughest rib could be broken by a pressure of 60lbs. (Dr. Mercier then gave a demonstration, the rib breaking at a pressure of 55lbs.) Having tested the rib against concavity it was also tested against convexity. It was exceedingly important that this instrument should be very generally used, for no argument could be imagined more likely to impress a coroner or a coroner's jury than to be able to show in figures that the ordinary breaking strain of a rib was 66lbs. or thereabouts, whilst the rib in question would break with a strain of 12lbs. That was a fact that could not fail to impress anyone. It was very important that the use of these instruments should be familiar in every asylum, so that they might get a very

large number of results, and be able to determine in what class of cases the breaking strain was lowest. That was not, however, by any means the primary object of the experiment, which was simply to determine the normal breaking strain of a rib, what were the limits of variation, and, especially in medico-legal cases, what was the actual strain ribs would bear, and how much weaker the ribs of the insane were than the ribs of normal people.

Dr. ANDRIEZEN said he should postpone what he had to say to a future occasion. They had made observations with Dr. Mercier's instrument at Wakefield in a total of 122 cases with regard to convexity, concavity, and other details of interest. It was, however, impossible to go into the question at that meeting, and he proposed to bring forward the results obtained at a future meeting.

Dr. HYSLOP said nine years ago at the Wakefield Asylum he undertook an investigation of this kind with an ordinary concrete testing machine. The results, so far as he knew, had never been published—he did not think Dr. Mercier had made use of them—but at any rate they confirmed Dr. Campbell's observations. In one senile female a pressure of 14lbs. produced fracture. So far as he could remember the case was one of general paralysis. The question was really not a new one, for it had already been inquired into in asylums.

Dr. ROGERS said as the time was very short he would confine himself to a few remarks. It was a subject in which he had taken a great deal of interest. He was happy to see (for he understood that Dr. Campbell hails from Rainhill) that such an extremely interesting paper, and one so very well worked out, should have been brought from a quarter with which he was so many years connected. He might also congratulate the Association as well as Dr. Campbell on the fact that they had young men amongst them who could teach their seniors how to go to work in things of this sort, for the lucidity of the paper and the manner in which it was thought out reflected the highest credit upon its author. So long ago as 1870, when, as some of the older members might remember, some extremely unfair and illiberal attacks were made upon the specialty by the "Lancet," the "British Medical Journal," and a paper called the "Social Blot," on that occasion, just before 1870, when the "Lancet" began to fire the foremost shot, he in company with Dr. Campbell Brown, the county analyst, examined several of these specimens. Unfortunately he had not skill at the time to make chemical examinations himself, but the results of their joint investigations were published in an early number of a Liverpool medical journal. They were not so carefully tabulated, but they were almost all cases of general paralysis that Dr. Campbell Brown had submitted to analysis. Subsequently in 1833, when the British Medical Association met in Liverpool, he being president of the Psychological Section, Dr. Wigglesworth, his successor at Rainhill, kindly undertook to bring this subject forward for discussion, and his paper was published in the "Journal of Medical Science" for October, 1833. That paper was open to Dr. Campbell, but it was no doubt only fragmentary. Dr. Campbell had brought the whole subject before them, and they should be especially grateful to Dr. Mercier for giving them the means to put a mechanical proof before a coroner and jury. The whole subject was brought up to date, and he was very grateful to Dr. Campbell for having maintained the credit of the asylum, and showing that although the Lancashire asylums were superintended by "arbitrary gentlemen," yet still there was something to be said for them after all.

Dr. STANSFIELD thought Dr. Campbell should have taken another feature into consideration, namely the bodily condition of the patient. Some four or five years ago, he (Dr. Stansfield) conducted a series of experiments on fractured ribs, which were incorporated in a paper published in the reports of that year. From those experiments, including some 45 or 46 cases, he came to the conclusion that the bodily condition affected the ribs much more than the mental. One of the

cases Dr. Campbell had referred to, one of dementia with phthisis, where the breaking strain was very high, rather corroborated the opinions which he had formed. He thought it would be well in future observations if the bodily condition of the patient was also taken into consideration.

Dr. CAMPBELL said that in the record the bodily condition of each case was noted, and full credit was given to that condition in tabulating the results.

The PRESIDENT said the Association was extremely obliged to Dr. Campbell for his admirable paper, and also to Dr. Mercier for his demonstration. They must all regret with Dr. Mercier that more experiments had not been made in the larger asylums on this subject. He hoped, however, that Dr. Mercier would be generous enough to again distribute a few of his instruments to various asylums.

Current Opinion on Medico-Psychological Questions in Germany, as represented by Professor Ludwig Meyer, of Göttingen. By A. R. URQUHART, M.D.

(Concluded from page 82.)

Passing to the treatment of special classes of patients, Professor Meyer expresses decided opinions, which seem to be somewhat in advance of the general consensus. For instance, at Alt Scherbitz, or in the remoter asylum of Bayreuth, one finds a considerable amount of restraint and special arrangements for the destructive and violent. It is, therefore, necessary to accept certain statements under the following heads as being more personal than representative.

V. *Excited patients.*—The disturbing element of restless, noisy, destructive, dirty patients may seem to require separate treatment; but although the plan of the Göttingen Asylum provided for such a system it has never been adopted in practice. Professor Meyer inaugurates the treatment of each excited patient by rest in bed. He holds that a thorough physical examination reveals the necessity for such a course, and finds, practically, that the great majority of restless cases submit to this procedure without trouble. If they do occasionally leave their beds, a little kindly persuasion induces them to return. The melancholiacs, too, are best treated in this way, and all those suffering from fear and agitation and suicidal tendencies. He claims that the symptoms are speedily rendered less urgent, and that the conditions for care and treatment are easier. Many of the patients are thus dealt with in the ordinary rooms of the clinical division of the institution, but it is more usual to carry out this plan in isolation.

If the patient is actively destructive and indecent, coercive measures are worse than useless. Even strong clothing

covers up, rather than obviates the trouble. After many experiments Professor Meyer adopted the use of bedding of seaweed. The destructive, dirty patients are provided with this material in abundance. It is softer than straw, which was originally selected for trial, and very hygroscopic, so that urine, etc., adheres to it, and the defiled portion can be easily removed. The advantages of this substance have been recognized in various asylums, and the benefits attending the adoption of seaweed, to the exclusion of other special appliances, are manifold. There is no permanent avowal of uncleanly habits; there is no tacit understanding that trouble may be saved in the treatment of such cases. The great majority of these are dirty in the same way as infants are, and require the constant attention of nurses for similar reasons. The rarer cases dependent upon morbid sensations and ideas are often very persistent, and require individual consideration. Nothing is more helpful than to arouse in them the notion that their improprieties pass unnoticed. Finally, Professor Meyer claims for these beds of seaweed certain hygienic properties in cases of paralysis with bed-sores and similar troubles.

VI. *The suicidal.*—While a suicide is regarded as one of the most critical occurrences of asylum life, because of the direct influence on other cases of similar tendency, there is no special department with permanent surveillance of these patients. Professor Meyer believes that such precautions increase and fix the intention. He cites the case of a suicidal patient, removed to the observation dormitory, who kept repeating “I must take my life here, the room is for the very purpose;” and he therefore separates such patients in treatment as widely as possible. But there is occasionally a particularly suicidal patient under special observation in the clinical division.

The result of this system is that the deaths by suicide in twenty-five years have numbered thirteen, which is thought inconsiderable out of an average of twenty-one resident after suicidal attempts, and but a fourth part of the suicidal rate for the country at large. In most of the cases there was a sudden impulse; their behaviour aroused, and could arouse no suspicion. Such cases show no symptom of depression in physiognomy or demeanour; they are rather indifferent, and lull to sleep the attention of their attendants, while they are carefully watching for an opportunity of self-destruction. While agreeing with Professor Meyer

that it is doubtful if suicide can be entirely prevented, and deprecating the harassing and deleterious routine to which these unfortunate patients are often condemned, the death-rate from suicide in the Göttingen Asylum must be regarded as high, even allowing for the greater suicidal rate in North Germany as compared with Great Britain.

VII. *Refusal of food.*—In the early years of Professor Meyer's professional life it was the custom in Germany to carry the apparatus for forcible feeding on each medical visit. It was usual, after one day's abstinence, to feed by such means unconditionally. He soon began to question the propriety of this procedure, and holds that lobular pneumonia often results from the introduction of small quantities of food into the larynx. After experience of several cases of long continued abstinence without detriment to the patient, he decided to abandon compulsory feeding, and for many years this has been the rule at Göttingen. The mortality has been diminished, and absolute abstinence has proved extremely rare. Five cases of obstinate refusal of food have been treated during the whole period, and two have died. The cause of death was lobular pneumonia, and it is noteworthy that forcible feeding had been employed as an extreme measure.

The treatment adopted is rest in bed, cleansing of the mouth with a lotion of chlorate of potash, enemata to remove constipation, clysters of eggs, olive oil, red wine and water, and an occasional warm bath. Observing the general rule laid down as to avoiding remarks on the patient's condition, every effort is made to induce the patient to take nourishment, these cases being specially treated by the head attendants.

VIII. *Restraint.*—From what has been already stated it is clear that no place has been left for the apparatus of restraint in the Göttingen Asylum except in the treatment of certain special cases. These were patients who were in a state of violent mania, and who had injured themselves by self-mutilation. In the course of five-and-twenty years four were restrained by improvised means, such as sewing up the sleeves of the night dress; and special attendants were placed in charge to minimise the amount of restraint required. I need not repeat in detail Professor Meyer's arguments for this course, as they are already familiar in this country.

Following on this enlarged liberty and enlightened treatment, the escapes from the asylum have been restricted to

moderate limits. The large proportion of patients occupied in useful work and dwelling outside the main institution has not increased the number of escapes. During the last five years twenty-four persons have left without permission, the majority having been quiet, unobtrusive, working patients. Two suicides have occurred among the escapes, and these were the result of sudden impulse. The intervention of the police is deprecated, and it is found better to allow such of them as can be properly cared for at home to remain there, if they cannot be induced to return by reasoning.

It will be evident that the routine of life in the Göttingen Asylum is pretty much the same as in any of our own institutions. The occupations and amusements are well considered, and the dietary has a sound scientific basis. I need not enter into particulars regarding these points, nor is there any necessity for adverting to the rules and regulations by which the Hanoverian Asylums are governed. These are similar in form to the Prussian Lunacy Laws, which have been printed in the Blue Book of 1885—"Reports from Her Majesty's Representatives at European Courts on the working of the Lunacy Laws in the countries in which they reside."

It will be of interest to note that nearly all the German asylums contain three classes of patients, some—such as Alt Scherbitz—four: 1. Those paying the highest rate of board, viz., 40s. a week, which may be increased to 50s. if the patient does not belong to the province. As a rule, the proportion of attendants to patients in this class is one to two, but a patient requiring special attendance is charged extra. 2. Those paying 20s. a week, one attendant to four patients. These have no special accommodation, but there is probability of this being provided in course of time. 3. State-supported patients at the rate of 8s. a week. This class is, of course, in the great majority, but some of them are maintained wholly or partially by their families. Broadly speaking, the friends pay what they can afford, and these payments are guaranteed by legal documents.

Naturally, there is complaint of over-crowding, and the question of accommodation for the incurable has of late excited some attention. Every town or district possesses a poorhouse, but these institutions seldom contain insane inmates. There are about 40 persons in the Göttingen poorhouse, but no lunatic, although there are some 75 vacant beds, and Professor Meyer considers that 200 of his 400 patients might

be discharged from asylum care if proper accommodation could be found in these less expensive buildings. He would favour such a course, and would not desire to retain personal supervision of these chronic cases. But the local authorities are very backward in removing non-recovered patients, on the ground that they have no proper places for their reception. Further, they decline to continue payments on behalf of these cases even where relatives or others are found willing to receive them. There is no After-Care Association such as has been at work in England and in Switzerland. In fact, the local authorities do not recognize that it is for their advantage to maintain these cases outside the asylum at less cost; yet it cannot be averred that from any point of view the peasantry are unsuitable to receive insane patients. The attendants are drawn from this class, and prove adequate guardians. Professor Meyer has had no occasion to prosecute an attendant, although such prosecutions are not unknown in Germany. There are few complaints of undue roughness. A young attendant is cautioned if he has given way to temper, and a repetition of ill-doing ends in dismissal. The male attendants are paid at the rate of £15 to £35 per annum, and the female attendants at about half that rate. They are entitled to a small pension in old age. I observe that the general name for attendants is still "warder," never "nurse."

The capacity of the insane resident in asylums to make valid wills has been admitted by the courts of law. Two cases have come under Professor Meyer's notice where such wills were disputed, but afterwards accepted as valid in consequence of the reasonableness of their provisions. It is Professor Meyer's practice to give notice to the legal authorities as soon as a will has been made in the asylum, considering this to be a reasonable precaution. On the other hand, it may be necessary for the protection of the estate of a lunatic that he should be placed under a guardian, and the local magistrate makes application for such an appointment by the Courts, should the family fail to take action. The process is speedy and inexpensive.

On the whole, it may be stated that German asylums are provided with sufficient and efficient medical officers. At Göttingen there is one assistant and two clinical clerks to some 390 patients. Clinical clerks are not usually found in these institutions, however, although Professor Meyer intro-

duced this system as far back as 1867. They are selected from the more advanced students of the University, and receive a small salary. The appointment generally lasts for a year.

It is thus possible to give due prominence to medical investigations. The clinical records and post-mortem examinations are full and careful. The proximity of the University is undoubtedly of great value. The laboratories are at the service of the asylum for the purposes of thorough research. I urge that in this respect we should take a hint from German practice. In our smaller asylums there is a wealth of pathological material which is too often absolutely wasted. It is not given to every man to attain skill in the specialized departments of this difficult research, and if the clinical side of morbid phenomena were duly studied and recorded in our hospitals we should have the active co-operation of the pathologists of our universities and colleges in correlating the post-mortem facts with the life-history of our cases.

The questions arising as to details of treatment are too numerous, diffuse, and intricate to enter upon at this time. The general abolition of beer except for working patients, the negative results of electricity, the unfavourable reception of hypnotism, the objections to trephining in general paralysis—all offer inducement for adequate discussion.

There are also larger questions of first-rate importance, a fitting consideration of any one of which would prolong these brief notes to a treatise. The influence of socialism, the military rigours of German life, the profound changes in religious beliefs, and the problems of drunkenness have each to be reckoned with by the asylum physician. If one curtly states that Professor Meyer is of opinion that political excitement is not an important factor in the production of lunacy; that "religious mania" is less common than formerly, although Germany may be no less religious than it was; that there might be more insanity as a result of the total abolition of alcohol, owing to the necessities of civilized life—it is evident that such statements would require lengthy and careful expansion.

Two virulent epidemic diseases—cholera and influenza—have lately swept over Germany and left deep marks on the country. Naturally, their effects have been studied with scrupulous diligence, and there is now before me an interesting dissertation on the psychoses following influenza

by Dr. H. Mucha, assistant medical officer Göttingen Asylum, to which I hope to refer on another occasion. In the meantime, I conclude by thanking Professor Meyer for his courtesy and patience in elucidating points of common interest, and for his kindness in revising the proofs of this article.

CLINICAL NOTES AND CASES.

*Cases of Sporadic Cretinism treated by Thyroid Extract.** By
TELFORD TELFORD-SMITH, M.A., M.D., Medical Superintendent,
Royal Albert Asylum, Lancaster.

The four cases of sporadic cretinism the treatment of which by thyroid extract I shall briefly describe, are all inmates of the Royal Albert Asylum, Lancaster.

They may, I think, be placed in Victor Horsley's third class of cases of cretinism, namely, that class in which the cretinism develops in early childhood, generally about or before the fifth year; that is to say, they are not cases of congenital cretinism, nor cases of ante-natal and subsequent slow development of cretinism. Three of the cases are girls and one a boy. They are all fairly typical, though not extreme cases, and the results of treatment by thyroid extract have been very similar in each case, though not equally marked in all.

Before treatment the general description of the sporadic cretin applied to each of the four cases.

They were all dwarfed in size, and childish in appearance, with large heads and pale, waxy, and slightly yellowish complexions, and slight malar blush; the lips bluish and larger than normal, the lower protruding; the tongue more or less hypertrophied; the teeth defective and carious, and the eruption of the permanent set very much delayed; the palate wide and flat; the nose retroussé, very flattened between the eyes, and the nostrils wide and visible. The eyes widely separated, the palpebral fissure narrow, the eyes

* Paper read by Dr. Shuttleworth, in the absence of the author, in the section of Psychology at the 62nd Annual Meeting of the British Medical Association, held at Bristol, July 31st, August 1st, 2nd, and 3rd, 1894.

PLATE I.

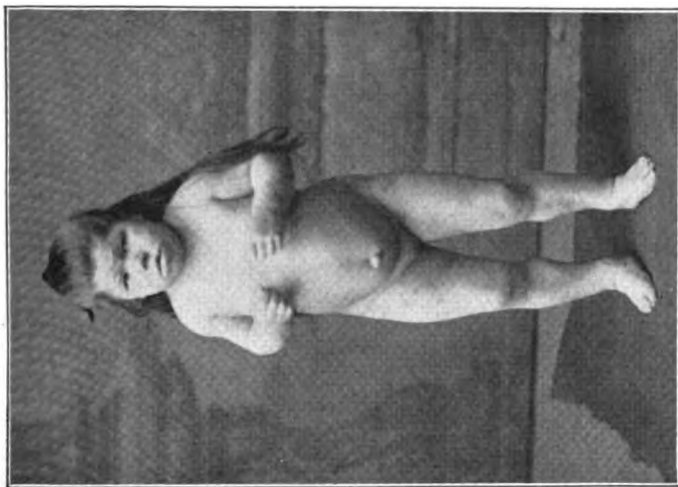


GROUP OF CRETINS (AFTER TREATMENT.)

To illustrate Dr. Telford Smith's paper.

[Engraved and printed by Daniellson & Co., London.]

PLATE II.



F. B. AT AGE OF 18 (BEFORE TREATMENT).

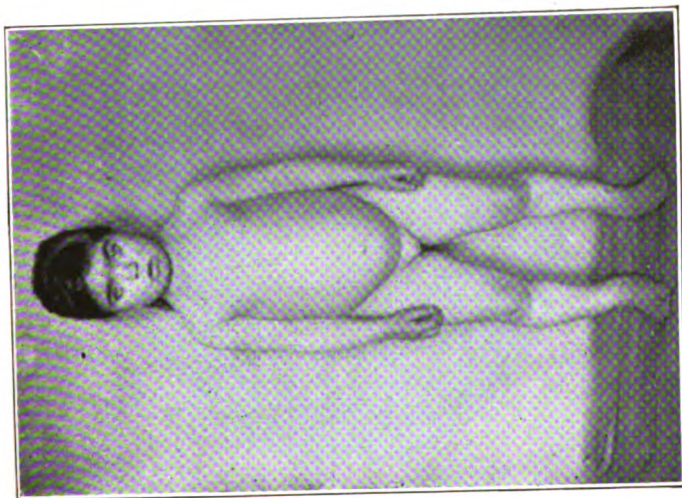


S. E. AT AGE OF 16 (BEFORE TREATMENT).

To illustrate Dr. Telford Smith's paper.

[Engraved and printed by Duntzson & Co., London.]

PLATE III.



A. W. AT AGE OF 15½ (BEFORE TREATMENT).



D. B. AT AGE OF 9 (BEFORE TREATMENT).

To illustrate Dr. Telford Smith's paper.

[Engraved and printed by Daniellson & Co., London.]

PLATE IV.



PALATE OF S. E. F. B.
SHOWING CHARACTERISTIC SHAPE FOUND IN CRETINS—BROAD, FLAT.



HAND OF D. B. SQUARE AND SPADE-LIKE.
(FROM CAST.)

To illustrate Dr. Telford Smith's paper.

[Engraved and printed by Danielsson & Co., London.]

almost disappearing when they smiled; the eyes normal and bright, the pupils reacting well to light and accommodation.

The wrists and ankles enlarged, and in the boy there is some beading of the ribs and thickening of the cranial sutures. The tibiæ are bowed and the feet flat. The hands short, thick and spade-like. They walk with a waddle, and can seldom run.

The deep reflexes are exaggerated in both extremities, and cutaneous sensibility almost absent in three of the cases.

The skin myxœdematous in appearance, rough and dry, perspiration seeming to be absent. The hair thin, short, dry, and growing very slowly.

The neck short and thick, and the thyroid gland either absent or hardly to be detected. Some fatty prominences are to be felt in the supra-clavicular regions.

Their temperatures were all subnormal, averaging about 95-96°, and their extremities blue and cold.

Their bowels were generally constipated. Their abdomens were protuberant, and one of the girls and the boy had small umbilical herniæ.

They were extremely phlegmatic and slow in all their movements, even the expression of the face altering in a very gradual manner. They spoke very little, if at all, and in a thick and indistinct manner, using monosyllables. They understood fairly well what was said to them.

Their senses of sight, hearing, smell, and taste were, as far as could be ascertained, about normal.

Their powers of observation, attention, and memory were fairly good.

They were affectionate, but shy, and, as a rule, rather sulky and obstinate if annoyed.

CASE F. B.—*History of Patient*.—She was born at Marcham, Berks, 5th August, 1875 (now 19 years of age).

She is the second born child. She was born at full time and normally, but the labour was more difficult than with the first child, and was rather protracted. No instruments were used, and the child was not asphyxiated when born, nor was it convulsed soon after birth. She has had some convulsions during attacks of bronchitis, between her 5th and 10th years.

She did not begin to walk till about five years, and talking was not attempted till about three years of age.

The mental deficiency did not begin to be noticed till about five

1887

1888

1889

1890

1891

1892

1893

1894

years, as she was a very fine baby and seemed quite right, except for the late walking and talking.

Family History of Patient.—The father is now aged 62, and is a native of Chester. He is a fine healthy man over six feet in height, and has been a gentleman's servant. He is normal in intelligence, is temperate; was not related by blood to his wife, nor is there any history of consanguineous marriage on either side.

There is no history of hereditary disease in his family, nor in that of his wife. No goitre; no nervous diseases.

The mother is a fine, healthy, intelligent woman, now aged 50. She is considerably over the average in height and physique, and is not neurotic. She says, however, that she was much worried and depressed during her pregnancy with the patient, through money losses.

MEASUREMENTS (F. B.)			
Date.	Age.	Height. Inches.	Weight. lbs.
1892, August ...	17	44	65
1893, August ...	18	44	73
September	Treatment commenced.		
October ...	—	—	69
1894, January ...	19	46	65
March ...	—	46½	70
July ...	—	47	76
		August, 1893.	July, 1894.
		Inches.	Inches.
Girth of Body round Navel..		28	26½
" " Mammæ...		28½	28

HEAD MEASUREMENTS (F. B.)			Inches.
Circumference ...	Above ears and over occipital tuberosity ...		20
Transverse ...	(a) Tape measure		12½
	(b) Calliper measure from ear to ear over vertex		4½
Longitudinal...	(a) Tape measure		12
	(b) Calliper measure from nasal notch to occipital tuberosity		7
Width of Forehead			5
Width between inner Canthi of Eyes			1½
" " outer " " 			3½
Cephalic Index			79.3
Shape of Head—Brachycephalic.			

Note, Nov., 1894.—This patient went to her home in Chester on August 6th, 1894, for a month's holiday. On September 2nd her father wrote to say that they would not send her back to the asylum as they thought she was too intelligent to be among our inmates.

CASE S. E.—History of Patient.—She was born at Huddersfield 11th January, 1877 (now 17 years of age).

She is the first-born child of the family, and was born at full time and normally. Labour was not protracted, nor were instruments used. She was not asphyxiated after birth, nor has she ever had any kind of fit.

Began to attempt to walk at about three years; she had a fall down some cellar steps when two years old, which kept her back. She did not begin to talk till about seven years of age.

Her mother says she noticed some mental deficiency in the child from birth, and attributed it to being frightened during pregnancy by seeing a young man, an idiot, who lived next door, in epileptic fits.

Family History of Patient.—Her father, now aged 52, is a coal-miner, living at present at Barnsley.

He is a healthy and intelligent man. Has always been temperate. No history of insanity or phthisis in his family.

Her mother is aged 52; is healthy and intelligent, and has always been temperate. No history of insanity or of phthisis in her family.

The father and mother were not related by blood, nor is there any history of consanguineous marriages in either of their families.

There are two sisters younger than the patient, both healthy and intelligent.

HEAD MEASUREMENTS (S. E.)			
		1888. Inches.	1894. Inches.
Circumference	Above ears and over occipital tuberosity ...	20½	21
Transverse	(a) Tape measure ...	11½	12½
	(b) Calliper measure from ear to ear over vertex	5.5	5.65
Longitudinal.....	(a) Tape measure ...	12½	12½
	(b) Calliper measure from nasal notch to occipital tuberosity ...	7½	7½
Width of Forehead		4	4½
Width between inner Canthi of Eyes			1½
" " outer " 			3½
Cephalic Index			77.9
Shape of Head—Brachycephalic			

MEASUREMENTS (S. E.)			
Date.	Age.	Height. Inches.	Weight. lbs.
1884, February	7	33½	—
1889, July	11	41	48
1892, April	15	44	54
1893, March	Treatment commenced.		
April	16	44½	53½
1894, July	17	46½	58½
October	—	49	66
		March, 1893.	July, 1894.
		Inches.	Inches.
Girth of body round Navel ...		23½	23½
„ „ Mammæ...		23½	24½

CASE A. W.—*History of Patient*.—She was born 18th November, 1878, at Rochdale (now 15½ years).

She is the third-born child, and was born at full time and normally. Labour was not protracted nor difficult. No instruments were used. She was not asphyxiated when born, nor was she convulsed soon after birth. She has never had any kind of fit. Began to walk at about 12 months; was about six to seven years old before she commenced to talk. Her mental deficiency began to be noticed at about one year. Her mother attributed it to fretting during her pregnancy with patient, owing to the eldest daughter being “sent away.”

Family History of Patient.—Her father, now aged 56, is a coal-miner, living in Rochdale; is a strong and apparently healthy man, but is intemperate. His niece has epileptic fits, but is at work.

The patient's mother is a strong, temperate woman, aged 44, who had an aunt insane for 20 years. There is no his-

tory of consanguineous marriages in the family. No history of phthisis.

The eldest sister of patient died in Whittingham Asylum in 1893, aged about 20. She is said to have had epileptic fits after about two years of age, due to having been bitten by a dog.

There are four younger children in the family, three girls and one boy; normal in physical and mental condition.

HEAD MEASUREMENTS (A. W.)			Inches.
Circumference ...	Above ears and over occipital tuberosity ...		21
Transverse ...	(a) Tape measure ...		12½
	(b) Calliper measure from ear to ear over vertex ...		4½
Longitudinal ...	(a) Tape measure ...		13½
	(b) Calliper measure from nasal notch to occipital tuberosity ...		7½
Width of Forehead ...			5
Width between inner Canthi of Eyes ...			1½
" " outer " " ...			3½
Cephalic Index ...			73.4
Shape of Head—Dolichocephalic.			

CASE D. B.—History of Patient.—The patient was born on June 24th, 1884. He is the fourth-born child. His eldest brother, aged 14, is also a cretin. A healthy brother and sister were born between the patient and his eldest brother. There are five brothers and sisters healthy and normal, physically and mentally. D. B. was born at full time and normally; labour was protracted. No instruments were used, and he was not asphyxiated when born. He was not convulsed soon after birth, nor has he ever had any kind of fit. He is said to have been bright as an infant, and cut his first teeth early. His mental deficiency began to be noticed at about two years of age. He did not begin to walk till about 2½ years. He has had measles, whooping cough, and diphtheria.

Family History of Patient.—His father, aged 45, is a fish salesman in Manchester. He is temperate and is an intelligent man. He is stout and measures about 5ft. 6in. in height. Is subject to asthma, as was his (the father's) mother. There is no history of intemperance in his family. The patient's mother is aged 35. She is temperate and an intelligent but very neurotic woman, and inclined to be delicate. Her father was intemperate, and died at the age of 44, of phthisis. There is no further history of intemperance in her family. The father and mother of the patient were not related, and there is no history of consanguineous marriages in their families. There is no history of insanity on either side.

Note, Nov., 1894.—The boy D. B. went to his home in Manchester on Aug. 6th, 1894, for a month's holiday, which was extended on account of infection in the house. On Oct. 23rd, 1894, his mother wrote to say they had now made up their minds to keep him at home, "as he has come on better than we expected when he first went to the asylum, and he is getting on splendid at home, now he goes to school regular weekdays and Sundays, and also to church, and he has brightened up wonderful, and he knows several tunes of songs and hymns that he hears at school and church, and he knows the chorus of 'Daisy Bell.' He is two inches taller and is half a pound heavier than when he came home."

Through the kindness of Dr. R. Turner, of York, I am permitted to make use of his notes on the blood of two of the cases (females) of cretinism mentioned in this paper, the examination having been made by Dr. Cattley, of York, on some blood he took from the patients in the Royal Albert Asylum.

Dr. Turner says (in his paper on "Cretinism and Myxœdema," read before the York Medical Society, October, 1893). "It is an interesting fact to note that the pathological changes in the blood in cretinism are identical with the pathological changes in myxœdema. Apart from the diminution in the red cell element and an increase in the leucocytes the two principal and characteristic features are the following:—

I. *The Presence of Marrow Cells in the Blood.*—These cells are large, and stain a light Cambridge blue with hæmatoxylin, but are not in any way affected with eosin.

The nucleus of the cell is only of a slightly deeper colour than the protoplasm, and it is quite unlike the violet tint of the multinucleated cells. The nucleus is generally identical on one side.

II. *The Large Number of Eosinophile Cells.*—In these the nucleus has the same blue tint that we find in the nucleus of the marrow cells, but the protoplasm contains numbers of bright spherical refracting granules which stain with eosin.

Each of these patients has been under treatment for different periods, and are all at present taking one 5gr. tabloid (Burroughs and Wellcome) daily at dinner time.

The improvement is well marked in each. The chief effects of the treatment may be summed up as follows:—

Almost after the first dose the temperature began to rise, gradually approaching the normal as treatment was continued.

At about two to three weeks the skin began to desquamate, chiefly on the hands, feet, and face, and to assume a more normal tint and feel; it lost its dry, rough, waxy appearance, and perspiration became perceptible.

The myxœdematous condition of the subcutaneous tissues began to subside, and the outline of the features became more defined and sharp. The abdomen became less protuberant, the hands and feet less thick and spade-like, and there was a general loss of weight, which, if the dose of thyroid was excessive, verged on a state of emaciation, the ribs becoming visible and the general nutrition evidently impaired. If, however, the dose was kept at a minimum the general muscular nutrition seemed to improve, and the previous loss of weight to be again made up by healthy tissue. A comparatively rapid increase in height commenced, and the previously delayed second dentition began to appear. The cutaneous sensibility became more near the normal, and the marked constipation gave place to a more healthy regularity. In the two cases where an umbilical hernia was present it became almost imperceptible.

After about two or three weeks' treatment a gradual change became noticeable in their temperament and manners; the phlegmatic state gave place to a spontaneous activity, their expression became more lively and intelligent. They became playful and even mischievous, and were constantly in motion, and the sulkiness of temper and disinclination to be amused passed off.

In the course of the treatment of these cases I had occasion to suspend the administration of the thyroid for several months. During this time I found that the patients slowly and gradually reverted to their former condition of mind and body, but this lapse was much more gradual than their former improvement had been. I should say that the deterioration occupied more than twice the length of time which was needed for the improvement.

The two conditions—the temperature at night, together with the state of general nutrition—afford a useful guide as to when a sufficient dose of the thyroid is being administered. If the temperature can be kept at about 97·5 to 98

Fah., and at the same time no emaciation is set up, the physiologically useful dose has been gauged. But if flesh is steadily lost and any degree of emaciation is set up, the dose should be diminished, even if the temperature should still remain considerably below normal.

In commencing treatment it is well to begin with a small dose—say 3grs. a day—and to increase it gradually to five or more grains, according to the effect produced.

If a large initial dose is given symptoms of great depression may show themselves—vomiting, headache, cold sweats, fall of temperature, followed by rise to 103 Fah. or higher, and signs of heart failure.

Judging from the different degrees of improvement in these cases, and in others that have been published, I think the conclusion that “in cases of equal degree the younger we can commence treatment the greater will be the improvement” is borne out.

And one is led to the speculation whether if we could detect a case of sporadic cretinism or cretinoid imbecility in its very early stage, when the child was in its infancy and before its mental and physical constitution had become impressed with the, I fear, not entirely eradicable stamp of the disease: whether in this early stage, if treatment were commenced and the physiological defect supplied by thyroid administration, the child might not grow up in an almost normal condition of mind and body. This early detection and treatment of the disease rests largely with the family doctor, as the parents are not so likely to notice or acknowledge the gradually increasing mental deficiency of their child, and the cretinoid condition is probably well-established before the case is brought for special care.

This form of imbecility certainly appears to be the one which offers the most hope of improvement from early and continuous medical treatment, apart from special training.

*A Case of Remarkable Morbid Sensory Phenomena of an Explosive or Epileptiform Character, the result of Old Injuries to the Head.** By Dr. DRAPES, Medical Superintendent of the Enniscorthy District Asylum.

W. C., æt. 65, was admitted into the Enniscorthy Asylum on 7th March, 1890, said to be suffering from chronic mania, believed to be the result of injuries to the head. His career was interesting from other points of view besides the medical. Commencing life as a bare-footed lad in a little village on the Wexford coast, and showing, I presume, some talent and intelligence, he was taken up by a nobleman in the neighbourhood, given some education and sent to sea. Within 13 years he was commander of a ship in the merchant service, where he achieved rapid promotion, and being an able captain and skilful navigator, he was employed by the British Government to bring out troops both to the Crimea and to India during the Mutiny, where he was a witness of many stirring scenes. Having retired from active seafaring he was made a surveyor of ships in Liverpool. Some seven or eight years previous to his admission, when inspecting a ship, he met with a terrible accident, having fallen several feet down a hatchway on his head, and was taken up unconscious and to all appearance dead. He recovered, however, after some months, but from that time he began to develop some extraordinary notions and eccentricities of conduct, squandered some £2,000 or £3,000 he had saved, and took to drink. Finally, when he had reduced himself to an almost penniless condition, some of his extravagant freaks brought him under the notice of the police, by whom he was arrested, and subsequently sentenced to a short period of imprisonment in Wexford Gaol, from whence he was transferred to the asylum as insane.

He was a fine, stalwart-looking man, of commanding presence, well dressed in frock coat and tall hat. He was brought here under the impression that it was the residence of a gentleman with whom he was acquainted, and when he discovered that he was lodged in an asylum his indignation knew no bounds, and when I went into the division shortly after his admission I learned that he had been acting with violence as soon as he realized his position, smashing the flowers in the windows, trying to break the windows themselves, and striking out right and left at the attendants, three or four of whom who were around him he was keeping at bay in a towering passion. Sitting down on the table beside him I chatted quietly to him, and in a very few minutes he quieted down and became as docile as a little child.

* Paper read at the Irish Divisional Meeting held in Cork, October, 1894.

He flared up again in another little tempest of passion when I was obliged to refuse his demand to go to Dublin that night on law business, but soon became friendly again, said he would not leave now if I gave him £1,000, offered me presents, such as a Russian spaniel, foreign beetles for brooches, and so on. I mention this little incident as characteristic of his natural disposition, which underwent no change during the maniacal stage of his insanity. During his wildest paroxysms of frenzy, when he presented a typical appearance of the "strong man in his wrath," he could always be approached with impunity, and even when "breathing out threatenings and slaughter," as he often afterwards did, standing in the midst of a pile of wreckage, a very genius of destructiveness, he was always ready to assume an amicable attitude if kindly addressed, and beneath his fierce exterior there was always evident a strange undercurrent of gentleness and courtesy. It will suffice to mention that for about a year after his admission he continued in a highly maniacal condition, the subject of many delusions, and some grandiose ideas such as are characteristic of general paralysis, and was, without exception, the most destructive patient I have ever had to deal with during my asylum experience. Strong new blankets were torn to tatters like so much paper, his bedstead was used as a battering ram against the door of his room, and when it was removed and a bed on the floor substituted he stripped the plaster off the walls with his hands, tore off the jambs of the door, the window-frame, and even the bricks; and when eventually he had to be put in a camisole, he used to cut it through in an amazingly short time by persistent friction against the wall, and usually at my nightly visit he was enveloped in a dense atmosphere of lime dust enough to smother any ordinary mortal. Sedatives had but little effect; he could not be got to take any medicine by mouth, and even hypodermics in full doses failed, though possibly in heroic doses they might have succeeded. There was a method in his madness, as, being firmly convinced that he was illegally detained, he was determined to do as much injury as he could, and even, Samson-like, pull the house down about his ears in order to effect his liberation.

After about a year he began to become more tranquil, and in July, 1891, he worked for a few weeks on the farm, and acted quite sensibly, and as the attendants, with whom he was very popular, said, "like a gentleman." He was always in the highest spirits and full of drollery and *bonhomie*. In August he took to bed, complaining of pains and soreness through him, especially down left side and epigastrium, with uneasiness and throbbing in the head, which felt hot, but there was no fever, and the pulse during the attack kept nearly constant at 46 per minute. In about a fortnight he was up, but giddiness persisted, and was so bad at times that he had to catch something to prevent his falling. His

head was blistered, which seemed to relieve the vertigo, and he was treated with Parrish's and Fellowes' syrup with small doses of arsenic. He became, however, profoundly depressed, and told me that he felt at times an impulse to self-destruction. I had him, therefore, kept confined to the house and the airing courts, so as to be under constant supervision. On 5th October, however, he made a desperate attempt to commit suicide, in which he nearly succeeded, having cut his throat with a piece of a wall-hook, which had been sharpened to a chisel-shaped edge, and which he told me afterwards another patient had supplied him with. I was with him within a very few minutes of the occurrence, which took place in the W.C., and found him almost moribund from the profuse hæmorrhage, quite unconscious, and with flickering pulse. Reaction did not set in for five hours, during which restorative measures were unceasingly applied, with the result that at last heat returned, and soon after consciousness. The wound healed in a fortnight, and on one day only, the sixth after the injury, was there any febrile disturbance, the temperature having risen rather suddenly to 103.5° , there being at the same time great throbbing and headache at left side of his head, which was relieved by a full dose of bromide. About a month after he had another febrile attack for one day, accompanied with distressing hallucinations, thought he was in India and Australia, saw all sorts of things pass before him, and incidents in which he was taking part himself, but still he was quite conscious that they were hallucinations and the coinage of his own brain. The remembrance of his own act also probably haunted him, as on the following day, when I asked him had he felt anything unpleasant, his face writhed with an expression of horror and disgust, as he shudderingly repeated the words, "Blood! blood!"

From that time till now (Oct., 1894), a period of three years, he has been to all intents and purposes quite sane. He continued very depressed for some time, cheering up at times, at others feeling the suicidal impulse again possessing him. But in his case it could hardly be called an insane impulse. It had a rational basis. The madness and frenzy had gone, and he now for the first time realized his position, a mournful one in the last degree; homeless, friendless, penniless, with nothing to look forward to but a hopeless future, death naturally would seem to him but a welcome deliverer. During his convalescence he for the first time told me of a symptom he had suffered from for years past, in fact it dated from very shortly after his fall. This was the sensation of a flash of light, followed immediately by a loud report in the left side of his head, as if a gun was discharged there; this was accompanied by a feeling of giddiness, with tendency to fall backwards, and he stated that he often did fall, but though everything swam round him, and he felt for a few moments in a condition bordering on oblivion, he did not think

that he ever actually became unconscious. The vertigo he always localized in the left side of his head, and with it was often associated double vision and nausea.

He was a good deal confined to bed for some months, any attempt to get up bringing on the giddiness. During the summer of 1892 he improved very slowly, and was able to walk about the grounds and read a little, but the head attacks have continued ever since up to the present date, and have rather increased in frequency during the past year, occurring about every ten days on an average. The order of events is as follows:—The first signal of the oncoming attack is a swelling of the right hand, followed by cramps and twitchings, with a feeling of numbness. The three inner fingers flex, or rather twist inwards towards the palm, and the hand turns outwards in the direction of supination. The cramps then generally extend up the forearm. Sometimes they commence in the calf of the right leg, and—though not invariably—extend from that up to the thigh, when the pain is “frightful.” The cramps may occur in the upper or lower extremity alone, or in both, one, usually the leg, preceding the other. Some vertigo may accompany these initial symptoms. After a variable interval of some hours, or perhaps a couple of days, the explosive phenomena occur. He hears a ringing in his left ear, “just like a bell,” sees a brilliant flash of light “as if the whole room was in flame,” and hears a tremendous report as if a gun was fired within his head; he feels at the same time intense giddiness and nausea, and, if out of bed at the time, has the tendency to fall backwards as previously mentioned. He may have only a single “shot” in an attack, more often two or three occur. They are followed by great prostration with profound depression, photophobia with congested conjunctivæ and “ferrety” look of the eye, and vivid hallucinations of vision chiefly referring to scenes he has gone through, and almost invariably of a horrifying character, such as bloody incidents recalling his Indian and Crimean experiences, or the room may be full of floating corpses with dogs gnawing them, and similar revolting subjects. He is always perfectly aware that they are hallucinations, but they are none the less horrible, and are seen even with his eyes open in their—to him—naked reality. During the attacks he eats almost absolutely nothing, and sleeps more. Insomnia is a frequent occurrence even during the intervals of the attacks, and he at all times gets very little sleep, and that of a dreamy, uncomfortable sort, so that he often says he does not know whether he is awake or asleep. Darts of pain through the left side of his head occasionally occur, and sometimes very severe pain in the præcordial region lasting for some hours. Morphia injections always make his head worse; bromide relieves to some extent, and so does antipyrin, but the result of medicinal treatment has been on the whole discouraging. His gait is now quite feeble, and he looks a

mere wreck of his former self, though he keeps up his flesh fairly.

There is a scar of an old injury over the left brow, and a long shallow linear depression running in a curve along the left parietal bone, about an inch above the eminence, and terminating about the centre of the coronal suture. He states that neither of these was due to the fall, but to blows of stones which were given by land-leaguers who attacked him in his house on one occasion. This I have not been able absolutely to verify, although I have heard persons who knew him say they believed he had been attacked in this way. The fundi of both eyes are normal, and there is no evidence of organic disease of any organ. The temperature is, as a rule, subnormal, and the pulse sluggish and slow. During the attacks the temperature averages 96.6° to 97.6° , and the pulse 48 to 54.

This is in some respects a remarkable case. On the mental side the great, almost violent, transition from a protracted highly maniacal condition, with exalted ideas, and the wildest and most fantastic conduct, to one of the profoundest depression, culminating in the suicidal attempt, is not, I think, a very common occurrence; although for the reasons stated there is some doubt whether the depression was of the nature of a true melancholia, an insanity in fact, or rather, as I am inclined to think, a natural despondency, the result of returning sanity and realization of his unhappy position. That this latter view is a reasonable one is borne out by the fact that since the crisis, notwithstanding his sufferings and hallucinations, he has continued quite rational in his conduct and conversation. His mental symptoms have, in fact, been replaced by more purely physical ones, the principal of which form an aggregate which has all the characters of an epileptiform paroxysm chiefly of sensory centres, the motor symptoms, although primary in point of time, being subordinate in intensity to the sensory ones. The motor symptoms, which are limited to cramp in three fingers and the calf of the leg, sometimes occur alone, without being followed by the explosive phenomena. It is not improbable, therefore, that there are two "discharging lesions," one of small area in the ascending parietal convolution where finger movements are represented, the other of wider extent in the adjacent supra-marginal lobule, and superior temporo-sphenoidal convolution where the visual and auditory centres are located. The long depression over the left parietal region would

denote an injury not unlikely to give rise to brain mischief capable of originating the morbid manifestations, and the question of trephining of course suggests itself. But it is doubtful, even if his broken condition admitted of his undergoing an operation, whether good would be effected without the removal of an extensive area of bone, and one would feel some hesitation about subjecting a feeble patient to such a risky proceeding. His mental condition during the paroxysm is peculiar. It corresponds very closely to the "dreamy state" of Hughlings Jackson, but much more protracted than usual. In effect, without actual loss of consciousness there is some defect of consciousness analogous to what occurs in sleep with dreaming, or in this instance probably corresponding more nearly to the condition of a person just falling asleep, and would indicate, in Jackson's phraseology, a dissolution of the topmost layer, as it were, of the highest centres with hyper-physiological activity of the subordinate layers. And the patient's statement that during his hallucinations he cannot say at times whether he is awake or asleep would seem to bear out this view. The "weakness" and great prostration following the attack are strictly analogous to the transient paralysis following epileptiform convulsions, a definite paresis being evidenced in the accompanying diplopia, which, as well probably as the vertigo and nausea, depends on a certain amount of ocular paralysis. It is not unlikely that eventually a greater depth of dissolution may be reached, with general convulsions and coma.

Trophic Intestinal Affections in the Insane. (With cases.) By THOMAS PHILIP COWEN, M.D., B.S.Lond., Assistant Medical Officer, County Asylum, Prestwich, Manchester.

From time to time cases of diarrhœa arise in asylum practice which are not due to any specific cause.*

This "simple" diarrhœa usually occurs in one or other of the "Organic Psychoses" of Krafft Ebing ("Lehrbuch der Psy-

* Dr. Claye Shaw, in a very interesting paper in St. Bartholomew's Hospital Reports, 1880, has described certain non-specific intestinal lesions in the insane. He there mainly refers to the production of ulcerations from the effects of long continued constipation or accumulation of undigested matters from irregular action of the intestine, liver, and pancreas. The causative condition in these lesions is mainly distension, acting mechanically, and one which in the cases here recorded we have carefully excluded.

chiatric") and in general paralysis of the insane for the most part. It is of comparatively long duration and is very often fatal.

The autopsy reveals an enteritis or a colitis, or both combined, which is often ulcerative.

The causes of these intestinal affections are not at all evident; none of the ordinary causes are present. The clinical and pathological accounts are in all strikingly similar, and it is most probable that all these cases have a similar origin.

There are two varieties of this "simple diarrhœa," although the more serious one is probably only an advanced stage of the milder variety and not a distinct type.

Firstly.—A very watery alvine flux, very frequently repeated, without passage of blood or excess of mucus; usually without any pyrexia or marked general symptoms. This may be fatal, but is often recovered from. Obvious intestinal lesions are rarely observed.

Secondly.—A frequent diarrhœa, with vomiting, pain, often tenesmus, and with marked constitutional symptoms.

The stools often contain blood, and occasionally excess of mucus, slime, and sloughs.

This affection is usually fatal.

The autopsy shows an inflammatory affection of the ileum and colon, and often with marked ulceration of the mucous membrane.

We have had under our care in the asylum at Prestwich, Manchester, a fair number of such cases. During the last three years thirty-two cases have thus arisen which have proved fatal. (See Table.)

It will be seen from that table that the greater proportion of these cases occur in males, and in those suffering from general paralysis of the insane. The remainder occur in either stuporous melancholia or in dementia of an incurable type. Most of the cases occurring are of the second variety.

Clinical History (of the second type for the most part).—Twenty-two cases are in males, ten in females. The age varies from 26 to 68 years, but most of the patients are over 40.

The onset may be sudden or gradual, the mode of onset varying with the acuteness of the attack.

The duration of the illness varies from three days to as many months.

The symptoms vary somewhat with the situation and extent of the lesions.

Diarrhœa is usually the earliest and most striking symptom.

Vomiting occurs at times, but this is not invariable, being often absent.

Abdominal pain is a very variable quantity. Some patients appear to suffer a good deal of pain, but this is not common. The demented condition of most of the patients renders them less susceptible to, and less apt to complain of, pain.

Tenesmus is at times present, especially when the lower bowel is affected.

Distension of the abdomen occurs but rarely.

The stools are generally loose, small in quantity, but frequently passed. Blood is often found in the motions, mixed and unmixed, and, in fact, the colour of the stools depends on the presence or absence of blood.

An excess of mucus is at times seen.

Slime, shreds of tissue or sloughs occur at rare intervals. The stools have usually a very offensive odour.

Perforation, with resulting peritonitis, is not common.

Pyrexia is often absent; when it occurs it is moderate and is irregularly manifested.

A fatal result is the rule. A few cases do undoubtedly recover, after presenting marked and serious symptoms.

Pathological appearances found:—

Patchy congestion of ileum and colon...	...	...	...	3
Patchy congestion of ileum and colon and enlarged solitary follicles	...	...	...	3
Patchy congestion of ileum and colon and submucous hæmorrhages	...	...	...	1
Subacute enteritis	...	..	...	2
Acute enteritis and colitis	...	...	...	2
Follicular ulceration of the ileum	...	...	...	3
Follicular ulceration of the colon	...	...	...	4
Ulcerative enteritis (ileum)	...	...	...	3
Ulcerative colitis	...	...	...	7
Ulcerative enteritis and colitis	...	...	...	4

—
32

The amount and extent of the congestion of the mucous membrane is very variable. It usually affects both the small and the large intestine, but is more general in the ileum. The patches are small and discrete as a rule, but they may coalesce, forming largish areas of congestion. The colour varies from the bright hue of inflammation to the dull red of passive congestion.

If the congestion become extreme, there is a tendency for submucous hæmorrhages to occur.

One form of ulcer is probably formed by the abrasion of the already damaged mucous membrane superficial to one of these hæmorrhages.

The solitary follicles are very often enlarged. This condition is usually found in the colon, although it is by no means uncommon in the small intestine. Peyer's patches are rarely affected.

The follicles are swollen, softened, and there is a tendency to their disintegration and the formation of small rounded ulcers, each surrounded by a ring of congestion, leaving the neighbouring mucous membrane apparently healthy.

This follicular ulceration of the intestine is fairly common, seven out of the thirty-two cases showing this condition markedly.

In two cases perforation had occurred (Nos. 3 and 12); in both the ulceration was confined to the ileum. The ulcers had extended in depth, forming punched-out conical cavities, through the peritoneum forming the floor of which an opening had formed, with resulting peritonitis.

In the colon the follicular ulcers, while remaining of small size, showed much variety in their depth and often extended down to the peritoneal coat of the bowel. This was well seen in Case 8.

Follicular ulceration is, we are convinced, essentially different from the next form—ulcerative enteritis and colitis. This ulcerative process is more common than the follicular one. It is apparently *sui generis*. It is certainly not due to an extension from the former.

The ileum and lower part of the jejunum in the small, and the ascending and transverse colon in the large intestine, are the parts usually affected, but no part is exempt.

The mucous membrane of these parts is congested, swollen, and softened. Here and there, in a mild case, are irregular ulcerations, often with yellow sloughs adhering in parts. In a severe case the ulcers tend to run together so as to form an irregular network of ulceration, leaving islets of sodden and congested mucous membrane in their meshes. The ulcers are of various shapes and sizes. Their bases are but little thickened. The floor may be formed by submucous tissue, by muscle, or by subperitoneal tissue.

Perforation may occur, but in our experience is not common. The solitary follicles may be swollen, but are rarely ulcerated, and not seldom are normal in appearance where they can be distinguished. Peyer's glands are commonly unaffected, or but slightly swollen. The mesenteric glands are at times enlarged.

The acute inflammatory affections of the intestine present the usual appearances of an acute enteritis or a colitis.

The inflammation is often intense, and quite localized, but without any local causative condition within or without the bowel.

An intense phlegmonous enteritis may even thus arise without evident local cause. In the case described "in association with dorsal myelitis" the inflammation of the upper part of the rectum was most intense, the inner coats having sloughed out.

In a few cases evidence of diseased blood-vessels was found (atheroma), but whether this had any part in the degenerative process is doubtful.

Microscopically the usual signs of inflammation were present, but nothing specific could be made out.

The organisms present were those usually found in the intestine, but the bacillus coli communis was especially common. An inoculation of some of the contents of the gut on nutrient media often yielded an almost pure culture of this organism.

In all these cases there was a total absence of any specific disease. In fact, we have excluded all cases in the records in which there was the least suspicion of tubercle, typhoid fever, dysentery, Bright's disease, or syphilis.

These are the facts. How can they be explained? Writers on Medicine describe, but as a rarity, a simple ulcerative enteritis or colitis.

Fagge says, "Apart from typhoid fever and tubercle the small intestines are very little liable to serious primary diseases, and the jejunum particularly is remarkably exempt" (Fagge, "Medicine," third edition). Hale White ("Guy's Hospital Reports," 1888) describes a most interesting series of 29 cases of "Simple ulcerative colitis and other rare intestinal ulcers." He, however, throws no light on their origin, which he says is extremely obscure.

In asylum practice these simple ulcerations and inflammations are by no means infrequent. This is shown by the fact that in our practice during the last three years at the Prestwich Asylum, Manchester, thirty-two such simple uncomplicated cases have been examined post-mortem.

We venture, therefore, to put forward the proposition that these intestinal lesions form a part of the general degenerative process, and that they owe their origin to a nervous perversion. The only term that expresses this perverted nervous action is the rather vague one of a *trophic* or a *dystrophic* affection. The reasons for such an opinion are:—

1. The rarity of similar lesions in the sane.
2. The comparative frequency in the degenerative insane.
3. Negative evidence as to causation.
4. Their association with other trophic lesions.
5. The association of such lesions with diseases of the central nervous system.

The mental and nervous affections associated with these lesions are, as has been shown, of a markedly depressive or degenerative nature.

It is not at all unusual in the degenerate insane, and more especially in general paralytics of the insane, for trophic lesions to occur, such as—

Atrophies of skin, muscles, and bones.

Acute sloughings of tissues as seen in acute bed-sores and in the so-called "insane" abscesses.

Herpetic and bullous eruptions.

A peculiar low form of pneumonia, which is probably of nervous origin.

Acute cystitis of trophic origin.

Some of these lesions occur in the same patients in whom the intestinal affections arise later. In fact, one or other of these tropho-neuroses is always present. In one man trophic ulcers of the legs were present (Case 4).

Dr. Hale White ("Guy's Hospital Reports," 1888) describes a case of intense colitis associated with disease of the central nervous system (double descending lateral sclerosis).

Dr. Acland ("Pathological Soc. Transactions," London, 1885) "raises the question whether in diseases of the spinal cord we may not get an ulceration of the intestine comparable to other trophic lesions, such as an acute bed-sore."

He records two cases of disease of the spinal cord, in both of which small ulcers were found in various parts of the bowel.

Curiously enough, a short time ago a similar case occurred in this asylum. A localized phlegmonous inflammation of the large intestine arose in association with a transverse myelitis in the dorsal region (see notes). In this case there was no local cause for the affection of the gut, and the only explanation valid was that the lesion was a trophic one.

We may thus explain the causation of the two varieties of diarrhoea first described.

(1.) The watery alvine flux frequently seen in general paralytics is due apparently to centric irritation of the vagus nerve. Buzzard regards a similar condition met with in certain cases of tabes as dependent upon irritation of the vagal nucleus in the medulla ("Dis. of Nervous System"). Bevan Lewis says: "In these cases the flux is probably the result of paralysis of the splanchnics (the vaso-motor nerves of the intestines), and to the resulting transudation of fluid from the blood-vessels into the bowel with the accompanying increased peristalsis" ("Text Book of Mental Diseases"). This vaso-motor paralysis probably gives rise to the varying patchy congestions and hæmorrhages.

(2.) The ulcers found are very often of the round, punched-out appearance which is usually held to be of dystrophic origin, and seen *par excellence* in the gastric ulcer (*Cf.* "Ord, St. Thomas Hospital Reports," 1892). The other variety of ulceration as best seen in ulcerative colitis is probably due to the same influence. It is due to a further extension of irritation

of the nuclei in the medulla causing a trophic inflammation and ulceration of the intestine. The ulceration once started is probably extended by the influence of the intestinal microbes on tissues of lowered vitality and powers of resistance.

The bacillus coli communis is most potent for evil in this respect.

Subjoined is a summary of the fatal cases, with fuller reports of nine of the most typical cases.

In conclusion, the tropho-neurotic origin of these intestinal affections seems to us the only possible explanation of their occurrence in the present state of our knowledge.

Hitherto, little notice seems to have been taken of these neuropathic lesions. There are but few and scanty references to them in the journals and text books.

We think, therefore, that some description of these very interesting cases should be published, so that they may be more generally recognized and investigated.

CASES.

Phlegmonous Inflammation of the Large Intestine associated with Dorsal Myelitis.

C. G., aged 34, was admitted in 1886, suffering from acute mania. He never improved, but became after a while feeble-minded, retaining, however, a few fixed delusions. His bodily health remained good until March, 1892. He was then found to be suffering from a gradually increasing weakness of the legs. This weakness rapidly increased until he became almost completely paraplegic (both of sensation and of motion). Knee-jerks were absent. There was retention of urine and incontinence of fæces.

He complained of girdle pains at the level of the ninth dorsal vertebra.

Early in April, 1892, he began to suffer from vomiting, abdominal pain, and diarrhœa. There was no rise of temperature.

The stools contained blood, but the blood was unmixed with the fæces.

On April 20th he passed a cast of the intestine, two inches long, which was evidently the mucous membrane and part of the muscular wall of the gut. Examination per rectum was negative.

The diarrhœa persisted, but at intervals only.

Later he developed cystitis, with irregular rises of temperature. He had a small bed sore.

Death occurred from exhaustion on May 18th, 1892.

TROPIC INTestinal AFFECTIONS OF THE INSANE.

No. Sex.	Name.	Age.	Mental Disorder.	Intestinal Lesion.
1 M.	W. B.	66	Senile mania.	Patches of congestion throughout entire tract.
2 M.	J. H.	44	General paralysis.	Patchy congestion of colon. Solitary follicles enlarged.
3* M.	W. H. S.	50	" "	Follicular ulceration of ileum. Perforation.
4 M.	A. E.	37	Chronic mania.	Patchy congestion of colon with superficial ulceration.
5* M.	J. M.	34	General paralysis.	Patchy congestion of ileum and colon with submucous hæmorrhages.
6* M.	T. P.	57	" "	Ulcerative colitis.
7* M.	J. C.	55	" "	Catarrhal enteritis.
8* M.	J. B.	47	" "	Follicular ulceration of the colon.
9 M.	H. F.	34	" "	Patchy congestion of ileum. Follicles enlarged.
10 M.	R. J.	26	Epileptic dementia.	Follicular ulceration of colon.
11 M.	J. B. T.	43	General paralysis.	Ulcerative colitis. Submucous hæmorrhages.
12 M.	T. W.	6	Chronic melancholia.	Punched out round ulcer in ileum which had perforated. Ulcerative colitis.
13 M.	W. C.	43	General paralysis.	Patchy congestion of ileum and colon.
14 M.	J. H. C.	43	" "	Patchy congestion of ileum. Ulcerative colitis.
15 M.	W. L.	51	Chronic mania with dementia.	Patchy congestion of ileum. Ulcerative colitis (superficial and deep rounded ulcers).
16 M.	J. R.	48	General paralysis.	Patchy congestion with superficial ulceration of ileum.
17 M.	A. E.	63	Secondary dementia.	Ulcerative enteritis and colitis. Follicles enlarged.
18 M.	J. S.	3	General paralysis.	Ulcerative enteritis. Follicles enlarged.
19 M.	R. B.	40	" "	Ulcerative enteritis. Congestion of colon.
20 M.	J. B.	50	" "	Patchy congestion of colon. Enlarged follicles.
21 M.	E. S.	49	" "	Follicular ulceration of colon. Congestion of ileum.
22* M.	E. J.	54	Melancholia attonita.	Ulcerative enteritis and colitis.
23 F.	F. S.	34	" "	Subacute enteritis. Submucous hæmorrhages.
24 F.	C. W.	29	" "	Follicular enteritis.
25* F.	A. H.	28	General paralysis.	Ulcerative colitis.
26* F.	E. A.	35	" "	Patchy congestion of ileum. Ulcerative colitis.
27 F.	M. N.	28	" "	Patchy congestion of ileum and colon.
28 F.	S. D.	50	Acute melancholia, chronic stupor.	Enteritis and colitis. Enlarged follicles.
29 F.	A. W.	46	Chronic melancholia.	Inflammation of ileum and ascending colon.
30 F.	C. A. R.	38	Epileptic dementia.	Patchy congestion. Superficial ulceration of ileum.
31 F.	A. G.	40	Secondary dementia.	Ulcerative enteritis and colitis.
32 F.	M. R.	50	Chronic melancholia.	Ulcerative colitis.

The cases marked * are described more fully.

The autopsy showed a transverse myelitis at the level of the eighth and ninth dorsal vertebræ, with a localized spinal meningitis. There was thickening and roughening of the vertebræ at this level, but no definite tubercular lesion existed.

Evidences of old tubercle were found at apex of the left lung.

Cystitis and pyelitis with commencing abscesses in kidneys were present.

There was an intense, but limited, proctitis affecting the middle part of the rectum. The inner coats had sloughed away, leaving a rough shreddy surface. No evidences of any local origin of this rectal affection were found. The rest of the bowel appeared to be healthy. The intestines were moderately distended.

CASE 3.—Follicular Ulceration of Ileum in a General Paralytic.—W. H. S., aged 50, was admitted April 11th, 1892. He was then in the second stage of general paralysis. He had already become demented, but still retained some of his old exalted delusions. His muscular power was feeble and his muscles were shrunken. Skin greasy and shiny. Wet in his habits.

May 5th.—He was found to have slight right hemiplegia, which passed away in a few days.

July 8th.—He complained of abdominal pain and tenderness about the umbilical region. He vomited several times, and was evidently very ill. Slight looseness of the bowels. There had been constipation previously for a few days. The temperature normal. Stools were dark coloured, but did not contain blood.

July 9th.—“The vomiting and abdominal pain continues.” There is dulness on percussion in left iliac fossa. Marked tenderness of abdomen, which is slightly tympanitic. Stools are liquid, but do not contain blood or slime. Temperature sub-normal. There is evidently peritonitis.

July 10th.—He died collapsed early this morning. The autopsy showed marked congestion of the mucous membrane of the last four feet of the ileum. The solitary follicles were enlarged, and in a few ulceration had begun. Six rounded punched out ulcers were found in the above area, and in two cases perforation had occurred, with resulting peritonitis.

No other lesion was discoverable, no tubercle or other specific disease.

CASE 5.—Patchy Congestion of Ileum and Colon, with Hemorrhages, in a General Paralytic.—J. M., aged 34, was admitted March 19th, 1892, suffering from general paralysis of the insane in the second stage. He presented the usual physical signs of that disease. Mentally he was demented, irritable and childish. He rapidly got worse, and was bedridden in the course of the next six months. At times he suffered from looseness of the bowels, alternating with constipation. Towards the end the diarrhœa became more marked. The stools were yellow and liquid, but never contained blood.

Signs of hypostatic pneumonia developed during the last week. He died from exhaustion on September 7th, 1892.

The autopsy showed marked patchy congestion of the ileum and colon, with submucous hæmorrhages. The solitary follicles were not enlarged. There was no ulceration of the intestine. No evidences of tubercle.

The lungs showed hypostatic congestion at the bases.

CASE 6.—*Ulcerative Colitis, with General Paralysis of the Insane.*—Thomas P., aged 57, was admitted October 25th, 1892, suffering from general paralysis of the insane, with exaltation. The case was a typical one in onset and course. The only symptom of intestinal trouble was the occurrence of rather severe diarrhœa, from which he suffered off and on during the last month of his life. The stools were watery, pale yellow, and did not contain blood or mucus. There was no vomiting. No pyrexia.

Treatment proved of no avail.

He died exhausted about three months after admission. The autopsy showed the usual changes in the nervous system found in general paralysis. Slight hypostatic pneumonia of the lungs. Marked atheroma of arteries.

The mucous membrane of the descending colon and sigmoid flexure showed several very congested and inflamed patches. Towards the centres of these patches, which were of limited extent, the surface of the mucous membrane was abraded, leaving small shallow ulcers. The solitary follicles were enlarged, but none showed any ulceration. There was some thickening of the wall of the gut opposite to these patches. No distension of the bowel.

The small intestine appeared to be normal.

CASE 7.—*Catarrhal Enteritis in a General Paralytic.*—James C., aged 55, was admitted October 31st, 1892, suffering from general paralysis of the insane, with melancholia. He had marked delusions of obstruction of the bowels, and was at one time very suicidal. About a week before his death he began to suffer from diarrhœa. He did not complain of pain, but there was some tenderness over the lower part of the abdomen. No vomiting occurred. There was moderate fever, the temperature rising and falling irregularly, but did not rise higher than 102°. He died rather suddenly in a kind of faint. The stools were loose yellow, and contained much mucus, but not blood.

At the autopsy patchy congestion of the lower part of the ileum and cæcum was found. The congested surfaces were rough and granular, but showed no definite ulceration.

The solitary follicles were not affected.

CASE 8.—*Follicular Ulceration of the Colon in a General Paralytic.*—James B., aged 47, was admitted December 8th, 1892, suffering from general paralysis with delusions of exaltation. He presented the usual symptoms of that disease, which ran its usual course until the onset of intestinal troubles.

He began to have diarrhoea on March 7th, 1893, accompanied with vomiting and pyrexia. The temperature rose to 103·6°. There was some pain in the abdomen, which was at first "board-like," but without tenderness. The stools were liquid, yellow, and very offensive. During the next week the pyrexia continued, the temperature varying from 99° in the morning to 102° in the evening. The diarrhoea continued, the bowels acting very frequently. There was no marked tenesmus. Stools were yellow, almost "pea-soup like," and at times contained shreds of tissue and blood. There was occasional vomiting. The abdomen towards the last became distended and tympanitic, with tenderness over the left side of the abdomen. Treatment was useless. Death occurred from exhaustion on March 12th, 1893.

The autopsy showed extensive changes in the large intestine, the whole of the colon and part of its sigmoid flexure being affected. There was much congestion of the mucous membrane in patches. The solitary follicles were greatly swollen, and many of them presented punched-out ulcers. In some the ulcerative process had only just begun, but in others the ulcers had nearly extended to the peritoneal surface of the bowel. None had actually perforated. The mucous membrane between the ulcers was darkly congested and superficially abraded. The wall of the bowel was distinctly thickened.

The small intestine appeared to be normal.

The brain showed the marked changes found in general paralysis. Marked atheroma of the large vessels. Considerable emphysema of lungs.

CASE 22.—*Ulcerative Enteritis and Colitis in a case of Melancholia with Stupor*.—E. J., aged 54, admitted December 11th, 1893. Died September 11th, 1894. He was a tall, stout, but unhealthy-looking man. He suffered from melancholia attonita. Used to sit in one position for hours, seeming quite crushed down by an overpowering weight of woe.

He remained in the same dull, stuporous condition during the remainder of his life. Often had to be fed with the stomach tube.

1894, September 4th.—There was slight pyrexia to-day. Diarrhoea set in, with some abdominal pain. No vomiting. Stools were loose, yellow, and did not contain blood, slime, or mucus.

September 5th.—Temperature a.m., 100°, p.m. 100·6°. He passes frequent, small, loose motions. Abdomen rather retracted. He does not complain of pain, but this is probably due to his stuporous state.

September 6th.—He is much the same. Moderate pyrexia. Diarrhoea continues. Tongue dry, brown, and cracked.

September 8th.—Streaks of blood and shreds of tissue were noticed in the stools to-day. Looseness of the bowels continues. He is getting weaker. No fresh physical signs.

The patient's condition steadily grew worse, the abdominal symptoms and diarrhœa persisting.

He died exhausted on September 11th, 1894.

The autopsy showed marked ulcerations of the lower part of the ileum and almost the whole length of the colon. The mucous membranes of ileum and colon were darkly congested, swollen, and superficially ulcerated. The solitary follicles were somewhat enlarged, but not ulcerated. Peyer's patches were unaffected. The ulceration of the ascending and transverse colon was most extensive, leaving here and there isolated patches of swollen and congested mucous membrane. The edges of the ulcers were sinuous, cleanly cut, and exposing in the floor muscular fibres. None had, however, perforated. The other organs were healthy. The liquid fœces in the intestine were yellow, blood-stained, and most offensive.

A growth was obtained from the intestine on agar-agar and on potato, which consisted of an almost pure culture of *B. coli communis*.

CASE 25.—*Ulcerative Colitis in a General Paralytic*.—Ada H., aged 28, was admitted July 7th, 1893, suffering from general paralysis with melancholic symptoms. She fancied that she had committed some dreadful crime and was eternally damned. Typical signs of general paralysis were present. Bodily health fair. On August 16th, 1893, vomiting and diarrhœa occurred for the first time. Pain in the abdomen, without tenderness or distension. The stools were loose, offensive, and contained a little blood. These symptoms persisted until the death of the patient, which occurred from exhaustion on August 24th, 1893. There was slight pyrexia on the last two days.

At the autopsy all the organs were found to be healthy except the colon. The brain presented the usual general paralytic changes.

There was marked congestion of the cœcum and ascending colon, with several superficial ulcers of irregular shape, but with curved margins and smooth base. Very little thickening. The solitary follicles were somewhat, but not markedly enlarged.

CASE 26.—*Ulcerative Colitis with General Paralysis of the Insane*.—Elizabeth A., aged 35 years, was admitted June 13th, 1893. She suffered from general paralysis with melancholia. She also had delusions of great sins having been committed by her, and of eternal perdition in consequence.

On October 22nd, 1893, she began to suffer from diarrhœa, which persisted for two months. There was no vomiting, and pain was rarely complained of. No abdominal distension. The temperature at times rose to 100°. The stools were loose, frequent, contained at times blood, but never slime or shreds of tissue. Death occurred from exhaustion on December 20th, 1893.

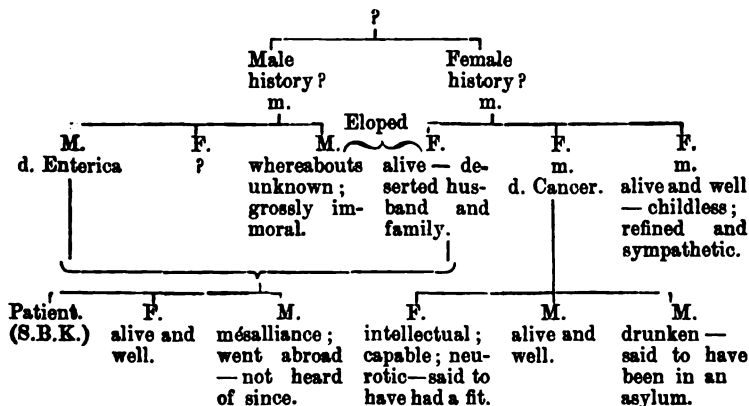
The autopsy showed patches of congestion in the lower part of

the ileum and a rather chronic colitis. The mucous membrane of the colon was softened, thickened, pulpy, and showed many superficial ulcerations. The bases of the ulcers were rather thickened, the floor ragged and uneven, and stained a dark yellow by adherent fæces.

Notes of a Case of Epilepsy with Aphasia. By FRANK HAY, M.B., Assistant Medical Officer, James Murray's Royal Asylum, Perth.*

S. B. K., male, single, aged 39, was admitted into James Murray's Royal Asylum on the 26th October, and died on the 26th April following.

The family tree, here appended, bears witness to a strong neurotic inheritance, with consanguinity of parents.



There is no trustworthy history of the patient's childhood, which was spent abroad; but it is evident, owing to the infidelity of the mother and the early death of the father, that he could not have had the careful nurture requisite for his unstable brain. However, he is said to have received a good average education.

Without regard to his special aptitudes, his guardian, the paternal grandfather, put him to the work that came nearest to hand—a clerkship.

The patient's natural disposition was quiet and reserved, highly sensitive, proud, and independent. His sane habits were steady, painstaking but slow, regular, methodical and punctilious. He was a member of the United Presbyterian Church.

He lodged alone, his sister having been adopted by a relative

* Paper read at the Scottish Division of the Association, held in Edinburgh, Nov. 8th, 1894.

who resided at a distance, a separation which he is said to have felt keenly.

The hygienic conditions under which he lived were of doubtful character, and within a short and recent period he passed through three attacks of influenza.

For some months previous to the onset of recognized insanity his employers had reason to be dissatisfied with his work, and his fellow-clerks asserted that he was slower of comprehension, slower in his movements, and, at times, decidedly "queer"—laughing foolishly.

About the beginning of October he could not sleep near a railway station, and left the lodging with which till then he had found no fault.

To his new landlady he complained of weakness, headache, depression, and a disinclination for work, but he went to the office regularly. She observed that his eyes rolled, and that he often put his hand to his head.

A friend who walked from church with him on the 8th October noticed that S. B. K. "looked about vacantly and seemed to be absent-minded." He also had difficulty in getting the right words to express himself, and tended to wander from the subject.

On Sunday, the 22nd October, he complained of indefinite bodily pains, and looked ill. Nevertheless he partook of a large breakfast and went to church. During the service he had what must have been an epileptic seizure, and was forthwith conveyed to a general hospital.

Here he seems to have passed into the *status epilepticus*, and for a while he was thought to be moribund, and his temperature rose to 103°. Subsequently it fell to normal, he recovered consciousness, became maniacal, and had to be removed. He was certified to be in a state of extreme excitement, with outbursts of violence and purposeless effort; to be irrational, incoherent and unintelligible, and giving evidence of delusions of suspicion.

At the examination on admission, on the evening of 26th October, he was found to be well developed and nourished, but his general condition was enfeebled. Height, 5ft. 11in.; weight, 10st. 8lb.; temperature, 97.6°.

There was no cardiac or pulmonary disease. The bowels were constipated. The urine was free from albumin and sugar, but had a heavy deposit of uric acid and urates. The genital organs were normal; no history or evidence of syphilis. No appreciable relative paresis, but the movements of the hands were clumsy and the gait lacked natural ease and precision. No muscular tremors. He was right-handed. Reflex action generally was normal, but the plantar reflexes were dull and the knee-jerks equal and exaggerated. Pupils unequal, the right being semi-dilated and reacting to light somewhat more slowly than the left, the reaction of which was apparently normal.

Sensation generally dull; no areas of hyper- or anæsthesia.

The sense of localizing touch and of appreciating heat and cold was unimpaired. The senses of smell, taste, and hearing were apparently normal. There was a disturbance of colour-vision, which proved to be transient. Tested with Holmgren's wools he mixed reds and violets, and for green selected colours of a yellow shade, principally yellowish-browns and broken-green. He soon began tossing about the wools, and the examination was discontinued. When a few days later it was resumed his colour-vision was apparently normal. The ophthalmoscope revealed a normal condition of the retina. [About two months afterwards Dr. McGillivray, of Dundee, verified this diagnosis.]

The mental disorder exhibited varying symptoms. Thus when first seen he was exalted with a sense of well-being, which made him excessively cordial, though irritability was easily provoked. Within a few hours he sank into a condition of apathy, arose from this to a state of excitability with delusions of suspicion, and then passed to an emotional phase, laughing and weeping without obvious cause. These features were not abruptly demarcated, and there was ample opportunity to study the aphasia uncomplicated.

Aphasia extended to all the methods of thought expression, and might conveniently be classified as a partial asemasia. Thus there was a marked impairment of the faculty of communicating thought by speech, an absence of the power of committing it to writing, and a limited range of intellectual pantomime.

He would mimic with facility complicated gestures that were familiar. Gestures less familiar were imitated with equal readiness, but not with equal accuracy. When asked to repeat an action unaided he failed to execute it. This may be ascribed to an advance of his natural slowness of comprehension and movement, but it was noted that while conscious of his inability to make himself understood by speech he did not resort to intelligent pantomime.

At this first examination, leaving out of account gestures of assent and dissent, though they were at times misapplied, he only twice employed intellectual pantomime, the meaning of which was intelligible. Once, to indicate the use of a pen, he moved the fingers of the right hand in a manner that remotely suggested writing. The other time he expressed his sense of comfort by a comprehensive sweep of the arms, accompanied by nodding and smiling, a gesture which, though appropriate, was exaggerated and clumsy.

There was no appreciable defect in the motor apparatus of speech. He frequently uttered clearly the subordinate words in a sentence (pronouns, adjectives, auxiliary verbs, adverbs, prepositions, and conjunctions), but was entirely at a loss to recall or give expression to the principal words. I am inclined to think that there was something more involved than the degree of

organization of the sign, for occasionally the same sign was or was not recalled, according to its relative importance.

The greater the psychical process the greater difficulty he had in expressing himself, and would ultimately utter a series of unsuggestive sounds. He was conscious of his disability, and at times attempted a circumlocution, only to become further involved. He was occasionally eager to make himself understood, but, as a rule, was indifferent.

He could not repeat words spoken to him. When assisted in his difficulties his face would brighten, and he would spontaneously repeat the sentence, and also repeat the error, sometimes modify it.

Asked, "Where have you come from?"

"From the Anwhether."

"Where?"

"Anwhether."

"You should say infirmary."

"Yes, from the Anwher."

"What is this?" (showing a fountain pen).

"A font wha-you-callen! A wha a ve it, forty. What you look at, fortify."

Analysing this answer one finds an attempt at the word fountain leading to disordered sound associations—font, forty, and fortify. An attempt at the stop-gap phrase "What you may call it!" then a sound which by a stretch of the imagination may be interpreted "What you write with," and lastly a successful circumlocution.

"It is a fountain pen?"

"Yes."

"A what?"

"Yes."

"A hat?"

"No."

"What is its use?"

"For-for-for-fuffuf" (sounds).

"Writing?"

"Yes."

It is noteworthy that, though the employment of sounds more or less suggestive was frequent, the paraphasia seldom extended to the substitution of a recognized word having no acoustic relation to the one which he struggled to utter.

Given a passage to read aloud, he accepted the task as one of no light responsibility, and evidently attempted to recall the meaning of each word before giving it utterance. As with speech proper, the principal words were involved, just the words that one would read in "skimming." These words, sometimes with preliminary hesitation, sometimes without, were omitted or substituted by meaningless sounds. On a second reading the same words were

stumbling blocks, but the omissions and substitutions often differed.

The subject of writing is deferred, as it is more convenient to consider the case in its proper sequence, and it was some time before he submitted to tests.

The post-paroxysmal state lasted for the succeeding three days. He was impulsive, irritable, highly suspicious, and having auditory and visual hallucinations and outbursts of maniacal excitement.

In the height of his excitement he spoke clearly and to the point, "I must go, let me out," etc., accompanying the words with appropriate gestures. As the excitement abated it was just possible to follow his speech, which rambled of love, of plots and conspiracies. It passed to disconnected words, and then, when the excitement ceased, to the condition already described. Even during excitement he never, to my knowledge, pronounced a proper noun. On one occasion such as the above, the excitement over, he said, "I must get back to my love, my dear love." This sentence is remarkable, though none of the terms are very concrete, and interesting, as being possibly a delayed response to the exaggerated stimuli during the excitement immediately preceding.

He was able to use interjectional phrases.

An interesting lapse of memory occurred during this period. On the morning of the 27th (the day after admission) he was in a dazed, somnolent state, in which he continued throughout the afternoon. Some of his relatives whom he had not seen for a long time, and never in the present surroundings, called at midday. They aroused him, and he recognizing them kissed them with much emotion. In the middle of their visit, which lasted five minutes, he was for a minute apparently asleep. That evening and for the next two days he invariably denied—with vehemence when questions were pushed—that anyone had visited him, and during a period of emotional excitement he said, "My friends will wonder where I am, they know nothing about me," or similar words. Yet on the 30th, by what association I was unable to elicit, the visit was recollected.

At this date he was quieter and less suspicious. His temperature, which had remained subnormal, returned to 98°4', and the inter-paroxysmal period was ushered in. It lasted for four weeks (*i.e.*, till the 28th November), though towards the end he showed signs of morbid irritability, had illusions of hearing, and a threatened return of former delusions.

One of the first signs of mental improvement was the recognition of the nature of his surroundings, which he styled "a kind of home." The use of such a word as home, and that in a specialized sense, was at the time unlooked for, and the example was isolated. The improvement, with certain transient remissions, was progressive, and he was able to arrange about the management of his affairs by deputy.

He now submitted to various tests which demonstrated the extensive and complex nature of the disorders of expression.

What has been noted with regard to intellectual speech is with greater force applicable to his volitional writing. Adverbs, pronouns, adjectives, and auxiliary verbs were often written, but never the more particular parts of speech, and as a natural result his meaning was never intelligible.

The first attempt was made on the 3rd of November in a letter to his sister, which he dated "22nd Equa;" the 22nd October was the date on which he had the first epileptic seizure.

His signature was accurate, and was written with facility. The following is the letter, a good average example:—

"Dear Sary [Sister] I have have have jushed have justed—I fush has has has just hast has has hast has has just just just just." [Asked to read what he had written he shook his head and made a fresh start.] "I have just has just." [Advised to begin again.] "Dear Sany Saning" [Sister]. He now recognized his helplessness and stopped.

Here one observes, because of the complete amnesia of proper names, the attempted substitution of a less concrete term, sister. There follows a string of words, the memory of which is thoroughly organized (and which were written with great facility), until the past tense of a verb, a term obviously of lesser organization, is requisite. The repetitions seem like a gathering of momentum to carry him over this obstacle.

He was unable to write to dictation, but would not permit a prolonged test. The most suggestive response was "In May" for "The Murray."

A few letters being written to give him a start, he was unable to finish the alphabet, and unable to continue the characters in their proper sequence. The order which he gave to them had no relation to their average frequency in language. The following is an example, with pronunciation in italics:—A, *Ale*; B, *Bell*; C, *Sill* and *Skill*; D, *Dill*; E, *Exex* (letters added by him); B, B; F, *Effex*; G, *Trill*; L, L; M, *M* and *Mac*.

He was able to copy with considerable accuracy from print or writing. In this respect he improved, though the penmanship, which was fairly good, varied intermittently. His method of copying is noteworthy. He did not carry a line or a few words in his memory, but referred to the copy for individual words and even syllables. He turned the preservation of this mechanical process to account by having letters written to his relatives for him to copy—a reduction to the early correspondence of childhood.

The musical faculty was deeply involved. He could not be induced to sing, and even in maniacal periods he had no tendency towards intonation. He was able to hum and whistle, but not tunefully, the sound being more or less a monotone. Yet it gave

him pleasure. Asked to whistle well-known simple tunes, he never ventured, and always replied in the affirmative when asked if he had forgotten them. He was a member of a church choir, otherwise we did not know what was the extent of his musical education, but it is unfortunate that he was not asked to read a score or to play an instrument.

He was able to recognize figures and to write them, but the arithmetical faculty was much impaired. During a fortnight he was daily given the same sums in addition, subtraction, multiplication, and division, with the result that subtraction was fairly accurate, only nine per cent. of errors; addition was a very poor second with 40 per cent. of errors; not far behind this was simple division by two; and last, but closely following, multiplication by two. Analyzing the errors, one generally finds a failure to "carry." He had not forgotten the process, but failed to hold the number for a period sufficiently long to permit of its being incorporated in the next term. Hence the better results in subtraction, where the figures concerned are near each other. In addition, though the vertical rows acted as guides, at each level his impressions had to be changed, and the liability towards error was thereby increased. In the remaining rules the divisor and multiplier were frequently referred to, and this led to confusion. He did not, as is usual, retain them in memory. No doubt the loop and line leading from the divisor helped to guide him, and would explain the slightly better results in what is really a more complicated process.

The earliest and most marked improvement was in intellectual pantomime. The gestures lacked precision, but not intellectuality.

He attained a certain facility in speech requiring but little mental effort—observations on weather, health, and the like, though exactly the same sentences were uttered with difficulty or not at all in answer to questions. When a complicated act of judgment was requisite the words that should have been chiefly instrumental in expressing it could not be recalled, though the ideation was clearly present.

The substitution of an inapt word, always exceptional, became conspicuously so.

He recovered the power of repeating words spoken to him.

His inability to sustain a prolonged effort of expression, perhaps on account of a mingling of associations, was demonstrated in attempts to repeat the alphabet. No matter at which letter he was started he would begin correctly, and then merge from suggestive into unsuggestive sounds.

He began to take an interest in the newspapers, and used to read mentally. When asked to do so aloud the result depended very much on the degree of the psychical process involved. The errors in the one case would be mainly with substantial expressions, in

the other with words that were polysyllabic. In the former instance he would often become hopelessly involved ; in the latter he would stumble through the passage.

There was no improvement in volitional writing, and the tests became a source of irritation by accentuating the knowledge of his helplessness. They were, therefore, discontinued.

On the 28th November he was gloomy, morose, and irresponsive, and would not communicate his sensations. The next morning he continued in the same condition, and without further warning had an epileptic seizure and passed into the status—in a little over four hours having thirty motor fits.

The following was the nature and sequence of the phenomena :—

Initial pallor of countenance during early stages of status.

Face drawn slowly to left side, with extreme conjugate rotation of eye-balls to left. Pupils widely dilated and insensitive. Conjunctival reflexes absent. At times the eye-balls jerked violently once or twice before becoming fixed.

Occasionally a groaning expiration.

Sudden tonic contraction of right arm and hand—the fingers often hyper-extended. Right leg less markedly affected ; at times not at all.

Left corresponding parts involved secondarily, and not affected so markedly nor for so long. As a rule there was tonic contraction of the extensors of the fingers, but occasionally no tonic stage on left side.

Clonic contractions began on left side, and followed the under-noted sequence :—

Eye-balls violently jerked.

Left eye-lid convulsed.

Mouth drawn to left and jerked.

Left forearm pronated, with flexion and extension of fingers.

Whole arm convulsed.

Left leg convulsed, but not so violently.

Convulsions now began to pass to right side, the head slowly turned, eye-balls following the movement. At the same time the convulsions became both sided.

The observer's hands being placed on the patient's forearms the contraction of the flexors was felt to diminish gradually on the left side and increase correspondingly on the right.

By the time that the face reached its extreme limit on the right side the convulsions had ceased on the left, and were for a few seconds entirely right-sided.

The right arm was convulsed for about two seconds after the right leg ceased to move.

The eye-balls twitched six or seven times violently, and some twice or thrice more moderately before ceasing. The pupils then contracted, the right remaining semi-dilated as on admission.

In the seventh fit of the series the order of events was reversed. This phenomenon was repeated in the last two of nineteen isolated fits that occurred during the succeeding week.

The temperature, taken at intervals, was uniformly 100°. The pulse rate averaged 130 per minute. The face was of a purplish dusky colour. The conjunctival vessels were injected, and a petechial hæmorrhage appeared on the right cheek. The skin was cold and clammy. Irregular muscular twitchings continued for half an hour. The return of consciousness was slow. He vomited an hour after the fits.

The next day, in the afternoon and evening, he was roaring (oaths being sometimes distinguishable), with more or less regular intervals of exhaustion. During this period he was only semi-conscious, and his expression was suspicious and dangerous.

The most marked feature of the post-paroxysmal state was the return of auditory hallucinations, and a relapse into aphasia more complete than on admission.

We ventured to assume the presence of a cortical irritative lesion in the neighbourhood of the left auditory area. The discharge being of great severity accounted for the extreme tonus on the right side and the commencement of clonic contractions primarily on the left side. The slow progress of the head seemed to point to the passage of the discharge along anatomical connections and the sudden supervention of the other symptoms to the transference of the discharge along a physiological path.

To explain the aphasia was difficult, but the implication of so many faculties seemed to indicate a reduced vitality of higher centres. The speech during excitement was probably a response to exaggerated stimuli of cells that an ordinary stimulus could not arouse to sufficient activity. The irritation being reduced or suspended in the inter-paroxysmal state would permit of these centres regaining their vitality to some extent and account for the improvement noted.

I need not dwell at length on the further history of the case, but shall select a few interesting features.

He was now put on the bromides, and for upwards of four months had only one recognized fit.

His general bodily condition improved, and he gained a stone in weight.

He was more irritable and impulsive, struck persons near him, and once without warning dangerously assaulted an attendant to whom he was well disposed.

For at least three days he forgot which was his right and which his left hand. At the end of this time he had no difficulty in

differentiating between them. His mental condition during this period was one of morbid irritability.

He tended to confuse words allied in sound or meaning.

He read the Bible (he often had a Bible in his hands) with false emphasis and misapplied, exaggerated emotion.

He gradually became more enfeebled mentally.

On the 15th April he seemed to be haunted by fears to which he could not give expression. The next morning he had a fit. In the afternoon, while I was examining him, his expression suddenly became anxious and his pupils began to dilate. On the immediate inhalation of nitrite of amyl the onset of a fit was checked. He did not lose consciousness, but unfortunately was not able to communicate his sensations.

A word about nitrite of amyl. When pushed in the status it was observed that the oncoming fit was shorter in duration, but the next interval was obliterated. In the final status it was again tried, but made no appreciable difference.

On the 20th April he was dreamy, dull, and apathetic. This condition continued during the next day, and in the evening he passed into the status epilepticus. For half an hour paroxysm followed paroxysm with extreme rapidity, and it was impossible to make accurate observations. To begin with, the fits seemed to have the same general character as those before noted. Later they became "a clotted mass of movements," and towards the end were irregular isolated spasms. Numerous separate fits followed.

He never recovered consciousness.

The face became dusky, almost bronzed, and continued so.

The eyes were dry and parchment-like, and the conjunctivæ were deeply injected.

Oxygen inhalations improved the colour slightly, and caused movements of the eyelids and head.

The mouth often twitched to the right side.

The plantar reflexes were exaggerated and equal one day (23rd) and dull the next.

The temperature, (taken in the axilla) gradually rose and was unequal on different sides, on the right side higher than on the left by more than half a degree.

On the 25th April there was an opacity in the lower external quadrant of each cornea, and within a few hours over the situation of the opacity in the left cornea there was considerable necrosis. During this comatose state great care had been taken to preserve the eyes from mechanical injury. The rapid corneal ulceration was unexpected, and suggested a lesion involving the nucleus of the fifth nerve in the pons, but this theory was more than counterbalanced by the grave and general nutritive disturbances.

Next morning the temperature on the left side was 104.2° , on the right 105° . Respiration failed, and then the heart.

Post-mortem.—Unfortunately the autopsy could not be made till 75½ hours after death. The average temperature during this period was 47° Fah.

The following is an epitome of the report :—

Nourishment good. Skin dotted with minute mulberry-tinted spots, with cheese-coloured centre, which followed the line of the sweat glands. This was a post-mortem change, and was absent from the abdomen, the walls of which were distended. Pupils, left slightly larger.

With the exception of the brain all the organs were found to be free from organic disease. There was hypostatic congestion of the lungs.

Cranium.—Outer table somewhat condensed, especially at the back. Two strongly-marked Pacchionian depressions placed symmetrically 38 m.m. behind bregma. Inner aspect of coronal and anterior part of sagittal suture somewhat roughened.

Dura.—Not unduly adherent to bone, but adherent to pia on each side of longitudinal sinus.

Sinuses.—Apparently healthy and filled with p.m. clots. Veins of pia distended.

Pia arachnoid.—General milkiness, especially along the course of vessels of left hemisphere. No adhesions to cortex. No hæmorrhages.

Cerebral arteries.—Everywhere patent and apparently healthy.

Brain as a whole of average size and complexity. Weight 1,332.5 grammes. Naturally, considering the period after death, the organ was generally softened. There was evidence of slight atrophy in the frontal and parietal regions. At the tip of the left tempero-sphenoidal lobe the cortex was entirely disorganized. The lesion was irregularly oval in shape, and included in it the anterior extremities of the superior, middle, and inferior tempero-sphenoidal convolutions. When held under a stream of water the cerebral tissue was washed away, leaving a cavity which entered into the fissure of Sylvius and partly exposed the insula and anterior extremity of the operculum. It measured in its oblique vertical diameter 25 m.m., in its horizontal 37 m.m., and was of a depth varying between 5 and 15 m.m. The corresponding parts of the right hemisphere were fairly firm to the touch.

On section the brain generally was highly congested.

The lateral ventricles were somewhat dilated. The membrane slightly thickened and the choroid plexus much congested. The same applies to the fourth ventricle.

The cerebellum, pons, and medulla were congested, but apparently healthy. The cranial nerves were to all appearances normal.*

* Since reading this paper I have been much interested in a report in the "British Medical Journal" of December 22nd of a case of amusia following a somewhat similar lesion, described by Professor Edgren, of Stockholm.

The CHAIRMAN (Dr. J. A. Campbell) said they were much obliged to Dr. Hay for bringing before them this carefully-noted and interesting case. He must say he was often astonished that they had not more serious complications following an epileptic fit than they heard of. He had fifty or sixty epileptics under his care, and it was wonderful to him that a severe seizure did not produce more than it did. How many of them had seen an apoplexy the result of epileptic fits? He only remembered one case of distinct cerebral hæmorrhage caused in that manner. He often looked with apprehension upon patients taking a severe epileptic fit, and when they saw so many atheromatous cases among their patients, it was astonishing that cerebral hæmorrhages and other brain mischiefs were not caused by an epileptic fit. In regard to aphasia, if they examined cases closely, they would find aphasia followed a fit more frequently than they thought. He had found it produced by the mental anxiety of a railway accident in the case of a physician friend of his, who escaped uninjured through his carriage window and did his best to help the injured, of whom there was a considerable number. This gentleman suffered for several hours from aphasia after the accident. If they noted their patients suffering from epilepsy he was sure they would find aphasia in several cases after fits.

Dr. CAMPBELL CLARK said that if they more particularly noticed epilepsy, especially after seizures, they would find the defects the Chairman suggested. For some time he had been making observations, and he had been astonished at the varying degrees of aphasia, especially after seizures. It might not attract the attention of the superficial observer, but if they examined carefully they would find difficulties of speech of different kinds induced in epilepsy, especially chronic epilepsy.

Dr. IRELAND said he remembered that Dr. Alexander Robertson made careful notes of epileptic fits causing a certain amount of paralysis, and he showed by experiment how much muscular power was diminished. Ataxic aphasia was to a certain extent paralysis. Dr. Hay had remarked about the case not being able to distinguish the left from the right side; he supposed this amounted to a certain motor incapacity. A man was able to distinguish the right hand from the left by the sentiment that he was better able to do things with the right. He remembered a boy at school who, on being asked which was his right hand, replied, "Give me a spoon and I will tell you."

Dr. CLOUSTON said he could not let the opportunity pass without congratulating Dr. Hay on the extraordinarily able report he had made on the case. If he had had a post-mortem within twenty-four hours and examined the brain microscopically, it would have been the best report of a case of that kind he (Dr. Clouston) had ever heard. He had a case of epilepsy succeeding infantile paralysis extending to the left arm, who frequently had for twenty-four hours symptoms of absolute dumbness. Although not fully clear in mind during that time, he could do some work. He asked Dr. Hay to say when unconsciousness seemed to come on in the fit, before the motor symptoms or after; whether or not the convulsion was in the nature of Jacksonian epilepsy. Dr. Hay had mentioned organic lesion. Wherever they had aphasic symptoms they always had organic lesion in or near the speech centre. When there was organic lesion so near the centre of speech, the explosion would readily pass into it, and microscopic examination would show an irritated area extending from that softening into the speech centre on the left side. He had no doubt that from the beginning there had been a tendency to organic lesion. When the patient was thirty-nine and epilepsy came on at that age, one expected some cause different from the ordinary epilepsy of adolescence.

Dr. HAY, in reply to Dr. Ireland, said he had no doubt that in this case there was a genuine amnesia of right and left. The patient, being right-handed, had a natural inclination to use the right hand in automatic acts, but confusion arose when the acts were of a higher order. He (Dr. Hay) became suspicious

of the presence of this phenomenon when one morning he noticed that the patient fumbled with his hands and hesitated to take the initiative in greeting him. Experimentally, he offered his left hand, and the patient, much relieved, thrust out his left and shook hands heartily. When consciousness of the act to be performed had been aroused, it was noted that the patient, aware of his disability, waited for a cue and unhesitatingly accepted it. Asked which was his right and which his left hand, he would frequently change his opinion, and would scan the face of the interrogator for an indication of the correctness of his answers. This condition passed off in three days after it was first observed. Replying to Dr. Clouston, Dr. Hay said that unconsciousness, so far as could be proved, was early and complete. With the initial pallor there was wide dilatation of the pupils, which were insensitive, and the conjunctival reflexes were absent. Questioned after return of consciousness, the patient merely knew from his present enfeeblement and sensations that he must have been ill, but was not aware of the nature of the seizure. Regarding the aphasia, he was inclined to think that minor discharges were passing from the seat of the lesion and maintaining a condition which, as the Chairman and Dr. Campbell Clark had indicated, may in many cases have a transitory existence. Moreover, the point of irritation was within the area of the left middle cerebral artery, and this induced him to lay some stress on the fact that vaso-motor disturbances, with resulting malnutrition of this area, may have led to the impairment of speech and other faculties of intellectual expression.

Dr. URQUEHART said that it would be a great gain to science if the facts buried in their case-books were organized and revealed. While assistant medical officers laboured to record, it must be regretted that they often did not bring the results before the medical world. When he first saw this case in the infirmary, without history and on superficial examination, the appearances suggested cerebral tumour. However, as the malady progressed and their observations accumulated, it became evident that this provisional diagnosis could not be maintained, as Dr. Hay had made very clear.

OCCASIONAL NOTES OF THE QUARTER.

The Terminal Days of Lunacy Certificates and Magisterial Orders.

There can be no doubt that medical men are constantly making mistakes in regard to the period for which the documents required to admit a patient to an asylum hold good. This partly arises from the carelessness of members of the medical profession, and partly from the same quality in the draughtsman of the last Lunacy Act—one which is credited with having caused more mistakes and confusion than perhaps any other Act of Parliament. In fact, it is found that two men of equal knowledge and capacity read clauses of this mischievous Act in precisely opposite senses in consequence of the blundering way in which they are worded.

One of the important duties of a mental expert is to advise the friends of a patient how to get him legally and

promptly placed under restraint. It is in regard to the terminal days of lunacy certificates and magisterial orders that we wish now to speak.

Take first the ordinary case of the admission of a patient into an asylum. According to the Lunacy Act, 1890, Section 29 (1), a patient may be examined medically on (say) the 1st of a month, and the petition presented to a justice "not more than 7 clear days" afterwards, *i.e.*, on the 9th. Thus:—

1 | 2, 3, 4, 5, 6, 7, 8 | 9.

Assuming that the Order is made on that day it is available for the patient's admission any time "before the expiration of 7 clear days." Lunacy Act, Section 36 (3)—*i.e.*, till the 17th. Thus:—

9 | 10, 11, 12, 13, 14, 15, 16 | 17.

A case occurred within our knowledge in which the Order bore the date of April 5th. The patient was brought to a county asylum on the 13th. The Commissioners in Lunacy ruled that the Order had ceased to have any force (there had been no suspension or temporary taking to the workhouse). The patient had to be re-certified, the fact being that the expression "before the expiration of" reduces the period by one day.

Had the Act employed the words "within seven days," the figures would clearly have run thus:—

9 | 10, 11, 12, 13, 14, 15, 16.

We will now suppose that the Justice, in accordance with Section 36 (1), suspends the operation of the Order for a period "within 14 days after the date of the Reception Order." The question arises, which is the latest day upon which the patient can be admitted into an asylum? Assuming that the Order so suspended was dated on the 9th of January, the figures would then be as follows:—

9 | 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23.

Here it will be seen that the day on which the Order was made is not counted, while the day on which the patient was admitted is counted. Had the Act stated 14 *clear* days, the terminal days would have been 9 and 24, instead of 9 and 23. As an illustration of an oversight, take the following: A Justice signed a Reception Order on September 20th last. On the same day he wrote on the margin, "I hereby suspend the execution of this Order for 14 days." On

October 4th, exactly 14 days afterwards, he wrote on the opposite margin, "The period of suspension having expired without sufficient improvement in the patient's condition, I direct that she now be moved to an asylum." Finding that there was no room in any of the London County Asylums, the Relieving Officer wired to another institution for room and obtained it. The next day she was removed there, that is to say on October 5th.

The copy of the certificates, etc., and the report of the mental condition and bodily state of the patient having been duly forwarded to the office of the Commissioners in Lunacy, the Secretary wrote as follows:—"With reference to the admission of A. B., on the 5th inst., I am directed by the Commissioners in Lunacy to say that as the Order was signed on the 20th, the admission not having taken place within 14 days after that date was irregular. It therefore appears that a fresh Order and Certificate will be required for the patient's detention." It may be mentioned that another question arose in the mind of the Medical Superintendent. Might it not be assumed that the Justice's Order held good for another seven days, as would have been the case with the original Order of the 20th September, which he had suspended? For this, however, there would have been no justification.

Is Sunday to be reckoned a *dies non*? We may mention the case of a patient brought to a county asylum on the ninth day of the month. As the Reception Order was dated the first of the month, seven clear days (2nd-8th) had already expired. It therefore appeared to the Medical Superintendent that the Order was no longer valid, and he declined to admit the patient. The Relieving Officer was very much dissatisfied with the decision, suggesting that one of the days being a Sunday it should not be counted. The Superintendent communicated the facts to the Commissioners, and requested their views on the subject. Their reply was that the Superintendent's reading of the Section appeared to them to be correct. It may be mentioned, in passing, that on relating the case to several *legal* friends he was surprised at the diversity of their opinions, two of them having quite a heated argument on the point. The Act does not take the trouble to throw any light on this question. That there should be a diversity of opinion among lawyers was quite *en règle*.

Criminal Lunacy Law.

It is to be hoped that the Legislature will soon give some attention to the long-neglected recommendation of the Departmental Commission of 1882 in favour of a consolidation and amendment of the criminal lunacy law. The present state of that law is absolutely deplorable. In the first place it is embodied in a series of statutes of the most antiquated and cumbrous description. There are the Custody of Lunatics Act, 1800, which was passed in consequence of the difficulty which arose as to where and how Hadfield was to be disposed of; the Criminal Lunatics Act, 1838; the Removal of Lunatics Act, 1851; the Broadmoor Act, 1860; the Trial of Lunatics Act, 1883; the Colonial Prisoners Removal Act, 1884; and the Criminal Lunatics Act, 1884. The earlier of these statutes were passed at a time when the science of legal draughtsmanship was in its infancy, and the later ones repeal each other in part in the most bewildering manner. When we turn from the Criminal Lunacy Acts to consider the law itself, matters get worse instead of better. The definition of "criminal lunatic" is admittedly and notoriously defective. The terms "lunacy," "insanity," "unsoundness of mind" are, for the most part, used as if they were convertible terms and stood in need of no definition. In many points the procedure to be adopted in regard to the criminal insane is not specified. An instance of this recently came under public notice at the magisterial proceedings in the Bethnal Green murder case. It was stated that the prisoner, a man named Matthews, had been removed to an asylum by order of the Secretary of State. The magistrate was quite at a loss as to how the charge-sheet should be marked—as the prosecution was being dismissed without the accused being discharged from prosecution. There was nothing in any of the Acts to help him, and so he had to make a precedent—"Removed to asylum by Secretary of State's order." Again, we learn that in spite of the express provision in the Trial of Lunatics Act, 1883, counsel at sessions still ask for and sometimes obtain verdicts of "not guilty on the ground of insanity." Moreover, the law as to the plea of insanity on arraignment is in a condition of the most hopeless confusion. It is unnecessary, we should imagine, to point out the thoroughly discreditable character of this state of matters, or the need that it should be remedied without delay. Badly as the codifica-

tion of the civil lunacy law has been done, it will at least constitute a convenient point of departure for the efforts of future law reformers, and it is now high time that the criminal lunacy law should be subjected to a similar process. A suitable opportunity for this salutary work being undertaken will occur when the reports of the Committees—which are investigating the vexed question of the criminal responsibility of the insane—are presented. We see no reason why the substantive and adjective laws of criminal lunacy should not be codified by the same Act.

The Death of Dr. D. Hack Tuke.

We feel that our readers would be disappointed if no notice, however short, were taken of the death of the chief editor of the Journal, so, though we purpose giving hereafter a full account of his life and work, we cannot allow the present number to go to press without expressing the great and irreparable loss which has been caused by the death of Dr. Tuke.

To our readers it is unnecessary to say more than that he was a prevailing spirit of work, kindly feeling, and sympathy. He has been the chief editor of the Journal for nearly 18 years, and all contributors know his kindly consideration for them, while our readers know the value of the product.

He worked hard for his profession with no feeling of self-interest, and if ever a man's good works follow him Dr. Tuke will have a rich harvest. We are too near the loss to be able to estimate it yet, and we shall leave till a future number our true judgment of the man. We have lost a friend, and the profession has lost a painstaking, honest historian, who was ever helpful to those who were earnestly endeavouring to follow truth.

He has been noticed to be failing for a year or more, and that his end was sudden was a blessing, we think, to him whose life had been spent in doing good honest work for humanity.

Many of his old friends stood by the grave-side at Saffron Walden to bid a long farewell to one who had ever borne the white flower of a blameless life.

PART II.—REVIEWS.

The Forty-third Report (with Appendices) of the Inspectors of Lunatics (Ireland).

The Inspectors' Report for the year 1893 opens with the usual table showing the number and distribution of the insane in establishments at the opening and close of the year.

	On 1st January, 1893.			On 1st January, 1894.		
	Males.	Fe- males.	Total.	Males.	Fe- males.	Total.
In District Asylums	6,601	5,532	12,133	6,818	5,616	12,434
.. Central Asylum, Dundrum ...	128	21	149	130	26	156
.. Private Asylums	275	369	644	281	361	642
.. Workhouses	1,701	2,497	4,198	1,718	2,326	4,044
.. Gaols	—	—	—	—	—	—
	8,705	8,419	17,124	8,947	8,329	17,276

These numbers, as the Inspectors quaintly point out, do not include the insane residing in private dwellings or wandering at large.

A considerable portion of the Report is taken up with the discussion of the question of the alleged increase in insanity in Ireland. It appears that the Chief Secretary called on the Inspectors for a report on this subject. The Inspectors obtained reports from the various superintendents, and these are printed as an appendix to the Blue Book before us.

The following are the CONCLUSIONS arrived at by the Inspectors :—

- (1.) That the great increase of the insane under care is mainly due to *accumulation*, and is, so far, an apparent and not a real increase. . . .
- (2.) That the yearly increase of admissions is drawn in a considerable proportion of the cases from the reserve of *unregistered insane* existing throughout the country, as shown by the reduction in the number of lunatics and idiots at large given in the Census Returns for 1891, as compared with 1881.

- (3). That the annual increase in the face of a shrinking population of the number of *first admissions*, including as it does such a large proportion of *first attacks*, of insanity, almost irresistibly points to *some* increase of occurring insanity in particular districts.
- (4.) That the main factors which contribute to the development of occurring insanity in this country may be classed as:—
- (a.) *Heredity*. . . .
 - (b.) *Consanguineous marriages* among those having any tendency to nervous disease. . . .
 - (c.) *The innutritious dietary* of the poorer population tending to produce anæmia and constitutional weakness, which favour the development of scrofulous and neurotic disease.
 - (d.) *The immoderate use of certain nervous stimulants*, such as alcohol, ether, tea, and tobacco. . . .
 - (e.) One further contributory influence in the increase of insanity dwelt on in some of the reports remains to be here specially noticed by us, namely, that of the *acute agricultural depression and dislocation* so widely experienced in recent years, and the great mental strain and harassing anxieties that have followed in their wake.

These conclusions indicate a considerable change of opinion, since the Inspectors reported in the Blue Books for 1891 and 1892, we “are driven by the facts before us to conclude that the large increase of lunacy has been absolute as well as relative.” In the alteration which has come over their views in this very important matter the Inspectors seem to have been largely influenced by “a most able and exhaustive paper on the entire subject, read at the recent meeting in Dublin, of the Royal Medico-Psychological Society of Great Britain and Ireland, by Dr. Drapes, Resident Medical Superintendent of the Enniscorthy District Lunatic Asylum.” We are pleased that the Inspectors note our proceedings. It would, perhaps, be too much to expect from them that they would recollect the name of our Association, though they are honorary members. We are obliged to them for the title of Royal. They have probably given it to us on the same principle which makes Mary Anne claim to have it “considered in her wages” when she is “called out of her name.”

We are very glad also to find that the arguments of our esteemed colleague Dr. Drapes have converted the Inspectors to what we regard as the correct view in this matter.

It is to be regretted that they should at first have been led into hastily adopting the notion that insanity in Ireland is increasing in any dangerous degree. It is understood that this opinion has been strongly pressed in very high quarters, but after all it is the business of specialists to correct the hasty generalizations of public men in matters falling within their own purview.

It is probable that had the Irish Inspectors reserved judgment they might now be able to say as distinctly as the Scottish Commissioners were able to do in their recently published supplementary Report, "that the facts and figures collected and studied afford no ground for a belief that insanity is to-day more prevalent than it was thirty-six years ago."

However, some good has perhaps been done through this mistake, since it has served to vigorously attract public attention to the condition of the insane in Ireland, an attention which was badly needed.

In the circular addressed to medical superintendents, calling on them for report and information as to the increase of insanity, the following passage occurs :—

In immediate connection with the question of causation by *heredity*, it is to be observed that it has been very strongly contended that a distinct increase under this head is traceable to the improved and more successful system of asylum treatment of recent years, and that it therefore becomes a matter of the utmost importance that you should, in your report, throw on these points such additional light as may be suggested by any specific facts that have come to your knowledge.

We cannot help thinking that the view thus expressed is rather crude. Certainly in Ireland the operation of the change in the feeling about asylums has told the other way. Instead of lunatics and idiots remaining at large and being propagated, as in olden times, they are now sent to asylums; and though some of the former may recover, go out and reproduce the species, the deteriorating effect on the population must be much less than when they were not confined at all.

Dr. Graham, of Armagh Asylum, is somewhat original in his views as to the misuse of alcohol, and is not afraid to say —

From my experience here I am compelled to deny to alcoholism *per se* the character of a directly producing cause of insanity. Alcoholism by itself often kills, as is evident from the familiar fact that the most hazardous life, from an insurance point of

view, is that of a liquor seller, the average mortality of persons engaged in that occupation being 29·2 per 1000. Compare this with the average mortality of gardeners, which is 10·6 per 1000. But alcoholism of itself is not a direct cause of lunacy, as witness the returns from this asylum, which show that only one liquor-seller has been admitted here during the last ten years.

He carries the war into the teetotalers' camp by pressing in a very strong way the injurious effects of tea drinking, especially the drinking of Indian tea, badly prepared. On this point Dr. Merrick, of Belfast, also dwells. His experience with regard to alcohol is rather different from Dr. Graham's, perhaps because his asylum is largely fed from a town: "there are 11½ per cent. of the admissions to this asylum directly caused by alcoholic excess."

The injurious effects of drinking decoctions of tea in large quantities are dwelt upon in several reports. Surely this habit is not peculiar to Ireland. Tea drinking is far more a national vice among our Australian brethren, who, as we are informed, keep the teapot on the fire all day, take a little of the decoction when they feel so disposed, and should it not exhibit that bloody tint to which Garrick objected in Peg Woffington's brew, remedy matters by shovelling a handful of fresh tea on top of the old. If anything could do harm it is this, and what do Australian statistics prove?

Dr. Atkins, of Waterford, very wisely says:—

It is probable that the consumption of tea by the peasantry has increased of late years, but the general influence of this in the causation of mental derangement is still too problematical to warrant any definite opinion being formed thereon.

With regard to two points specially dwelt on in the Inspectors' Report—heredity and consanguineous marriages—we fail to see how they have any special relation to the increase of insanity in Ireland. The former cause must operate as strongly everywhere else as it operates there, and consanguineous marriages, strongly forbidden by the Church, are no doubt rarer in Ireland than in any other country in Europe.

In the district asylums there were under treatment during the year 1893, 15,191 patients. The number of deaths by suicide is stated in the text to amount to five, though only four are detailed and only four are enumerated in Table XII. There is nothing very special to note in the details of any of the cases. Five deaths occurred from accident, according to Table XII. The details of three are given; one was a mere accidental fall. A patient in the Cork Asylum

died from the fracture of four ribs; the attendant in charge was prosecuted, but acquitted. A patient in the Richmond Asylum died from rupture of the bladder resulting from a kick inflicted by another patient. This record is not discreditable, considering especially the many difficulties under which the asylums are worked.

“Overcrowding” as usual occupies a large part of the Inspectors’ Reports.

At the present time every district asylum, with the exception of Cork—recently enlarged—is full to overflowing, and in every district throughout Ireland, with this one exception, additional accommodation is being provided, or is in contemplation, either by adding to the existing buildings, or by erecting new institutions.

We are glad to find that the Inspectors have adopted our hint with regard to the Central Criminal Asylum, Dundrum, and in this Blue Book publish a report of the inspection of that institution. Dr. Revington’s report, which, as usual, shows a great amount of work, ends with this rather sad paragraph:—

I regret to say that the vote for structural alterations is totally inadequate to meet the urgent needs of the asylum, and I am much disheartened by the prospect of postponing progress until the commencement of the financial year 1895-96.

When Dr. Revington has a few more years’ experience of the delay that seems inevitable in all Irish public asylum work, he will probably have learned to grin and bear it, and will regard with careless philosophy the loss of a year or two of his official life.

The reports on the various district asylums seem to indicate that some of the numerous and extraordinary structural defects in the Irish asylums are being at last rectified, and that in most places work and advance are going on. At Armagh “a mortuary of the most advanced kind has been erected” and “sanction has been given (it is not specified by whom) for the erection of a detached hospital to accommodate 140 patients.”

In consequence of the rapid extension of the City of Belfast the existing asylum site is now surrounded with buildings, and consequently does not admit of extension at any reasonable cost. Under these circumstances the Governors have determined to obtain a site outside the city, whereon to erect an auxiliary asylum, and propose, when a favourable opportunity offers, to dispose of the existing buildings and estate, which in consequence of the rapid growth of the city have become most valuable.

One hundred and sixty acres ("a much-needed addition") have been added to the farm at Ballinasloe. The asylum is overcrowded, and it has been decided to add to it a detached hospital for 200 beds.

At Carlow a laundry and a new block for males are being constructed, and much of the asylum is being remodelled.

At Clonmel and at Cork new accommodation has been provided on a large scale, and further works are being carried out.

At Downpatrick plans are in progress for the erection of a hospital for females and a block for acute cases.

Improvements are in progress in the asylums at Kilkenny, Letterkenny, and Limerick, including the erection of separate houses for the medical superintendents in the two latter places.

At Londonderry, after long and careful consideration, the Governors have decided to abandon the present site, and seek for one where sufficient land can be obtained outside the city. This decision must be highly commended, as the situation of the present institution is such as to render it in some respects unsuitable for the treatment of the insane.

At Maryborough, Mullingar, Sligo, and Waterford, laundries, kitchens, and increased accommodation are being provided.

The following remarkable passage occurs referring to the Richmond Asylum, Dublin:—

It has been at length decided to erect a second asylum for the Metropolitan District at Portrane for 1,200 patients, while accommodation in an improved form will be provided at the Richmond for 800 inmates. For this purpose the existing male block will be remodelled to accommodate both male and female patients, the detached hospitals enlarged and improved, while the female block, which is so hemmed in by public buildings as to render any large expenditure on it unwise, will be given up.

It is to be hoped that the competition for the plans for the new building at Portrane will be proceeded with without delay, as the overcrowded condition of the Richmond still continues, rendering the management and care of that institution a matter of great anxiety. The workhouses of the metropolis are also overcrowded with the insane, whose condition is far from satisfactory.

Now, the decision here referred to must, we conclude, be one which has been arrived at by the Board of Control of Lunatic Asylums in Ireland, the only body which has any authority to arrive at such decisions. Of this body the Inspectors are members. No doubt they act as medical

assessors, and are, or ought to be, the predominant partners in all matters relating to the erection or rearrangement of asylums. Nevertheless, the decision which they here announce as regards the reconstruction of the Richmond Asylum must have been since this Report was written entirely reversed, if we are to judge by the reports which have reached us from time to time for several months past in the Dublin papers, or by the reply of Lord Ribblesdale to a question recently asked in the House of Lords.* The opinion of the Inspectors is sufficiently clear from the above quotations, both those relating to the Richmond and to other city asylums. "Any large expenditure on the female block would be unwise," say the Inspectors, but Lord Ribblesdale tells us that £60,000 is to be expended on the whole asylum. In what way can the circumstances have altered since the Inspectors reported, or have their views as to the unwisdom of wasting money on the place been fully weighed? We should like to see the opinions of officials in their responsible position—opinions we are sure not lightly formed—receive the fullest consideration. What is to be done with the public buildings which hem in the Richmond Asylum, or where in the City of Dublin and in the vicinity of the asylum are the needed 100 acres or so to be obtained at any reasonable cost?

The memoranda of inspections made at district asylums contain little that is of special interest. In many the management is praised with a warmth which must be most encouraging to the medical superintendents. Armagh, Ennis,

* In answer to a series of questions from Lord Ashbourne, Lord Ribblesdale said—The number of patients resident in the asylum is 1,486. There is provision in the permanent building for about 1,100. Arrangements have been made to provide commodious and suitable temporary buildings for the residue. Portions of these buildings have been completed and are in occupation, and the remaining portions will be handed over immediately. It has been decided to build a new asylum at Portrane for at least 1,000 patients. This will provide accommodation for about half the insane of the district. It has been decided to remodel, improve, and enlarge the existing buildings at Richmond so as to accommodate the residue of the insane population. Owing to overcrowding the medical history of the existing asylum has not been favourable. There is no reason to suppose that the soil is in an unhealthy state, except to a very limited extent, in the immediate vicinity of old sewers, and this it is proposed to remedy by the execution of suitable works. The grounds are not at present sufficient in extent for the needs of the asylum, but it is contemplated to increase the area by the purchase of additional land. The estimated cost of altering and remodelling the existing asylum so as to satisfy modern requirements is about £60,000.—The Earl of Erne said it was a matter of notoriety that the soil was saturated with sewage, and he hoped the Government would consider whether it would not be better and cheaper in the long run to build a new asylum on another site.—"Times," March 8, 1895.

Enniscorthy, and Londonderry are highly commended, and Mullingar receives, as usual, unstinted praise. We are sure this is well deserved, and we congratulate Dr. Finnegan on obtaining what he merits, not always easy in official life. We are told that St. Patrick bestowed a certain see upon a favourite disciple with these words, "Found, then, a church there, that shall not be so near us (*i.e.*, so near his own primatial city) that we must jar, nor so far away that we cannot often meet." Mullingar is about fifty miles from Dublin.

The average annual cost per head varied in the Irish District Asylums for the year 1893 from £25 2s. 8d. at Mullingar to £18 11s. 1d. at Castlebar. We cannot comprehend how it is possible to maintain a lunatic for the latter sum in an asylum for less than 500 patients, especially in Ireland, where all ordinary repairs and alterations are charged to maintenance account.

The Inspectors continue to deplore the manner in which the insane in workhouses are mismanaged.

As in previous years, they regret the insufficient provision for middle-class patients.

They also point out again that some of the private asylums are not flourishing concerns. It is doubtless too much to expect that the management of any place of the kind will be satisfactory when it does not pay.

The Insanity of Over-Exertion of the Brain: The Morison Lectures, delivered before the Royal College of Physicians, Edinburgh, 1894. By J. BATTY TUKE, M.D., F.R.C.P.E., F.R.C.S.E. With Illustrations and Diagrams. Edinburgh: Oliver and Boyd. London: Simpkin, Marshall, and Co.

This work consists of five lectures. Taking these *seriatim*, we find that Lecture I. sketches the progressive alteration and development of our conception of the conditions included under the designation "Insanity." It is observed that the popular view of insanity, down to a period not very remote, had been "entirely psychological, at the best . . . but a rude mixture of a pseudo-psychology and of a pseudo-pathology. . . ." Furthermore, the older physicians are not credited by Dr. Batty Tuke with any more enlightened conception than the above. We are reminded how that everywhere men

bowed down to and worshipped the psychological principle, and approached the study of insanity with feelings of mystery not experienced in presence of the ordinary diseases of the flesh. Of late years we have grown more sceptical and materialistic in our views as we have advanced in our knowledge of nervous anatomy, physiology, and pathology. We still grope, it is true, in a pitchy darkness; but the awesome feeling, erstwhile so powerfully deterrent, has no longer its old force. Dr. Tuke accords a due measure of admiration to the labours of those to whom we owe our present knowledge of the central nervous apparatus, and expresses the hope that in the future the insanities may be worked at "on the same scientific principles that govern our views of disease at large."

Most appropriately, our attention is then invited to the study of a cerebral convolution, in which much assistance is afforded by a diagrammatic sketch of the constituents of a convolution, largely founded on plates by Retzius, Cajal, and Andriezen. The silver methods of staining, on which this diagram depends, are doubtless still new to many in this country, who will be able to form from it some idea of the remarkable results obtainable by those methods. The author follows the description of Cajal.

We consider such a diagram of great service in assisting us to "visualize" the apparatus of the cortex. As incidental to its consideration, we may be allowed to express a fervent hope that peace may some day reign in respect of the vexed question of the proper nomenclature of the leptomeninges. Between "visceral pia," "parietal pia," "arachno pia," and "arachnoidal lining of the dura," the mind of the hapless student has been reduced to an acute confusional state. To such an one it will be good news indeed that Dr. Tuke advocates the abolition of the term "arachnoid," and would speak of a "visceral pia"—which dips into the sulci—and a "parietal pia"—which passes across them; there being no membrane between this latter and the dura. The diagrammatic sketch enables one to visualize with great facility the course of the lymph-channels in the cortex. It may not be out of place to intimate to potential investigators that, whilst not questioning the existence of pericellular lymph-spaces (about nerve and neuroglia cells), the demonstration of such, in our experience, is extremely difficult; and the presumptive evidence for their existence, drawn from the silver-method, is, in our opinion, not at all satisfactory.

Lecture II. discusses the effects of continued hyperæmia of the brain-cortex, and of fatigue, the result of psychical activity. The experiments of Hodge upon the effects of electrical stimulation of nerve-cells are described (with plates); and the conclusions arrived at by Dr. Tuke from a personal examination of certain of the actual specimens are stated. The altered reactions to stains, and the nuclear changes exhibited by cells which have been subjected to such stimulation, are most interesting, in view of like alterations observed in the brains of the insane.

In this association the evil effects of (theoretical) obstruction of the lymph-channels are dwelt upon. Implication of these structures may be legitimately supposed to occur in association with hyperæmia. The solutions of continuity of the brain-elements (produced by vascular congestion) which are described in this lecture are believed by Dr. Tuke to be the causes of the early symptoms of insanity from over-exertion of the brain.

Next follows a description of a chain of symptoms (*i.e.*, of insanity of over-exertion) which the author attributes to the conditions sketched—a *syntomen-complex* which, we apprehend, is presented from time to time to medical men outside asylums. We consider that it is legitimate to refer such symptoms to the influence of hyperæmia, and the morbid exudates and collections associated therewith. At any rate, there appears to us a greater justification for making such a reference than exists for ascribing a motley group of symptoms of malaise to a "congestion of the liver," as is often done. Moreover, the theoretical pathology is of service, since, founding upon it, we are enabled to dictate with greater emphasis the policy of rest.

Lecture III. is occupied by a consideration in further detail of the pathological changes occurring in the cortex in cases of insanity, with special reference to those ascribable to over-exertion of the brain; the subject of colloid and miliary changes is also treated of; and, lastly, that of cerebro-spinal fluid pressure. "Colloid bodies" and "miliary sclerosis" are terms with which Dr. Batty Tuke's name is naturally associated, and therefore it is interesting to observe his present position—as indicated by the quotation which follows—in regard to the conditions which they connote. "The latter lesion was described by me many years ago, along with Prof. Rutherford, and I am mainly to blame for the error enunciated as to its genesis and name. Bevan Lewis

convinced me that colloid bodies and so-called 'miliary sclerosis' were aggregations of myelin, derived from the investment of nerve-fibre."

But the chief purpose of this lecture would seem to be the development of a line of argument which culminates in the statement (sufficiently remarkable) that "on the rapid removal or non-removal of the causes of implication of the cells of the Rolandic area depends the issue of the case" (*i.e.*, of insanity from over-exertion)—"recovery or pre-frontal atrophy." The argument is based upon the fact that, alike macro- and microscopically, the chief indications of disease in those dying insane are located in the Rolandic area. In the giant cells especially (amongst the pyramids) the evidence of degeneration is pronounced. Now, there are "the very strongest reasons" for believing that kinæsthesia (transmutation of sensory stimulus into motion) occurs in the pyramidal cells of the Rolandic area, and other transmutations of energy doubtless occur there also. The organs of the Rolandic area have an influence over other regions, and if these organs (cells) are over-stimulated we may expect remote effects. Amongst these would be perversion of psychical acts, which gradually develops as the impaired function of the cells of the kinæsthetic area makes itself felt on the cells of ideational centres. From this point it is a natural step to the conclusion set forth in the culminating sentence we have quoted. We have said enough to indicate that there is much that is controversial in this lecture.

Lecture IV. deals with the somatic symptoms of over-exertion of the brain and various theoretical matters arising out of their consideration. Whilst on the subject of the disturbances of the menstrual function which are occasionally present, the author permits himself a slight excursion, in which he considers the relationship (often a mistaken one) between various bodily disorders and insanity. In this connection it is satisfactory to us to observe that Dr. Tuke has no sort of sympathy with those who glibly refer mental disorders to menstrual disturbance and to diseases of the female generative organs.

Lecture V. opens with a statement of the main conclusions reached in the previous lectures, *viz.*, (1) over-exertion of the areas forming the substrata of consciousness produces changes, evidenced by both physical and mental symptoms; (2) the primary change is a congestive one; (3) secondary changes may occur, injuring connection-systems, and result-

ing in chronic insanity. Thereafter a strong plea is entered for the study of the insanities in the same rational mode as is adopted in the study of other diseases, namely, by way of the anatomy of the part affected. Without minimizing the importance of clinical observation, Dr. Tuke protests strongly against the tendency manifested by the specialty (or a section of it) to give prominence "to a sort of pseudo-psychology." Such terms as "medico-psychologists" and "psychiatric medicine" obviously inspire him with but scant respect. The asylum psychologist does not rank high in his estimation. Personally, we feel indebted to Dr. Tuke for his refreshing plainness of speech, and, under his protection, would respectfully protest against the exceeding dilettantism of asylum psychology. We believe that in asylums by far the most weighty contributions to our knowledge have resulted, not from "attempts to analyze the psyche," but rather from the careful study of a brain convulsion; that, whilst the former is the more soulful, the latter is the more fruitful pursuit.

The question of the treatment of the insanity of over-exertion occupies the remainder of this lecture, and calls for no special observation from us, beyond the remark that, the conditions to be dealt with being those of over-stimulation and exhaustion, the main principle of treatment is Rest.

In the foregoing lectures Dr. Batty Tuke has furnished an account, at once carefully thought out and clearly expressed, of a variety of mental disturbance with which the average student of insanity may be said, without disparagement, to be inadequately acquainted. It behoves those whose work lies in the midst of so much mental wreckage to acquaint themselves precisely with the characters of a malady which leaves its victims open to rescue. Its features are sharply delineated in Dr. Batty Tuke's pages. It may be thought that certain of the theories advanced are assailable; that the pathology (from obvious considerations) is largely speculative. Few, however, will be prepared to deny that it is a good working pathology.

With these observations we commend to the medical reader, whether general or special, a monograph worthy his consideration. The paper, print, and binding are all that could be desired.

On Chorea and Choreiform Affections. By WILLIAM OSLER, M.D. London: H. K. Lewis. 1894.

This treatise is another example of the excellent work which Dr. Osler performs. It is admirably done and will be welcomed by all those who recognize the value of careful record and criticism. We are pleased to see a very appreciative dedication to Dr. Gowers usher in the argument proper.

In a few introductory paragraphs, Dr. Osler points out the various affections which from time to time have been included under the heading of chorea, and the confusion which has resulted therefrom. He then classifies the subject as follows:—

1. Chorea Minor or Sydenham's Chorea,
2. Chorea Major or Chorea Sancti Viti of Paracelsus,
3. Choreiform Affections or Pseudo-choreas,
4. Secondary or Symptomatic Choreas,

and he follows this with an interesting, though brief, historical note upon the development of the study.

The chapter on general etiology makes reference, among other qualifying conditions, to the curious influence of race as predisposing or not, and it fully bears out the statement as to the rarity of the disease among negroes. Dr. Osler adds further that the disease is rare also among the Indians. The seasonal relationship of the disease does not appear to us to be very clearly set forth in the conclusions which the author quotes from Morris J. Lewis. One point of interest, however, does come out, viz., that there is a parallelism in respect of season between chorea and rheumatism. As to the part played by psychical influences, Dr. Osler says that of 86 cases a percentage of 15·5 recognized fright as the exciting cause, but that in the majority of these cases there was no very close connection between the fright and the occurrence of the chorea, an interval of two or more days, as a rule, elapsing. One might criticize this to the effect that two or more days constitute a sufficiently close connection. The influence of causes other than fright, viz., grief, worry, anxiety, is mentioned, and in particular the strain of education. Sturges' school-made chorea comes in here. Very interesting is the question of eye strain from refraction errors as a cause of chorea. Dr. de Schweinitz is especially quoted, and from his investigations it would appear that whilst eye strain may provoke the habit spasms of the

immediate facial area, there is no proof that it is the cause of chorea, though there is a presumption that it is a favouring condition in a patient otherwise predisposed to the disease, and it seems clear that any existing error of refraction in a choreic patient should be remedied.

The relations of chorea and hysteria are very interesting; they may be summed up thus:—Chorea may attack a hysterical subject and manifestations of the two affections may simply co-exist; next, chorea may be simulated by hysteria—the case of a man, *æt.* 21, is quoted from Debove; thirdly, true choreic movements may be present along with motor manifestations of hysteria, or the latter movements may succeed the former.

The maniacal forms of chorea, the chorea insaniens of Bernt, show us a disease with many of the symptoms of acute delirious mania. The patients rapidly succumb to the prostration caused, in part by the violent movements, in part by the maniacal excitement. When we say the symptoms of acute delirious mania, we simply mean a mania with typhoidal symptoms. The alienist will study this form with advantage, since, as Dr. Osler says, “the cases are not infrequently admitted to asylums” on account of the predominance of the mental symptoms. “Whether there is a chronic form of insanity deserving the name of folie choreique is extremely doubtful.”

Whilst in the example of chorea just described the mental symptoms, including hallucinations, delusions, mania, predominate and characterize the attack, there are not wanting in the ordinary mild attacks signs of some psychological deviation from the normal, *e.g.*, deviations from the moral standard of the child shown by perverseness, irritability, and ready tears, and as an instance belonging here, Dr. Osler mentions the case of a child who hid away her clothes and on one occasion herself wandered off and was lost for two days. Loss of memory and of the power of giving heed are of very frequent occurrence. “Actual melancholia may occur,” and in rare instances the intellect may fail progressively and terminate in dementia.

We turn with interest to the chapter containing the pathology of chorea; does it throw new light upon the disorder? Frankly, Osler confesses that the hesitations and difficulties which prevailed at the beginning of this century, and were well expressed by Bouteille and Bernt, are still with us. Sydenham had said: “Now this affection arises

from some humour falling on the nerves, and such irritation causes the spasm." This "humour" we are yet in search of, and perhaps in the pursuit of the infectious element, according to most recent ideas, we may light upon it. To this, the infectious theory, the author devotes his remarks, and, in the first place, he points out that whilst the severe cases of chorea are very suggestive indeed of infection, it is the milder cases which oppose this view, and, more particularly, that the part played by psychological causes in producing the disease offers the chief difficulty.

In favour of the infectious view, the author adduces:—1. The influence of age, sex, and season as similar to that witnessed in known infectious disease. 2. The clinical course of the severer forms which simulates closely infection, and the fact that the typical forms shade off insensibly into the mild, atypical forms. The validity of this argument depends obviously from which side you approach the problem. 3. The post-mortem appearances, amongst which the endo-carditis present affords the strongest evidence in favour of infection. On the other hand, the symptoms of the milder cases and the frequency with which fright or shock or nerve strain appear in the causation, suggest a simple neurosis.

In respect of this question of infection, the relation which exists between chorea and rheumatic fever involves almost that there should be the same etiology, and if, therefore, it could be shown that rheumatic fever were an infectious disease, the argument in favour of chorea being so would be strengthened. Proof positive is, however, wanting in the case of rheumatic fever.

Chapter VI. takes up certain choreiform affections, including habit spasms, and then in Chapter VII. we pass to chronic progressive chorea or Huntington's chorea (not Huntingdon's, as it is often written). The features which essentially characterize this disease are:—1. Its heredity; 2. Its relation to insanity and suicide; 3. Its incidence as a grave disease in adult life only. A very curious fact has been observed in relation to its heredity, viz., that if it miss one generation it never reappears.

The reading of the characteristics of this affection raises before one the picture of general paralysis of the insane, with the substitution of inco-ordination for weakness. Why not the term general chorea of the insane? The divergence of Huntington's chorea from Sydenham's is very manifest,

and the recent investigations of Oppenheim and Hoppe are in agreement with those of Golgi, Klebs, and Greppin, which refer the symptoms to a miliary cortical and subcortical encephalitis.

A useful appendix giving an analysis of 73 fatal cases of chorea, in tabular form, concludes this excellent treatise.

Lunacy Law for Medical Men. By CHARLES MERCIER, M.B.
London: J. & A. Churchill. 1894.

In the preface to this work the author states: "Endeavour has been made to give in this book clear information on every point of lunacy law on which a practitioner of medicine is likely to be consulted, as well as upon every point that he will have to consider in his own dealings with insane persons."

Now one of the first points that will in all probability arise, will be when a medical man is called upon to examine and certify an alleged lunatic, not a pauper, with the object of having him placed under care and treatment; and, as these cases are by no means very frequent in general practice, the practitioner will expect to find his duty made clear to him, and the proper steps to be taken set forth in this little volume. More condensation would have been an improvement, for there is a tendency to overload the text by reference to cases, so that, for instance, the busy practitioner will find he has to read through six pages of matter under the head of "Medical Certificates" before he finds the paragraph pointing out that the examination upon which he bases his certificate must be made within a period of seven clear days before the presentation of the petition. In dealing with the question of "urgency orders" this difficulty of finding the time allowed between the examination of the patient and signing the necessary certificate again occurs, as under the head of "Urgency Orders" there are eight pages (pp. 41 to 48), but the practitioner having waded through them has to turn to p. 80 to find that he must have personally examined the patient not more than two clear days before the reception of the patient.

In the index we find no mention of "single patients," but under "Person having charge of Lunatic" (pp. 62, 69, 70) the multifarious duties of those who take lunatics into unlicensed houses for profit are stated. The section of the

Act forbidding the reception of more than one certified patient into an unlicensed house is given, but we find no mention of the fact that the Commissioners can, if they think fit, allow more than one certified patient to be received into the same house.

Frequent reference is made to the rules of the Commissioners in Lunacy which they are empowered to make by the Act of 1891; and, as these rules are as binding as the Act itself, it seems to us that no book on lunacy law for the use of medical men can be complete without them. We are well aware that it is by no means an easy task to condense an Act of Parliament, but when the condensed form is mixed up with references, quotations from cases, and general rules for guidance, it is likely to become somewhat distracting for the unfortunate reader to find what he wants.

Imagination in Dreams and their Study. By FREDERICK GREENWOOD. London: John Lane. 1894.

The study of dreams, which had a supernatural significance in days of old and has acquired a new scientific significance within recent years, is a branch of psychological investigation presenting many points of interest to the psychiatrist. Not only do dreams occasionally play an important part in the evolution of insanity, but they are themselves a normal counterpart of insanity. We may frequently observe in our dreams the same struggle with an absurdity, the same eventual reconciliation with it, which we may watch in the victim of a systematized delusion spread over many years. In our sane dreams we are brought into the same condition of inhibited higher centres and diminished responsibility which we witness in the waking life of the insane.

In Germany under Wundt's inspiration, and in America under Stanley Hall's, several detailed and precise studies of dream phenomena have been published, which are of considerable value. In England also a few interesting, though too generalized, studies have appeared from time to time. Mr. Greenwood's little volume—consisting of two essays with appendices—contains his own observations on himself (a vivid and prolific dreamer) and on others, together with an appeal for the serious scientific study of dreams. For the sake of these observations, and as a stimulus to investiga-

tion, this charmingly-written book is well worth reading. Mr. Greenwood has many remarkable dreams to record, some of an apparently telepathic character; he also experiences in the waking condition many of the abnormal psychic phenomena described by Mr. Galton and others, and one of the points he makes is the connection between dreams and "day dreams," day visions, etc. Mr. Greenwood approaches his subject as an amateur; he has the advantage of all the amateur's freshness and enthusiasm, together with his tendency to magnify his hobby. It must be added that he exhibits in full measure the deficiencies of the amateur psychologist. He is evidently in ignorance of all the scientific work lately done with regard to dreams, and the only scientific book he refers to is Maury's venerable work, written long before psychology, as distinct from metaphysics, can be said to have come into existence. His theory of mental phenomena is also obviously antiquated; he clings to the theory of "faculties," and thus introduces much unnecessary confusion and difficulty into the more abstract parts of his book. Mr. Greenwood's ignorance of the present position of psychology renders futile much of what he says concerning those who do not approach dreams in what he would regard as the right spirit. He only sees the supernaturalists, who are now out of court, and the physiologists, who are satisfied when they have traced a dream to such a cause as indigestion, which is of course much the same as to call digitalis the cause of the heart's action. The psychologists remain, and the province of dreaming belongs to them.

Mr. Greenwood has much to say about the "faculty of Imagination," which he considers is more highly-developed during the sleeping than the waking life. There is an element of truth in this, especially when we recall the way in which isolated reminiscences of our waking life fall together during dreams in a bizarre congruity. But the examples brought forward scarcely show any high imaginative power, and Mr. Greenwood fails to take into account that during sleep we immensely over-estimate our powers, just as does the alcoholized person (whom elsewhere the author brings in for an instructive analogy). Sometimes during sleep we compose what seem to be eloquent and profound essays, but on awaking we recall the last sentence and find it in the last degree feeble. The experiences of Coleridge and Condorcet are extremely rare. Mr. Greenwood is

scarcely yet master of his subject, but his suggestive little book is saved from being unscientific by its prevailing honesty and open-mindedness.

Grafologia. Di CESARE LOMBROSO. Milano: Ulrico Hoepli. 1895.

“Graphology”—if the psychology of handwriting deserves to rank as a science—has been studied by Preyer, Goldscheider, Binet, Arréat, and many others, to mention no English names. It can scarcely be said that Prof. Lombroso has in this volume added much that is both new and true to what is already known. He falls too often into the facile generalizations affected by physiognomists of the school of Lavater. The volume is chiefly interesting on account of the 470 fac-similes of handwriting which the author has brought together with his usual energy and enthusiasm. These fac-similes are thus classified according to their writers: men of genius, the insane, criminals, persons under the influence of nervous diseases, and persons under the influence of hypnotism.

Jeanne d'Arc la Vénérable d'après les documents versés au Procès de sa Canonisation en Cour de Rome. Par Monseigneur RICARD, Prélat de la Maison de sa Sainteté, Vicaire Général Honoraire de Monseigneur l'Archevêque d'Aix. Paris. 1894.

The object of this book is to support the process of canonization of Joan of Arc, which is now being carried on at Rome, with the consent of Pope Leo XIII. The author writes in the full faith that the peasant girl of Lorraine was inspired by God to go on a purely political mission to save France from the English. Though we believe that all the real facts about Joan of Arc are susceptible of explanation without any need of referring them to a supernatural interference, we have no intention of criticizing the arguments of the author. There is an announcement on the cover that the report of the discussion before the devil's advocate is in preparation. We are not aware who this gentleman is, but we hope that he has taken counsel from some of the members of the Psychiatric Society of Italy, and we had almost suggested some names of distinguished colleagues

who might be called in to support the rationalistic side. Monseigneur Ricard in a foot-note alludes to objections taken from a medical point of view, which he considers to have been met by a work by the Count of Bourbon Lignières. He also announces a new work on the same subject, "*Étude sur Jeanne d'Arc et les principaux systèmes qui contestent son inspiration surnaturelle et son orthodoxie*," by a learned Jesuit, "the indefatigable P. Ayroles." The number of books which of late years have been published upon Joan of Arc is but one of the many proofs of the increasing cult paid to the heroine. Statues have been erected in various places haunted by her memory, chapels have been built in her honour, and plays and operas composed to celebrate her exploits. The visitor to Paris should not neglect to admire the fine frescoes on the walls of the Pantheon representing scenes in her life, one of which has been copied amongst the illustrations of M. Ricard's book. The author's narrative is evidently written from a careful study of the surviving records of the events, and in this respect it contrasts favourably with many of the accounts of Joan of Arc in English books. There is a great deal of scamped work in history. How often have we been told by different historians that Joan, after leading the Dauphin to be crowned at Rheims, announced that her mission was now fulfilled, and that she wished to return to her home and resume her humble occupations? This is a myth which came into credit as accounting for her subsequent failures and misfortunes. Our author has no difficulty in showing that Joan did not think her divine mission concluded at Rheims. It was the will of heaven that her trials and sufferings should end in martyrdom, as a special proof of the favour which God had accorded to France. He hopes that the time is at hand when the churches and altars will resound with the cry of "St. Joan of Arc, pray for the Church and for France." He promises to give an account of the miracles performed through her intercession, and in several passages draws a parallel between her life and that of the Redeemer, which is somewhat strange, coming from a Catholic priest. His hatred of England finds frequent expression. He informs us that the ashes of the messenger of heaven, carried by the winds and waves to the British shores, sowed malediction. The loss of the English provinces of France, and the wars of the Roses, are treated as a chastisement visited upon the whole nation for the

execution of Joan of Arc. He observes that England is still in schism and heresy, as the Jewish nation in infidelity, and puts the question, Must we see in this misfortune, the greatest of all, a chastisement for the stake at Rouen? It would, he thinks, be bold to say so. The book is curious as illustrating a condition of mind and a heightened tone of feeling which is not very common amongst cultured readers either in Britain or in France.

Le Sentiment et la Pensée—et leurs principaux aspects physiologiques. Par ANDRÉ GODFERNAUX. Paris: Félix Alcan, Editeur. 1894.

In this inquiry into the principal relations subsisting between feeling and thought, Dr. Godfernaux has made full use of the latest investigations in experimental psychology—especially as regards movements and sensations—with the result that he has produced a very suggestive essay.

The tendency of modern researches leads more and more to the abandonment of the view that thought is the sole source of all psychical manifestations, and that feeling has merely a derived origin and is of secondary importance. Moreover, the theory of the association of ideas, which has long held the field, while it shows how mental representations become grouped and are reproduced, in no way explains why they are so grouped and reproduced. So that it was natural to look elsewhere for the agent in the association of ideas, and modern opinion points to the feelings. This is the direction in which our author travels; and after perusing his facts and arguments, we must congratulate him on having made out a very strong case.

Starting with the hypothesis (which is constantly verified) that every event in consciousness is accompanied by a bodily phenomenon, which may be classed as (and which ultimate analysis shows to be) a movement, the problem to be solved may be thus set: If we observe that a feeling is constantly accompanied by organic phenomena or movements (heart-beats, visceral contractions, vaso-motor phenomena, etc.), and that an association of ideas must be accompanied (according to the hypothesis) by movements which experience may possibly disclose and some of which have already been studied (movements of the eye, the ear, the face, the larynx, etc.), we could try to define the relations between feeling

and thought by observing as closely as possible the movements which correspond to them.

In order to study feeling or thought in its isolated state, Dr. Godfernaux has investigated the field of mental pathology, and he finds a gradual dissociation of feeling and thought in the "simple psychoses," so that the diminution or exaggeration of one of these two elements of conscious life is always accompanied by corresponding and proportional disturbances in the other.

Thus in mania, feeling is eliminated from the consciousness of the subject, leaving thought, necessarily reduced to its simple elements, to subsist. The motor disorders in this affection are the objective manifestation of the psychical disorder—incoherence of thought. In melancholia, on the other hand, there is a gradual augmentation of the inhibitions; the affective life becomes gradually exaggerated to the detriment of thought, and finally subsists alone in consciousness; the climax is reached in stupor. A growing rarefaction of motor phenomena coincides with the centripetal direction of the associations of ideas. In hypochondriasis, consciousness is absorbed by the organic or internal sensations to the detriment of other forms of feeling and thought.

That the affective state is really the primordial agent in the intellectual or ideational disorders, the author considers proved by a careful study of chronic delusional insanity—the "systematized form" of Magnan. Here we have a definite succession of varying affective states corresponding with correlated changes in the mode of grouping of the elements of consciousness—that is, with definite and constant modifications in the associations of ideas. The affective state, Dr. Godfernaux considers, is the true agent which brings about the systematizations of the elements of thought, and the apparent "logical reasons" to explain the evolution of the disease are only a particular form of "justification" of the affective state; the apparent logical succession, for instance, of ambition to persecution is only an apparent phenomenon, and we must look for the true agent of the new reassociation of ideas in a new affective state.

The author is careful to lay stress on the fact that these indications are general, and feeling and thought are here taken in a very general sense—feeling being a diffuse and vague phenomenon of consciousness, corresponding to a

diffuse and vague movement; thought, a clearly limited and defined phenomenon of consciousness, corresponding to a localized and systematized movement.

Whether this reciprocal influence of feeling and thought can be made to explain the smallest systematizations of the elements of consciousness is uncertain at present. Our knowledge of mental pathology is not sufficiently ripe.

Turning to the normal being, the author endeavours to discover whether such real and constant relations are found between the affective state and the association of ideas as we find in morbid cases, and he concludes in the affirmative, basing especially his observations on the existence in every normal individual of disorders allied to those found in the psychoses—which are after all only exaggerated cases. The association of ideas is never, except in very rare instances, completely normal and perfectly systematized. It tends towards incoherence, which at times becomes evident. As soon as the affective state exists in excess, or is deficient, thought is troubled; and in excitement and depression the disorders are analogous to the incoherence found in the different psychoses.

If feeling then has a real influence on thought, if it is, speaking generally, its source, how does the influence act? It is here that motor phenomena, with the part they play, are introduced. Already, in observing the insane, the author shows that disorders of consciousness are accompanied with motor disorders, and this idea is further extended in support of his thesis to the normal mind. The conception of the "*tendencies*" is here introduced, as coordinations of movements or dynamic associations, more or less complicated and stable, and regulating the steps or progress in human activity. Most of these "*tendencies*" are hereditary; some are gradually acquired by the individual. Life is engaged in complicating the former, in acquiring and registering in the organism the latter. They correspond to phenomena of consciousness (conscious or subconscious) which are called emotions. And while the tendency systematizes definite muscular elements, the emotion produces a synthesis of definite elements of consciousness, *i.e.*, associations of ideas. The general conclusion, after many pages of careful description and close analysis, is thus given: The mode of operation by which the ill-defined and vague effort of tendency becomes organized into groups of motor phenomena more or less complex, and

finally into well-defined muscular co-ordinations, corresponds constantly to that by which emotion takes a definite and concrete form and gives rise to definite syntheses of elements of consciousness (sensations or simple images). So that the emotion is, therefore, like the affective state, but in a much more definite form, the internal agent of the association of ideas.

Dr. Godfernaux has made a bold attempt to summarize our knowledge of, and throw light on, the relations between feeling and thought, and the relations between phenomena of consciousness and motor phenomena, and every student of experimental psychology will be grateful to him for his well-executed task.

Grundsätze der physiologischen Psychologie. By WILHELM WUNDT. 4 Auflage. Leipzig: Wm. Engelmann. 1893.

The fourth edition of Professor Wundt's great work gives striking evidence of the growth of psychology as an experimental science. The book has been much enlarged and revised, and now consists of two volumes, each with over 600 pages. The chief change since the last edition is the more complete treatment of experimental methods, and especially those of psycho-physical measurement, and that apparatus has been described in more detail and with more illustrations. These changes decidedly increase its value as a work of reference, and as a text-book. It is questionable whether the general controversial tone of the book is quite suited to the latter capacity, although it is probably unavoidable in a work of such magnitude.

The chapters on purely physiological subjects have hardly undergone the alterations that might have been expected, and the author continues to hold opinions on cerebral localization and specific nervous energy differing widely from those current among physiologists. How very far wrong these opinions may lead him is shown by his acceptance of Ewald's supposed proof that the trunk of the acoustic nerve is directly stimulated by sound waves, a view which has since been amply refuted.

No very material change has been made in any of Wundt's psychological doctrines, although these have been modified occasionally—for instance, in the rejection of the

term, if not of the idea, "sensation of innervation." Comparatively little space is given to abnormal mental phenomena, these being treated of mainly in a section entitled "Disturbances of Consciousness." This section contains a good summary of Wundt's views on hypnotism, which have already been noticed in the Journal. In an early chapter the existence of centrifugal fibres in the optic nerve paths is held to support the view that in hallucination there may be a peripheral change set up by central disturbance. In the chapter on reaction time Wundt expresses the opinion that little has been learnt from observations on the insane in this respect, and he seems to fear that little is to be hoped for owing to the difficulty of comparing times so obtained with those of practised observers.

Professor Wundt does not appear to sufficiently recognize the importance which the observation of abnormal mental phenomena must have for the study of the physiological aspect of psychology. Such subjects as Weber's law and reaction time are treated with the greatest elaboration, chiefly because they lend themselves to exact measurement, while such topics as hallucination and the various forms of aphasia receive very scanty notice. It is a question whether psychologists are not going too far in the direction of exact measurement. The direct increase of psychological knowledge which we owe to the vast amount of toil and skill expended on the two subjects mentioned is very small, although it must be remembered that they have been of great service indirectly in leading psychologists to study scientific method.

Psychiatrie. By TH. ZIEHEN. Berlin: Friedrich Wreden. 1894. Pp. ix., 470.

In the preface to his "Introduction to Physiological Psychology," Professor Ziehen told us that his psychological studies received their first impetus from his interest in mental disease, and now we have a text-book on insanity founded on the psychological doctrines laid down in those lectures. The first part of the present work is a much abbreviated, but clear and connected account of the author's psychology, with its application to the symptoms of mental disease. It is written on the lines of pure associationism, and though this basis is a questionable one, it is certainly suited in the

author's hands to the systematic description of abnormal mental phenomena. The section on disturbances of association may be singled out as one of the best and most original in the book. The analysis of incoherence and the separation of a primary form from those secondary to other forms of mental disturbance is a valuable contribution to mental pathology. The parts of the book dealing with diagnosis, causation, and treatment are good, but contain nothing specially novel in matter or form; and the most interesting feature of the latter part is the classification of the forms of insanity. The term mania is used in a much more restricted sense than is customary in this country, and is limited to cases in which the three chief symptoms are constant cheerful mood, increased rapidity of flow of ideas, and motor excitement. These symptoms form a group exactly opposed to those of melancholia, which he regards as characterized generally by constant depressed mood, decreased rapidity of the flow of ideas, and motor inhibition. In both the alteration of the emotional condition is the chief and the primary, and the intellectual disturbance secondary to it. Paranoia is used as a general term for those cases in which the primary and chief change is of the intellectual or cognition side of mental life, in which the emotional change is usually variable and not constantly altered in the direction of exaltation or depression. It has two chief groups, each with a chronic and an acute form. Hallucinations, as affections of the cognition aspect of the mind, are distinctive of one form, hallucinatory paranoia. Primary delusions and incoherence are the distinctive features of simple paranoia. Chronic simple paranoia corresponds to the chronic delusional insanity to which the name is often limited, and Professor Ziehen contends that there is no essential difference in psychological character between this and many acute cases of insanity. The chief groups of paranoia are subdivided into varieties, partly in order to accommodate intermediate cases for which it would be difficult to find a suitable place in any classification. Cases of dementia form an altogether distinct group, as insanity with weak-mindedness, all the forms already considered being regarded as cases without weak-mindedness. This distinction is probably justifiable, though open to the charge of inaccuracy. Professor Ziehen's classification has at any rate the merit of being in accordance with the generally recognized psychological principle of the distinction

between feeling and cognition. It is unfortunate that the term which he uses for his chief class of intellectual disturbance has become associated with a comparatively limited group, and also that the term he applies to one of his minor classes is used by us in a much more extended sense. It is, however, better than the other alternative of coining new names, and the question of terminology need not necessarily interfere with the general idea of the classification, which is certainly worthy of consideration by English alienists.

PART III.—PSYCHOLOGICAL RETROSPECT.

1. *English Retrospect.*

Asylum Reports for 1893.

(Continued from Jan., 1895, p. 148.)

Some English Registered Hospitals.

Bethlehem Royal Hospital.—Dr. Percy Smith notes that of all certificated admissions, about one-third were admitted at first on urgency orders. Of those who, by reason of not having been seen by a justice before admission, had to receive the notice of a right to a personal interview, one in eight availed themselves of that right. It is curious that both proportions closely resemble those of former years, showing how much lunacy facts and figures tend to run in grooves.

Voluntary boarders continue to be admitted to a very considerable extent, and we append the statistics given by Dr. Smith. Care is taken to certify these boarders as soon as they pass out of borderland.

VOLUNTARY BOARDERS.

	M.	F.	T.
Remaining Dec. 31st, 1892	6	11	17
Admitted	17	26	43
Under care in 1893	23	37	60
	M.	F.	T.
Left the Hospital (refusing to remain for treatment)	—	2	2
Discharged Recovered	7	14	21
" Relieved	5	5	10
" Uncured	1	—	1
Placed under Certificates	6	11	17
Died... ..	—	—	—
Remaining Dec. 31st, 1893	4	5	9

Barnwood House, Gloucester.—Success, both psychological and financial, continues to attend the working of this institution under its new head, Dr. Soutar. A large amount of capital was laid out during the year in the purchase of property and buildings.

One of the effects of the Lunacy Act, 1890, was to create a fresh class of cases who seem to be a source of suspicious interest on the part of officials of all sorts. We believe that the conventional term for them is "short cases." This report contains particulars of rather a startling procedure under Section 116. In giving these we need hardly say that the hospital authorities had nothing to do with it.

In the case of a lady, the subject of an Order under the 116th Section of the Lunacy Act, 1890, we heard with surprise that it was made upon affidavits only, and that she was not seen by a Master in Lunacy, and that she had but one week's notice of the proceeding for the Order, during which time she endeavoured to obtain legal assistance, but through her reference to a wrong quarter, did not get it. She is, we believe, insane; but the proceeding in this way seems to be a strong measure, where property to the extent of £1,000 a year is involved, and different persons might possibly form different conclusions as to the mental condition of the alleged lunatic and her capacity to manage her affairs.

The Commissioners have suggested in their Report that when cases partly dependent on the charity have become chronic, and incapable of deriving benefit from the treatment here, they should be transferred elsewhere, to make room for other curable cases who have need for such treatment. We should think that the selection of suitable cases for such transfer would demand very great care, and that it would only be justified by advanced dementia. Dr. Soutar reports:—"Six patients, the subjects of dementia, have been discharged, to make room for curable cases and for those who, though incurable, are capable of appreciating the advantages offered by the hospital."

St. Andrew's, Northampton.—This institution continues to do much in the way of charitable assistance to the necessitous insane of the middle class, just one quarter of the inhabitants receiving financial help in some shape or another. A few are kept and clothed for nothing. We regret that the usual financial tables are not added, since it is interesting to compare one institution with another, even in this direction. The death-rate continues to be extremely low, less than 3·0 of the total number under treatment. A new stationary pump, capable of throwing 600 gallons per minute, has been added.

York, "The Retreat."—This is a very satisfactory report. A prominent feature is the response made to the appeal of the Committee for funds to enable them to wipe off a debt which in recent years has accrued from various causes. Towards the reduction of the bank debt, £2,158 11s. 6d. has been subscribed, while about £500 has been contributed towards an Endowment Fund. Greater economy, without injury to the inmates of the institution, has been exercised. The average weekly cost per head, calcu-

lated on total ordinary payments, is £2 9s. 5½d. The Committee acknowledge the "able and energetic administration" of Dr. Bedford Pierce, who entered upon his work at "The Retreat" more than a year ago. Dr. Pierce notes the success of the "drawing-rooms" commenced eighteen months ago and regularly held during the winter months. Patients and officers of the institution attend, but no attendants or nurses. Concerts, lectures, magic lantern entertainments, tableaux, and an amateur play have given great satisfaction to the patients. Sunday services have been satisfactorily conducted, and the Very Reverend the Dean of York and the Rev. F. W. Harper, the clergyman of an adjoining parish, have kindly lent their assistance.

The comfort of the nursing staff has, we are glad to see, proper consideration. Arrangements have been made to enable the nurses and attendants to take their meals apart from the patients, and the change has been found decidedly beneficial. To the annual holiday of all the attendants and nurses, at the instance of the Medical Superintendent, three days have been added by the Committee. For the nurses, the usual leave of absence has been increased, the result being that one day in every month is altogether free from duty.

It is stated that within the last decade six separate lavatory blocks have been erected at a cost of £2,880.

It is evident that Dr. Pierce has successfully advanced the interests of the important institution of which he has been placed in charge, and we can only wish that the ardour and energy which he has manifested may be sustained for many years to come. The Committee and Directors are to be congratulated on the excellent choice of superintendent which they have made.

The financial accounts are presented, kept with praiseworthy correctness, but we incline to think they are needlessly full in some respects. The question whether, in the case of an institution like a registered hospital, a valuation of freehold and buildings, and an inventory of furniture, etc., shall be kept up from year to year, is chiefly governed by a consideration whether the valuation and inventory are ever likely to be at any future time brought into account for the purposes of sale between the seller and the buyer of the institution as a going concern. One can scarcely conceive possible circumstances under which such a sale could take place. In fact, the ample powers given to the Commissioners and Home Secretary would render it impossible. If, as might be the case, the premises and contents had to be sold to meet liabilities, we may rest assured that the valuation then acted on would be arrived at by actual sale, and not by actuarial calculations. It may be thought that for the purposes of a loan a valuation is desirable, but then this is a valuation taken at the moment, and not by yearly calculations; and in this case is only of the freehold, since the premises are of less value than

bricks and mortar, and the furniture could only be a security under a bill of sale.

Assuming, then, that the hospital cannot be sold, there appears to be no more reason for keeping up a valuation than there would be for having a continuing valuation of the Houses of Parliament and their contents.

If there is no reason for it, there are, we think, several reasons against it, *e.g.*, waste of labour, the probable error in estimates, the suggestion of the existence of a capital value which can never be realized, etc.

There is yet another most important reason for not publishing an annual valuation. We suppose that the institution is kept up to a proper point of efficiency by repairs, etc. We know that in the nature of things depreciation by wear and tear is bound to arise. We know too that, though possibly in any given year repairs and wear and tear may just balance each other, it is impossible for such a balance to be kept up year after year, and that one will from time to time outweigh the other. Then, if the valuation is to have any effect at all, it must eventually affect the preparation of the revenue account. If waste exceeds repair, so much must be written off the year's balance (if favourable). If repair exceeds waste, then a fallacious addition will be made. Yet under both circumstances the institution may be in good and sufficient repair.

It is, of course, quite right to present a statement showing whether debts at the end of the year are met by cash assets, but it does seem unnecessary and very unusual to have "stock" annually set down; in the present instance about £50,000. The Retreat has cleared its ordinary expenses notwithstanding depreciation charged in excess, as we hold, and should be thankful. It is satisfactory that warrantable reductions have been made in some of the main articles of expenditure without disadvantage to the institution.

Some Scottish Royal Asylums.

Dundee.—It is somewhat curious to read that the Directors consider that the asylum is in a prosperous condition, and in another paragraph to find that the year's revenue is £205 short of expenditure. But an institution with a history and reputation such as Dundee has can afford to have a lean year or two.

The proportion of admissions to population is very large, being 180 to 403.

The extension of accommodation for the better class of patients will be most efficiently and at the same time most economically met, partly by the erection of a special building for exceptionally difficult cases, quite apart from, and yet within easy access of, the present institution, and partly and chiefly by the purchase or lease of any suitable buildings in the neighbourhood which may be available for the purpose, and where the patient could secure greater privacy, and enjoy more fully those home-like comforts which can only to a limited extent be introduced into a large public institution.

Edinburgh. Morningside.—The treatment of lunacy is not carried on here at a loss, the managers pointing “with much satisfaction to the very substantial surplus revenue derived last year from the East House,” viz., £4,134. To the end of 1893 £85,000 had been spent on the new Craig House, of which £51,000 had been borrowed, and £34,000 had been provided from profit since 1884. Since the report was written this great addition to the institution has been opened with due ceremony. To Dr. Clouston’s determination, tact, and skill is chiefly attributable the getting together and successful expenditure of such vast sums. It is easy for a “local authority” to issue a precept for a quarter of a million or so, and its execution is absolutely assured. It is a very different thing to obtain even a less sum purely by appealing to public confidence. To Dr. Clouston we offer our congratulations. Apparently there are some people in Edinburgh or thereabouts who are not content to leave well alone. Against these are hurled some hard financial facts, Dr. Clouston showing that by the present housing of their patients in Morningside the ratepayers are saved £2,700 a year. This sum would have to be paid in excess if the District Board erected accommodation of their own, but evidently there is a “bit of a row” going on, the dust only of which do we see in the report. General paralytics were *admitted* to the extent of twice as many as the *deaths* from the same disease in all Ireland. This fact sets us thinking. Some say viciousness, some say ardent spirits, some say poverty and a keen struggle for life, some say ceaseless activity and want of peace cause the disease. Will Morningside care to be judged by all or any of these tests when compared with Ireland?

Dr. Clouston again insists on the necessity for man knowing himself in order to fight off the tendency to the disease. He protests with good cause against the foolish boast “that our family at least is quite free from insanity.” From statistics of a country parish, fortified by his own observation, he deduces the fact that every second family is predisposed by the existence of idiocy, epilepsy, insanity, or other allied neurosis.

The recovery and death-rates were both high, the latter fact being partly due to influenza, and partly to the presence in the asylum of so many old and paralytic patients. Death robbed the asylum of an old inmate, and an old friend to many. The printer, after a residence of 41 years as a patient, has ceased to issue the “Morningside Mirror” and the Morningside reports. He would be well known to many in our Association. Dr. Clouston reviews the working of Morningside during the past ten years. The recovery-rate is 36·7, the death-rate 7·2. . Of the deaths—

Causes of Death.—Fifty-nine per cent. of all the deaths during the ten years were directly due to diseases of the brain or nervous system, against 54 per cent. in the previous ten years. General paralysis alone caused 20·6 per cent. of all these deaths. These facts do not necessarily prove that nervous diseases are increasing

nowadays, though there are many grounds to fear that this is so. But they do prove that the serious and fatal diseases of the brain, with mental complications, are more sent to asylums nowadays. The same causes that led to the decreased recovery-rate necessarily led to the increased death-rate in the decade.

One very satisfactory fact appears in these statistics. While the death-rate from consumption was about 25 per cent. of the whole mortality before 1873, it fell to 15 per cent. in the decade 1874-83, and during 1884-93 it has fallen to 12·7 per cent., this including all the cases found tubercular after death. This speaks volumes for our improved diet, ventilation, outdoor exercise, clothing, and the benefit our hospitals have been to our patients.

Montrose.—More room is wanted, and it is proposed to build separate houses for private patients, thus making room for more parochial people. The Committee paid Dr. Rutherford a visit at Dumfries, and came away much impressed by his detached villas. Eleven attendants obtained the certificate of the Association. Dr. Howden will not give a recommendation to anyone as a trained nurse who does not hold this.

The hospital that was added to the asylum some years back continues to give great satisfaction. It is used for sick people, and is not intended in any way for the special care of recent cases. Post-mortem examinations were held in 47 out of 52 deaths.

James Murray's Asylum, Perth.—Dr. Urquhart is a persistent advocator of change for many sorts of cases—bad chronics, slow and unsatisfactory convalescents, and so forth. We feel sure that he is right. He sent out six patients and received four on this principle.

Instead of the cares and responsibilities of marriage tending to produce insanity more readily than celibacy, Dr. Urquhart finds just the reverse. Only two married men remained on the register.

The influenza of the preceding year reduced the vitality and body weight of all; but during the year under report there was an average gain of 6lbs. per patient.

It is no mere formality to express thankfulness that our record for the year is unsullied in this respect, and I desire to bring into prominence the valuable services rendered by those continuously and intimately responsible. In the outer world there is a rooted idea that anyone will do for an attendant, and there is no lack of unsuitable candidates when vacancies occur; but newcomers soon find that an asylum is a school for all the Christian virtues, and it ought to occasion little surprise if the severe training finds here and there a contumacious pupil.

Some Scottish District Asylums.

Fife and Kinross.—The admissions show a welcome decrease, but the cases were not of so favourable a character as usual. Dr. Turnbull has occasion to make protest against comparisons being made between district asylums and other asylums. In the former obviously everything that comes to the net has to be taken in, but it is not all fish. In other institutions, we suppose, there is some freedom of choice. There is no question but that he was hardly treated by one inspector, who out of three cases from one parish sent the chronic to Dr. Turnbull and the other two curable ones to another place. As we have said many times before, compari-

sons of figures are utterly valueless unless the correlative facts, such as this, are known.

No case of general paralysis was admitted.

Dr. Turnbull has been to the trouble of obtaining information from other asylums as to consumption of water per head in them, and after comparing them with his own figures he comes to the following conclusion :—That while 30 gallons per diem is generally taken to be the average amount consumed by sane folk, in asylums 75 gallons are used where there is no restriction ; 40 is the absolute minimum, while a supply of at least 50 is desirable.

A supplementary table is given, showing the increase or decrease in weight in those cases who recovered. Four cases in 35 actually lost weight, but only to a small amount. The others mostly gained considerably, one female having well spent 19 months in adding 86 pounds to her already reasonable proportions. In this table, which is a really interesting and instructive one, we note that a case recovered after 16 years of melancholia.

Roxburgh, Berwick, and Selkirk.—This asylum is getting uncomfortably crowded, for which a very low death-rate must be mainly responsible. It is curious that, after reading Dr. Turnbull's figures of the water requirements of an asylum, we should have, in the very next report we take up, a convincing proof of why so much water is required and of the ill-effects of shortness. Dr. Carlyle Johnstone writes :—

The supply of water to the asylum has not been increased. During the prolonged drought of last summer the quantity from all sources, good and bad, was quite insufficient for the wants of the community. It was found necessary to discontinue the bathing of the patients, to cease cleansing the floors, to restrict the washing of clothes, to cut off the water in the lavatories during the greater part of the day, and to shut up many of the water closets ; while, as regards risks from fire, the institution was reduced to a practically defenceless position. It must not be supposed that this distressing state of matters is an unusual one. An almost equally serious condition exists during every dry summer, and in no summer is there a sufficiency of water of a wholesome quality.

Stirling, Dumbarton, Linlithgow, and Clackmannan.—197 admissions for an average residence of 459 is undoubtedly high, especially in an asylum only constructed for 400 patients. Dr. Macpherson does not adduce any particular explanation of the increase, but warns against too ready acceptance of current theories which are so fashionable. In separating the private from the pauper patients he applies the words "State-supported" to the latter. We must really take exception to this term, which is used not by him only. Patients are sent to asylums and paid for there by their immediate neighbours, in obedience to a law as old as Moses, that each aggregation of people should support and care for its sick and poor. The suggestion of this duty being thrown on the tender mercies of a State department is a suggestion of a calamity from which we pray Heaven to shield us. Even in its modified form in Ireland it is not found to be a blessing.

Dr. Macpherson well points out that education is no safeguard against insanity, at least that "smattering of a variety of different kinds of knowledge" which is supposed to be education. He quotes Sir J. Coxe as insisting that education "in knowledge of a man's own body, and of the relations in which he stands to the moral and physical world round him," is a power for checking the spread of the disease.

Great interest is taken in the training of nurses, and we make the following extract from some excellent remarks thereon:—

The enthusiasm with which nurses and attendants in the present day asylum have thrown themselves into this new scheme of reform (and nowhere has this enthusiasm been more freely manifested than in this asylum) is an excellent sign that the standard of asylum nursing has risen, and will continue to rise with increasing aspirations. When the fashion in nursing changes, as all fashions do, and when people begin to perceive that ministering to a diseased mind is a higher mission than that of ministering to a diseased body, then we may expect the highest type of nursing to have its location in our hospitals for the insane, and the reproach of centuries of neglect and cruelty to be at least partially expiated in the gentle alleviation of the fearful and painful sickness of the mind.

2. *French Retrospect.*

Ph. Chaslin on Cerebral Sclerosis.

Contribution à l'Étude de la Sclérose Cérébrale. "Archives de Médecine Expérimentale," Tome iii., p. 305.

More recent methods and investigations must be held to modify some of the results of this observer. His paper deals, directly, only with the particular form of cerebral sclerosis frequent in epileptics. In some of these the lesions were visible to the naked eye, some convolutions being atrophied, indurated, rough or smooth; and the cornu ammonis and medulla oblongata were also more or less affected. One part of an altered gyrus contained some abnormal nerve-cells, and between them neuroglia fibrils; another part was formed solely of overgrown neuroglia. The point of departure of this overgrowth appears to be the spider-cells.

He uses a histo-chemical reaction or test, suggested by Melassez, to show that, in these cases, the proliferated material, as well as being morphologically, is also chemically very different from connective tissue.

In milder degrees of change there is thickening of the superficial or neuroglia layer, forming a close network; in the next subjacent layer are fibrils of neuroglia, some of them described as traversing the protoplasm of spider-cells. The change is to a less embryonic state of the neuroglia, approaching that of the spinal neuroglia, and is entirely different from that found in general paralysis.

He asserts that the neuroglia and connective tissue come from different sources, and that the proliferation, in the cases forming the basis of his paper, is of neuroglia of ectodermal origin. (On

these two points partial correction is necessary. See article in "Brain," by the abstractor).

Klebs, taking his stand on the structure of glioma, believed that the neuroglia in these cases is of nervous nature. Others hold the neuroglia, or in morbid cases the proliferated material, to be true connective tissue. Yet in syringomyelia and in Friedreich's disease there is pure neuroglia proliferation, quite distinct from true connective tissue or its proliferation. Both forms may co-exist, yet remain separate, *i.e.*, without reciprocal encroachment, in some diseases of the spinal cord, as, *e.g.*, tabes. Achard also showed in the optic nerves two forms of sclerosis, namely (a) Pure neuroglia sclerosis, and (b) Connective sclerosis.

Firstly, denying, therefore, the connective nature of the sustentacular tissue of the nervous centres; he concludes, secondly, that the lesion he describes in the brain of some epileptics is not an actual chronic inflammation; and, thirdly, that this particular proliferation of neuroglia is set up by a disorder in the development and evolution of neuroglia, usually due to a congenital defect or vice.

For this so-called "pure neuroglia sclerosis" he also proposes to specially retain the name "gliosis;" thus marking its special character; its approximation, perhaps, to the formation of glioma (but whether so or not); its constitutional and hereditary nature.

The term cerebral sclerosis he uses in his paper as affecting the cerebral grey cortex only, there being in all cases proliferation of neuroglia, either with or without palpable induration.

Proliferations of the neuroglia (or scleroses) he divides into two classes, the inflammatory and non-inflammatory. Among the former, or inflammatory, he places insular sclerosis; many or most cases of general paralysis; simple encephalitis or meningoencephalitis, toxic or infectious; infantile hemiplegia (or polioencephalitis); the sclerosis following cerebral injury, etc.

Among the latter, or non-inflammatory scleroses, are gliosis (used in the sense as above); hypertrophic or tuberos sclerotic; that secondary to arrested or lessened nervous development, or to disuse, or to senile involution, etc.

These two classes may be mixed in a given case.

He concludes that in the pathologically affected grey cerebral cortex the fibres and bundles found (other than the nerve-fibres) are not of connective tissue. They form at the expense of the neuroglia a sustentacular tissue of ectodermal origin (see previous criticism).

The cerebral sclerosis in epileptics is a variety of cerebral sclerosis attributable to a defect or vice of development. To that he more specially reserves the name gliosis, as being an alteration ordinarily hereditary and constitutional, and approaching gliomatous formation.

A table of classification of cerebral sclerosis and a plate complete the contribution.

Puerperal Insanity.

Idanoff ("Annales Médico-Psychologiques," May, 1893) found infection to be certainly present in 70 per cent. of his cases, and this to be the chief ætiological factor. Heredity existed in 56 per cent. Nearly half were primiparæ (45 per cent.) Emotional disturbance was a factor in 26 per cent.

Menzies ("American Journal of Insanity," October, 1893) includes the cases of puerperal insanity, properly speaking, together with those connected with pregnancy, with parturition, and with lactation. This does not entail clearness when we compare his cases with those of others. He insists upon self-intoxication as the important factor, and the result of a pathological deviation of the processes attending the above-mentioned physiological periods or crises in some persons. The mental symptoms, in this view, arise from the resultant toxæmic state, and the perverted processes attending it, as, e.g., cessation of the lochia. A number of clinical types are described.

The matter, of which the following are brief abstracts, we borrow from Dr. F. Peterson's report on "Psychiatry" in a recent number of the "New York Medical Journal," the original sources not being at hand.

Narcolepsy.

Böhm (Inaugural Dissertation, Berlin, 1893) gives histories of four cases of narcolepsy. Three were females, aged 11, 12, and 31 years, and one was a male, aged 18. Hysteria was marked in all the cases. Two of the girls had hystero-epilepsy, and one of these had also exophthalmic goitre.

Traumatic Psychoses.

Jacobson ("Nordiskt. Med. Arkiv.," No. 13, 1893) disbelieves in a traumatic psychosis, but admits that the mental symptoms following cranial injury often present resemblances in a series of cases. Usually there is mental confusion, "and this may be hallucinatory, maniacal, or stuporous, or even a chronic dementia with or without motor paralysis." He does not say that the head-injury was the cause of the general paralysis of the insane in any of several cases in which it preceded the latter; and if there is a previous syphilitic infection the part played, ætiologically, by the injury is doubtful.

The Bactericidal and Toxic Action of the Blood of the Insane.

D'Abundo ("Rivista Sper. di Freniatria," etc., Vol. xviii).—The toxicity was determined by the injection of the defibrinated serum of the blood of the insane into the auricular veins of rabbits; the bactericidal power was tested on the anthrax bacillus. Ten c.cm. per kilogramme of blood kills rabbits by acute intoxication. He found the toxicity and bactericidal power of the blood increased in all forms of insanity except in the depressed conditions, in which, on the contrary, it was lessened.

Folie à deux.

Arnaud ("Ann. Méd. Psych.," May, 1893) divides cases of *folie à deux* into three groups:—

1. Imposed insanity, in which the second makes unusually small resistance to the first person affected.

3. Simultaneous insanity, in which natural proclivity, environment, and corresponding causation affect the two persons in like manner.

3. That in which there is doughty resistance by the second person affected, and only overcome by the exhaustion of a long conflict.

Common to all forms of induced insanity are three factors, namely, a similar predisposition; great and protracted intimacy of the two persons; and lastly, a plausibility of the delusional notions. Hence most of the cases are examples of persecutory paranoia.

Dr. Peterson ("Alienist and Neurologist," Jan., 1890) had previously expressed the same view as concerns the intimacy of the affected persons and the plausibility of the delusions, and that on this account *folie à deux* was more apt to occur among sisters, and that delusions of a suspicious and persecutory nature, because more readily given credence to, were more easily induced in a close associate.

A Psychopathic Epidemic.

Szikowski ("Universitetskija Iswjetstija," 1893, "Neurol. Centralb.") observed this in Kiev, Russia. The originator of the pseudo-religious movement was insane, and the majority of his followers, mostly peasants, presented morbid nervous and mental symptoms. They believed their leader's assertions, such as that he was Christ; and, becoming exalted and joyful, sold their possessions and gave up work, saying no one would die, and work was not necessary, as God would take care of them all. Eighty per cent. of them had sensory illusions; most of them had hallucinations of smell. They perceived extremely agreeable odours, which they described as pertaining to God and Heaven, or the Holy Ghost. "Many had the feeling of remarkable bodily lightness, as if floating in the air. Some heard the voice of God, the whispering of the Holy Ghost, saw heaven open before them, and so on. Many were taken with convulsions, manifestly of an hysterical character. The congregations were always noisy and exalted, many falling to the earth, others jumping, striking themselves on the breast, shouting inarticulately, the women undressing themselves and becoming erotically excited." Some spoke in incomprehensible, senseless sounds, which they took to be a language spoken somewhere. Some had complete analgesia during ecstatic conditions. Most of them were anæmic and emaciated. The authorities broke up the "epidemic" by dispersing the subjects of it.

3. German Retrospect.

Percussion of the Cranium.

BY W. W. IRELAND, M.D.

("Neurologischer Centralblatt," No. 14.) Professor W. v. Bechterew treats of the conduction of sound and percussion of the bones of the skull and vertebral column. Dr. W. O. Kunew ("Wratch," 1893, Nos. 48 and 49) has already indicated a method of examination for suppurative inflammation of the mastoid process in disease of the middle ear. He employed a common india-rubber tube, such as is used for otoscopic examination. The ear-piece is inserted into the auditory meatus, and the funnel laid upon the mastoid process. If a tuning fork be now made to vibrate on the vertex of the head, the tone is always more distinct on the sound mastoid process than on the diseased one. He holds that examination of the conduction of sound is indispensable in deciding the question whether the mastoid process should be trephined or not. Diminution of the intensity and muffling of the sound of the tuning fork if conducted through the bone is an infallible symptom of deep disease, suppuration, caries of the bone, or new formation. This new method of diagnosis enables the surgeon to trephine early.

Dr. Gabritschewski invented a special instrument, called the pneumatoscope, by which he makes examinations of the walls of the thorax and cranium, but the short description of it given by Dr. Bechterew is scarcely clear enough to justify me attempting to render it into English.

In practising auscultation of the cranial vault Dr. Bechterew places an ordinary stethoscope on the suspected part of the skull, and, at the same time, percusses the neighbouring parts of the skull with the finger. In this way he compares the conduction of the sound in symmetrical or neighbouring parts. He finds the percussion sound of diseased parts duller and giving a different sound than in healthy parts. In a recent case of abscess of the cerebellum he found a muffling of the percussion note at the back of the head in the neighbourhood of the occipital protuberance. In a case of Ménière's disease there was observed a muffling of the sound on percussion of the mastoid process of the affected side of the head. For the more convenient use of percussion Dr. Bechterew has a tuning fork so connected with a galvanic battery that it emits a continued sound. By the aid of a double stethoscope he is thus able to compare the vibrations on corresponding sides of the head. An engraving of this instrument is given in the "Centralblatt." Dr. Bechterew observes that, in pursuing this method of investigation in cerebral or spinal diseases, great atten-

tion should be made in distinguishing weak or superficial from strong or deep percussion. In the first case the spinal column may be struck with the finger or the percussion hammer; in the second case it should be struck upon a pleximeter. Through weak percussion localized diseased processes may be discovered, such as tuberculosis, periostitis, or syphilitic sclerosis of the bones. In these cases percussion must be done with caution, as even a slight pressure of the finger may cause great pain.

But, though percussion of the skull and vertebral column is to be avoided in painful affections, there are cases in which deep percussion is serviceable in bringing out diseased parts which show no sensibility to slight percussion. In this way Dr. Bechterew assures us he has often found an increased sensibility in one or other temporal region, with epileptics, as well as sensibility of the occipital region in affections of the posterior part of the brain. He has found deep percussion especially useful in affections of the spinal cord. In general local affections of the cord where the vertebral column is not affected no sensibility is shown to weak percussion; but let strong percussion on the pleximeter be used, sensitive or painful points are brought out, which indicate the seat of diseased parts in the cord or its membranes, syphilitic processes, or myelitic abscesses. This method of investigation sometimes enables us to localize the lesion when other means of diagnosis fail.

Hæmato-Porphyrinuria after Sulphonal.

Dr. Herting has published ("Allgemeine Zeitschrift," Li. Band, 1 Heft; see also L. Band, 5 Heft) three cases occurring in the asylum of Alt-Scherbitz in which porphyrohæmaturia followed the administration of sulphonal. The first patient was a woman aged fifty-three years, a chronic paranoiac, to whom sulphonal had been given to subdue excitement and cause sleep. After 128 grammes of sulphonal had been taken in 110 days some symptoms of intoxication appeared, heaviness in the legs, slight giddiness, and lisping speech. On the doses being lowered these symptoms soon disappeared. As the excitement increased two grammes of sulphonal daily were administered for ten days. One morning the patient could not keep from tumbling, and was put to bed. The next day the temperature rose to 39.3. There was want of appetite, sickness, and pains in the right hypochondrium. The urine was noticed to be red like wine. The patient gradually declined in strength, and died after three weeks. The examination did not throw any light upon the symptoms. The blood-coloured urine was found to keep a long time without decomposing; sp. gr. about 1026. It contained neither albumen nor sugar, but a few red and white blood globules and fatty granules, epithelial corpuscles, and some bluish red bodies. On a spectroscopic examination eight weeks after there were observed two

absorption bands between 58.3 and 57, and between 55 and 53. From the reactions it did not appear to be hæmato-porphyrin, but some other colouring stuff whose nature was unknown. In the two other cases there were similar symptoms, but both patients recovered.

Dr. Herting has collected 28 cases in which the porphyrhæmaturia appeared in patients dosed with sulphonal. All these patients were women. Only one case is on record of a male so affected. The premonitory symptoms seem generally to have been those which follow the administration of large doses of sulphonal. Constipation was a common symptom. No explanation has been furnished why the female constitution should be so affected, nor did the examination of those who died throw light upon the symptoms.

Sulphonal is much used in German asylums, and the number of cases where unfavourable results followed bears a small proportion to those in which no evil consequences were noticed.

Dr. Erlenmeyer holds that sulphonal should be given with great caution, as in large doses it favours the passage into dementia; but Dr. Herting has observed nothing to confirm this view at Alt-Scherbitz. He gives instances of chronic patients taking sulphonal in large doses and entirely recovering.

Dr. Herting describes a case in which the hæmato-porphyrinuria seemed to him to follow the administration of trional and tetronal, but the patient had taken five grammes of sulphonal in eight days, immediately before the appearance of the symptoms.

Case of Poisoning by Trional.

Dr. Ewald Hecker ("Centralblatt für Nervenheilkunde," 1894, August) contributes a case of poisoning with trional. The patient was a lady, aged fifty, who had been ten years under treatment for melancholia. Being much troubled with sleeplessness she was given a gramme and a half of trional. She complained of sore throat and coryza, and remained two days in bed. On getting up she had a feeling of giddiness and uncertainty in her gait; on taking a walk she fell. These symptoms were put down to influenza. Dr. Hecker had occasion to be absent for ten days. On returning he found the lady's condition much worse. She fell when she tried to walk, forgot names, confused words, and was much affected in her intellect. It appears that she had been getting a gramme and a half of trional every evening for thirty-six days. Dr. Hecker now came to the conclusion that she was suffering from the effects of that drug. It was immediately stopped, the signs of advancing dementia gradually ceased, though five weeks elapsed before she was able to walk.

Dr. Hecker observes that the symptoms were not so specific as in the case described by Dr. Schulze, in the "Deutsche Medi-

cínische Wochenschrift," 1894, No. 7. There was hæmatoporphyrin in the urine, and the patient died; whereas in Dr. Hecker's case no such symptom was noted, and the patient came back to the *status quo ante*.

Dr. Hecker quotes the investigation of Binz to show that after the use of certain hypnotics there is a slight but pervading coagulation of the protoplasm of the brain cells, which explains the abatement of function. Whether a similar coagulation takes place in natural sleep is doubtful. The newest investigations of Mosso indicate that the conditions under which artificial sleep is produced through soporifics are probably different from those which induce and accompany natural sleep. In his book, "Die Temperatur des Gehirns," Leipzig, 1894, Mosso publishes a series of experiments which show that in natural sleep the temperature of the brain at first remains unaltered, but sinks if the sleep be prolonged, whereas after the use of hypnotics there is a decided rise of temperature in the brain, while the temperature in the rectum is not altered. From this we may conclude that during artificial sleep there are more rapid processes of oxidation in the cells of the brain, which may leave behind them profound lesions of the nerve tissues.

4. Retrospect of Criminal Anthropology.

BY HAVELOCK ELLIS.

Caserio.

The greater part of the "Archives d' Anthropologie Criminelle" for last September is devoted to a medico-legal and criminological study of the events connected with the murder of President Carnot. It is drawn up by Drs. Lacassagne, Ollier, Coutagne, and others who conducted the autopsy and had some opportunity of examining Caserio. The latter, born at Malta-Visconti in Lombardy, was 20 years of age. His father was epileptic. Caserio emphatically denied that there was any insanity in the family, but the point was never really investigated; it has been stated that two uncles are in an asylum. Caserio's face, as may be seen from the portraits given, is rather pleasant; a few signs of physical degeneration are noted about his person, but they are of trifling character. There was a continuous smile, of spasmodic character, on his lips. He was tall, upper part of body well developed and muscular, head rather small and brachycephalic. His expression was gentle, but rendered ferocious by political discussion. It is noted that he had the lean and pallid air dreaded by Cæsar. His education was very elementary, but he was an insatiable reader, depriving himself of sleep to study politics. His memory, visual in character, was extremely

good. His intelligence was quick and clear, but superficial, easily accepting paradoxes and sophisms, and regarding anarchism as the universal panacea. His chief characteristic was his impulsive, energetic will. He had a very strong vagabond impulse and could never remain long in the same place. He was taciturn and solitary, and certainly had no confederates. His indifference to women was complete; he had, as he put it, "married anarchism." He was one of those individuals, remarks Lacassagne, whose blood is like flowing dynamite. Whatever feelings of affection he may have possessed were subordinated to his devotion to the poor and suffering. He had never seen the President before plunging the dagger up to the hilt in his abdomen, and he once remarked that if he had caught his victim's mild, affrighted gaze an instant earlier his arm would have been powerless. Lacassagne decides that Caserio was not insane, that he was "un fanatique assassin" and responsible.

In the following number of the "Archives" Lacassagne prints a long letter addressed to him by Dr. Régis of Bordeaux, who is the author of a remarkable book on regicides. Régis criticizes with much acuteness and moderation many of Lacassagne's statements and conclusions, pointing out contradictions and bringing forward other facts that Lacassagne had ignored. He attaches importance to the marked religious fervour of Caserio in early life, as a sign of the morbid exaltation which he afterwards placed at the service of anarchism. He points out that no real psychiatric examination was ordered by the authorities, and that Caserio's counsel was only able to base his defence on "the general theories of Maudsley and Lombroso." He suggests that Lacassagne has been to some extent unconsciously influenced by the universal wave of indignation which passed over Lyons and the whole of France; in this connection he mentions that Tamburini, Biffi, and Lombroso had first declared that Passanante, the would-be assassin of King Humbert, was responsible, but that Passanante was afterwards consigned to an asylum at the recommendation of the same experts, and is now in the last stages of dementia. Taking Caserio's history point by point, he shows that in main outline it corresponds to that of regicides generally, and concludes that the right place for Caserio would have been a criminal lunatic asylum.

Caserio certainly cannot be described as an instinctive criminal or a moral imbecile. He was a political criminal, though of an extreme and unbalanced kind. In a country like England, where political idealism is tolerated, he would probably have remained a harmless enthusiast.

The Elmira Reformatory.

This famous prison has recently, not for the first time, been passing through a period of trouble. While in England it has frequently been condemned on account of the supposed indulgence

with which its inmates are treated, in America there is a popular agitation against the supposed severity of the treatment. It is not likely that this agitation, which is got up by the baser part of the population and those who pander to it, will have any permanent effect in injuring the magnificent work done at this prison. It is satisfactory to learn that an inquiry instituted by the Governor of New York State has entirely vindicated the management of the Reformatory. The most enlightened advocates of progress in these matters are entirely on the side of Mr. Brockway and his methods. Thus Mr. C. D. Warner, who from the first has closely followed the work at Elmira, has lately published a wise and vigorous defence of it as a system which for the first time in history has subjected the criminal to strictly scientific treatment. ("The Elmira System," "Am. Social Science Ass.," September, 1894.)

The "Year Book" of the Reformatory for 1893 contains no reference to these troubles, and is as full as ever of interesting matter. The photographic illustrations are not so numerous, but they are even better than usual. The managers still believe that about 80 per cent. of the prisoners released on parole are probably reformed; to realize what this means it must be remembered that the Elmira inmates are not, strictly speaking, first offenders, they are sent there on first conviction of a "felony." They may have been convicted and imprisoned many times previously for "misdemeanours." This good result is certainly due in large measure to the trade-school, which comprises a large and varied number of departments, and is described as one of the largest in existence, covering three acres. When the inmates reach the reformatory 95 per cent. of them have no knowledge of a trade; when they leave 78·5 per cent. are able to secure employment at trades acquired in the reformatory, and a very large proportion obtain full wages. The object of this insistence on trade is to train the nervous system by impressing regular and healthy habits; the man who has been forced to become accustomed to hammering eventually acquires a need to hammer and a satisfaction in so doing. The education and training of the whole nervous system, and not the mere forcing of the brain, is an essential part of the Elmira system. A section is devoted to the dietary of the reformatory, a question to which much attention is devoted. Dr. Wey's notes on anthropology are, as usual, of much interest. Some account is also given of the chief innovation during the year—the conversion of the kindergarten (for the feeblest, mentally and physically, of the inmates) into what is called the experimental class. These men are given a different diet, less in amount, but better in quality; are subjected to calisthenics, hot baths, and massage every day; are clad in more elegant suits, which they must keep strictly clean and neat, and everything about them is carefully regulated, while their hands and eyes are trained by clay-modelling, etc.

The Teaching of Criminal Anthropology.

The recent advances that have been made towards rendering more precise and scientific our methods of investigating the insane and criminal tend to complicate the work of the psychiatrist. As rule-of-thumb methods fall into discredit, and as it becomes recognized that however important the study of the nervous system after death may be, it is far more important to investigate it during life, the apparatus of investigation becomes more difficult both to learn and to apply. It is therefore somewhat strange that so few efforts have yet been made to give adequate instruction in psychiatric methods. In Italy, where so much has been done to initiate new methods, there are greater facilities for instruction than elsewhere; the laboratories of universities and asylums from Turin to Naples are constantly sending out young investigators to do sound and unobtrusive scientific work. In Germany the investigator has usually to work out his own methods, though he sometimes does this to very good effect. France has at least the good fortune to possess the fruitful medico-legal school at Lyons, under Lacassagne's superintendence, and at Paris a practical school of anthropology which, through Manouvrier and others, is closely in touch with criminal anthropology. At Paris, also, as well as in many other parts of Europe, at Amsterdam, at Cracow, etc., lectures on criminal anthropology form a more or less extensive part of official courses, though mere lecturing cannot be expected to furnish much stimulus to practical work. In America, where considerable interest is taken in the study of abnormal human variations generally, lectures on criminal anthropology, occasionally with a certain amount of practical demonstration in methods, form part of the courses of many universities and colleges. This is notably the case at Clark University, and at the new but important University of Chicago, also at the young and vigorous Leland Stanford University in California. At Wisconsin University, Brown University, and Vassar College there are courses on criminal anthropology.

At the recent Indian Medical Congress, the president of the Medico-legal Section devoted his address to criminal anthropology, with a view to the opening up of the large and unexplored field which is to be found in India. But this and all similar ends cannot be attained until the investigator has received a certain amount of training. So far as I am aware, and I shall be glad to be assured that I am mistaken, this is not yet possible in England. We do not yet possess a single centre at which elementary instruction may be obtained in anthropology and anthropometry and in precise psychological methods, such as should be

possessed by everyone who expects to be in charge of the criminal and the insane.

Insanity among Criminals.

The Matteawan State Hospital in the State of New York is devoted to the reception of criminals in whom insanity appears or is discovered after conviction or before their cases are finally adjudicated. Dr. Allison, the Medical Superintendent, has lately published an interesting paper on the characteristics of this insanity ("Insanity among Criminals," "American Journal of Insanity," July, 1894). Acutely maniacal conditions are exceptional, the mental disturbance is usually quiet, unattended by motor excitement, frequently associated with arrested physical or mental development. Ideas of persecution, with auditory hallucinations, are extremely common, and often lead to carefully-planned assaults for the sake of warding off imaginary dangers. The victims of these hallucinations fraternize and combine in many cases, are unwilling to inform against each other, and the burglar and thief will still exercise their special talents when opportunity offers, so that constant espionage is required. Altogether, Dr. Allison finds the inmates of Matteawan present very distinct characters, and they show none of those "commendable qualities of the heart and mind which are commonly found among the chronic insane." Yet all these persons have had a trial before a jury, "and, it might be said, have been judicially pronounced sane." Even when they have recovered, and can no longer be regarded as insane strictly speaking, many of these criminals remain in "a condition which is recognized as unsoundness of mind; that is, they are imbeciles or weak-minded creatures, easily swayed, prone to vicious acts, evil practices and habits, with little knowledge and little capacity for acquiring it. They are not amenable to prison discipline and are incorrigible. Solitary confinement in the dark cell of the prison soon unnerves them and unhinges their already feeble mental powers. If discharged they become recidivists." Dr. Allison considers that on a second conviction the best plan would be to place such cases upon an indeterminate sentence at a reformatory, or, in many cases, to place them permanently in a criminal asylum.

In 46 per cent. of the inmates of Matteawan there was a history of decided alcoholism. The parents of upwards of 65 per cent. were both of foreign birth. It is noteworthy that 17 per cent. of the life-convicts of the State of New York are in Matteawan, usually in a condition of melancholia or with delusions of persecution.

PART IV.—NOTES AND NEWS.

MEDICO-PSYCHOLOGICAL ASSOCIATION: GENERAL MEETING.

A General Meeting of the Medico-Psychological Association was held on the 21st of February at the County and City Asylum, Powick, near Worcester, under the presidency of Dr. Conolly Norman, F.R.C.P.I.

The minutes of the last meeting were read and confirmed.

ELECTION OF MEMBERS

The following candidates were elected:—Frederick P. Header, M.B., C.M., Assistant Medical Officer, West Riding Asylum, Wakefield. Neil M. Macfarlane, M.B., C.M. Aber., Medical Superintendent, Government Hospital, Motrales Hack, Basutoland, South Africa. Robert Henderson Nicholson, M.B., C.M. Aber., Senior Assistant Medical Officer, County Asylum, Hatton, Warwick. Lancelot W. Rolleston, M.B., B.S. Durh., Junior Assistant Medical Officer, Middlesex County Asylum, near Tooting, London, S.W. Francis O. Simpson, M.R.C.S., L.R.C.P., Assistant Medical Officer, West Riding Asylum, Wakefield. Jane Elizabeth Waterson, M.D. Brussels, L.R.C.P.I., L.R.C.S. Edin., Official Visitor Cape Town District Lunatic Asylums, Cape Town, South Africa. Arthur William Wilcox, M.B., C.M. Edin., Second Assistant Medical Officer, County Asylum, Hatton, Warwick. Thomas Edward Harper, L.R.C.P. Lond., M.R.C.S. Eng., Assistant Medical Officer, Peckham House Asylum, Peckham, S.E. John Francis Sutherland, M.D. Edin., Deputy Commissioner in Lunacy for Scotland. Arthur E. Madge, M.R.C.S. Eng., L.R.C.P. Lond., Ivy House, St. Albans.

READING OF PAPERS.

Dr. COOKE read a paper entitled "A Review of the last Twenty Years at the Worcester County and City Lunatic Asylum, with some Conclusions derived therefrom."

Dr. BOND then read a paper on "Atrophy and Sclerosis of the Cerebellum."

Thereafter a paper was read by the GENERAL SECRETARY for Dr. McCLAUGHRY on "Influenza as a Factor in the Increase of Insanity in Ireland."

[These papers, along with the discussions elicited, will appear in the next number of the Journal.]

VOTE OF THANKS.

The PRESIDENT, Dr. Conolly Norman, moved the following resolution:—"That the thanks of the Association are most warmly due to the Committee of this Asylum for kindly giving us the use of this room for our meeting, and to the Authorities of the City of Worcester for allowing us to meet yesterday in the Guildhall."

The resolution was seconded by Dr. NICOLSON, carried by acclamation, and terminated a most successful meeting.

MEETING OF THE SOUTH-WESTERN DIVISION.

A meeting of the South-Western Division of the Association was held on December the 13th, 1894, at Bailbrook House, Bath, on the kind invitation of Drs. Weatherly and Cobbold. There were present Drs. Nicolson, Weatherly, Wade, Cobbold, Bristowe, Stewart, Bullen, Aldridge, Morrison, Bower, Mercier, and Ewan.

On the motion of Dr. LIONEL WEATHERLY, Dr. Nicolson, the President Elect of the Association, was voted to the chair.

Dr. NICOLSON said he thought he ought to protest against being put in the position, but as their vote was unanimous he would not pretend to be diffident or unwilling. At any rate, so far as the will went, he was very much with them, and he hoped that in endeavouring to inaugurate a fresh departure in England on

behalf of the Association they might, at any rate, be so far successful as to encourage other districts to follow the lead which they in the South-Western Division had given.

The CHAIRMAN announced that several had written expressing their regret for being unable to attend, among whom he might mention Sir H. Acland, Dr. Ward, Dr. Adams, Dr. Benham, Dr. Brunton, etc. He had further to mention, and with regret, that Dr. Deas, who was to have opened a discussion, was, as they were aware, unable to be present, and Dr. Goodall, who was also to have read a paper, had found it incompatible with his duties to be there, but Dr. Bullen had kindly undertaken to read his paper for him. Then he had to apologise for the absence of their Honorary Secretary (Dr. MacDonald) through sickness, who they all hoped would soon be about again.

NEXT MEETING.

It was resolved to hold the Spring Meeting at Bristol on the first Thursday in April.

ELECTION OF MEMBERS.

The following were elected Members of the Association:—Dr. Robinson, Assistant Medical Officer, Dorset County Asylum. Dr. Wilson, Assistant Medical Officer, Wilts County Asylum. Dr. Offord (late Assistant Medical Officer, Dorset County Asylum), the Colonial Hospital, Surva, Fiji.

PAPERS.

Dr. BRISTOWE read a paper on "The Relationship between General Paralysis and Chronic Renal Disease" (see page 245).

The CHAIRMAN said he thought that they might all fairly congratulate themselves upon having had the opportunity of listening to such an excellent paper, and if it was to be taken as a sample of what they were going to have at their Divisional Meetings, they had every reason to be proud of having inaugurated such a system. The conciseness and clearness with which Dr. Bristowe had put the issues before them were very remarkable, and clear enough, he thought, to call for and stimulate some expression of opinion on the part of those present.

Dr. BULLEN read Dr. Goodall's paper on "Certain Questions bearing upon the Problems of Heredity and Alcoholism in connection with Insanity."

[This paper, with the discussion, will appear in a subsequent number.]

The CHAIRMAN, at the conclusion of the meeting, said he did not think they could break up without tendering their warmest thanks to Dr. Weatherly and Dr. Cobbold for the very hospitable arrangements which they had made for their reception, and moved accordingly.

The motion was carried by acclamation. Thereafter the members dined together at the Grand Pump Room Hotel, Bath.

MEETING OF THE SCOTTISH DIVISION.

A meeting of the Scottish Division of the Medico-Psychological Association was held in the Hall of the Faculty of Physicians and Surgeons, Glasgow, on Thursday, 14th March.

On the motion of Dr. URQUHART, Dr. J. A. Campbell, Carlisle, was called upon to preside.

There were present:—Dr. J. A. Campbell, Dr. Ireland, Dr. Oswald, Dr. T. W. M'Dowall, Dr. Macpherson, Dr. E. B. Mitchell, Dr. G. M. Robertson, Dr. Alexander Robertson, Dr. W. R. Watson, Dr. Carswell, Dr. Urquhart, and Dr. A. R. Turnbull, Secretary.

The minutes of the last meeting were read, approved, and signed by the Chairman.

CASE OF GENERAL PARALYSIS.

Dr. CARSWELL showed a patient suffering from general paralysis. The man was far advanced in the second stage of the disease, and showed great motor affection of speech, etc. The feature of special interest in the case was that, in spite of his condition, the patient was living at home and able to follow his employment regularly, going to and returning from his work every day by rail, and even earning one pound a week.

THE LATE DR. HACK TUKE.

Dr. IRELAND said it would only be becoming in them before commencing business to express their great regret at the loss of their common friend, Dr. Hack Tuke. It was quite unnecessary for him to make a long speech on the subject. The duty of an orator was to persuade, and when an audience was already persuaded, he thought that words were very apt to be superfluous. It was quite unnecessary to recall to those present Dr. Tuke's great services to psychological medicine, and his long-continued support of this Association. His amiable character must be known to every one of them. His peculiar mission was, as it were, to keep burning the lamp of knowledge. He diffused science and knowledge to all parts of the world, and, acting as the Editor of the Journal, did a vast deal of laborious work, from which the Association had derived great benefit. It was also quite unnecessary to recall the extraordinary amiability of his character and his persevering desire to do friendly actions, not only to the members of the Association, but to everyone with whom he came in contact. To strangers and foreigners he was specially obliging. He (Dr. Ireland) did not believe that anyone alive had done more than Dr. Tuke to foster the aims of the Association and promote friendly feelings. He would, therefore, move: "That we, the Members of the Medico-Psychological Association assembled in the Scottish Division, express our deep regret in the loss we have sustained by the death of Dr. Hack Tuke; and our high appreciation of his eminent services in promoting a knowledge of psychological medicine, and of his able support of the Medico-Psychological Association. We recall his many acts of kindness, and desire to record our admiration of his great ability and learning, and our esteem for his upright and amiable character."

Dr. ALEXANDER ROBERTSON asked to be allowed, as a senior member of the Association, to endorse what Dr. Ireland had said. He had many pleasant relations with Dr. Tuke, and he was sure that all those members who had come in contact with Dr. Hack Tuke must have been struck with his unflinching courtesy and his great desire to oblige them individually; and also to further the science and interests of their specialty. His death was not only a loss to the Association, but it was also a loss to psychological medicine in all parts of the world. He did not think that there was any man who could take a higher place in their esteem than the late Dr. Hack Tuke.

The CHAIRMAN spoke in support of the resolution which had been submitted so ably by Dr. Ireland. He suggested that the Secretary should be instructed to write to Mrs. Tuke, conveying their sense of the great loss they had sustained in the death of Dr. Tuke and their sympathy with her.

The motion was unanimously agreed to.

ADMISSION OF NEW MEMBERS.

The Secretary submitted applications for admission as members by Dr. Samuel Edgerley, Assistant Medical Officer, District Asylum, Melrose; Dr. W. F. Robertson, Pathologist to the Royal Edinburgh Asylum; Dr. Charles C. Easterbrook, Assistant Physician to the Royal Edinburgh Asylum; and Dr. Chas. Percival Felvyn, Assistant Physician to the Perth District Asylum, Murthly. After ballot, these gentlemen were declared to be unanimously admitted.

PENSIONS COMMITTEE.

The SECRETARY said that, as instructed by the Association, he had forwarded the communication with regard to pensions, and he had received the following reply from Dr. Beach, the General Secretary:—

"The matter was first remitted by the Council to the Parliamentary Com-

mittee for report, and at a meeting of that Committee at Worcester on 20th February, 1895, 'it was resolved that the Committee, regarding the question of pension as one of very great importance, and one in which the action of any Division, working singly, may possibly affect the interests of a very large number of other members, and possessing no information as to the exact purpose for which actuarial advice is wanted, are not at present in a position to recommend the Council to adopt the suggestion of the Scottish Division.' When submitted to the Council on 21st February, 1895, this report was approved and adopted by them."

Dr. URQUHART thought that if the subject were put down on the Council agenda during the annual meeting they would be able to bring the whole matter up, when there would be Scottish members present to explain the matter.

On the suggestion of the CHAIRMAN it was agreed to leave the matter over till then.

PLACE OF MEETING AND COLLECTIVE INVESTIGATION.

Dr. G. M. ROBERTSON said that there would be many advantages if some of their meetings could be held in asylums. In the first place, he thought that there would be many clinical advantages. No doubt there would be interesting patients who would be well worthy of their attention, and there would be many subjects connected with the administration of asylums and the treatment of patients which would thus come more properly and more vividly under their notice. He had remarked that the question of the construction of asylums had always interested them greatly, and when plans of new asylums were hung up in a meeting like this it was very difficult for members to keep their eyes off them. If they could see the buildings themselves in stone and lime it would be a further advantage. For instance, if they had been brought together in the new asylum at Gartloch they could have more adequately discussed its arrangements and admired many special points than from mere plans. He would suggest, however, that it was not requisite that all meetings should be held in asylums, but it should be known that if medical superintendents would give an invitation the Association might accept it. As regarded collective investigation, there was no more scientific method for gaining knowledge than by accurately and statistically recording facts. That could be more effectively done in a wide area than in a single asylum. One individual might make separate observations, and might request help from other asylums; but one hesitated to do that, because of the trouble it gave to others. If, however, they had the sanction of the Association to collective investigation, he thought that they would receive ready assistance, and at the same time create a wider interest in the subjects proposed. These subjects would be selected from time to time as the members might decide, and tabulated for subsequent meetings. He thought that much valuable information might be gained in that manner.

The CHAIRMAN quite agreed with all that Dr. Robertson had said, and referred to what had been previously done in this direction. Dr. Clouston had proposed a similar resolution some five-and-twenty years ago, that a Committee should be appointed to investigate mental diseases and therapeutics, and to record the results in a specific manner. A case-book was designed, which had been in use at Garlands and at Morningside for the last twenty years, and he, as secretary of that Committee, wrote a remarkably good report, which would be found in the Journal.

Dr. TURNBULL seconded Dr. Robertson's suggestion for the very good reason that, valuable as it was in itself, it had been allowed to fall into disuse, and the sooner they came back to a very good rule the better. In regard to visiting asylums it would be necessary first to receive invitations, but he had not the least doubt that the Association would receive such invitations from time to time. In regard to collective investigation he thought that at any one of their meetings they might very well select a subject to be considered, and a small sub-committee might be appointed to arrange the questions in regard to which information was wanted. Then the Committee would work it up in time for a

subsequent meeting, in order that it might be brought before the Association and be properly discussed. If they had an understanding of that kind it would tend to keep the matter before them.

Dr. ALEXANDER ROBERTSON said he thought that the first suggestion was a very excellent one indeed, but it must be left to the goodwill of each superintendent, and a good deal would also depend upon the situation of the asylums. As to collective investigation, they were aware that the British Medical Association inaugurated that a good many years ago.

The CHAIRMAN—Pardon me; our Association had previously taken action.

Dr. ALEXANDER ROBERTSON—Some good results had followed, but it was not very successful generally speaking. Indeed, he did not think it still existed. The unfortunate thing was that when they were working in that way their individuality was lost, and it was a great stimulus to a man to have his own work brought before his fellows. That was lost in collective investigation. However, he thought there was a greater chance of success in connection with a limited Association such as this. (Hear, hear.) There were certain subjects of importance to medical science which could be better worked out by a limited Association than by a vast Association like the British Medical.

Dr. URQUHART agreed with Dr. Robertson's proposal that they should meet in asylums from time to time. He was also specially interested in collective investigation, having been local Secretary for the Committee of the British Medical Association, and having done what he could in support of the late Dr. Mahomed to urge the importance of this method of scientific inquiry. The cards then drawn up had proved useful and valuable when returned by competent observers. The initial difficulty was to arrange the questions; then came the greater difficulty of inducing men to take an active interest in the work; and lastly there was the labour of reducing the facts to order. Of course, that meeting had no power to spend the money of the Association or to embark on any undertaking which would commit the general body of the Association to any specific course. He did not wish to throw cold water on the proposal—far from it!—he desired to give what help he could. But the success of the proposal would depend upon the man who would carry it through. If Dr. Robertson would give his time and energy to this method of investigation there would assuredly be adequate results. No doubt the Association would aid by opening its coffers when the time came to make that necessary appeal. Meanwhile he produced specimen cards of the British Medical Association and one which he had drawn out for the purpose of investigating certain points in the history of cases received into Murray's Asylum since 1827, and gave his hearty support to Dr. Robertson's suggestion.

Dr. IRELAND asked whether Dr. Robertson meant that the proposed meetings should supersede their present meetings in Edinburgh and Glasgow, or that they should hold them as extra meetings.

Dr. ROBERTSON—I think that they might take the place of these meetings occasionally.

Dr. IRELAND said that he was rather alarmed at the extent of Dr. Robertson's programme. Dr. Robertson had said that the medical superintendents would be able to exhibit patients. He was perfectly ready to go to any asylum if there were patients illustrative of a subject that he might be making inquiry about. He had enjoyed much valuable instruction, for which he was always grateful; but Dr. Robertson said that they were also to admire the architecture, and it struck him that it would not be easy to accomplish all that at one meeting. When he went to an asylum he generally asked to see the patients, and had not enough time to admire the architecture. He found young vigorous superintendents insisting on walking him round the whole building. He remembered the late Professor Charcot being walked all round an asylum, and even through the laundries, and heard him exclaiming, "Insupportable! Insupportable!" He would remind his enthusiastic young friend that perhaps it might be well to condense the subjects and teach them the lessons derived from the

patients—the cream of what they had studied and learned. It was a source of regret to him that it was only members intimately connected with insanity who came to their meetings. Twenty years ago a considerable number of distinguished physicians frequented the meetings, but somehow they were getting into a narrower rut every year. He did not know if anything could be done to tempt general physicians to come to their meetings and to show cases. He always thought that, in studying ordinary diseases of the brain, not exactly connected with insanity, they would find the key to unlock the very difficult mazes of mental maladies.

Dr. MACPHERSON thought that the previous speakers had mistaken Dr. Robertson's meaning with regard to collective investigation. He did not think that Dr. Robertson intended that they should have an Investigation Committee like the British Medical Association. It would be impossible for a Society like this to proceed in the same way as the British Medical Association, but they might do good work in other ways. He would give them one example. Their Chairman and their Secretary lately did some very excellent work with regard to dietary in asylums. That was taken up by the whole Association, and the report was at their service; but, supposing the Chairman and the Secretary had by themselves entered upon an investigation into dietary, and had sent round circulars of inquiry, the replies would have been addressed to them as individuals, and would probably never have been published. In regard to various matters of administration, and such questions as pathology, it would be necessary that a Committee should be appointed, and that the results should be laid before a meeting of the Association. The last report of the London County Council contained a succinct account of a most extensive investigation into the pathological departments of the various asylums of Europe. It was set forth in such a manner that anybody could refer to it; and if he had not mistaken Dr. Robertson's remarks he thought that he had indicated some such plan of action. He therefore suggested that they should appoint a Committee, with Dr. Robertson as convener, to report on this matter.

The CHAIRMAN said that Dr. Macpherson had referred to dietary, and he (the Chairman) always thought that Dr. Turnbull's work on this subject had hardly been realized. Dr. Turnbull had taken a great deal of trouble, but he had not got the credit that was due to him for that work. He had gone into the matter most thoroughly, and had presented the Association with an accurate and careful opinion in regard to dietary in asylums. That report had deeply influenced the asylums of Great Britain and Ireland, and the dietary scale had been revised in many instances. If Dr. Robertson moved for a Committee to report upon his suggestion, he would be supported by all those who had at heart the interests of the insane.

Dr. G. M. ROBERTSON moved that a Committee should be appointed to consider and report upon the suggestions he had made, constituted as follows:—Dr. Urquhart, Dr. Turnbull, Dr. Carswell, Dr. Mitchell, and Dr. G. M. Robertson; Dr. Robertson to be convener.

This was agreed to.

NEXT PLACE OF MEETING.

Dr. URQUHART proposed that the Division should hold a meeting at Carlisle. They had very pleasant recollections of meeting there nine years ago, and he had no doubt that Dr. Campbell would again willingly undertake the trouble entailed. He thought that it should be a General Meeting of the Association, so as to bring the Council as far north as Carlisle and equalize the distance that some of them had to travel.

On being seconded by Dr. TURNBULL, the motion was agreed to.

NOMINATION FOR COUNCIL.

Dr. TURNBULL explained that according to Rule 27, Cap. 1, of the New Rules it was necessary for them to recommend to the Council the name of a member to act as Divisional Secretary. On that point, therefore, it was requisite to have a formal resolution. In regard to their representation on the Council, there

was no such arrangement, and the matter had been put on the agenda merely to elicit an expression of opinion from the Division as to who should be their representatives, on the understanding that the Council was not in any way bound to accept their suggestion. At present they had two Scottish members on the Council, in addition to those who were *ex-officio* members; formerly they had three members. Both the Scottish members fell to retire at next annual meeting. He proposed that they should suggest only one name on this occasion and one in each succeeding year. In view of the limited number of vacancies, he believed that in this way they would have a better chance of getting their suggestions accepted, and they would also ensure that the question of their representation was duly taken into consideration by them every year.

Dr. URQUHART moved that Dr. Watson and Dr. Carlyle Johnstone should be suggested for nomination by the Council.

This was seconded by Dr. MACDOWALL and agreed to.

Dr. URQUHART nominated Dr. Turnbull as the Secretary, and said he was the most admirable Secretary they could have.

This also was agreed to.

Dr. G. M. ROBERTSON read a paper, entitled "Sane or Insane?" which, with the discussion following on it, will appear in a future number of the Journal.

In the unavoidable absence of Dr. Keay, a paper contributed by him was held over for a subsequent meeting.

Dr. TURNBULL showed the plans of an addition which has recently been made to the Fife and Kinross District Asylum. The new building is a "Hospital Block," and is intended to receive all mental cases of recent admission and to provide for cases of bodily illness among the patients. There is a ward on each side for the isolation of infectious disease. The building gives accommodation for 156 patients, with the requisite staff of attendants, nurses, and servants. The system of ventilation is propulsion by fan, and the heating is to a large extent combined with it, the air being filtered through a hempen screen and warmed by passing over steam coils before entering the rooms.

EXAMINATION FOR THE CERTIFICATE IN PSYCHOLOGICAL MEDICINE.

The following candidates were successful at the examination held on the 20th December, 1894:—

England.—Examined at Bethlem Hospital, London.—Pring, Horace Reginald.

Scotland.—Examined at Saughton Hall, Edinburgh.—Ellis, Clarence J.; Christie, William; Bruce, Lewis C.

Ireland.—Examined at Swift's Hospital, Dublin.—Cooper, Alfred J. S.

The following were the written questions:—

1. State the law regarding the criminal responsibility of insane persons. What was the origin of this law? Do you consider it satisfactory? If not, state what amendments are in your opinion desirable.
2. Describe from a pathological point of view the changes found in the peripheral nerves of general paralysis of the insane.
3. Discuss senile insanity in regard to (1) its clinical symptoms, (2) its pathology, and (3) its prognosis.
4. Describe in detail the lymphatic system of the brain and spinal cord.
5. What are your views in regard to the value of evidence given by lunatic asylum patients in a Court of Justice.
6. Describe a case of phthisical insanity.

The next examination will be held in June, 1895. Due notice of the date will be given in the "Lancet" and the "British Medical Journal."

The examination for the Gaskell prize will be held at Bethlem Hospital, London, in the same month. Further particulars may be obtained from the Registrar.

EXAMINATION FOR THE CERTIFICATE OF PROFICIENCY IN MENTAL NURSING.

The next examination will be held on Monday, May 6th, 1895. Schedules to be filled up by the candidates may be obtained from the Registrar (Dr. Spence, Burntwood Asylum, near Lichfield), and should be returned to him properly filled up and signed not later than Monday, April 8th, 1895, as this is the last day upon which, under the rules, applications for admission to the examination can be received.

MEDICO-PSYCHOLOGICAL ASSOCIATION.

NOTICES OF MEETINGS.

The next General Meeting will be held at the Rooms of the Association, 11, Chandos Street, Cavendish Square, on Thursday, May 16th, 1895.

FLETCHER BEACH,
Hon. General Secretary.

The next Annual Meeting will be held at the Rooms of the Association in London, on July 25th, 26th, and 27th (three days). Circulars containing further particulars will be issued in due time.

FLETCHER BEACH,
Hon. General Secretary.

IRISH DIVISION.

The next meeting will be held at noon on the third Thursday in May, at the College of Physicians, Kildare Street, Dublin.

OSCAR T. WOODS,
Divisional Secretary.

SOUTH-WESTERN DIVISION.

The Spring Meeting will be held at the City Asylum, Bristol, on Thursday, the 4th April, 1895, at 2.30 p.m.

P. W. MACDONALD,
Divisional Secretary.

Appointments.

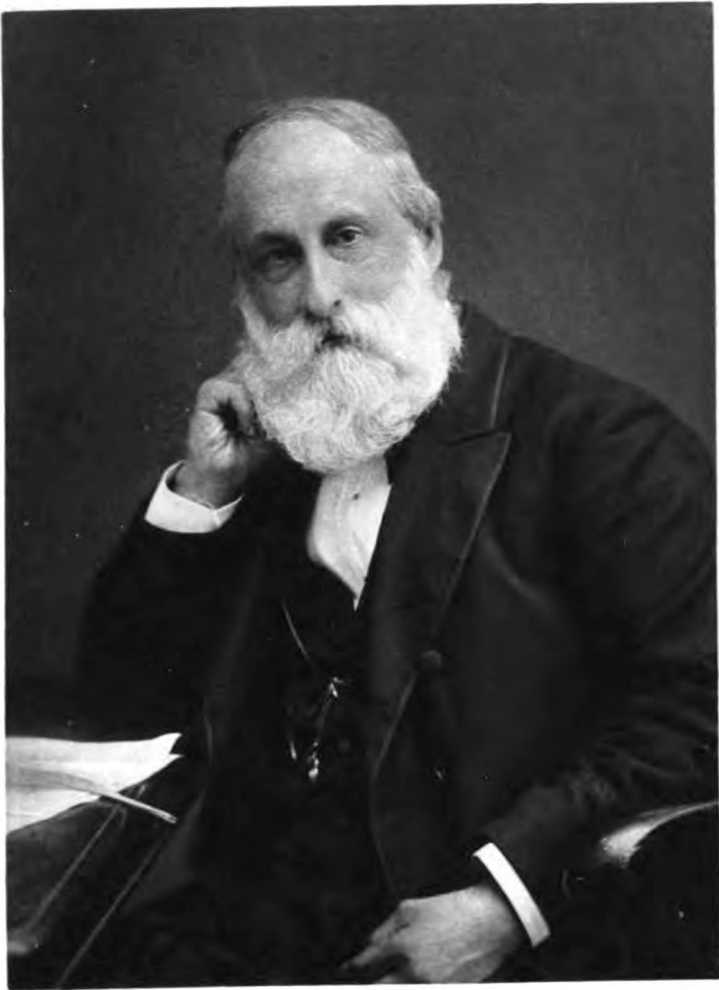
FLEURY, ELEONORA LILIAN, M.D., M.Ch., appointed Assistant Medical Officer, Richmond Asylum, Dublin.

FRASER, JOHN, M. B., M.R.C.P.E., appointed Commissioner in Lunacy for Scotland.

MARR, HAMILTON C., M.B., C.M., appointed Senior Assistant Medical Officer to the Barony Parochial Asylum, Woodilee, near Glasgow.

STEWART, ROTHESAY C., M.R.C.S., L.S.A., appointed Medical Superintendent of the Leicestershire and Rutland Asylum, Leicester.

SUTHERLAND, J. F., M.D., appointed Deputy-Commissioner of the Board of Lunacy for Scotland.



DANIEL HACK TUKE, M.D., LL.D.

Obit., 5 March, 1895.

THE JOURNAL OF MENTAL SCIENCE.

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DANIEL HACK TUKE, M.R.C.S., M.D., LL.D.

The death of this learned and much-beloved physician has aroused a feeling of regret so wide and deep that mere words of grief at his loss and praise of his merits seem formal and superfluous. Now that he has left us, we realize more clearly that he was a man unique in character. We know of none who had the same fine qualities—qualities so blended; so cultivated, and so tempered by the limitations of his life.

It might fairly be expected that there should be in the "Journal of Mental Science" such a biography as to satisfy the curiosity of those who had not the fortune to know him intimately, as well as the desire of those who come after us to learn something of the life of a man who is sure to leave a long memory behind him. It therefore seems more appropriate that, instead of dwelling upon the sad thoughts following his unexpected loss, we should endeavour to present a view of his whole life, which is so well-fitted to be an instruction and an example.

Daniel Hack Tuke, the youngest son of Samuel Tuke, was born at York on the 19th of April, 1827. His ancestors and all his kindred belonged to the Society of Friends. His father was a deeply religious man, much esteemed amongst his friends, and very strict in his views of conduct. He thought that in human nature there was much chaff which required burning, nor was he withheld by the fear of scorching the grain. The loss of his wife soon after the birth of this last child so deeply affected him that he could never after bear her name to be mentioned. Dr. Tuke used to feel a sentiment of regret that his childhood was not passed in a more joyous atmosphere. He was a weakly child, but his health was tenderly watched over by an aunt and an elder sister, whom he regarded with grateful affection. He was educated at different schools, which were attended by boys of

the same religious persuasion. Amongst his schoolfellows were the great surgeon, Sir Joseph Lister, and the eminent physician, Dr. Wilson Fox. Though his delicate health retarded his education, he early showed a fondness for study, but he does not seem to have owed much to his preceptors. It was, perhaps, no great loss that much of his time was not consumed in the study of Latin and Greek, then thought the staple of a high-class education, but, at any rate, he learned to read and write his own language, which, with his innate powers and love of knowledge, was sufficient to put the means of learning within his reach. He records how once, looking through the spectacles of his mathematical tutor, he made the discovery that he was short-sighted and that he thus lost much of the beauty of a landscape. When the time came to fit him for some calling, his father thought him not strong enough for business, and his teacher recommended that he should take to the legal profession, because he was studious and fond of debate. The natural outcome of this advice would seem that Hack Tuke should have been trained to become a barrister; but it ended in his being sent, at the beginning of the year 1845, to the office of a solicitor at Bradford, whose principal business was conveyancing, a branch of the law which is all too lucrative, but does not require any power of debate or anything beyond dry diligence. He never applied his mind closely to legal studies, and his health began to suffer from the drudgery of copying papers, through which budding solicitors are expected to pick up a knowledge of law business. From boyhood he had taken to collecting the skulls of animals and making observations on the shape of the heads and on the physiognomies of his companions. While still in the solicitor's office, Hack Tuke made a holiday journey to Scotland with two friends, and called on George Combe, then well known as the principal defender of phrenology in Britain. Combe seems to have received the young enthusiast somewhat coldly. He, however, gave him an order to see the Phrenological Museum, which was at that time in two rooms attached to the Industrial School in Surgeon's Square, Edinburgh. The friends then went to Stirling and through the Trossachs to the Western Highlands. At Glasgow he stopped for a night to see a collection of skulls.

About this time physiologists had already turned their backs upon the doctrines of Gall and Spurzheim; but

phrenology still excited popular interest, and still found advocates and defenders. A medical man in York enlisted Hack Tuke's interest in this subject, and he made a long, continued, and serious inquiry to ascertain the correspondence of certain portions of the brain with certain traits of character. He made a number of observations, but the results were unsatisfactory. Though never a complete convert to its tenets, many years elapsed before he gave up all faith in phrenology.

His friends at this time became uneasy about his health, and a physician was consulted. Dreading the approach of phthisis, the doctor recommended that he should be released from the office, where he had spent six months. He was sent with his sister and brother to spend the winter at Ventnor. In the spring he consulted Dr. J. B. Williams, who recommended him to go to Clifton, where he remained during the winter of 1846. He occupied his time in reading books of philosophy and poetry, his early favourites being Young and Pope.

Most of the people amongst whom he lived were imbued with a deep piety. Owing to the weakness of his health much of the buoyancy of youth was wanting, and his whole upbringing and culture were such as to form a grave, earnest, and reflective character. He sought the society of persons of literary taste, and at an early age made efforts at original composition, and wrote verses on occasions which interested him. His first publication was an essay in which he advocated the abolition of capital punishment, but it may be mentioned that later on a more extended knowledge of human nature modified his views on this point. Like most thoughtful young men of his time, he was troubled by the difficulty of reconciling the discoveries of geology with the accounts of the creation in Genesis. All his life he was a searcher for truth, never content to rest on dogmatic teaching though retaining a profound reverence for religion. In philosophy he took the spiritual side. In the course of time, Dr. Tuke parted from the peculiar tenets of the Society in which he had been nurtured. I have heard him say that it had commenced with a rigid protest against formalism and in the end became the most formal of any religious profession. To another intimate acquaintance, he expressed in familiar conversation the feeling that the religion of the Friends was somewhat too purely intellectual to retain a hold on a large number of men for any considerable time. Yet

he always cherished social relations with the Friends, and was deeply imbued with their spirit of charity, mildness, and benevolence.

Though brought up in a Cathedral City, he probably had few relations with the members of the Church of England, but he must have heard something of their restrictions on burials in consecrated ground, which were supported by laws now abolished. Hack Tuke himself narrates how, on one occasion during his boyhood, his feelings were so intense as to impel him into an act in which mischief and conscientiousness were amusingly blended:—

“In an old burying-ground at York, in which Dick Turpin, the famous highwayman, was said to have been interred, a notice on a black board on a pole certified that trespassers on this sacred ground would be prosecuted according to law. It seemed to me profane to call any ground ‘sacred’ in which so evil a character was buried, so I determined to erase the word. This, however, was no easy matter, as persons were frequently passing and the board was too high for me to reach. Further, the ground was enclosed by iron railings. I therefore resolved to go early in the morning before anyone was up and take a ladder with me, and a paint pot and brush. I remember getting up in the morning and the walk there, ladder over my shoulder like a lamp-lighter, as well as if it was yesterday, and certainly I shall never forget how, when I had painted black the obnoxious word and was about to descend, the blind of a neighbouring house was drawn up and a woman’s head was visible. I was glad to expedite my escape. For years the words remained unchanged, and I never passed the spot without a glance of curiosity and interest at the scene of my youthful enthusiasm.”

Hack Tuke had not forgotten that he was the great-grandson of Samuel Tuke, the founder of the Friends’ Retreat. He used to visit the Superintendent, Dr. Thurnam, who lent him books about insanity. Being now twenty years of age, and his health having improved, he applied for some employment in the asylum, and was received in the summer of 1847 as steward. He at once took a lively interest in the patients, studied their cases, and read with Dr. Thurnam such books as “Solly on the Brain.” The next year he attended lectures on chemistry and botany, and began to frequent the York Hospital. He remained in the Retreat for above two years, during which time he acquired that ac-

quaintance with the insane which can neither be learned from books nor fleeting visits. As Dr. Tuke himself observes, "Actual residence in an asylum is almost essential to a thorough understanding of the life, nightly as well as daily, of the inmates."

In the spring of 1850 he went to London to begin, or rather to continue, at St. Bartholomew's Hospital the study of the profession to which his natural tastes so clearly led him. He gained prizes both in practical and theoretical medicine, and took the diploma of M.R.C.S. in 1852. Next year he became M.D. of Heidelberg.

He was married on the 10th August, 1853, and set out with his wife on a continental tour. He visited all the large asylums in Holland, and published an account of them in the "Psychological Journal." He saw the venerable Dr. Jacobi at Siegburg, and was agreeably surprised by the asylum at Vienna. Returning through France, he visited the Salpêtrière and Bicêtre. He gave the results of his impressions of the asylums on the continent in a Prize Essay on the Treatment of the Insane.

Returning to his native city, Dr. Tuke now set up in practice, and became visiting physician to the Friends' Retreat. When Dr. Laycock left York for Edinburgh he succeeded him as physician to the York Dispensary, and purposed setting up a private asylum for ladies in the house in Lawrence Street to which he had fallen heir by the death of his father in 1854.

But the prospects of success and the hopes of usefulness in his profession were cut short by an attack of pulmonary hæmorrhage. As early as 1853, Dr. Williams had detected tuberculous deposit in both apices. No longer fit for such exertions as a medical man must make who places his services at the call of the public, Dr. Tuke now wandered southward, cheered by the company and solicitude of his amiable wife, in search of a milder climate. In the course of a twelvemonth they settled in Falmouth, where they had a house for fifteen years. When his health improved he busied himself with the care of the Public Library, British Schools, and Working Men's Clubs. He had gleams of better health, in which the natural energy and liveliness of his temperament led him to premature exertions, which were often followed by extreme prostration.

In conjunction with Dr. Bucknill he agreed to write the well-known "Manual of Psychological Medicine," which was

published in 1858, and remained for many years the standard English authority on insanity. There are some points of contrast between these two gifted authors, but we have the assurance of the survivor that during the preparation of the four editions they never had the ghost of a misunderstanding, though, as Sir John Bucknill adds, "We did not agree in all matters of opinion. We disagreed about moral insanity and about mesmerism and some other matters upon which a good deal may be said on both sides." They worked separately: Dr. Hack Tuke wrote the first half of the volume, comprising the chapters on the lunacy law, classification, causation, and the various forms of insanity; while Dr. Bucknill wrote on diagnosis, pathology, and treatment.

In 1875 his health had much improved, and he took a house in London and became a consultant in lunacy. The late Dr. Harrington Tuke, then already eminent, used to say in a facetious way that he got a deal of practice through Dr. Hack Tuke's books.

In 1880 Dr. Tuke became, along with Dr. G. H. Savage, joint editor of the "Journal of Mental Science." What Dr. Tuke did for this Journal it is needless to say. *Si merita queris respice.*

The only criticism I could make is, it seems to me, that from the benignity of his disposition he accepted too many papers. Hence some manuscripts lay a long time unprinted. Among these were many of his own contributions.

In 1881 Dr. Tuke was President of the Medico-Psychological Association. The statistical tables which are now generally used in asylums were framed and adopted in great measure owing to his tact and perseverance. The International Medical Congress assembled in London in that year, and many neurologists who came from far and near will recall with gratitude the courtesy and hospitality which Dr. Tuke showed on that occasion. His own trials and fears were renewed in the long-continued illness of his eldest son—William Samuel Tuke, M.R.C.S.—who died in 1883, having already given promise of distinction in medicine.

In 1878 Dr. Tuke's book on "Insanity in Ancient and Modern Life" appeared. This was followed in 1882 by the "History of the Insane in the British Isles," a work happily combining much research, command of information, and sobriety of judgment, warmed by a benevolent zeal for the welfare of this unfortunate class of mankind.

In 1884 Dr. Tuke visited America, where his reputation insured him a hospitable reception. The result of his observation was a book on "The Insane in the United States and Canada." These studies on the history of insanity take a much wider scope than any previous writer has attempted, and those coming after him must take his work as the foundation for their researches.

It is sometimes believed that the degree of LL.D. is rather a social distinction than an academic honour, and is rather bestowed upon men who are intimate with professors than upon men who are friends of knowledge. However, in Hack Tuke's case this was not so, and the honorary degree of LL.D., which was bestowed upon him by the distant University of Glasgow in the year 1888, was a signal honour, inasmuch as he was one of the very few holders thereof who have had no University training.

As it has sometimes happened that men who have earned distinction by contributions to psychological medicine have been chosen Commissioners in Lunacy, it might have been expected that Dr. Tuke's great merits would be recognized in this way; but his peculiar mission was to keep burning the light of knowledge, and this is seldom thought worthy of any signal reward.

Dr. Tuke surprised even the intimate friends who knew his capacity for work when he undertook to edit the "Dictionary of Psychological Medicine." Availing himself of his wide acquaintance with medical literati, he enlisted the services of 128 contributors, comprising most of the best known neurologists of Europe, each of whom treated the subjects which he had most carefully studied. The work of correspondence, arranging and editing, so as to prevent overlapping, was extremely laborious. Dr. Tuke's contributions comprised 68 original articles. The whole was completed in two years.

In July, 1892, the Medico-Psychological Association assembled in the reception-room of the Friends' Retreat at York to celebrate the centenary of that Institution, in which the kindly system of treating lunatics had been inaugurated in England. Dr. Tuke was seated below the portrait of his ancestor, William Tuke, to whom he bore a striking resemblance. Amidst the applause of his friends and colleagues, Dr. Tuke rose and presented the two goodly volumes of the first copy of the Dictionary to the President, Dr. Baker, the Superintendent of the Retreat. This scene,

striking in its very simplicity, which recorded the peaceful triumph of humane ideas, was rendered the more memorable by the presence of Dr. René Semelaigne, the biographer and great-grand-nephew of Pinel. Shortly afterwards Dr. Tuke recorded the early history of the Retreat in a small volume. Though condemning all rough and hard methods of restraint, he viewed the subject with his accustomed sense and moderation. He never favoured the erection of non-restraint into a formal dogma, by which asylum superintendents might make a popular claim of dexterous management. He was willing to allow those experienced in the treatment of the insane such means of treating exceptional cases of violence as seemed best, under the circumstances, for the safety and recovery of the patient.

About this time Dr. Tuke became Examiner in Mental Physiology in the University of London, and Lecturer on Insanity in the Charing Cross Hospital. He was long a Governor of Bethlem Hospital, where he used often to resort for study both in the wards and in the post-mortem room. He was one of the founders of the "After-Care Association," inaugurated in 1879, the object of which is to facilitate the readmission of female convalescents from lunatic asylums into social and domestic life. In 1896 Dr. Tuke was made Chairman of this beneficent Association. He presided at the meeting held in February last.

It would take pages to give a list of Dr. Tuke's contributions to psychology, anthropology, and medicine in various periodicals. His latest publication in book form was "Sketches of Prichard and Symonds, with Chapters on Moral Insanity" (1891).

He never came to the time in which men crave for rest. He rose early and went to bed late. After a busy day in London he returned to Hanwell in the evening, often to work till past midnight. During last winter he was correcting his little book on "Sleep-Walking and Hypnotism" (which is in great demand and some time out of print) for a new edition, and still followed his usual pursuits.

An old friend who called on him shortly before his death found him bright and lively as ever; but loving eyes that watched him noticed that his strength was ebbing.

On the morning of the 2nd of March he left his villa at Hanwell for his consulting rooms in London in the house of his son-in-law, Dr. Sainsbury. But his life's work was done. Some vessel in the busy brain gave way. He thought that

it was but a temporary fainting fit; but he soon lapsed into an unconscious state, which lasted till he passed away on the morning of the 5th.

Besides his widow and his daughter, Mrs. Sainsbury, he has left behind him one son, who has already gained celebrity as a painter, especially of sea pieces. His eldest son, as has been mentioned, predeceased Dr. Tuke.

Dr. Tuke was a man of short stature and spare figure. He was of nervous temperament and very quick and alert in his motions. In his mind the desire to know was always keen, and extended over many subjects. Very frank and affable, he would go anywhere, or speak to anyone who could give him information. He had a good deal of philosophical simplicity about him. When I first met him about twenty years ago I observed that when anyone told him something which interested him, or said a good thing, Dr. Tuke would gravely take out his note-book and ask him to repeat it. In later years I did not see so much of the note-book.

He was a ready and persuasive speaker, and was a well-known figure at medical societies. An old member of the Medico-Psychological Association, he took a lively interest in its affairs, and had great influence at the Council.

He was fond of pictures, old engravings, and literary curiosities. He had an especial taste for history. His mind was deeply imbued with the Yorkshire traditions of the Friends. Whittier was a favourite poet, and John Bright the politician whom he most admired.

It was a favourite recreation in his holiday excursions to visit spots rendered memorable by some remarkable event. In this way he went to see the place by the Starnberg Lake where Louis of Bavaria and Dr. Gudden were drowned, and followed the footsteps of Joan of Arc through France. His last autumn excursion was to the country about Oxford where John Hampden lived, and where he was mortally wounded at Chalgrove Field.

Dr. Tuke's literary style was plain and clear. He had a keen appreciation of wit and humorous situations, but wanted the aggressiveness of disposition which is needed to make a man skilful in repartee. Sometimes when pressed he would indulge in a little playful banter. Dr. Savage has told me one of his sayings, which merits repetition. Once when he went to visit the leading physician of the day (Sir Andrew Clark), and was kept waiting, he was met by the

great man with effusive expressions of regret, "but," said he, "my life is one of slavery." "Yes," said Tuke, "on the Guinea Coast."

Dr. Tuke had quick and wide sympathies, and was a fine judge of character. He was ever ready to recognize merit and to help young people. He took a pleasure in entertaining men of science and learning in his beautiful house, Lyndon Lodge. When not actually suffering from bad health the liveliness of his disposition always asserted itself. Fortunately his circumstances were such that he never knew the cares of poverty during his long suspension from active work.

The portrait of a man without faults and weaknesses bears an appearance of unreality, but in truth I know of no dim points in Dr. Tuke's character which might be used for artistic shading. Few men become better by sickness, and people who have been for long invalids are often somewhat fretful and selfish. Nevertheless, no one was of a gentler disposition and more lavish of his own time and pains to do services to others. Xenophon wrote of one of his generals that he was perfect in war and in friendship. As a friend no one could be kinder and more thoughtful than Hack Tuke; but he was a man of peace, and never knew the joy of battle. Such was his calmness in debate that he considered discussion on religious matters an useful way of arriving at the truth. During the last election he was much perplexed about the question of Home Rule for Ireland, especially as his views at first ran counter to those of most men of culture. "A plague of both your houses," he wrote to me, "I am not going to vote at all." He had come to think that it was absurd that men should get angry over questions in the sphere of religion and politics; but heat is useful as well as light, and some warmth in debate does no harm if it be forgotten when the dispute is over.

On the whole we may say that the friend whom we have so lately lost had within him a certain innate fire and energy, which through weakness and ill-health pushed him strenuously on to play a worthy part in the world, that he lived strictly within the circle of his duties, and was governed by a deep feeling of benevolence, and, best of all, that he has left behind him a memory in which there is nothing to regard with regret.

WILLIAM W. IRELAND.

HACK TUKE MEMORIAL.

SUBSCRIPTIONS RECEIVED.

10th SEPTEMBER, 1896.

	£	s.	d.		£	s.	d.		
Dr. Heurtley Sankey	...	1	1	0	Professor T. Mierzejewski	2	0	0	
„ J. D. Cleaton	...	1	1	0	Dr. A. Law Wade	...	1	1	0
„ E. Long Fox	...	1	1	0	„ Fletcher Beach	...	1	1	0
Charles Wigan, Esq.	...	1	1	0	„ J. Wiglesworth	...	3	3	0
Dr. J. H. Paul	...	10	10	0	„ Cooke	...	1	1	0
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„ Clouston	...	5	5	0	„ Yellowlees	...	5	5	0
„ Orange	...	2	2	0	„ T. W. M. MacDowall	...	2	2	0
„ Henry Lewis	...	1	1	0	„ Huggard	...	1	1	0
„ H. C. Major	...	2	2	0	„ Brushfield	...	1	1	0
„ H. C. French	...	1	1	0	„ J. Frazer	...	1	1	0
„ H. F. Winslow	...	1	1	0	„ J. T. Calcott	...	2	2	0
„ G. H. Savage	...	5	5	0	Professor Victor Horsley	...	2	2	0
„ G. M. Robertson	...	2	2	6	Dr. P. W. MacDonald	...	1	0	0
„ A. Motet	...	4	0	0	„ J. P. Richards	...	0	10	6
„ C. Lockhart Robertson	...	5	5	0	„ B. Percy Smith	...	2	12	6
„ J. W. Stirling Christie	...	1	1	0	„ Whitcombe	...	2	2	0
„ T. A. Elkins	...	1	1	0	„ J. C. Howden	...	3	3	0
„ John Eustace	...	5	0	0	„ J. Beveridge Spence	...	2	2	0
„ J. Woods	...	1	1	0	„ Murray Lindsay	...	1	1	0
„ S. Rees Philipps	...	2	2	0	„ Bedford Pierce	...	2	2	0
„ Ringrose Atkins	...	2	2	0	„ J. Gasquet	...	3	0	0
„ T. Barlow	...	1	1	0	Sir J. C. Bucknill	...	5	5	0
„ A. Robertson	...	1	1	0	Dr. Shuttleworth	...	1	1	0
„ Turnbull	...	2	2	0	„ D. H. Schüle	...	1	0	0
„ J. Caldecott	...	0	10	6	„ Warnock	...	1	1	0
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„ H. C. Chapman	...	2	2	0	„ W. J. Dodds	...	1	1	0
„ J. Rutherford	...	5	5	0	„ MacEvoy	...	1	1	0
„ Arthur Finegan	...	1	1	0	„ R. J. Gadler	...	1	1	0
„ Outterson Wood	...	3	3	0	Professor Benedikt	...	2	2	0
„ A. Hill	...	1	1	0	Hayes Newington, Esq.	...	3	3	0
„ Patton	...	2	2	0	A. Newington, Esq.	...	1	1	0
„ Wilson Eager	...	1	1	0	Dr. H. C. MacBryan	...	1	1	0
„ Lauder Brunton	...	1	1	0	Per Dr. Morel, 10f.	}	9	10	1
„ Octavius Jepson	...	2	2	0	„ Peeters, 10f.				
Professor L. Heinrich Laehr	...	5	0	0	„ Semal, 20f.				
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„ J. Bywater Ward	...	0	10	6	„ Crochley Clapham	...	1	1	0
„ Gardiner Hill	...	1	1	0	„ J. Greig Sontar	...	2	2	0
„ Semelaigne	...	4	0	0	„ Urquhart	...	1	1	0
Sir H. Pitman	...	2	2	0	Sir J. Lister	...	10	0	0
Dr. J. B. Lawford	...	1	0	0	Dr. R. Baker	...	2	2	0
„ Thomas Draper	...	2	2	0	„ E. White	...	2	2	0
„ Bower	...	3	3	0	„ Norton Manning	...	2	2	0
„ Sibbald	...	1	1	0	„ Alexander	...	1	11	6
„ W. H. Tate	...	1	1	0					
Colonel Lambert	...	2	2	0					
Dr. R. S. Stewart	...	1	1	0					
					Total to Sept. 10	£220	16	7	

H. RAYNER, Hon. Treas.

PART I.—ORIGINAL ARTICLES.

A Review of the last Twenty Years at the Worcester County and City Lunatic Asylum, with some conclusions derived therefrom. By E. MARRIOTT COOKE, M.B.Lond., Medical Officer and Superintendent.*

As it is just twenty years since I first became connected with this asylum—a considerable slice out of what should be the most active part of my life, and the period during which my judgment ought to be maturing—it occurred to me that a *résumé* of the changes and new departures which have been made here during that time, together with a statement of the views I now entertain of their utility, and the opinions which experience has led me to form for my future guidance, might not inopportunely form the subject matter of a paper this afternoon.

In the year 1875 this asylum provided accommodation for 710 patients. The best features of the buildings then were two wards, of comparatively recent construction, detached from the main building, designed for the reception of about 125 chronic, well-disposed working patients, and convalescents of either sex. These wards have answered their purpose well, the patients placed in them being pleased to be entirely separate from those that are more turbulent and noisy. If I have a fault to find with them it is that they are rather too large, and that the number of patients congregated in them is too great.

The other wards that existed at the date referred to were of considerably older construction, most of them having been erected in the year 1852. They are built on the corridor plan, the galleries and day-rooms being somewhat narrow and cramped, and the windows in some of the single rooms and dormitories being placed much too high, to render these rooms as cheerful and bright as they should be

These buildings sufficed for the requirements of the county and city till the year 1883, when, owing to the continued increase in the number of patients, it was decided to build an *Annexe* for the reception of idiots and imbeciles, the most dirty cases, and the worst class of demented epileptics.

Before the plans were drawn, I visited several of the very large asylums in Lancashire and elsewhere, and, as a result,

* Read at a meeting of the Association at Worcester Asylum, February, 1895.

I formed the opinion that it would not be desirable to associate together more than seventy patients of the class I have named. The wards were designed on this basis, and my opinion has since been fully confirmed by experience.

The Annexe is two-storied, the day-rooms being on the ground floor, the dormitories on the first floor. It is built in blocks, a connecting corridor running through them.

At present there are five blocks built, which bring the accommodation of the asylum up to 1,060. The Committee propose to add, when necessary, two more blocks, but have decided that after that addition is made it will be undesirable to further extend this asylum. We shall then be able to accommodate 1,200 patients, and I certainly think that no asylum containing mixed patients should exceed that limit.

The Annexe has fully come up to our expectations. It is easy of supervision, the wards are very bright and airy, and many of the most miserable and depraved patients have improved to a marked extent in general health, and some even in mental condition, since they were placed there. The advantage of separating the idiots and demented epileptics from the acute, intelligent, and curable cases is undoubtedly great.

The Annexe has its own infirmary wards, kitchens, airing courts, Assistant Medical Officer's and other Officers' quarters, but is dependent for its supplies upon the stores of the main building, and there is but one laundry, chapel, and recreation room for the whole asylum.

Special pains were taken to construct the w.c.'s, lavatories, bathrooms, etc., as sanitary as possible, and suitable to the wants of the patients who would use them.

It is calculated that, when complete, the Annexe will have cost about £100 per bed, exclusive of furniture.

The dormitories are nearly the same size as the day-rooms. With one exception they are each under the continuous supervision of a separate attendant throughout the night.

Nothing has tended so much during the past twenty years to the safety and well-being of certain classes of patients, and to the relief of anxiety to those in charge of them, as the extension of the system of continuous supervision at night in association dormitories.

For patients of the class we have in the Annexe I do not think it matters if a dormitory contains as many as from sixty to seventy beds, such patients being able to sleep unaffected by disturbing influences around them; but with regard to the more sensible and sensitive patients—I refer

specially to some patients requiring continuous supervision on account of suicidal propensities, and to some intelligent epileptics—the case is different, and I believe not only can irritability and much discomfort be caused by sleeping a very large number of such patients together in one room, but, occasionally, positive harm may even be done to a curable case.

During the period under revision the number of patients has increased by 253. Of these about 130 can be accounted for by increase in the population; a gradually decreasing death-rate will account for a good many more. Only twice during the past eight years have the deaths in relation to the average number resident reached eight per cent., and in 1891 [they were as low as 6·2 per cent. Lastly, some of the increase must be attributed to the fact that, with one or two exceptions, the Boards of Guardians in the county do not now keep anything like such a large proportion of imbeciles in the workhouses as they did formerly.

In spite of this last-mentioned fact, I doubt very much the advisability of interfering with the present arrangement of the 4s. Government grant. Any alteration that might tend to delay the transfer of a curable case from the workhouse to the asylum would be a retrograde step, and I do not think any material saving would be effected by retaining in, or returning to the workhouse, harmless imbeciles and chronic dements who are now treated in the asylum; certainly, in nine cases out of ten, they would not be so well looked after and supervised, or get such facilities for outdoor exercise and occupation.

The Architect, who designed the asylum originally, arranged for the sewage to be conveyed away by a 2ft. brick culvert, which he made to run right through the basement of the administrative block; he also placed all the soil pipes internally. In course of time the walls of the sewer became so riddled by rats, and the soil pipes so corroded, that the free escape of foul gas into the interior of the asylum was in many places permitted. In these, and other respects, the sanitary arrangements were so obsolete, and such a source of danger, that thirteen years ago they were entirely remodelled on the most approved principles.

Since then we have had one rather sharp outbreak of typhoid fever; but this was, after a little difficulty, clearly traced to sewage finding its way from a sewer, which had burst, into a well which partly supplied the asylum with

drinking water. For a time our main water supply was suspected to be at fault, but my attention was ultimately directed to the true cause by the fact, that all the persons attacked drew their drinking water from a particular cistern which was the only one supplied by the well referred to.

Two other cases of typhoid have also occurred since our sanitary arrangements were put to rights. The patients attacked resided in entirely distinct parts of the building, and there was an interval of years between the appearance of each case. Such isolated cases seem to crop up from time to time in nearly all communities of any magnitude, and I think they are probably to be attributed to something that has been eaten, possibly something in the tinned line.

During the early part of last year I had five patients attacked with scarlet fever; the disease was contracted in some mysterious way by patients residing in totally different parts of the building, some of whom had not been beyond their wards or airing courts for many months previously.

At present a farmhouse, which has as far as possible been adapted for the purpose, is reserved for cases of infectious disease, or patients who are thought to need isolation. These arrangements are, however, not considered sufficiently complete, and the Committee are entertaining the idea of erecting a small infectious hospital.

The liquid portion of our sewage is distributed over about thirty acres of the farm, and is a considerable source of profit from the excellent crops that it produces.

The arrangement originally provided for warming the older wards, which was an intricate system of channels built under the floors and in the roofs and walls, by means of which it was intended to convey heated air from stoves placed in the basements to all the rooms, was long ago discarded as useless, and for many years the asylum was only heated by open fires, which were quite inadequate to maintain a proper temperature in the depth of winter.

When the Annexe was built it was decided to warm it mainly by steam coils, and the experience of one winter demonstrated that this method was so successful, that in the following year similar coils were introduced into all the other wards. Not only can a most comfortable temperature be maintained, even in the severest weather, by these coils, but also the ventilation is greatly improved, for a large quantity of fresh air is constantly being admitted through gratings

placed in the walls behind the coils, which becomes heated in its passage to the rooms.

The ornamental cases covering in the coils can easily be taken down for the removal of any rubbish that may have been poked through them by the patients.

Steam has the advantage over hot water for heating purposes in the greater rapidity with which it can be put on and taken off, an important matter on mild days in the early autumn and late spring, when artificial heat is often only required for a few hours the first thing in the morning and in the evening.

The drawback to steam is that it causes such great expansion and contraction of the coils that the joints have a tendency to become slack and to leak a little when the steam is first turned on. Owing to this unsightly places are apt to make their appearance on the ceilings. The defect can, to a certain extent, be got over by placing lead or cast-iron trays under the coils to catch the drops of water.

Indiarubber packing should on no account be used to make the joints, for the rubber soon becomes burnt by the steam, and breaks up into pieces, which are driven into the smaller pipes, stopping them up.

All the channels of the original system have been bricked up, for, although it was intended these should convey cold air to the various rooms in summer, yet, as a matter of fact, such collections of rubbish and filth were placed by the patients through the gratings into the channels, especially those connected with the single rooms, that the air issuing from them was often most offensive, and even dangerous to health.

Although the steam coils are so efficient in their action I still have fires in all the wards, with the object of promoting ventilation, and for their homely and cheerful appearance.

Our water supply has always, more or less, been a cause of anxiety to us. For a short period wells sunk in proximity to the buildings were the source of supply, but these soon gave out, and on endeavouring to increase their yield by deepening them we struck a stratum through which a communication was set up with the celebrated Droitwich salt springs, a brackish water, totally unfit for potable purposes, being obtained.

The asylum then had to fall back on a small brook which runs through the estate. This brook has always furnished us with an ample supply, though in times of drought the

volume of the stream has diminished to such an extent as to give rise to serious apprehension; this was notably the case during the summer before last. The danger always present in depending upon a brook of so small a size is its liability to become contaminated above the intake.

The water as it exists in the stream is very hard; in rainy weather it is much discoloured by washings off the red marl, and contains much vegetable matter.

By a very efficient system of sand-filtration, however, the suspended matters are almost entirely removed, and the water rendered bright and clear.

As a matter of precaution, all water intended for drinking purposes is boiled, and passed through Maignen's "filtres rapides," which are placed in all the wards.

The process of boiling of course removes much of the temporary hardness, and the water as it comes from the filters, after the above operations, is reported by our analyst to be of good quality, excepting its permanent hardness, which is due to the presence of about $8\frac{1}{2}$ grains of magnesia in each gallon. This permanent hardness is, I think, responsible for much of the constipation and dyspepsia, which are rather prevalent troubles here.

The improvement of our water supply has been the subject of almost endless deliberation, and even at the present time the Visitors are considering a scheme for obtaining a better supply from some waterworks at a considerable distance.

For protection in case of fire we rely mainly upon our principal water tank. This is placed at an altitude of 55ft. above the highest roof; it holds 20,000 gallons, and from it a system of fire mains, which are constantly charged, surround all the buildings. The fire hydrants are placed at very frequent intervals, so that one, or at the most two lengths of hose will command any part—an important matter, I think, for the less coupling up of hose there is to do, by a semi-amateur brigade, the less risk is there of confusion in the event of a fire occurring.

The administrative offices are further protected by a powerful steam-pump, which draws its supply from a large rain-water tank, capable of holding a quarter of a million gallons, and which charges a fire main distinct from those connected with the tower.

In some positions, specially likely to be the seat of a fire, as around the stage in the recreation-room, we have also

small internal hydrants. Hand-pumps and fire-buckets are freely distributed throughout the buildings. We have long ago discarded all forms of chemical extinguishers and hand-grenades.

Considerable alterations have from time to time been made in the patients' dietary.

One new departure has been the fixing of a somewhat different diet for the patients in the Annexe to that supplied in the other wards. The following are the particulars:—In the Annexe, bread and milk is generally given for breakfast in lieu of coffee and bread and butter; bread and milk is also sometimes supplied for tea; the amount of meat and bread is somewhat smaller, cheese being substituted for meat at dinner when fruit pudding is given.

These changes were made with the idea of economy, and in the belief that they were admissible on medical grounds; the result has fully justified the experiment, for not only has the physical condition of our own patients placed in the Annexe been, as I have stated above, more than fully maintained, but also a considerable number of patients who have come to us from the Essex and Stafford Asylums have gained weight to a marked extent.

I am quite convinced that many epileptics and imbeciles do not require, and are even better without, the amount of meat which was formerly considered necessary for them.

A great reduction has been made in the amount of beer issued to the patients. Although I always thought that the amount allowed twenty years ago was somewhat unnecessary, yet for a long time I was very averse to any curtailment of the allowance at lunch and dinner; I feared that most of the patients would feel it a great hardship to be deprived of beer with their meals.

At different times, and for different considerations, the allowance has, however, been gradually reduced, so that instead of all working patients having their three half-pints daily, with an extra allowance during harvesting, etc., and all non-working patients their half-pint for their dinner, as was formerly the case, now only half-a-pint is given to a selected number of industrious patients with their midday meal.

I am glad to say that my Committee have devoted the entire money value of the beer that has been taken off to otherwise improving the diet, and to increasing the small grants of money, presents of sweets and tobacco, and other

little gifts that they permit me to make to the workers as rewards for industry and good behaviour.

Those patients who do not have beer with their dinner as a rule drink water, but at times, when plentiful, milk is given. Those who work in the shops and in the fields are given, in the summer time, a drink which we call "Stokos," the ingredients being oatmeal, lemon, and sugar; it is supplied to both paid men and patients alike, and I find they work well on it. At times "Stokos" is varied by a very good gingerade, which beverage is also given to the patients with their supper, after the entertainments, and on other special occasions.

I am bound to confess that these alterations have worked much better than I anticipated. They have been made with scarcely any friction, and the very little notice that has been taken of the change has greatly surprised me. I think the money which the beer cost is now expended in a more profitable manner, and we do not lay ourselves open to adverse criticism on the score of giving beer to those patients whose mental illness was caused by drink. We have been unable to take credit, as some asylums have, for an improvement such as a reduction of excitement in the mental condition of our patients owing to the discontinuance of beer, for the proportion of alcohol contained in our beer, a very wholesome beverage brewed on the asylum premises, is so small—something like two-thirds of an ounce to the pint—that such a result is physiologically impossible.

It has been our constant endeavour to introduce greater variation in the patients' food, and to make it as savoury and palatable as possible. I find rice much appreciated as a change; sometimes it is sent up plain boiled, instead of a vegetable; sometimes it is served with treacle or sugar, and sometimes it is given in the form of sloppy milk puddings, which are specially liked. On soup and fish days the more intelligent patients are now allowed the option of meat and vegetables, a privilege much valued.

In this district plum, damson, apple, and currant trees are grown so largely that we have a great variety of fruit and jam, and so can give the patients a good deal of change in the pudding line.

The farm has been greatly extended and consolidated by our acquiring, as opportunity offered, additional land, conveniently situated to the asylum. We have now altogether 469 acres in occupation.

The chief advantages of having a large farm attached to an asylum are, in my opinion, first, that you have a large extent over which those patients who are unfitted to be taken on the roads can walk, without annoyance to the public, and without the likelihood of difficulties arising with neighbouring farmers; secondly, you have the control of all the land in the vicinity of the asylum, and are consequently in a better position to protect the patients against any sources of danger, natural or otherwise, that may exist; thirdly, you have an almost unlimited scope for employment; and lastly, even in these times of agricultural depression, asylum farming operations can, as a rule, be carried on with considerable pecuniary success.

The fact that many Superintendents have, as a part of their duty, to exercise supervision over the asylum farm, to generally direct the Engineer and artisans in their work, to exercise a control over the patients' clothing, and to perform various other administrative work, has of late years been rather severely criticized by some gentlemen, who seem to think, not only that such duties should not fall within the scope of an asylum physician's work, but that it is even derogatory to his position and dignity to take any interest in such matters.

I entirely dissent from such a view. I hold that employment is one of the most important factors in the treatment of lunatic patients, and that, to employ them safely and successfully, it is desirable that the Superintendent should know something of the character of the work in which they are engaged, and be in a position to exercise general control over it.

I am also of opinion that, to fully ensure the harmonious interworking of the various departments and economical administration, it is essential that the Superintendent should be, not merely the nominal, but the actual head of the whole asylum; and with regard to the various field exercises, entertainments, and other recreations, so essential for providing our patients with mental change, unless the Superintendent takes an active interest in them there will, sooner or later, be a tendency for them to flag, or to become diverted from the intention for which they are provided.

Such duties need not, and ought not to be allowed to interfere with the efficient discharge of purely medical work; indeed the different trains of thought to which such work gives rise should afford a pleasant relief, and enable us

to cope all the better with our medical worries and the trying and irritating ways of our patients. I know well from experience that I am never so fit for a good morning's work in the wards as when I have had an early ride round the farm.

On the other hand, I am free to admit that there may have been growing up a tendency to over-estimate the importance of administrative duties and to spend unnecessary time over details which should be attended to by subordinate officers, to the partial neglect of medical work; and, if such has been the case, we shall no doubt profit by the criticisms that have been passed upon us.

It would be quite impossible in such a paper as this to glance, even most superficially, at the immense number of medicinal remedies which have been introduced during the past twenty years for the treatment of mental disease. I suppose during that time none have attracted more attention or given rise to more discussion as to their value than the nervous sedatives and hypnotics. My experience is that these drugs, in common with very many others of our pharmacopœia, are of the greatest utility, and should occupy a most important place, in the treatment of mental disease, and to stigmatize the administration of them as chemical restraint is, I think, quite wrong. No doubt, unduly prolonged and given in unsuitable cases, sedatives and hypnotics may do great harm, but carefully prescribed they are often most beneficial, as witness the immense improvement that may be effected in the mental condition of irritable, excitable epileptics by small doses of sulphonal given two or three times a day, and in the permanent benefit which may be brought about by the administration of paraldehyde in some cases of acute melancholia.

Patients who recover here are almost invariably sent away for a month on trial before receiving their discharge. I believe this to be a good plan. It ensures the patient having a fair amount of supervision for several weeks after leaving the asylum, and, in the event of a relapse occurring, the friends are spared much anxiety, and the patient's safety is enhanced, by his being able to be at once sent back to the asylum without the necessity for a fresh order. The knowledge, too, of this fact, often aids those patients, whose illness has been caused by drink, to exercise an increased amount of self-control. The practice no doubt operates occasionally adversely to the recovery-rate.

We have a fund here, for which we are indebted to the

sister of a grateful patient, the interest upon which is devoted by the Committee to relieving necessitous patients on their discharge; thus, at one time a grant is made to aid in the payment of rent that has become in arrear, at another time to redeem tools which may have had to be pledged, and occasionally with the object of enabling the patient to obtain a change before resuming work. Such help no doubt conduces to permanent recovery, and it would be a great advantage if it could be extended.

The questions arising upon the lunacy legislation of the last twenty years are so many, and they have been so frequently discussed by this Society, that it would be unnecessary for me to refer to them in any detail now. In whatever light these changes may have been viewed when they were first proposed, I think experience has shown that their result has been to ensure the more efficient supervision of the insane and the certainty of their kind and proper treatment; to provide additional safeguards against the possibility of infringement of the liberty of the subject, and to supply a satisfactory answer to the unfounded charges that are from time to time made as to the improper admission and unnecessary detention of patients asserted to be of sound mind, and so, indirectly if not directly, to afford protection to the medical profession generally, and to our speciality in particular.

In over anxiety to secure these desirable ends, it is, however, possible to err in other directions, and it is important that the following points should not be overlooked—first, that in the endeavour to avoid accident, harmful irritability and restlessness may be occasioned by giving some patients very incessant supervision; secondly, that pauper patients may be prematurely and too frequently discharged, in order that the least suspicion of undue detention may not arise, and that a high recovery-rate may be obtained, the fact being lost sight of that it is almost invariably essential that patients of this class should have completely recovered in order that they may have a fair chance of keeping well, and of being a comfort and assistance to their family; thirdly, that valuable time may be wasted by medical officers through the unnecessary multiplication of complicated reports and statistical returns; and lastly, that in the hope of evading grave responsibility, the certification of persons of unsound mind may be unduly delayed, greatly to their detriment and to the danger of the public.

Some risks must be run in the treatment of the insane, just in the same way as the surgeon who excises a knee joint, places the life of his patient in peril in order to save the limb.

Whilst allowing that curable cases do often seem to be admitted in rushes, still the recovery-rate in different asylums varies, I think, a good deal according to the views entertained by the respective Superintendents as to the frequency with which those patients of unstable mental condition should be discharged, who do fairly well as long as they are under control, yet break down soon after they are sent into the outer world. I believe that if all asylums would prepare and publish Table II. A of the tables adopted by our Society, it would be found that over a term of years the percentage of patients who keep permanently well after their discharge would not vary considerably.

Nowadays I believe it is much more likely for pauper patients to suffer from the disadvantages of too early discharge than from too prolonged detention.

I have the greatest detestation of all forms of mechanical restraint, and it is never resorted to here except in the most urgent necessity. I should think I could count on my fingers the number of times I have seen restraint used during the past twenty years.

I do not view seclusion in the same light; I am sure that there are some cases, both curable and chronic, which are greatly benefited by being isolated for a few hours in the quiet of a single room. I believe also that it is far better, in the interest of the patient himself, let alone that of the staff, to place him, when he is very violent, for a short time in a padded room, rather than to keep him in the day-room fighting and struggling with four or five attendants.

I know that there are some Superintendents who entirely disagree with such a line of treatment, and who hold that the necessity for employing seclusion only arises in having a numerically insufficient staff. I can only say that such is not the case here, and that from time to time I adopt seclusion in the manner I have indicated merely because I believe it to be beneficial.

I think there is the greatest possible distinction to be made between the use and the abuse of seclusion, and I fail to see what would be the wisdom of my medical journal showing year after year no entry of its employment.

The general tone and capability of the attendants and

nurses here has been decidedly raised during the past twenty years. As a whole, they are more intelligent, more suited to bear responsibility, of better physique, and are more attentive and considerate to their patients.

These improvements have been brought about because a better class of persons have been attracted to the service, and induced to remain in it by the higher pay given, by the extension of leave of absence, by the consideration shown for their comfort in the way of food and accommodation, and in the providing of good cottages for the families of the married men, by a more complete system of training, and by the increase that has been made in the number of the staff in proportion to that of the patients.

My ward attendants and nurses now number ninety; of these just one-third have been over five years in the service.

Although the improvements mentioned above are satisfactory, I think there is still room for further progress. Of the class of persons I can now obtain I have no reason to complain, but I still find that, at intervals, good men resign after they have been three or four years in the service and have had much time and pains spent upon their training, not because they dislike the work in itself, but because they get sick of the long hours of duty and close confinement, and are attracted to the prison or police services and elsewhere by the higher pay and the greater amount of freedom that they can obtain. I hope that this defect may before long be eradicated by further raising the limit of pay of the Charge and Senior Attendants, and by extending their leave so that all married men would have at least a day-and-a-half with their families out of every seven. This would only be an equivalent to the Saturday afternoon and Sunday which all artisans have to themselves, and they would still perform about seventy-eight hours' duty on the other five-and-a-half days.

The maximum wages that a Charge Attendant can now attain is £40 per annum; in addition, he has his uniform, board, lodging, and washing free, the option of £3 6s. 6d. in lieu of beer, and, if a married man, £6 annually for lodging money.

Charge Attendants and those attendants who are married are, in every twenty-eight days, given leave of absence on two whole weekdays, on two weekdays from two p.m., and on one Sunday from ten a.m.; they are also allowed out on

two other evenings in each week after eight p.m. and have nine days' annual holiday.

The salary of the nurses I find adequate. It begins at £16 per annum and the usual limit is £26, though a few Charge Attendants, having special duties to perform, go to £30 a year. They have uniform and everything found and the option of £2 in lieu of beer.

The nurses are allowed in every twenty-eight days one whole weekday and one weekday from two to ten p.m. They are also given every third Sunday from ten a.m. to ten p.m. The above is irrespective of their fourteen days' annual leave.

No doubt our nurses, in the discharge of their duties, get a good deal of exercise and fresh air, but their period of duty, which averages over twelve hours a day all the year round, is excessive, and I hope before long that arrangements will be made whereby they will have more time to themselves. I feel that it is better to adhere to the principle of having two shifts of attendants in the twenty-four hours rather than three; the latter plan might have advantages, but in practice would be most expensive to work.

Nothing conduces more to the well-being of an asylum, and to the comfort of its patients, than the retention of experienced and reliable attendants. At the same time it is most essential that attendants should not have to continue at their posts after they are past their work. It is in reference to this point that one of the great advantages of combining a moderate salary with the certainty of a pension is manifest.

The Visitors of this asylum were, I believe, one of the first Committees in the country to adopt a scale and frame regulations for the granting of pensions. Under this scheme pensions are calculated upon the basis of one-fiftieth of the value of the salary and allowances for each year's service. The scheme has worked well since it came into operation, and no doubt has great advantages; but it fails in one important point, where all similar schemes fail, namely, in the fact that, owing to the pension clause of the Lunacy Act requiring that all pensions shall be approved by the Local Authority after they have been granted by the Committee, we are not in a position to promise pensions beforehand, and so a great deal of the moral effect produced by the certain prospect of a pension is lost.

The Visitors did endeavour to obtain such an approval from our Local Authorities as would to all intents and

purposes have made the scheme binding, but, after full discussion, it was considered that such sanction could not be legally given.

The only way I see out of the difficulty would be for us to ask those Committees who are interested in the subject to unite, with a view to obtaining such a modification of the pension clause in the Lunacy Act as would enable any Local Authority to approve of a pension scheme for their asylum staff, should they desire to do so.

I find a considerable amount of interest is taken by the attendants and nurses in the lectures and practical demonstrations which have been instituted during the past two years, with the object of increasing their knowledge and of better instructing them in their duties. I anticipate that as time goes on a good deal more will be done in this respect, and that ultimately excellent results will accrue therefrom. In addition to education of this character, a good deal is done in the way of instruction and providing recreation for our attendants and nurses by means of singing and music classes, which are presided over by competent persons.

While on the subject of the staff I cannot help just briefly referring to a correspondence, which appeared about eight months ago in one of the medical papers, on the status and promotion of Assistant Medical Officers in asylums.

I must say I think that the tone of some of those letters was most unfortunate and some of the assertions most preposterous.

So far as this asylum is concerned the relations existing between the Superintendent and his Assistant Medical Officers have always been those of loyalty, confidence, and friendship, and it has always been a source of gratification to the former when he has been able to further the advancement of the latter. In saying this I wish it to be understood that I speak not merely of my experience as a Superintendent, but of that as an Assistant Medical Officer as well, and I hope, and cannot but believe, that the asylums where a similar feeling does not exist are very few and far between.

No doubt promotion is much more difficult to obtain than it was twenty years ago, and I fear must become increasingly so, and I sympathize very much with any gentleman who, after conscientiously discharging his duties for a number of years, finds himself no nearer to the certainty of promotion than when he commenced.

The chief reason for the stagnation is to be found in the perpetual additions which have been made to existing asylums, whereby, the number of Medical Superintendents remaining the same, the number of Assistant Medical Officers has greatly increased.

In common, I suppose, with most other asylums we have gradually added to our stock of instruments, etc., till we have now a fairly equipped pathological and chemical laboratory, and from time to time a good deal of interesting work has been undertaken.

I think that the recent appointment of a fairly paid permanent pathologist to the whole of the asylums of the London County Council is a most important step and a matter for congratulation. The investigation of any new pathological point must in the future entail such difficult and prolonged work, that really useful and reliable conclusions are more likely to be obtained by gentlemen who, having given much preliminary study to the physiology and pathology of the nervous system, intend, and are from a pecuniary point of view able to devote their entire life and attention to the subject, than can be obtained by men who, at the most, only propose to take up that special branch of work for a few years. I hope in time we may see the system just inaugurated by the London County Council extended to the provinces.

One change I am glad to say we have not had, and that is any material alteration in the constitution of our Committee through the operation of the Local Government Act. Our Chairman and most of the members of the Committee remain the same, still taking their former interest in the welfare of the patients, still anxious to do their best for the asylum and the public, and still always ready to listen to the suggestions of their Superintendent.

Finally, gentlemen, let me say nothing has been further from my desire than to present the views expressed to you this afternoon in an egotistical form.

It is a good plan for us all to take stock of our work from time to time; and feeling that we had not been merely slumbering on, lulled by a false sense of satisfaction in the standard we had reached, and unmindful of the many fresh proposals which have emanated from various sources for the better and more scientific treatment of the insane, it seemed to me that an account of the progress we have made during the last twenty years might not be uninteresting to you.

Discussion on Dr. Cooke's Paper.

Dr. NICOLSON, after referring in warm terms and at some length to the hospitality with which the Association had been received at the Worcester Asylum, said—I am sure it would be impossible to be placed under more favourable circumstances than we have been placed to-day, not only with regard to the paper which has been read to us by Dr. Cooke, but with regard to the condition of the asylum which it has been our privilege to have the opportunity of inspecting along with him to-day. This asylum combines a twofold condition of things, which it is well for us to bear in mind; although it has not existed half a century, yet, within that time, it illustrates the very extensive changes in almost all the arrangements of the asylum which have been considered necessary in order to adapt it to modern requirements. In the earlier days it was necessary to get rid of patients as soon as possible from the unfavourable surroundings in which they were placed. We live under different circumstances, the position of the patients is one of a maximum amount of comfort, and we whose duty it is to look after them feel that we have the entire sympathy of the public in our endeavour to maintain their life in the unhappy, still not uncomfortable, surroundings in which they are placed. I rise to ask you to convey to Dr. Cooke an expression of our best thanks for the trouble he has taken in preparing a paper of this sort, which I think myself, and which I think every one of us must feel, has been a great privilege and a pleasure to listen to. It is a paper practical, sound, and full of common-sense, and if in points of detail we differ, we shall, as he has said, now have the opportunity of expressing these differences. For myself, I am bound to say I am unable to criticize unfavourably anything that has fallen from him upon the wider questions. The question of diet is one that comes prominently before us. I am a little doubtful about reducing the meat diet, but if you have a meat diet let it be proper meat, and no imitation kind of food placed before the patients. We have to look very carefully after our contractors. The question of seclusion is one which I have had a great deal to do with. I think unruly members should be removed from the day-rooms, of which they are unfit occupants, and my experience in that way, which is completely borne out by the results, is that if a man is unfit for association with others he must be made to behave himself like the rest of the patients before he is allowed to mix with them in the day-room. The question of the attendants is a most important one, and I feel very strongly on that. We ought to do everything to encourage a prolonged service of attendants. An old attendant in the management of a ward is worth half-a-dozen junior attendants, and I am sure that money cannot be devoted to a better use than by increasing the pay of capable

attendants, and by giving every encouragement to those who are disposed to stay and carry out their duties in a satisfactory manner. As to the question of leave, at Broadmoor we give our attendants ten days a year, and one day off in nine, on which they don't go on duty at all. I am sure this is not so good as the proportion of leave at some other asylums, but I think that it is a very fair proportion, and seems to meet the requirements of our staff, which is very large, and the responsibilities are therefore very freely divided. Before I sit down I beg to propose a cordial vote of thanks to Dr. Cooke, not only for his kindness to us to-day, but for the substantial and common-sense paper that he has read to us on this occasion (applause).

Dr. WHITE—The beer question is one that has absorbed our attention for some years past in various asylums. In my own institution I had great difficulties to contend with. The wholesale and immediate abolition of beer was felt to be impossible. At first the patients all had beer whether they worked or not. I told the Committee that it was a very bad thing for the non-workers to have beer. We then said, no work, no beer. This began to work very well, the patients commenced to employ themselves, and our numbers of employed increased very considerably. We remarked that it was by no means beneficial for epileptics to have beer. After a time the Committee consented to its being abolished all along the line. What you abolish to the patients you must abolish to the staff. With one or two exceptions the latter were in favour of beer money, male attendants receiving £4 10s., nurses £2 10s. We decided to abolish it for the patients also, not giving them water, but giving them milk or lemonade, according to their choice, and we found that it worked out exceedingly well. The patients have rather gained weight than lost, look better, and they work well. With regard to the variation of diet, I think it is a most important matter in the treatment of the insane. You cannot give them too great a variety, vegetable as well as animal. I don't think you can do too much with regard to the change of diet. We have heard to-day, in the asylum which probably has one of the largest farms of the asylums in England, of the beneficial results of having a farm, and there is no Superintendent who could give us a better idea of the employment on the farm than Dr. Cooke, and it only tends to bear out the experience of all of us. We at the City of London Asylum now have a farm of 140 acres, and I have noticed the immense improvement of patients. I am perfectly certain that there is no more efficient agent in the treatment of patients than the farm, if properly employed, and under the judicious superintendence of the Superintendent himself (applause).

Mr. BRINTON—It has been my lot to deal with this beer question in the workhouse of the district with which I am connected. I have always felt that in a large workhouse, say with over 400 inmates,

beer did not tend to the improvement of the condition of the paupers, and it certainly very often leads to their being quarrelsome and disturbed, and, after some years, I am glad to say that persistence attained its due reward, and that about eighteen months ago my contention was successful, and beer was dismissed from the dietary of the paupers. We have certainly found, with a little improvement in the dietary, a great deal of comfort from its abolition in the workhouse. We see the appearance of the inmates decidedly improved, we know they have been gratified with the alteration in the dietary, and we have certainly found them in a more comfortable condition.

Dr. SPENCE said that he thought those who have to do with asylums are quite cognizant of the fact that when we receive patients from other asylums it does not matter whether the dietary is better or worse, we often see a very marked change in their condition in the mere fact that they have had a change. Considering the short time the Stafford patients had been in Worcester the improvement could not be attributed to the alteration in the diet.

Dr. CONOLLY NORMAN—I have listened with very great interest to Dr. Cooke's paper for several reasons. One reason has been that the twenty years which Dr. Marriott Cooke discusses about correspond to the length of time which I myself have lived in asylums. I generally find myself unable to quarrel with his conclusions. He has spoken of the disadvantages of large wards as one of the matters which has come out in his experience of the last twenty years. I have, perhaps, had more experience of the disadvantages of large wards (my smallest wards contain 100 patients). He tells us the largest number of chronic cases that he would have in one ward is 70. In that I slightly dissent from him. I should reduce the number, I think, to 50. I think 50 patients, even of the chronic class, is as many as any one charge attendant can undertake to understand and know about. He also spoke of the advantages of continuous supervision at night. Eight years ago, when I took charge of the asylum of which I am now Superintendent, there were 1,100 patients. We had four night attendants, and four night nurses. We have increased them to twelve on the male side and fourteen on the female; when a casualty or a sudden death occurs during the night another attendant is generally added. Dr. Cooke glanced casually at the question of the removal of imbeciles from workhouses to asylums. I think that the experience of past years inclines us to look forward to the time when all classes of the insane will be under practically one authority and one management, and I think the period is approaching when our workhouses will be cleared of a great number of their lunatic occupants, and the sooner the better. I heard with amusement and sympathy mixed in about equal pro-

portions that the subject of the water supply in this asylum was one which had given rise to "endless deliberation." There is no more difficult question, when it arises at all, and none better calculated to call up discussion endless, fruitless, and time wasting. With regard to beer, I may mention that it does not form a portion of the dietary in any asylum in Ireland now. In the asylum of which I have charge beer had been introduced, very injudiciously I think, for it is not the common beverage of our people in Ireland. I very soon put a stop to its use, and found no difficulty in effecting the change. Dr. Cooke has referred to the question of administration *v.* medicine. Our asylums are designed for the cure and care of patients, and in the cure and care of patients there is no difference between the administrative and medical treatment. Everything we do for our patients is medical, and if you have an asylum managed on any principle by which the administration is separated from the medical part, your asylum is badly managed. Dr. Cooke has spoken of mechanical restraint, and he says that during his twenty years' experience he thinks he could count on his fingers the number of times he has employed mechanical restraint. I am glad to say that I can count on my thumbs the number of times I have employed mechanical restraint. After having only employed restraint twice in twenty years, I am not prepared to say that I will not restrain a patient to-morrow if I think it necessary, and I consider that this is a question which should not any longer divide medical men. If it is for the good of the patient I think it is our duty to restrain him. I shall never be described as a non-restraint man. Dr. Cooke has referred to the benefits accruing during the last few years from the education bestowed upon our attendants. Great steps are being made in that direction, and I think it is a proud thing for this Association to boast that this advance is due to the action of our associates. Another matter which may perhaps come within the ken of every Superintendent is the advantage to be derived from the externe treatment of the insane. Though a great deal remains to be done, I am satisfied that the beginnings made at Wakefield, at St. Thomas' Hospital, and elsewhere will not be long without many followers. One word respecting Assistant Medical Officers. I read, in common with many of us, with astonishment, certain letters that appeared in the medical papers some months ago, supposed to be an expression of the feeling of Assistant Medical Officers. I was an assistant for seven or eight years. I was as ambitious as most men, I was discontented, as any man living, a rather narrow and isolated life is apt to be, and I found the outlook very gloomy, and very restricted, but I protest I never entertained any feelings like those described in the papers with regard to my chief. Our relations were, I am happy to say, always of the most cordial and even fraternal nature. I am sure every one of us who are Superintendents feel most keenly the difficulty that our juniors are under with regard to promotion. A few years ago promotion

was easy, now it has become difficult. This is the fault of circumstances over which we have no control and are never likely to have control (applause).

Dr. MERCIER said there was one nail which Dr. Cooke had struck and which he should like to help to hammer down, and that was with regard to the Act of 1890, and the provisions contained therein by which the periodic recertification of patients in asylums was required. He thought these provisions were excellent. This was the first public intimation they had had that this Act was a good one from any Superintendent. With regard to the Assistant Medical Officers, he endeavoured to champion their cause at Bristol, but regretted to say he was left absolutely alone, not one Assistant Medical Officer rising to back him up.

Dr. WHITCOMBE—I would like to congratulate Dr. Cooke upon the very admirable and useful paper which he has given us to-day. I think he has set an example to Medical Superintendents which would prove most useful if it were followed. We should each of us, as our time arrives, write a *résumé* of our work in asylums, which would, I am sure, prove of very great service in our treatment of patients. I remember this asylum even longer than Dr. Cooke. I had the benefit of seeing this asylum under the management of Dr. Sherlock, and I can congratulate Dr. Cooke upon the very great advance that has been made herein. There are one or two questions which struck me as most interesting in the paper which we have heard, and I was glad to hear from Dr. Spence his views as to the change of patients from one asylum to another. I think that is a matter which we should not lose sight of. Nothing, I think, could be more beneficial to a very large number of our patients than a change from one asylum to another, not for the purpose of altering the diet, but for the purpose of having a change, a change which in many instances leads to recovery, whereas if patients were still staying in their old associations, the probability would be that they would remain chronic. There was another question which interested me, and on which I think it might be useful for me to give my experience. I was very pleased to hear Dr. Cooke say that he was effecting great changes in diet. For the last six months I have been trying the effect of giving my patients a dinner, the constitution of which they do not know beforehand. The first effect of it was that every patient lost the day of the week and day of the month. It is a curious fact, if you come to look at it, that we should go on managing asylums day after day, week after week, month after month, and we should be giving our patients all this time a routine of diet day by day, and they know every day what is coming. After a great deal of trouble, I am glad to say, with the co-operation of my officers, I was able to place a dinner before patients daily, without altering the dietary scale, and without their knowing what it was to be. On Saturday they had roast meat, and I believe the expression was that they

were afraid they would have "that darned soup" on Sunday. They did not have it. I think this adds very materially to the comfort of our patients, and I think also they are much improved under it. Although it has only been in existence for the last six months, I think there is a greater amount of content, and also that the varied food does the patients far more good than the ordinary routine dietary. Then, sir, with regard to the beer, I think I was one of the early advocates of the discontinuance of beer in asylums, and I am proud to think that in two asylums I have been the means of getting rid of beer for patients. If we consider that a very large proportion of our patients come to us through excesses of some kind or other, I think it is not at any rate common sense treatment to continue giving them those things which have brought them to the asylum. At the same time I had another feeling as regards this beer. It was not a matter of the effect of beer upon a patient, but was rather the feeling that patients in asylums were getting swipes, not beer, that it was really water spoilt, and actually could have no good effect whatever on the patient's health. With regard to excitement I can speak personally that now beer has been taken away excitement has been immensely subdued. There are many questions arising to one of twenty-five years' experience in asylums which were touched upon by Dr. Cooke and which were of an interesting character, and I think perhaps it would be better for me to follow his example at some future time and give the Association all the benefits I have derived after twenty-five years' experience than to detain you longer now.

Dr. MORRISON, with regard to Assistant Medical Officers, remarked that they had to lead a life without a home, and that whilst in the asylum they were always on duty. They never, as a matter of fact, saw the Committee, nor had they an opportunity of discussing with the Committee any subject of importance. There is not the confidence given them by their senior colleagues that there should be, and that is what they are working for now. They have to gain information which would be afterwards useful to them in life, not from the Superintendent, but from the Clerk and from the officers generally. The positions of Medical Superintendents have vastly improved, they are paid well, and have comfortable homes. Dr. Cooke is to be congratulated upon the loyalty which he and his colleagues show to each other. The Senior Medical Officers are men who are generally responsible for the administrative part of the work. I have only to say that those of this Association who are in any way able to help, should exercise their best endeavours to improve the existing state of matters.

Dr. FLETCHER BEACH said there were many matters he wished to touch upon, but he would not trespass upon their time any further than simply to second the vote of thanks, by Dr. Nicolson, to Dr. Cooke for his excellent paper.

Carried by acclamation.

Atrophy and Sclerosis of the Cerebellum. By C. HUBERT BOND, B.Sc., M.B., Ch.M., Pathologist and Assistant Medical Officer, London County Asylum, Banstead.*

Notwithstanding all the elaborate researches that already have been conducted upon the cerebellum, much controversy yet exists as to its physiology, and a complete account of its functional relations, with the rest of the central nervous system, cannot yet be given. Rapid strides have been lately made, and many doubtful points elucidated by direct experiment upon lower animals, but the deductions drawn from them cannot be regarded as absolutely applicable to man until they have been confirmed by pathological observations on the human brain. With this in view, the case about to be related has been thought worthy of publication:

Before, however, entering upon it, it would not perhaps be amiss to briefly recall some of the chief theories which have been advanced as to the functions of the cerebellum. Foster questions our right to even use such an expression. By that, I take it, he implies the cerebellum is not one distinct organ with its own separate rôle to perform, like the heart for instance; but that it is the union of various structures, each with its own particular duties to carry out, in conjunction with various other parts of the nervous system. Plentiful facts have, however, been cited, which demonstrate that in some way the cerebellum, in part or as a whole, is intimately concerned in the maintenance of equilibrium and in our power of performing co-ordinated movements. It would seem, too, that it may possibly be concerned in our sense of sight, and that very probably a connection exists between the centres for ocular movements and the middle lobe of the cerebellum. A view held, as regards its hemispheres, was that they had to do with psychical phenomena; and, in this connection, Gowers has pointed out that they are chiefly connected with those areas of the cerebral cortex which we believe to be the main seat of psychical processes. Sexual activities, too, were once ascribed to the cerebellum (Gall). In an address given early last year by Dr. Ferrier,† a concise review was made of

* Paper read at the Quarterly Meeting of the Association, held at Worcester Asylum, February 21st, 1895.

† "Brain," Spring, 1894.

recent investigations upon the cerebellum by himself, Luciani, and others. And, if these are to be accepted as applicable to man, much that is at present fairly definitely insisted on in the leading works must be restated. He dismisses, as totally without proof, the possible theories that the cerebellum is concerned in either psychological processes or the sexual instincts. He would overthrow the theory of Nothnagel, that the function of maintaining equilibrium was dependent on the middle lobe alone. At present all text-books appear to agree, that a lesion of one hemisphere, except it compress the middle lobe, produces of itself no symptoms by which it can be diagnosed; and that only when the middle lobe is the seat of disease, or is compressed, or irritated in some way, does cerebellar ataxia and vertigo appear. But he upholds the teaching that the functional relations of each half of the cerebellum are chiefly direct and not crossed, thus, he says, if one half of the organ be removed, the permanent symptoms are restricted to the same side as the lesion; and it is of course a well-known fact that, in cases of atrophy of one cerebral hemisphere, should the cerebellum also be affected, it is on the opposite side.

While so much mystery still surrounds the functional position of the cerebellum, and such conflicting opinions yet exist, every case of disease of that region becomes of value, and, if minutely studied, will possibly furnish us with fresh data to confirm experimental evidence.

I will now describe a case, which came under my notice last year, where this part of the brain was found to be most extensively diseased.

A woman, A. D., single, aged 43, never been occupied, was transferred to Banstead Asylum, on July 20, 1877, from Hoxton House Asylum, where she had been since November 18, 1872. Since the age of seven she had been observed to be mentally and physically deficient, but was not under certificate until 1872. At no time in her life had she ever been subject to epilepsy.

By application to the parish authorities, I have endeavoured to trace her family and personal history, but without success.

*Condition on Admission to Hoxton House.**—Patient was a thin, spare woman, of medium height, expression vacant; she appeared to be of a nervous temperament. Her gait was considerably impaired, she walked with difficulty, and was more or less helpless. Otherwise she seemed to be in fair bodily health; respiratory, cir-

* To Dr. Clave Shaw I am indebted for permission to publish this case, and to Dr. Fenouillet for kindly supplying me with the notes made as to the patient's condition while at Hoxton House.

culatory, and abdominal viscera appeared healthy. The tongue showed no tremor. She was simple and childish in manner, did not at all know her own age, did not understand the relative value between a sixpence and a sovereign, made foolish remarks, such as, "The cat is my baby." She exhibited no melancholic or maniacal symptoms.

Throughout her residence in Hoxton House, her mental state remained *in statu quo*; no maniacal outbursts were recorded, and the only extra physical facts noted were, that in March, 1873, her speech was observed to be faltering, and, in January, 1876, she was noted as being too helpless to attend to her own personal wants and cleanliness. While there she was never able to employ herself at anything.

On Admission to Banstead Asylum.—Nothing of interest was noted as to her physical condition, beyond that which has already been mentioned above. She was described as being almost idealless, stupid, and heedless of her surroundings.

The following are some of the more important notes made from time to time:—

January, 1878.—Patient shows much general tremor, her gait is impaired, also power of deglutition; her speech is hesitating. She is listless and apathetic, but can do a little sewing. Her habits are now clean.

During the next ten years various maniacal outbursts were recorded. She would sometimes become frantically excited, and at times would show violence to other patients, otherwise her mental state remained the same, and her gait continued to be described as markedly ataxic.

February, 1889.—Patient's gait has become so ataxic that she can scarcely walk. Knee-reflexes are normal. She is very demented, but yet has a rather exaggerated sense of well-being.

December, 1891.—Her gait is very sprawling in character. The right patellar reflex is difficult to elicit; left ditto is exaggerated. She is extremely demented; is wet and dirty in her habits; takes food heartily, and sleeps well.

May, 1892.—Patient has become more feeble. Is at present confined to bed. Her feet are cedematous and cyanosed, and are painful on pressure. She cannot now stand. Takes food with difficulty, and requires minced diet.

August, 1892.—She is now better again. Is able to get about, and, though her gait is extremely ataxic, she but rarely falls. She can now take food fairly well again. Habits unclean. For the next year and three-quarters no important note was made; at times she would be noisy and troublesome.

May, 1894.—Phthisis was diagnosed; she was noted as breaking up rapidly.

July 1st, 1894.—Weakness still greater. She is in bed. Can only take liquid diet. Suffers from diarrhoea. This condition

continued, and became gradually more aggravated till her death, which occurred 11 days later.

Autopsy made by Dr. Meakin, 10 hours after death. Temperature 16° C. The lungs were in an advanced state of Tuberculosis; many parts were breaking down, and several vomicae existed. The liver and spleen showed amyloid degeneration, and in the latter were two infarcts, one of which was recent. Both kidneys were fatty. The other viscera were normal.

Calvarium.—Sawn at a level of 3 centim. above root of nose, weighed 283 grammes (10 oz.), and presented no abnormality. At the base of the skull the cerebellar fossæ were symmetrical, and did not appear to be smaller than usual.*

Dura Mater.—Was normal. A considerable quantity of subdural fluid escaped when the brain was being removed; the exact amount was not determined. There were no undue adhesions of the membrane to the skull.

Arachnoid and Pia Mater.—Were fairly normal in appearance. There were no adhesions between the cerebral hemispheres, and the pia mater could be stripped with ease from them. A small amount of atheroma was present in the vessels of the circle of Willis; but the basilar and the two vertebral arteries, with their cerebellar branches, were quite patent. The fluid in the subarachnoid space seemed to be of the usual amount.

Cerebrum.—Appeared to be quite of average size and of fairly good consistence; there was perhaps a slight tendency to general softening of it. The main convolutions followed the usual arrangement, and there was no special atrophy of them; it is true that the sulci in the frontal lobes gaped somewhat, but, considering the lengthy time the patient had been insane, there was but little brain-wasting. On section, both grey and white matter presented a normal appearance, and, to the touch, did not strike one as being particularly softened; there was certainly no evidence of general or local sclerosis. There were no focal lesions observable, nor was there any abnormality as regards the ventricles. Unfortunately, this part of the brain was inadvertently thrown away before a microscopical examination was made.

Cerebellum, Pons and Medulla.—The last of these was normal in size and appearance, but, as regards both points, the former two showed a very remarkable departure, more especially the cerebellum. It was obvious that most extensive atrophy had taken place; the relative size of the small to the great brain was 1 to 22, instead of 1 to 8, as it should normally be. The pia mater was removed with moderate ease, except that here and there the processes dipping down between certain laminae refused to come

* In a case reported by Dr. Fletcher Beach in "Brain," 1884, where there was atrophy of the left cerebral hemisphere and of the right half of the cerebellum, the cranium was asymmetrical, the corresponding fossæ being reduced in size.

away; and it was afterwards found that many of the leaflets were adherent to each other. The cerebellum then presented all over a peculiarly ivory-white shining appearance. To the touch it was extremely hard, just as much as one would have expected had it lain for months in hardening-fluid. At first sight it gave one the impression that the white matter had been entirely denuded of the grey cortex; however, on slicing it, a line of demarcation could be seen; but there was very little difference in colour between the central white core and what one had to take as representing the layer of grey matter. This latter was evidently much narrower than usual, and the central white matter looked shrunken and wasted; in it there was no trace visible of the corpus dentatum. The organ appeared to be symmetrically and completely involved; no part seemed to be harder or softer than another, and each part, cut into, presented the same appearances. The pons was certainly smaller than it should be, but, to the touch, it did not appear so much sclerosed as the cerebellum.

Weights.—The whole brain weighed 1,090 grammes (38½ oz.); cerebral hemispheres, 1,026 grms.; cerebellum, 50 grms. (on dividing it mesially each half was found to have the same weight); pons, 8 grms.; medulla, 6 grms. An average female brain should weigh 1,220 grms. (*vide* Landois and Stirling). And, according to figures obtained from Wakefield Asylum tables, the several parts of the brain in the female average as follows:—Cerebrum, 1,060; cerebellum, 137·2; pons, 15·9; medulla, 6 grammes.* We thus see that while the medulla was not atrophied at all and the cerebrum only to a comparatively small extent, the cerebellum had been reduced to only a little more than a third of its normal bulk, and the pons was half the size it should properly be.

Microscopical Examination.—Fresh frozen sections were made from pieces taken from various parts of the cerebellum, and stained in aniline-blue-black. Similar sections were made from the pons and medulla. All the sections from the cerebellum showed practically the same appearances; what differences there were could easily be accounted for by remembering the direction in which the section was made. Every leaflet examined looked as though it had been transformed entirely into fibrous tissue, and, had it not been for a darkly stained band, representing the remains of the cells of Purkinjé, and perhaps also the remains of the "nuclear" layer of grey matter, it would have been impossible to say which had been grey and which white matter. In no section from any part of the cerebellum have I been able to discover a single healthy-looking cell of Purkinjé. In most cases all that remained of them was a confused mass of *débris*, enclosed in thick meshes of fibrous tissue, with numerous connective tissue corpuscles around; occasionally a dim outline of a cell of Purkinjé was visible. In the position of

* *Vide* "Tuke's Dictionary of Psychological Medicine."

the outer or "molecular" layer of grey matter, but not as wide as this normally would have been, was a layer of fibrous tissue having a somewhat honeycombed arrangement; its width was fairly uniform everywhere. Sometimes I observed two neighbouring leaflets would be firmly adherent to each other by the union of the opposing two sclerosed molecular layers; and strands of connective tissue could then be seen to pass apparently without interruption across from one leaflet to the other. (This is fairly well brought out in the annexed photo-micrograph, the development of which, however, in parts has not been quite the success it might have been). The inner or "nuclear" layer of grey matter, which usually stands out so prominently in sections of the cerebellar cortex, was practically indistinguishable; whatever did remain of it had lost all typical characteristics, and was included in the above-mentioned darkly stained band. In the central white core I could not with certainty distinguish any nerve-fibres; it seemed entirely made up of thick strands of fibrous tissue.

In 1883 Dr. Major published a case* occurring at Wakefield Asylum, where the cerebellum was atrophied, not, however, universally as in the case now under notice. The diseased area was limited to the under surface of the right lobe, and, microscopically, it appears to have presented almost identically the same appearances as those seen in my case. She exhibited no peculiarity of gait during life. In his patient, the cerebrum, in addition to the cerebellum, showed considerable atrophy; it weighed only 985 grms.; the cerebellum 115 grms.; the pons and medulla 20 grms. He had previously published another somewhat similar case.† It was one of paralytic idiocy, with right-sided hemiplegia, and again a female. There was atrophy and sclerosis, not only of the left cerebral hemisphere, which weighed 217 grms., the right being 507, but also of the right lobe of the cerebellum, which weighed 42 grms., as compared with 72 grms. for the left lobe; the pons was 14 and the medulla 5.5 grms. In that case, however, a few ill-developed cells of Purkinjé yet remained, and the subjacent granular layer showed no change. Both his cases were epileptics.

To return to my case, the sections through the pons were not very satisfactory; but it was plain that there was a considerable increase again of connective tissue, and here and there the sections had a cribriform appearance. In those through the medulla the only thing I observed was a marked yellow degeneration of the nerve-cells; more particularly could this be seen where the section crossed the olive; the cells were small and their outline indistinct. It is much to be regretted that the rest of the brain and cord was not available for microscopical examination, in order that the presence or absence of consecutive degenerations, which have

* "Journal of Mental Science," Vol. xxviii.

† *Ibid.*, Vol. xxv.

sometimes been described after lesions of the cerebellum, might have been determined. For it is these cases which afford us so valuable assistance in unravelling the still doubtful connections of the cerebellum. However, even limiting our observations to the condition seen here in that organ alone, the case offers, I think, some interesting suggestions, especially when compared with others already published.

From the meagre history supplied to us of the patient, the precise onset of the disease cannot be fixed. Her certificate states the duration of her condition to be 36 years; so that it is fairly clear the lesion existed to some extent at the age of seven. Though no symptoms may have been noticed prior to that, I imagine it possible that it still might in part have been congenital, or even have commenced before birth.

As to the cause we are equally in the dark. The vessels seemed fairly healthy, and we have no history of any attack of meningitis in infancy. Were it one of those cases due to a hæmorrhage occurring during difficult parturition—and these, when basal, usually are from a tearing of the cerebellum—one would not have expected the degeneration to have been so uniformly distributed. Cases have been described as due to intra-uterine disease; but Gowers opines that for the majority we have no adequate explanation, and says that the cerebellum is the most common seat for these obscure cases. He suggests that they are owing to some perversion in the process of development, and that they are possibly allied to those cases of total absence of the cerebellum. In this connection I would like to briefly refer to a most interesting example of cerebellar disease in kittens, described by Drs. Herringham and Andrewes.* A cat produced a litter of four apparently healthy kittens. All, however, developed a most markedly staggering gait, but the time of onset was not uniform in each case. Two developed it soon after birth and had to be killed in a few weeks. Shortly after their death the other two developed the same symptoms. They showed solely an inability to maintain equilibrium. Fine co-ordinated movements of the paws were well performed. They were killed, and on examination the brain and cord were found healthy, except for the cerebellum. This in each case was much atrophied and showed extensive microscopic changes in both central and lateral lobes,

* "St. Bartholomew's Hospital Reports," Vol. xxiv.

but in the one animal the lowest and hindermost convolutions and the adjacent portions of the second, in both middle and lateral lobes, were nearly normal. The minute changes differ, however, somewhat from those seen in my case. The cells of Purkinjé were normal in appearance and number, but, instead of being arranged in a row, they had become irregularly placed, and their direction was sometimes twisted. The outer layer of grey matter was reduced to half its proper width, and the granular layer was also narrowed and very deficient in "hæmatoxylin" cells. The white matter was abnormally broad. In it the nerve-fibres did not appear to be affected, but were separated by some interstitial substance.* The nucleus dentatus looked healthy. Though no symptoms were observed till some while after birth, it seems to me that, as in each case it was the cerebellum and that alone which was diseased, the cause must have existed in intra-uterine life. An identical case was recorded by Rumpf.†

Another point of interest in my case is the mental state of the patient. She was evidently an imbecile, and subject to the periodic exacerbations one occasionally sees in this class of the insane. I have already alluded to the opinions held as to psychical manifestations being in any way dependent on the cerebellum. Gowers suggests that at least it is possible, and draws certain analogies between the cerebral and cerebellar cortex. He alludes also to cases where there has been intellectual defect, when the cerebellar hemispheres alone have been affected. In this case the cerebrum did certainly not follow the type so often seen in imbeciles; it looked of fair size, and the balance showed only a trifling atrophy. So that, would it be far fetched to assume that her marked intellectual deficiency was in some way connected with the almost functional absence of the cerebellum?

Many of the symptoms which assist in coming to a diagnosis of cerebellar disease were absent in this patient. There was never any vomiting, vertigo, or spasm of the muscles at the back of the neck; however, these of course are usually only found in compressing or irritative lesions. There was never any nystagmus noted or other affection of the eyes, nor did she tend to fall specially in one direction

* Permission has been kindly granted me to reproduce a drawing of a section through the cerebellum of one of these kittens.

† "Arch. f. Psychiatrie," xvi.

more than another. In addition to a markedly "cerebellar" gait, she exhibited the general body tremors and inco-ordination of the limbs occasionally noted in such lesions. Luciani has proposed the term "astasia" to include such a combination, and Ferrier states that it is especially seen in examples of cerebellar atrophy. The activity of the knee-jerks in affections of the cerebellum is still a moot point. Bastian, for instance, has formulated a theory that, in cases of cerebral disease, the rigidity ensuing on the paralysis is owing to the unrestrained action of the cerebellum. Ferrier would deny this, and says their abolition is not the rule, and that in monkeys they are even increased after ablation of the organ. Gowers states that, in cases of tumour of this region, they are lost, but not persistently, at times a slight response being obtainable. In my case they do not seem to have been very frequently tested, but in February, 1889—that is at least 47 years after the first physical signs were noted—they were described as being normal; three years later they were unequal.

The case further illustrates the very long duration over which a cerebellar lesion is compatible with life—at least 53 years in this patient; and even then her death did not appear to be directly due to it, but to Phthisis.

In conclusion, there is one more point upon which I would like to touch, too intricate a one, however, to be dealt with at length in this paper. It is this: What part of the cerebellum subserves our maintenance of equilibrium, disregarding for the present the question whether it is the middle lobe alone? In other words, what structural elements must be destroyed before our power of locomotion becomes impaired? The histology of the cerebellar cortex is uniform throughout, and in it, as far as is known at present, we have to consider the following nerve-elements:—The cells of Purkinjé; a set of nerve-cells in the outer layer of grey matter; numerous, small, and indistinct nerve-cells with prominent nuclei in the inner layer of grey matter; nerve-fibres forming the central white matter, with fibrils in the two grey layers; and, lastly, embedded in the white matter, a few other small masses of grey matter, the chief of which are the corpora dentata. In my case all the nerve-elements appeared to be destroyed. It is of course possible that small isolated patches of healthy tissue may have existed and escaped my sections; but I think my examination may claim to be fairly exhaustive. However, other cases

show that such an extensive lesion is not necessary for loss of equilibrium. The dentate bodies, it would seem, may be placed out of court. In the kittens they were normal, yet marked ataxia was present; and Dr. A. W. Campbell published five cases of cerebellar disease,* in two of which the sole lesion was a unilateral destruction of the dentate nucleus, and in a third a hæmorrhage had occurred into both dentate bodies; yet in neither of these three cases were there any clinical indications of cerebellar disease. As to the cells of Purkinjé, a staggering gait may be coincident with their integrity, as was so again in the kittens, and large areas of them may be destroyed without ataxia occurring, as in the first of the cases I mentioned by Dr. Major. As regards the nerve-fibres, their continuity did not appear to have been broken in the two kittens. We are thus brought to the molecular and nuclear layers of grey matter, and I have as yet not come across any microscopical description of an example of cerebellar ataxia in which these were noted as healthy.† It is true that in the other of Dr. Major's cases the nuclear layer was intact, but the presence or absence of ataxia was not stated. Drs. Herringham and Andrewes point to an intimate relation between the two layers of grey matter, and, further in support of this, they say that on the border-line between the more healthy and the diseased parts of their sections the changes begin equally in both layers.

My remarks in parts, I fear, have perhaps been unnecessarily lengthy; but some points have appeared to me so full of interest that I have been tempted to dwell upon them longer than I first had intended.

* "British Medical Journal," September, 1894.

† Since reading this paper I note that, in the first part of "Brain" for this year, another case of a cat showing defective development of the central nervous system has been very fully reported on by Dr. Risien Russell. In this instance, among other defects, the right lateral lobe of the cerebellum was affected. The right half of the middle lobe did not appear to share in the atrophy. What existed of the right lateral lobe seemed fairly healthy. The proportion of the layers of the cortex to each other and of the grey to the white matter remained unaltered. The cells of Purkinjé were normal in appearance and arrangement, as were also the cells of the granular and molecular layers. In fact, it seemed rather as if part of this lobe had been simply removed. The corpus dentatum was well marked on the left side, but only a few irregularly scattered cells represented it on the right side. During life paresis of both posterior extremities and of the right anterior one were observed, which condition is stated to correspond with that met with in dogs after ablation of the right lateral lobe of the cerebellum.



FIG. 1.

Reproduction of a drawing, which appeared in St. Bartholomew's Hospital Reports, illustrating Cerebellar Disease in Cats, reported by Drs. W. P. Herringham and F. W. Andrewes.

Section of a Kitten's Cerebellum; $\times 15$; stained with aniline black. Shows the irregular distribution of the cells of Purkinjé, and absence of the nuclear layer of grey matter.

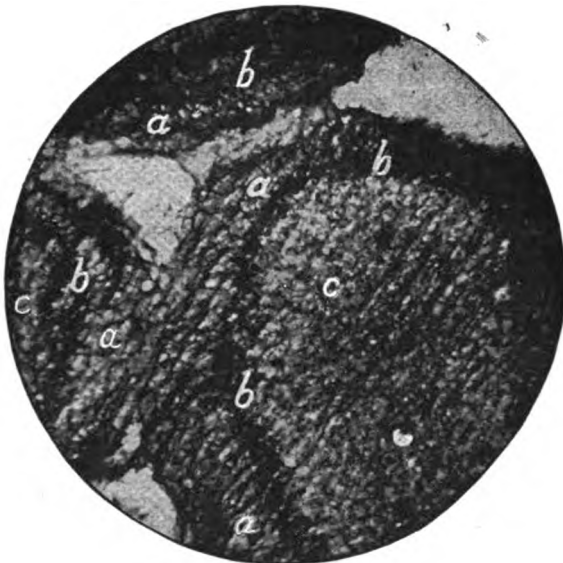


FIG. 2.

Photo-micrograph of a Vertical Section through the right hemisphere of the Cerebellum. One sclerosed leaflet is seen, and portions of two neighbouring ones, one of which is completely and one partially adherent to it. (a) The atrophied outer layer of grey matter, converted into fibrous tissue. (c) The white matter and inner layer of grey matter, in a similar condition. (b) The remains of Purkinjé's cells and part of the inner layer of grey matter. ($\times 70$ diam.)

C. H. BOND.

Discussion on Dr. Bond's Paper.

Dr. FLETCHER BEACH begged to thank Dr. Bond for his very interesting paper. He met some years ago with a case in which there was atrophy of the brain and co-existent atrophy of the cerebellum on the opposite side, and a few years afterwards he reported to the Association a case of cerebellar disease in which two cysts occupied that organ. As far as he could remember, these were the only two cases in which he had met with disease of the cerebellum. Dr. Risien Russell had made some recent researches on the cerebellum, and if Dr. Bond had not seen them, he would probably find some facts recorded in Dr. Russell's paper which might bear on the subject.

Dr. CONOLLY NORMAN said the Association was deeply indebted to Dr. Bond for this most learned and carefully prepared paper. The speaker referred to the description of atrophy of the cerebellum given by Ziegler, and described a similar condition which he had had an opportunity of studying in specimens which a friend had kindly shown him. In his own laboratory he had not had a case of atrophy of the cerebellum. A condition apparently analogous attacking one cerebral hemisphere is not uncommon.

Dr. COWAN expressed his thanks to Dr. Bond for the able paper which he had given them. Facts in pathology were always welcome and valuable, and were the more valuable and the more welcome when so carefully reasoned out as they were in Dr. Bond's paper. The speaker then referred to a case which is the subject of the following article.

Notes on a Case of Cerebral Hemiatrophy. By JOHN J. COWAN, M.B., C.M., M.P.C., Leigh Sinton, Malvern; late A.M.O., District Asylum, Melrose, N.B.

The subjoined notes are those of a case mentioned at the Association's meeting at Worcester, in connection with Dr. Bond's paper.

A. R. H., an epileptic imbecile, was admitted to District Asylum, Melrose, on May 27th, 1879. His mother suffered from an attack of insanity. Of his state previous to admission little is known. He used to assist at a gardener's, but never was able to earn a livelihood. For some three months he had been an inmate of Perth Criminal Lunatic Asylum for assaulting a labourer with an axe. On admission nothing abnormal was found to exist directly bearing on the condition found after death. At varying intervals he suffered from severe epileptic fits, but these under the steady administration of bromides ceased in November, 1890, leaving him of a very irritable and sometimes savage dis-

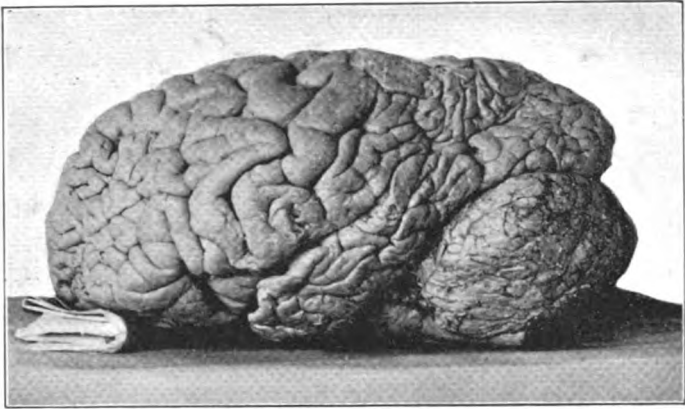


FIG. 1.

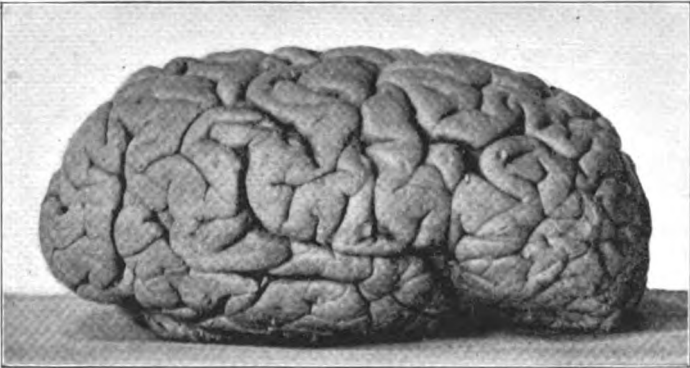


FIG. 2.

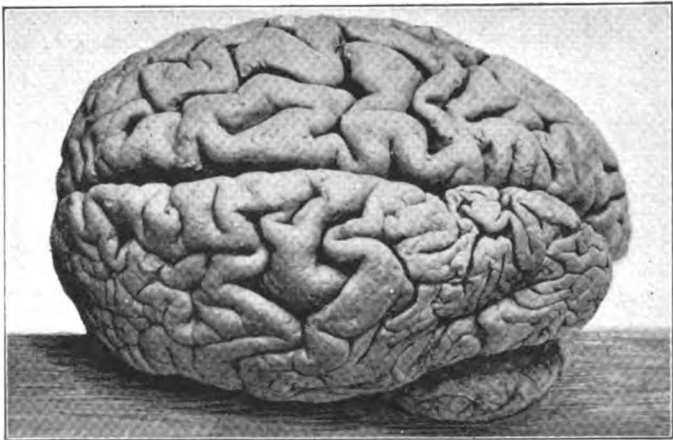


FIG. 3.
To illustrate Dr. Cowan's paper, Google

position, and the subject of delusions and hallucinations. In 1887 he is noted to be very irritable, conceited, and supercilious, rambling and incoherent in talk, imagines that he is a most superior person, and proud of his singing and dancing. In July, 1891, his condition was one of mild chronic excitement of mind with dementia. His gait was awkward, but not staggering; he drags the right limb somewhat. While dancing the movements of the limbs on the right side are performed stiffly, and he kicks out the right leg spastically. The face was asymmetrical; speech jerky and explosive, rambling and incoherent in talk, can only express his wants in a roundabout manner. In January, 1892, signs of phthisis were detected. Mentally his condition was characteristic of phthisical insanity. He developed tubercular disease of peritoneum, and died in May, 1892.

Extracts from post-mortem register:—Old hæmatoma of left ear.

Head.—Calvarium very thick owing to great hypertrophy of diploë, especially on the left side; shape asymmetrical, the right being the larger side. The thickening of the diploë is most marked in the frontal and occipital regions. Parietal foramina unusually large. Dura mater readily separable from skull, slightly thickened. Over the vertex on left side is a thin rusty-coloured false membrane dotted with small brown spots. The pia adheres to the dura mater in the frontal and occipital regions on the left side. The venous sinuses are all large. The brain is seen to be much larger on the right side than the left. The convolutions of the left hemisphere in the frontal regions and occipital are very small, withered, and compressed looking. Those of the motor areas, while atrophied, are more normal in appearance and size, but simple. The convolutions of the right hemisphere are large in the motor areas, but show also slight atrophy in the frontal lobe. Arteries at the base are free from gross disease. There are two anterior communicating arteries. Pia mater is extremely tough over the left hemisphere; very œdematous, and of an opaque milky-white colour. It strips with abnormal readiness. The left parietal lobe is shrunken, withered, and hollowed out. The right half of the cerebellum is smaller than the left, but shows no other lesion, nor does the cord to the naked eye. The brain weighs, with pons, medulla, and cerebellum, 35½ oz.

The accompanying plate shows three views of the brain before section.

A Further Contribution on the Relationship between Chronic Renal Disease and General Paralysis of the Insane. By HUBERT C. BRISTOWE, M.D. Lond., late Assistant Medical Officer, Somerset and Bath Asylum.*

In a paper I had the honour of reading before you last December I called attention to the high percentage of patients who died of general paralysis of the insane showing post-mortem signs of disease of the kidney. The task I then set myself was to find out, if possible, what was the pathological relation between the two. The arteries seemed to me to be the only connecting link. I then proceeded to point out that a diseased condition of the cerebral arteries occurred in those dying with granular kidneys, very similar to, if not identical with, what is found in those dying of general paralysis of the insane. And, finally, I called attention to three possible explanations of this apparent relationship.

What I chiefly wish to do now is to put before you some of the results obtained from other asylums, and also to fill up certain vacant places in my last paper, which lack of material compelled me to leave.

Since writing my last paper both Mr. C. Beadles † and Dr. C. H. Bond ‡ have published articles on the subject of chronic renal disease in insanity. Beadles quotes statistics from Colney Hatch, and states that out of 150 post-mortem examinations he found 106 cases of chronic renal disease, or 70·6 per cent. ; but that further on, looking through the post-mortem records of 2,610 cases, he finds only 1,128 cases of chronic renal disease, or 43·21 per cent. Dr. Bond, quoting from Banstead Asylum, finds that out of 154 post-mortems there were 74 cases of chronic renal disease, or 48 per cent. My own numbers are 532 post-mortems and 327 cases of chronic renal disease, or 61·466 per cent. The numbers do not agree well. Dr. Bond, quoting from Dr. Leith, of Edinburgh, states a fact which is already well known, that "it is extremely common to meet with minor degrees of cirrhosis in old people, and not infrequent to find granular kidneys in cases where these conditions were not suspected during life." We ought, therefore, to exclude from our list a proportion

* Read at a Meeting of the South Western Division of the Association, held at Bristol, April, 1895.

† "Journal of Mental Science," Jan., 1895, p. 32.

‡ "British Medical Journal," March 2nd, 1895, p. 465.

of the patients who are advanced in life. If for that purpose he had excluded those patients over 60 from his list he would have found his percentages considerably reduced. Doing that with my own number reduces the percentage of chronic renal disease to 52·9, or a reduction of 8 per cent. But if, again, I put aside my general paralytics, there is a further reduction of about 12 per cent. The difference between 61 per cent. and 41 per cent. is certainly important and striking. Of course I admit that even my carefully calculated numbers are far from being the exact truth. For to make it quite accurate a proportion of those persons over 60 must be included, and that would as near as possible bring the ordinary percentage of chronic renal disease among the insane, other than general paralytics, to 44.

These numbers must be compared with my 72·11 per cent. of diseased kidneys in general paralytics, all of them under the age of 60. The diminution of my percentage since my last paper is due to a more careful examination of our books and the admission of a few more cases, the records of which I had previously put on one side as untrustworthy.

Through the kindness of Drs. MacDonald, Benham, and Craddock, and the valuable assistance of Drs. Ewan, Tinker, and Blachford, I am able to quote the percentages of chronic renal disease in general paralysis as found in the post-mortem records of Dorchester, Bristol, and Gloucester Asylums. At Dorchester the total number of post-mortems on general paralytics was 32; of these only 38·1 per cent. could be said to be healthy. At the same time only 34·375 per cent. could be said to be distinctly cirrhotic. The others showed signs of congestion and early trouble of a similar nature, the total number of cases of diseased kidney being 23, or 71·875 per cent. At the Bristol City and County Asylum there were 59 cases, and of these only 11 had granular disease of the kidneys, or 18·644 per cent. But 32 cases showed signs of disease of some sort or another, making a total percentage of 54·237. At Gloucester, however, the figures approach much nearer to my own. Out of 89 cases 40 had contracted granular kidney, or 44·943 per cent. But here again the total number which were found to be diseased was 66, or 74·157 per cent. In studying these figures many points have to be considered, and perhaps not the least important is the personal factor of the observer: for even in our own records I noticed as a curious fact that during the term of office of one gentleman there was hardly a case of renal

disease recorded, whilst during another period such cases were found to be exceedingly frequent. That leads me to state what I have considered to be the chief points in settling under what category to place the various cases. Of course the adherent capsule and granular cortex are self-evident, but then I think I may fairly consider that all cases in which the cortex is stated to be wasted, or the kidney is much under weight, should correctly be placed in the category of unhealthy kidneys. And in looking through records it has been a matter of great difficulty to avoid admitting cases unfairly to either side; whilst to neglect such doubtful cases entirely must only enormously increase the proportion of cases presenting a granular condition of kidney. Later on I shall describe one case which helps to justify me in including a somewhat large number of cases under the head of those with interstitial nephritis.

I am afraid I weary you with figures, but I must just point out the total numbers and percentages obtained from the various asylums. Taking my figures of the Bath and Somerset Asylum, together with Mr. Beadle's figures of Colney Hatch and Dr. Bond's of Banstead, we have a total of 3,446 cases of insanity, and of these 48·867 per cent. had renal disease. I showed that by removing general paralytics we might reduce that percentage by 12, and by removing a fair proportion of those over 60 we might again reduce the number by 4, that is a total of 16 per cent. We have left then only a little over an average of 32 per cent. I do not for one moment suggest that this is really correct; it is only an interesting calculation. Now, taking the Somerset, Gloucester, Dorchester, and Bristol Asylums, we have a total of 266 cases of general paralysis, and of these 183, or about 68·8 per cent., showed signs of renal disease. The difference is marked, and from these numbers I think I am justified in considering that in general paralysis both contracted granular kidney and other forms of renal trouble are far more common than in other forms of insanity; in fact, that they are usually found.

The next question to be considered is—What is the condition of the arteries and kidneys in those cases of general paralysis where no naked-eye lesion of the kidney is found? In my last paper I showed that in some of those cases, at all events, and in all I had been able to examine, the arteries of the body generally were thickened and their coats hypertrophied. The condition of the kidneys I was unfortunately

unable to investigate. Since then I have had under my care a case which I think is worth quoting in full:—W. C., æt. 33, was admitted to the Bath and Somerset Asylum suffering from what appeared to be acute delirious mania, with great exaltation, and a history suggestive of general paralysis. He died after being under observation for two-and-a-half months and ill a little over six. Post-mortem all the naked-eye appearances of general paralysis were well marked. The microscopic examination of the brain, however, showed comparatively slight changes. But the blood-vessels were thickened and the coats filled with darkly-stained nuclei, such as I described as being present in general paralysis and in chronic renal disease. The kidneys were said to be not quite healthy, the capsule being slightly adherent. But I am not at all sure that it was not a case of the wish being father to the thought, and I believe they would usually have been put down as healthy. However, microscopic examination showed that the vessels of the kidney were thickened, and also that there was a decided excess of connective tissue in the kidney itself, with thickening of the capsules of the malpighian bodies; in fact, it was a case of early interstitial nephritis. The case is also interesting as it was an early one of general paralysis, that was carried off by the acuteness of the maniacal attack, and in which also the conditions I before described were in an early stage, and yet well marked.

I have been at some trouble to search out the literature on this subject, with the only result that the question of the kidneys seems to have been more or less overlooked. Dr. Mickle, in "A Critical Digest on General Paralysis," does not mention it.* But in this same paper he quotes Prof. Binswanger, who has observed what I mentioned in my last paper, *i. e.*, that the proliferation of nuclei in the cerebral vessels of general paralytics exists in the true vessel wall as well as in the adventitial coat.

Mr. Beadles and Dr. Bond, though they both call attention to nephritic troubles in insanity, do not allude to it specially in general paralysis.

Dr. Carter † believes that the changes are primarily in the nerve cells; nor does he notice the curious connection of chronic renal disease with general paralysis.

I next have tried to find out whether the duration of the

* "Brain," Spring Number, 1894.

† "Brain," Autumn Number, 1893.

disease before death appeared to have any influence on the condition of the kidney. The information I have been able to get has been very unsatisfactory, owing to the great difficulty in obtaining accurate histories. But, as far as I am able to judge, on the whole those cases in which chronic renal disease was present were of somewhat longer duration than those in which it was apparently absent. I found that the average duration of cases in which it was present was two years and two months, whilst of those in whom it was absent it was only one year and nine months, making an average difference of five months. This is interesting, but I can hardly consider my figures as conclusive.

Another point I have considered is the sex. Out of 43 cases of general paralysis in the female, 32 had diseased kidneys, and in almost every case it was distinctly interstitial nephritis. That means that 74.418 per cent. of the female cases had renal trouble, as against a general percentage of 68.8. So I think we may take it that sex has no appreciable effect.

I have again investigated the urine of patients suffering from general paralysis. The results are negative. Dr. Blachford has kindly given me a list of 13 cases, but in only one case was there albumin present, or indeed anything to lead one to suspect renal disease; and in my own cases the result of examination is very similar. But in what stage of interstitial nephritis does albumin or any other sign appear? This question is not easily answered, and I suspect disease may exist for a long period without signs in the urine.

Though it is perfectly clear that chronic renal disease is very frequent in ordinary insanity, yet I have shown that in general paralysis of the insane it is far more common, in fact that it is the general rule. As regards chronic renal disease in the ordinary forms of insanity, I feel I must say a few words on Dr. C. H. Bond's deductions. He is inclined to think that alcohol is the chief cause of this condition, and goes so far as to state that probably 32.2 per cent. of the admissions in asylums are due to this cause. I am inclined to think he over-estimates his case. He does not make any allowances for those advanced in age, in whom arterial degeneration is common, and interstitial nephritis, to some extent the usual accompaniment. Nor does he make allowances for other causes of arterial degeneration and nephritis. And, finally, to prove his case he must explain the presence of chronic interstitial changes in the kidneys in some who die at an old age after being inmates of an

asylum for 30 or 40 years, during which time no alcohol has passed their lips. Again, anything may be proved almost by statistics; and, pointing to the post-mortem records of St. Bartholomew's Hospital for 1893, he shows a percentage of 26 for chronic renal disease. In a general hospital how many of these are infants? Is it fair to include them all? If those under 30 are ignored, the percentage of chronic renal disease at once runs up to over 48·453, or 0·453 per cent. more than is found in asylums. Of course that does not show the true numbers, for a fair number of patients in asylums die under 30. But then, we don't have infants. Or go a little further and take his asylum cases over 30 only. There were then 142 cases during 1893 in Banstead Asylum, and 71 of these, or exactly 50 per cent., had chronic renal disease, only 1·547 per cent. more than among patients of the same age during that year in St. Bartholomew's Hospital. Such a difference may be neglected.

In general paralysis, however, the case is different, for here we have almost 70 per cent. of cases of chronic renal trouble. And even if the percentage were not so high the curious similarity of the vascular changes in general paralysis and in chronic renal disease would still remain as a connecting link. In my last paper, I inclined to the opinion that the cause which brings about general paralysis was also capable of bringing about general vascular changes and interstitial nephritis, and further that the whole condition was due to the presence of some poison or other in the blood. Now we know of four such poisons which are certainly capable of acting in such a way. First is syphilis, which is well known to lead to arterial changes and degenerations; second is alcohol, which is also well known to lead to interstitial changes in the glandular organs, and thickening of the vessels; third, such poisons as lead, which have a similar action; and finally the poison of gout. Whether the presence of uric acid in the blood is a remote result of the abuse of alcohol does not concern us here.

The total evidence we have on the subject is in favour of a toxic origin of this disease, and that is the view that Dr. Mickle seems inclined to support.*

Whether injury is a cause is doubtful, and the history of the injury often, on further investigation, proves that the accident which was supposed to have caused the disease was due to some already commencing trouble.

* "Critical Digest on General Paralysis of the Insane," "Brain," Spring Number, 1894.

I have tried, but in vain, to trace in the histories of our cases the presence of some toxic agent. But there are too many difficulties in the way, and until the public are taught to recognize that there may be abuse of alcohol without drunkenness (which form of abuse is also far the most dangerous to health) we shall be unable to obtain satisfactory data as to the history of alcohol in general paralytics. But knowing that this form of abuse is such a common cause of interstitial changes in the liver and kidneys, we cannot altogether ignore it in cases of general paralysis, and Dr. Mickle himself favours it as one possible cause.*

Besides this, we must remember that alcohol is probably also a cause of chronic renal disease, and in support of this I cannot do better than quote Dr. Dickenson's own words on this subject:—"There is a large, smooth, somewhat congested kidney, partly tubal and partly fibrotic, which is begotten of beer upon the persons of draymen. And alcohol in other shapes has an influence in causing granular contraction of this organ by a process of chronic irritation such as makes the liver cirrhotic, although other organs are more amenable than is the kidney to this influence, and other causes touch the kidney more nearly than this."†

As regards the action of syphilis in such cases there are many opinions. These have recently been collected by Dr Mickle, and on the whole the evidence seems to be in favour of its being the cause in some cases.‡

I would now take a general review of the facts I have laid before you. I am still able to maintain, after obtaining an increase of material, that renal disease of some sort or other is exceedingly common in general paralysis. But at the same time I must admit that it is by no means so clear, according to statistics, that the form of renal disease is always interstitial nephritis. Still, in the majority of cases it certainly is so, whilst in others the presence of some other gross renal lesion must mask any interstitial nephritis which might possibly be present. I have been able to show that in one case, at all events, where the presence of disease was doubtful macroscopically, it was present, however, microscopically. To be quite accurate then in our number, a microscopic examination of the kidney in every case must be made. And judging by the thickening of the arteries of

* *Ibid.*, page 63 *et seq.*

† "On Renal and Urinary Affections," Vol. ii, p. 153.

‡ "Syphilis of the Nervous System," "Brain," Spring Number, 1895, p. 102 *et seq.*

the pia mater, and the increased arterial tension of the larger vessels, it would be very surprising not to find some renal change. Dr. Coates even goes so far as to admit that vascular changes may be the earliest lesions met with in interstitial nephritis,* and later on points out that experimentally renal trouble has been produced by artificial increase of tension in the arteries, which in time would have led to well-marked interstitial nephritis.

The more I consider the matter, the more I am inclined to believe that the view propounded by Gull and Sutton is the correct one, or at all events is a correct one, *i.e.*, that there is such a disease as arterio-capillary fibrosis, in which disease the kidneys are commonly affected. I would add to that, and suggest that under some circumstances disease of the brain is another result—and that that disease is general paralysis of the insane.

Discussion on Dr. Bristowe's Paper.

Dr. MORRISON questioned whether there were not causes outside of syphilis which might not act so as to produce renal changes which in appearance were exactly the same as those produced by syphilis. Was it necessary they should always point to syphilis or alcohol? He knew of one case of a practically young woman where, upon a post-mortem, it was shown that she had died from advanced kidney disease.

Dr. MACDONALD said he did not know that he could add much to what Dr. Bristowe had put before them in his excellent paper. There was one point to his mind that had been overlooked in connection with general paralysis, and that was the question of heredity. For his own part he failed entirely to see what connection could be made out between general paralysis and chronic renal disease, especially in cases where they could without any doubt say it was an inherited neurosis and not an acquired one. At the present moment he had under his care three cases where there was no doubt as to the diagnosis of general paralysis, and where he thought there could be no doubt whatever that syphilis and alcohol had nothing whatever to do with the condition. There were two deaths of juvenile general paralytics (one since Dr. Bristowe's first paper) where he looked most carefully for the condition referred to, but failed to find the slightest trace, either microscopically or otherwise, of any change whatever in the kidneys. He did not think this fact detracted from the real point of Dr. Bristowe's paper, but he was quite sure it was a fact which he should not overlook in furthering his work and in making deductions hereafter. Another point which Dr. Bristowe had very wisely, if ruthlessly, scathed were Dr. Bond's deductions

* "Text Book of Pathology," p. 698.

about alcohol and general paralysis. For his own part, he had come to the conclusion that in the West of England alcohol had practically little or nothing whatever to do with brain disease. At any rate, he could find no trace of it except in two or three per cent. in the county in which he lived, and he believed if he took the records of brother superintendents in the district they would fairly bear him out. He himself was inclined to think that at the present moment they knew little or nothing about general paralysis. He believed it was two or three diseases mixed up together. It was a very convenient term, and, for his own part, he was disposed to say that, like heart disease, it covered a multitude of sins.

Dr. Fox said there was one remark Dr. Bristowe made incidentally rather than essential to his subject, with regard to which he was bound to say he must respectfully raise one word of protest—that was that general paralysis in its causation was always toxæmic, and he attributed four chief poisons as the cause of what they recognized and called by the name of general paralysis. Now, for his own part, he was bound to confess that in the large majority of cases one or other of these causes, or two of these causes, were predominant factors. As far as he could tell, however, and he had taken a great deal of trouble in investigation with regard to their history, some cases which had come under his care were absolutely free from any toxæmic taint. He had at present a case of a man who had lived a most careful life, in whom there was no possible trace of syphilis, who had a healthy family, who had done his work easily, who had had no worries, and who was free from any pecuniary anxiety. One day he went out into the country and was thrown from his carriage, and from that time he was a changed man, and very shortly symptoms which were as typical of general paralysis as anything could possibly be super-vened. He fully admitted that alcohol and syphilis played a very important part. At the present moment he had a rather extraordinary case under his observation, in which a patient suffered not only from acquired syphilis, but also from inherited syphilis. At the time he was begotten, his father, no doubt, suffered from it and had undoubtedly suffered from it before he had general paralysis. That case was pursuing a very unusual course. The man had been once or twice reduced to the position of a log, in which he had to be fed, have his water drained off, and everything possible done for him. Now he undertook to say the man would walk any of the gentlemen present any distance they might name, and he was as active and as cheerful as any of them. He had been going on now for five or six years, and showed no signs of going back, although of course he might stop suddenly. If he might be allowed to wander slightly from the subject of the paper he would remark that it not infrequently happened that the more complex

and numerous the causes of general paralysis the more anomalous and uncertain might be the course and symptoms of the disease. That was a point that had struck him. Of course the cases that came under his notice were fewer than those which came before the observation of the Superintendents of the County and Borough Asylums. On the other hand there were probably some compensating advantages in that he got fuller and truer histories of the cases which came before him.

Dr. SOUTAR said he did not understand that Dr. Bristowe in his paper contended that all cases of general paralysis arose in the same way. He seemed, as far as he could make out, to deal merely with one class of cases. As Dr. Macdonald had pointed out, general paralysis was undoubtedly a disease that was very impossible of definition, and that they looked at their general paralytic cases and saw in them a variety of symptoms. For this very reason contributions such as Dr. Bristowe had submitted to them were of inestimable value (hear, hear). It would only be by patient and continual pegging away on special and particular lines that they would come ultimately to some reasonable conclusion as to what was and what really was not general paralysis. He would merely add to what Dr. Fox had said that in his opinion there were cases of general paralysis which owed their origin to injury. He had at the present time under his care a man who was injured at polo; there was not the slightest suspicion of alcohol even in a modified way, nor was there any history or trace of syphilis. But there was a distinctive history of the man, formerly a strong, healthy, vigorous fellow, being knocked over at polo and seriously injured. He recovered to some extent, but from that time he was an altered man. Slowly a general degeneration of his nervous system advanced until he became into a condition which he could not describe as any other than general paralysis, but which neither had its origin in syphilis nor alcoholic excess. But there was this one difference. In this case the symptoms were not so aggravated and the case seemed to run a more prolonged course. The discussion on Dr. Bristowe's paper should, he thought, prove valuable if they recognized the fact that in general paralysis they were dealing with a disease which presented itself to them in varying aspects, and it was only by carefully scrutinizing their cases as Dr. Bristowe had scrutinized his, that they were likely to come to that differentiation so much to be desired.

The CHAIRMAN in his concluding observations said it seemed to him that any discussion on the question such as they had had always showed that it was a subject on which it was very difficult for them to arrive at anything like an unanimous opinion. But such papers as those Dr. Bristowe had contributed were of material advantage to them in order that they, too, might, when cases occurred to them, try and focus their experience and their notions.

He trusted some of them might be able to assist Dr. Bristowe in the elucidation of such a complex subject. The question of alcohol was, of course, an interminable one, and for his own part, although he did not go quite so far as Dr. Macdonald, yet he went in that direction, and was strongly of opinion—an opinion which he expressed officially before the Scotch Committee on Habitual Drunkards—he was strongly of opinion that too much was being made at the present day of the question of drink with regard to insanity. It was getting a sort of fad or craze; all people wanted to be philanthropists, and it was a cry of drink, drink, drink everywhere. He was bound to say, of course, that drink either directly or indirectly was a most potent factor in the production of insanity and also of crime in connection with insanity, but, although he would not altogether decry the noise that was being made about the abuse of alcohol, he thought it was their duty to endeavour to show truthfully, so far as they possibly could, the extent of its ravages and the extent of the disease to which it either directly or indirectly gave rise. He thought they should discount fads and faddists and their theories, and come to practical work, and he was sure an excellent illustration of that practical work that was hoped for existed in the paper read by Dr. Bristowe (hear, hear).

Dr. BRISTOWE briefly replied upon the various points raised. Speaking to one or two of the observations made in the course of the discussion, he remarked that possibly he had not made himself so clearly understood as he should like to have done. He did not wish at all to make them believe that he considered that alcohol and syphilis were the two most important causes. He was very much inclined to agree with Dr. Macdonald that general paralysis was a disease in which various diseases were mixed up under one name and required separating. And as to syphilis being the cause of general paralysis, honestly he did not believe it (laughter). He believed that those cases in which syphilis was put down as the cause were not true general paralytics at all, and many cases he might quote, if time permitted, which would go very largely to bear out his belief. As regards heredity, he believed he was right in saying that Dr. Dickinson believed in heredity as existing in renal disease, so that that removed one difficulty at all events. The point as to cases owing their origin to injury was a most difficult one. He had had one case himself, the details of which were published in the "British Medical Journal," of a boy, aged about 15, who was knocked down by a carriage, and in whose history there was not the slightest sign or suspicion of syphilis or alcohol. As to the remarks of Dr. Macdonald and the Chairman, he would like it to be understood that he was neither a total abstainer nor a faddist; he thought wine was a good familiar creature when not misused (laughter).

Sanity or Insanity? A brief account of the Legal and Medical Views of Insanity, and some practical difficulties. By GEORGE M. ROBERTSON, M.B., F.R.C.P.Ed., Perth District Asylum, Murthly.*

The term "insanity" conveys to the minds of lawyers and physicians two different meanings, based on two divergent methods of testing its presence, and a clear recognition of this fact would go far to prevent many misunderstandings which arise solely from the logical error of equivocation. The term insanity as used by each should of course be accurately defined, and the difference of meaning thereby made plain; but this has not been done, for to prepare an accurate and satisfactory definition of insanity appears to surpass the wit of man. Even had it been done in a theoretically perfect manner it would probably be of little or no value, for, like Mr. Herbert Spencer's definition of life, it would of necessity be so abstract as to give no assistance in practice. For my purpose here it will be sufficient if I indicate the lines on which the legal and medical definitions of this term would run.

Legal View.—The lawyer considers and tests insanity from the standpoint of the conduct of the individual, whereas the physician considers it from the standpoint of a disease affecting the mind. Mr. Justice Stephen once put this difference very clearly to a jury. He said: "They had not to consider whether a man had a particular disease, but whether his conduct was in itself insane." The improper conduct of the individual, actual or highly probable, is the direct and only reason for the intervention of the law, and if crime has been committed the non-responsibility or non-liability to legal punishment of the individual, otherwise his insanity, from the legal point of view, is tested by certain rules. These state that if "the accused had a sufficient degree of reason to know that he was doing an act that was wrong" or "contrary to law" he is punishable. If, however, he has been influenced by delusions this fact is usually taken into consideration, and the law has even gone further and regarded a man as insane whose knowledge of the wrongness of his act did not attain to the full conception of

* Read at a meeting of the Scotch Division of the Association at Glasgow, March 14th, 1895.

its nature and results such as every sane man possessed. In coming to a decision as to whether the conduct of an individual be insane, the law is thus guided by certain symptoms of mental disease that may be proved to exist, but only in their relation to conduct.

If the conduct of an individual showing these signs of mental derangement be short of criminal, but be of so anti-social a nature as to be injurious to his own person or interests or to those of others, or to the public welfare generally, the individual may be considered a proper person for care and treatment in an asylum. The existence of delusions alone, or other signs of mental derangement, if the conduct remains apparently unaffected, and it cannot be predicted otherwise, is, however, not sufficient for this purpose. Delusions and other signs of mental derangement should also always be of so unmistakable a character as to appeal immediately to the minds of persons untrained in morbid psychology.

The law does not define the term insanity, unqualified by phrase, though it describes and recognizes several degrees or varieties of it. It is also wise in making no attempt to diagnose an obscure disease, nor in subjecting the mental faculties to delicate psychological analyses. Restricting itself to its proper functions, it recognizes insanity only from its effects on conduct and in relation to society, and therefore a certificate of insanity, properly speaking, is not a medical report, but a legal one, and might have been granted by any intelligent member of society, such as a clergyman. This antithesis betokens the distance the legal idea of insanity, founded on conduct, has diverged from the medical idea of a disease affecting the mind.

Medical View.—When we pass to the medical view of insanity, we take a broader and fuller survey of the whole phenomena, physical, mental, and social, accompanying it, but the pervading or dominant idea is that of a disease. In assuming this position, we bring insanity into line with ordinary bodily diseases and subject it to investigation by the exact methods of physical research. For example, we have observed that nervous disease has a marked tendency to be hereditary on account of the operation of certain physical laws, as yet very imperfectly understood, and, therefore, if we establish a strong predisposition to insanity in the family of a man suspected of it, we regard the hypothesis as being strengthened. It would, however, be

most improper from the strict legal view to bias our judgment of a man's conduct by that of his relatives, whom he may never have seen or been associated with.

Insanity, regarded as a disease of the mind, has two aspects, a mental and a physical. On the mental side we have such derangements of the faculties—the feelings, ideas, and will—as constitute a serious and lasting* departure from the normal or average mental condition. This normal state not being very definite or accurate, in acquired insanity we not infrequently take as the standard the previous average mental condition of the individual himself. These derangements of the faculties include within their scope the whole mental life of the individual, and not only his conduct and social relationships, and thus medicine is not only more extensive and inclusive, but more minute and particular in its investigations into insanity than is the law. Not only this, for in medicine a man is considered to be technically insane if symptoms of mental derangement be present, even though these do not affect his conduct, for it tests insanity, not by social reactions, but pathologically.†

On the physical side of mental disease we have derangements such as those of expression, muscular tone, nervous reflexes, reaction time, appetite, secretions, nutrition, sleep and temperature, as well as the signs of gross brain disease. Physical derangements by themselves, such as sleeplessness, for example, are not regarded as indicating insanity, a condition in which there is necessarily some degree of mental derangement. Certain physical derangements, however, are recognized as being so closely associated with insanity that their occurrence is accepted as a warning of impending insanity, and remedial measures are on their account adopted. It is very questionable, nevertheless, whether it is possible to draw this line of demarcation between physical and mental symptoms if we consistently follow the pathological and materialistic idea of insanity. According to it, all so-called mental phenomena are merely indications of

* Slight and transient departures being seldom regarded as insanity necessitate the insertion of these vague qualifications.

† The following example is one of insanity from the pathological and strictly medical point of view, which is not recognized as such by the law. This man, for two years, we read, "durst not ever eat an apple for fear it should make him drunk; but as he took care to assign no reason for his forbearance, and as no man is much solicited to eat apples, the oddity escaped notice, and would not have been known at this hour" had he not confessed after he had recovered his senses to perfection, and told it as an instance of concealed insanity ("British Synonymy," by H. L. Piozzi. London, 1794. Vol. ii., p. 3).

physical changes in the cells and fibres, and if we regard insanity from the purely pathological point of view, as we profess to do in medicine, there can be no such distinctions. It can only be admitted if we regard insanity from a subjective aspect.

Objections to Medical View.—The medical view of regarding insanity as a disease affecting the mind is not unaccompanied by some difficulties. In the first place it is assumed, and this forms the foundation of the whole structure, that mind has a materialistic or physical basis, and by this something more is meant than that the brain is necessary for mental action.

It is evident that those who accept the modern views of physiology, psychology, and psychiatry are convinced that this is more than an assumption, that it is a statement of fact, yet no one can deny that this view is not accepted by society at large, by our legislators,* or by those who administer the law. It is not too much to say that it is almost universally regarded with aversion, if not with horror. If consistently pursued to its logical end it is found to be irreconcilably opposed by the religious beliefs of civilized people, which favour the view that conduct and the exercise of the will are not dependent on materialistic phenomena. The fundamental basis of the medical idea of insanity is therefore alien to, and wholly out of touch with the feelings and views of the public at large.

In the second place, what do we mean by disease? There is no hard and fast line between health and disease, for the latter is not a separate entity, superimposed on the former, but rather a continued development of it.† Disease has been defined as a departure from the normal or average, but our conception of the normal or average is open to this objection, that it is a theoretical and abstract standard—it may not even exist in nature. Moreover, in the case of the mind it is constantly varying; age, sex, civilization, and even social status affect it, and so broad in practice are the boundaries of this zone that each individual may for accuracy require to be tested by his own normal or average mental condition.

Finally, our knowledge of mind itself is neither clear nor

* *E.g.*, Mr. A. J. Balfour.

† As there is no rigid boundary between health and disease it is well to recognize at once that it is impossible to define insanity from the medical point of view with absolute accuracy.

exact. We regard it as a function of the nervous system, more particularly of the brain, but have we any exact notion when a nervous process ceases to be physical and becomes mental, or if in nature there is any difference corresponding to these terms? "Physical" pain is a state of consciousness, yet have we a clear idea how, when, or where the physical process ends and the mental begins? For example, we shall take the will, generally regarded from the purely psychological and the ethical point of view as being so essentially a faculty of "mind." Why do we not regard slight chorea as a form of insanity, a disease of volition? The sufferer is conscious of his movements, which may be purposive acts, with significance, and they are so far voluntary that he may stop them for a time if he wishes to do so. We regard chorea almost entirely from the physical point of view and classify it as a nervous disease; and why do we not then regard the movements and acts of mania in a similar way? In advanced delirious mania none of us regard the grimaces, the jerky movements, and the shouts of the patient as being the results of a consciously exercised volition. We regard them as being nearly as physical and automatic as the knee-jerks. In the progressive dissolution towards this stage, when did the movements cease to be voluntary and indicative of mind and become purely physical and automatic, if not finally altogether unconscious? The whole question is in a state of hopeless tangle, and subjective psychology and materialistic pathology can at present no more be united than oil and water. There can be no solution of these difficulties till a simple state of consciousness can be explained physically, a more difficult task than that of describing the colour red to a blind man. It is also not yet recognized that when we accept the materialistic basis of mind, the scope of the term "mind" is no longer bounded by such subjective abstractions as consciousness and volition, but merges insensibly into the functions of the whole nervous system, trophic, sensory, and motor. Thus it is that symptoms such as disordered nutrition and want of sleep are very frequently regarded by us as indicative of mental disease, for, from the medical point of view, the chemico-physical changes subserving the healthy nutritive life of the cell are just as important as the metabolism which accompanies the special functions of the cell, and if the former be deranged the latter will sooner or later also become affected.

Practical Difficulty of Reconciling Views.—We shall now point out some difficulties that occur in practice owing to the legal and medical views of insanity not coinciding with one another. In the first place, with regard to sending a lunatic to an asylum, there appears to be two good reasons why this should be done. There is, firstly, a social reason, for it is necessary to protect society from the aggressions of an irresponsible person; and, secondly, there is a personal one, for it is usually necessary to do so in order to subject the individual to curative treatment. The law concerns itself principally with the first reason, and whenever an insane person's conduct becomes anti-social it recognizes the necessity of confining him somewhere. On the other hand, the second or personal reason is the one which medicine concerns itself mainly with; it is doubtful if the law gives it any consideration whatsoever, and it is certain that it does not consider the efficient medical treatment of a lunatic, apart from other reasons, as justifying detention in an asylum. It is willing to regard the lunatic as an enemy of society, and then give him the benefit of asylum treatment, but it provides no facilities for treating a person because he is deranged in mind. For example, a person may be suffering from mental disease in the opinion of his physician, but who is not yet regarded by the law as a lunatic, because his conduct and mental derangement has not reached the stage it recognizes. Such a case from the medical point of view may be a proper person for care and treatment in an asylum, for the sufficient reason that he will not submit to curative treatment at home. The symptoms of such a case may be characterized by the onset of irregular habits, inattention to work, looseness of conduct, drinking, dishonesty, extravagance, and disregard of social conventionalities, yet none of these symptoms may be of so pronounced a nature as to be certain of convincing a legal tribunal, should that be appealed to, that it differed from mere wickedness and general bad conduct. While, therefore, some worthy man is ruining his reputation and squandering his fortune, the relatives and family physician must stand by with such feelings of resignation as may be imagined till society and the law have at length considered themselves satisfactorily outraged. This desirable consummation may come too late for his name and fortune, and even for the chances of his recovery from insanity. This I consider the greatest hardship in the Lunacy Laws, of much

greater social importance than the sudden extinction of a few undesirable criminal lunatics annually, for the law gives us no assistance, and may seriously hamper the early and most hopeful curative treatment of mental disease, when the patient himself will not submit to treatment at home. The law protects society, but it neglects the individual by refusing to notice his disease till he becomes a nuisance.

When a lunatic is within an asylum under medical treatment his insanity is regarded from the pathological point of view, and his recovery is tested greatly from the physical side. If I were asked, for example, what I considered the most common sign of recovery from insanity, I should feel inclined to answer, a distinct gain in body weight. In many cases there is no surer test of a return to the normal and of an expectation of permanent recovery. The detention of those cases who have recovered suddenly from acute symptoms illustrates the medical or pathological method of regarding insanity in asylums. The patient appears to have suddenly found his reason; his conduct may now be in all respects quite proper, and therefore from the strict legal point of view he is a sane man, who could not be certified. He is, however, not regarded as recovered by the physician, for though his nerve-cells are apparently performing their special functions in an average manner, and have ceased to enervise morbidly, yet we believe they cannot for some time longer recover from the physical and nutritive disturbances of insanity and regain their normal metabolic stability. This belief is founded on clinical experience, for it is observed that such cases frequently relapse, especially if subjected to any stress. If the law compelled us to discharge these cases the moment the symptoms of mental derangement passed away, we should require to test the stability of the apparent recovery by subjecting the patient to a series of mental shocks and strains, and a large number would break down.

There is another class of case in which medical practice is opposed to the strict letter of the law. I refer to those cases in which a patient has returned to an average or normal mental condition, and therefore the law would regard him as sane, but who is not yet considered recovered by his physician, as he has not returned to his own normal or usual condition. The remaining symptoms may be very trifling in themselves and infinitely various, such as, for example, a forwardness or a reserve, or a religiosity that is not natural to the person,

and they are held to denote that he is "not himself," and that an abnormal state still exists.

Among the "legally sane" patients detained in asylums must also be mentioned some epileptics during the interval between fits. It is right that these persons should be under some supervision, but if the intervals be prolonged and the fits occur seldom it is a question whether they should be regarded as insane and continuously detained in an asylum. It would be interesting to know how long an interval in the eyes of the law would justify the discharge of an epileptic, subject to occasional fits with violence, and what is the strict legal practice with cases of recurrent mania with sane but short intervals.

Summary.—In concluding I shall point out what seem to be the difficulties that law and medicine have each to contend with, and their ideals.

The law desires to know when a person ceases to be a useful member of society, and it hesitates to interfere with the liberty of a subject till he has himself demonstrated by his disregard of the liberties of others that he is a noxious individual needing sequestration either in a gaol or an asylum. It is, however, possible that the law would be serving the best interests of society, as well as of the individual, if it paid more regard to the early medical treatment of the diseased in mind by recognizing the pathological and physical aspect of insanity, as well as the social evil accompanying it.

Medicine, on the other hand, for prophylactic and curative purposes strives to discover the earliest symptoms of derangement of the most complicated and obscure functions of the nervous system. It is hampered by the ignorance it labours under of these functions, and by the difficulty, if not impossibility, of obtaining direct physical signs of disease. It has, therefore, to infer disease from symptoms, without having a certain and exact knowledge of pathological lesions, but it is slowly attaining to more exact physical knowledge.

In practice a compromise is usually effected between these views. The law moves slowly, but it is steadily advancing towards medical ideas, under the influence of public opinion, which is being educated by the greater dispersion and readier acquisition of physiological knowledge. The question of sanity or insanity lies, therefore, in the hands of the public, and if those who come in daily and immediate contact with a man regard him as labouring under mental disease, such a man may be considered to be legally insane.

Discussion on Dr. Robertson's Paper.

The Chairman, Dr. J. A. CAMPBELL (Carlisle), said he was sure they were all very much obliged to Dr. Robertson for reading that paper and for giving them his views on the question. He had remarked, in regard to the collective investigation suggested by Dr. Robertson, that the same thing had been gone into years ago by Dr. Clouston. With regard to the main proposal contained in his paper to-day, he was sorry again to have to remark that this question was gone into in Rome more than 1,000 years ago, but there was no reason why they should not reconsider it. The Romans went into the very same question that Dr. Robertson had brought before them, and they considered that whenever a man was insane he should have a curator appointed to look after him and see that he did nothing out of the way and that he was safely taken care of. They made this curator entirely responsible for him, both for his medical treatment and his personal safety. Taking all these things into consideration, he was not very sure that we were very far advanced even now—in fact, he thought that our views were not very much further on than what the Romans' views were even at that time.

Dr. MACPHERSON said that the sensational title did not prepare some of them for what was to come, but, speaking for himself, he was somewhat agreeably disappointed, especially with one or two points that had been referred to. He was glad to see that Dr. Robertson struck—although not so hard as he might have done—at the present day materialistic view of the relation between mind and matter. These materialistic views were not of very long duration. One might say that they had chiefly come into fashion since the publication of the Darwinian theory, and they were now almost solely upheld in this country by Prof. Huxley. These views had gone the length of explaining everything in heaven and earth, even the connection of mind and matter. It was a very important thing that they in their specialty, not so much in their treatment of the insane, because they must treat the mind with the body and must look upon a disease of the mind as a disease of the body—it was a very important thing that in their educative attitude towards the public they should not be too much carried away by the materialistic tone of such men as Dr. Maudsley. He thought that such views were extremely wide of the mark when all the thought of Western Europe was turning from them and was beginning to go back to its old beliefs. It was also unfortunate that an eminent Scottish specialist should have recently given utterance to the expression that it was possible to demonstrate under the microscope the connection between diseased nervous tissue and morbid mental ideation. He had no doubt that Dr. Maudsley and Dr. Clouston would be the last men to

take literal meanings from such expressions, but a large section of their readers would be influenced in an indefinite and injurious way by what might be to them a very clear truth. He was very glad that Dr. Robertson had treated this matter, though not so weightily as he might have done. The anomalies between the legal aspect of insanity and the medical aspect of it had really come to a point at which something ought to be done. In a society like this they could lay down no rule, but he thought it would be of importance to take up some questions of interest that had recently occupied him very much. There were two or three types of cases in connection with which every asylum staff must have had difficulties. There was, first, the type of the case that came to the asylum who was unable to go on living quietly at home and who broke down owing to adverse circumstances in his surroundings. Perhaps it happened that any symptom of insanity disappeared within 24 hours after admission. They kept such a case on and watched it from day to day without discovering any technical insanity, and finally discharged the patient. Soon after discharge, however, the case came back again. The patient remained under restraint, not legally insane and not entitled to asylum treatment at all. There was, again, the case of recurring mania with long intervals of sanity and of good working capacity between the attacks. If the patient had friends and money he could be easily dealt with otherwise, but if he had no means the only thing that was left for them was to continue to retain these legally sane persons under care. Then much difficulty frequently occurred in certain cases of epilepsy. He had a case brought under his care a year ago where a man was admitted with furious epileptic mania. He had assaulted homicidally the members of his family and had leapt from an upper window, after which he was overpowered by superior numbers and brought bound hand and foot to the asylum. He recovered in 36 hours. He remained under observation for several weeks. He had previously been in the asylum five years before with precisely similar symptoms, and in the interval when he was out he was a quiet, sober, hard-working man. He was discharged at the end of a few weeks, but, for all anyone knew, he might have committed murder on the night on which he was discharged or he might commit murder still. However, he could not be continuously detained under restraint, which was the only alternative way of dealing with him. He (Dr. Macpherson) would be very glad to hear the experience of any members present of a case of that kind. Finally, with regard to imbeciles who were being constantly admitted to asylums labouring under slight maniacal attacks. Imbecility was not legally a sufficient cause for the retention of such patients, but from a utilitarian point of view it was evident that many such cases were better in asylums. At the same time, it was a very big assumption that because a patient was likely to behave in an

unconventional manner outside that they were, therefore, going to restrain him indefinitely, and thus convert lunatic asylums into large penitentiaries. The admission of a large number of senile cases into asylums was a distinct evasion of the law. They were brought in in bad physical health, with a certain amount of dotage perhaps, and remained there till removed by natural dissolution. He thought that that was a sign that there was no other available place offering similar advantages where these people could be sent. Nobody was less inclined to grudge the benefits of modern asylums to such cases than he, but he desired to recall to their mind the fact that a large number of deserving cases were not admitted to asylums at all because they could not be legally certified. These were such cases as neurasthenia, hysteria, epilepsy, and pseudo-dipsomania, and other cases of that kind. They all knew that a case of hysteria was often as difficult and troublesome to manage in a private house as any form of insanity, and neurasthenia was the soil upon which insanity developed; but there were no wards in ordinary hospitals into which to put these cases, and therefore they were left to the mercy of circumstances. In order to bring those cases within the reach of medical skill it would be necessary to have some legal reform so as to include them within lunacy administration, and admit them without certification either into special wards or into the ordinary wards of an asylum. The voluntary system did not apply to these patients, because it can only apply to patients who had independent means. The existing lunacy laws seem to be biassed on the side of protecting the sane from the annoyance caused by the insane, and do as little as possible towards facilitating the medical treatment of insanity or for the benefit of neurotic patients outside asylums. It might seem a preposterous and a very Utopian idea to hope for any other arrangement; but there was no doubt that so long as their present method of taxation was allocated so that each district was taxed for its own pauper patients it would be the desire and aim of parochial authorities to exclude every case that they possibly could from asylums where they had to pay for it. He saw a case the other day that he would like to mention in this connection. A man was brought to him suffering from simple melancholia, and he had to tell him, "You are as yet scarcely ill enough to come to an asylum, and meantime I shall give you some medicine." Three weeks afterwards the patient got worse, and he developed suicidal feelings. He was getting benefit money to the amount of 15s. a week; he was advised to apply to the Inspector of Poor. He went with his wife to the Inspector of Poor, who said to the latter, "I will have nothing to do with the case unless you sign a paper undertaking to pay 9s. 6d. a week for his maintenance." The woman thought this an unreasonable demand, as she had to support a large family, and she applied to the chairman of the parochial board, but the chairman said, "I will not inter-

fers with the duties of the inspector." Thereafter she complained to the police, but they declined to interfere in the apparent absence of any legal justification. The last report on this case he had heard was that symptoms of stupor were supervening. So long as the law did not include such cases as these they were in a great way compelled to neglect the best interests of those in whom insanity was a late, often a final, symptom.

The CHAIRMAN said he had been very much interested in the remarks made by Dr. Clouston two years ago in his annual report, when he brought forward statistics to show that in Ireland 4 per cent. only of the insane were paid for by their relatives, in England 10 per cent., and in Scotland 10½ per cent. He had come to the conclusion from his experience, which was of no short duration, that an asylum was a place where everybody was shoved into who could not be dealt with otherwise. If a man was a nuisance to his friends, if he was a nuisance to the police, or if he was weak-minded or could not maintain himself, he was sent to the asylum. The other day he had a patient sent in to him who was of the mature age of ten years. That boy was said to be extremely dangerous, and to have nearly killed his mother. He had had a great number of cases of that sort sent to him, and he had come to the conclusion that in regard to consignment to an asylum they ought to have a little more consideration in seeing that cases were not sent there which, though certifiable, did not distinctly require asylum treatment.

Dr. CARSWELL said the subject that Dr. Robertson had raised was one of wide importance, because, as the discussion had already indicated, it touched the interests of the insane during the whole period they had to do with an insane person. It related to his certification as a lunatic, to his detention in the asylum, to his discharge from the asylum, and it also related to questions connected with the treatment of premonitory indications of insanity. If they would permit him, he would like to refer to some of Dr. Macpherson's remarks, and he would take the last first. He noticed that there was in certain quarters a readiness to trot out examples of shabby treatment of people who were supposed to be insane, on account of the tendency that existed, or was supposed to exist, in the parochial mind in regard to keeping down the number of patients certified and denying patients the advantage of asylum treatment simply on the ground of the cost to the parish. He did not know whether Dr. Macpherson's remarks quite implied all that he had just said. As a case illustrating the necessity for early asylum treatment of cases of simple melancholia that were at present considered, and, he thought, wrongly considered, non-certifiable—he thought that Dr. Macpherson would be quite justified in certifying such a patient as the wisest thing for the patient and the wisest thing for the parish; it was interesting and instructive, but when he related the circumstance that

the Inspector of Poor would have nothing to do with the case unless the friends undertook to pay 9s. 6d. a week he supposed he meant to make a suggestion unfavourable to the action of the Inspector of Poor and the administration of the Poor Law in respect to such cases. Well, that was one view as to how such cases ought to be provided for, but there was another. Dr. Macpherson was quite right in saying that the best interests of such patients were seriously neglected in so far as no provision seemed to exist for their early treatment, but the blame for that state of matters must not be laid upon the shoulders of the Inspectors of Poor. He was of opinion that if they were to apportion blame in the matter at all, some, if not most of it, might justly enough go to the Royal Asylums. He found frequent difficulty in getting patients into Royal Asylums at the lowest rate of £40 a year. It was constantly the case. Almost every such patient that he had occasion to send as a private patient found a difficulty in getting in. No case was ever refused, but it was constantly suggested that there was such pressure on the accommodation provided for low-rate-paying patients that it was exceedingly difficult to admit them at £40 per annum. He thought that that should not be so. The Commissioners had repeatedly stated their opinion that Royal Asylums would not be doing their duty until the lowest rate for private patients was reduced to £20 or £25 per annum. He knew that District Asylums were doing something in that direction, but the Royal Asylums, which claimed to be charitable institutions, ought to provide accommodation at the lowest possible rate of board so as to meet such cases as Dr. Macpherson mentioned, and which ought not to be sent to the parish. As to neurasthenia, simple melancholia, hysteria, and so forth, he held the opinion that such cases ought not to be treated in asylums at all, but in special hospitals. Till they could get these, however, the best place was an asylum. There were more cases of that character than probably those whose experience was limited to asylums were aware of. Dr. Macpherson had said that there was no clinique, no outside department, in connection with their large hospitals in which special attention was given to mental complications, but two years ago or so he began to give advice at the outdoor department of one of the public dispensaries in Glasgow. The number of patients was increasing as the clinique became better known, and the majority of them were suffering from neurasthenia and simple melancholia, and frequently he had been very doubtful whether it was wise to allow some of those patients to continue at home under medical treatment. He assured them that there was a large number of such persons going about and suffering a great deal indeed. The suffering caused by an attack of simple melancholia in the case of a workman or of his wife was simply indescribable, because limited house accommodation rendered restful quiet impossible, and in addition loss of wages

bereft the family of the food and other comforts essential for recovery. The best thing that he could do for a poor woman whom he was at present attending was that he had gone round to his friends and had secured sufficient funds to place her for a month in a private nursing home. She required freedom from the worries of a small home; she could not afford to pay for treatment in an asylum, and he did not want to send her to a pauper lunatic asylum. He thought that with a little care she would soon be all right. He did not think it was necessary to go into the elaborate discussion that Dr. Robertson had entered upon as to whether insanity was a disorder of the materialistic basis of mind, or whether it was a disorder of a spiritual nature or a condition that was not materialistic. The question was simply one of diagnosis, and the diagnosis of insanity should be arrived at by similar methods to those adopted in ordinary physical diagnosis. They ought to endeavour to find evidence of persistent alterations in physical structure or function, as well as disordered ideas, in order to diagnose insanity, but he did not think that that position committed them to the doctrine of the materialistic basis of mind. For instance, persistent sleeplessness might be the most significant feature, from a diagnostic point of view, in a patient's history, whose other symptoms were, perhaps, unfounded notions of ill-usage by his friends. He called persistent sleeplessness a symptom of altered physical function.

Dr. G. M. ROBERTSON—Does the law or the public regard sleeplessness as indicating insanity?

The CHAIRMAN—No; you may not sleep for a long time, and yet nobody would consider you insane.

Dr. CARSWELL said he meant sleeplessness associated with other symptoms of mental disorder, not so demonstrably dependent upon altered physical structure or function. With regard to the cry that they wanted co-ordination between the legal idea of insanity and the medical idea of insanity, he did not think that they were able to get such co-ordination by any statutory declaration, but he thought that judge-made law as regards criminal insanity was a thing that grew and altered with medical and public opinion. He thought that they had had recently in Glasgow a most interesting illustration of that point. There was tried last June at the High Court of Glasgow a man called Dickman for the attempted murder of his wife. He was suffering at the time from delirium tremens. It was known that a few years ago he had suffered from a similar attack, for which he was under treatment in the Crichton Asylum. He was placed on trial and insanity was pleaded, but not in bar of trial. Lord Kingsburgh, in charging the jury, said that it was a very significant statement that the law had now settled down to the general acceptance of this position, that if a man was proved to be insane at the time he committed the act he was therefore to be freed from the consequences of that act, but furthermore he

said :—" It is not for you and it is not for me to enter into any question as to how this insane state was brought about. You cannot, therefore, raise the question—Was it his own act? Was it, in fact, brought about by his own course of drinking? We have had evidence before us, and the evidence is to the effect that he was insane when the crime was committed, and you must accept that." He thought that was a very large admission from a judge. His lordship did not presume to judge on the question of insanity, but he merely said, " We are told that he was insane, and that is sufficient for you." He thought that a growing perception of the limits of insanity and the various forms of insanity, the growing medical opinion regarding insanity, and the growing readiness on the part of the Bench to accept medical testimony on these points would co-ordinate sufficiently well all that was necessary in determining particular cases whether a man was insane or not. They could never get such a standard as seemed to be always desirable, but, as a matter of fact, they found that justice was done all round, and they did not hear of the extraordinary deviations from what was morally right that formerly took place. His lordship put this question to him, " Do you mean to say that at the time this man committed the crime alleged against him he had not a sane appreciation of the nature of his act?" He thought that was a very important alteration, and a very great improvement upon the old question, " Did he not know the nature and quality of his act?"

Dr. IRELAND said that there was no doubt this question had been raised even before the time of the Romans, and he supposed it would be raised thousands of years afterwards by enthusiastic young superintendents, but their definitions were rather inconclusive. Since ever he studied medicine he had often tried to make a definition of insanity to include all the forms. One of the difficulties that they had to deal with was what the law considered insanity, and they had to do with insane patients and insane persons. A lawyer had once wanted to entangle him by asking him for a definition of insanity, to which he replied that there was no such thing, that it was a mere conception of the human mind, but that there were insane persons, and if they showed him a person he would give them his opinion, to the best of his knowledge, whether he was insane or not. He thought that that was the position for medical men to take up. They might make their definitions as clever as they liked, and probably the first case before them would not be included. For that reason he was not at all disposed to enlarge his remarks. He was a little surprised at Dr. Carswell telling them about the admission of Lord Kingsburgh. Apparently his lordship admitted that insanity and irresponsibility were the same thing. That was a great error that medical men had made in attacking the region of the lawyers. They had their friend Dr. Macpherson talking of neurasthenia,

and he thought it might be included in medical insanity, but not in legal insanity. Then Dr. Robertson talked of chorea being brought in, and that might be correct, but he did not suppose that Lord Kingsburgh would say that neurasthenia or chorea was irresponsibility.

The CHAIRMAN held that the definition of insanity was a shifting one, and that it was a mere question of the opinion of the day as to what was sanity and what was insanity. Lord Kingsburgh's views might be the views to-day and another man's views might be the views to-morrow. Taking it as they ran, the opinions of their fellowmen who were acting with them and dealing with them, and who had to do with them day after day, were the opinions that would be held by those who had to judge. If one was thought insane by the people that he was working with day after day, he would be considered insane; and if he was thought sane by his own people and by the people he had to do with, then he would be considered sane. This commonplace view of sanity or insanity had for years been the accepted view. The rare cases had been subjected to medical evidence, and had been the questions in dispute, but it was only the rare cases. He heartily upheld the views that Dr. Carswell had enunciated in regard to the Royal Asylums of Scotland. He quite agreed that Dr. Yellowlees had carried out the beneficent views of the founders of the Royal Asylum in Glasgow. He thought that it was not intended that the Royal Asylums of Scotland should make big profits, and go in for rich patients, and he held the strong view that the English Act of 1890 had thrown open a mode of dealing with the poorer insane, who yet were able to pay for their own maintenance while insane in such a way as to retain their self-respect in a manner that hitherto had not been as available to the English private patient as it should have been.

Dr. G. M. ROBERTSON said he had briefly pointed out some of the differences that occurred to him between the idea of insanity in the eyes of the law and their ordinary medical views. He thought that some of the practical difficulties in connection with the matter were such as might be solved by fresh legislation—for instance, the law might now recognize insanity as a disease requiring special and early treatment and not merely as a social nuisance requiring seclusion after the disease had reached a certain height. In order to do so the law would require to be entirely dependent upon medical men as experts, accepting their opinion without dispute in the same way as they would accept the evidence of medical men regarding infectious diseases, and apparently as Lord Kingsburgh accepted the evidence of the medical men in the case referred to. Such cases as he mentioned of undoubted commencing insanity, with no grossly insane disturbance of conduct, he considered were very badly treated by the law if there was no particular facility given for their early admission to

asylums. At the present time such patients remain outside for a longer or shorter time, doing harm to themselves and their friends, and cannot be admitted to an asylum. A lawyer in Edinburgh recently spoke to him about a client, an elderly gentleman, who was pursuing such immoral and extravagant conduct as he described. He had behaved in an exactly similar manner during the incipient stage of a previous attack of insanity, and his relatives and intimate friends had no doubt of his morbid condition. It was, however, found impossible to certify him, and they had to wait for an explosion till the law and that intelligent and observant body, the general public, were satisfied as to his insanity. The law and the public do not recognize physical and trophic signs as being symptoms of insanity. We, of course, regard sleeplessness as being one of the symptoms of brain disease, and found our treatment upon it, but the public would not accept that as being one of the reasons for sending a man to an asylum or of keeping him there after he was there. In conclusion, he was glad to see from the discussion which had taken place that this subject, which the Romans had unfortunately left in an unsatisfactory condition, was still one of interest in spite of its antiquity—possibly this was some measure of its importance, and he begged to state that he had had sufficient wisdom to steer clear of definitions, for he considered that it was absolutely impossible to give a mathematically correct definition of insanity for reasons already dwelt on.

The CHAIRMAN said that they had had a very interesting discussion. He agreed with Dr. Ireland that this matter had been *sub-judice* for the last thousand years and more, and they were still in the position that they had to take the current opinion of the day in regard to the sanity or insanity of people. He himself thought that for purposes of treatment the opinion of two asylum physicians ought to be taken and taken unquestioned in regard to the sanity of any person, and that they should not have to give the reasons for their opinion. (Laughter and applause.)

*Collective Investigation in Mental Disease.** By CHARLES
MERCIEE, M.D.

The last time that I had the honour of reading a paper before this Association, I was told with some asperity by one of the subsequent speakers that the subject was not new, and that he himself had dealt with it some years before. It is better, therefore, that I should at once proclaim that the subject that I propose to deal with in the present paper is by no means new. It has been dealt with years ago by a sister

* Read at a General Meeting of the Association, held in London, May 16th, 1895.

Society, and it is dealt with every year by our own Association in our statistical tables. I venture to submit, however, that there is no necessary obligation upon any member of this or of any other learned body to confine his attention to matters that have never been dealt with before. It is not competent, I submit, to any member to draw a line round any department of knowledge, and to cry to all comers "Hands off! This is my preserve, and trespassers will be prosecuted." Surely if we think, however presumptuously and erroneously, that we can see a way to advance knowledge in any particular direction or by any particular method, we need not be deterred from doing our best by the knowledge that the field we propose to till is not wholly unreclaimed ground, but has already been under cultivation to some extent.

The statistical tables of our Association are, as has been said, a form of collective investigation. As far back as 1883 I made an onslaught upon these tables, and contended that in many respects they were untrustworthy, and to much of the criticism to which I then subjected them I still adhere. It is needless now to repeat those criticisms, but what does need to be pointed out is the uselessness of these tables and the waste of labour that they involve, unless they are combined together by some central co-ordinating body. The figures representing a certain class of facts as existing in any one asylum are of very little value. But the figures representing the same class of facts as existing throughout the country—figures which could be obtained by combining those of all the asylums—would have great value and great interest. To some extent, and with regard to some of the tables, this is already done, and admirably done, by the Commissioners in Lunacy in their quinquennial tables; and the results obtained by them with respect to the facts of suicide, of epilepsy, and of general paralysis are samples of what might be done by this Association if the statistical tables that we already possess were combined and co-ordinated. Take for instance Table V., dealing with the forms of insanity. The table is somewhat crude, it is true. The forms given do not correspond with an ideal classification of insanity, but, such as it is, the table is capable of yielding very interesting results if dealt with in the way suggested, and over a series of years. By such means we should obtain answers to several important questions, such as these: Is the prevailing type of insanity undergoing alteration? Is any one form of insanity becoming relatively more fre-

quent? and any other form less frequent? and if so what forms are increasing and what decreasing? and to what extent?

Then there is the question of the ratio of the recovery-rate to the duration of the malady on admission. This has been already investigated to some extent, no doubt, but more facts are needed, and only from our tables by the method of combination can they be obtained.

But besides the results to be obtained by the systematic combination of the figures in the statistical tables of the Association, there are other fields of knowledge which can be profitably cultivated by the method of collective investigation, and by this method alone. To instance a few. Two admirable papers have recently been read before this Association, one before the South Western Division, which I had the pleasure of hearing, at Bath in the autumn. It was a paper by Dr. Bristowe upon the Association between Bright's Disease and General Paralysis of the Insane, in which he arrived at a definite conclusion from the examination of a number of cases which, though considerable as collected by a single individual, was insignificant compared with the number that could be collected by a collective investigation by this Association. By this method it would be easy to put Dr. Bristowe's figures to such a test as should finally confirm or disprove them, and in either case a very important result would have been gained. The other paper, by Dr. Cowen, was upon the Occurrence of Intestinal Lesions in the Insane, and to it the same remarks apply.

Not to weary you with a multiplicity of instances, I will confine my remarks to the one subject of epilepsy, and endeavour to show with respect to this one malady how much there is waiting—clamouring—to be discovered, and how peculiarly appropriate is the method of collective investigation to the discovery of these facts. The simple data with respect to the occurrences in epilepsy that still remain to be determined are very numerous. There is, no doubt, a considerable body of statistics available with regard to them, but the statistics already obtained are but as a drop in the ocean in comparison with those that could be elicited by the method here advocated. Are fits more frequent by day or by night? That simple question is still undetermined. Are they more frequent at one time of year than at another? and if so when? These are questions for which the materials lie ready to our hands. In many of our large asylums the epileptics are numbered by hundreds. They are all under

continuous observation. Already the number and the time of their fits are recorded day by day and year by year. No extra labour of observation is needed. All that is required is the transmission to some central body of facts that are already collected, but are suffered to waste from the mere want of some means of utilization.

Then what is the proportion of cases of petit mal to cases of grand mal? What is the proportion of cases in which the two forms of epilepsy are combined? Is there any relation between the times of the occurrence of fits and the times of the ingestion of food? And at this point we are led to another class of investigation—that in which the mere observation of facts is supplemented by a modification of the conditions. It is still a wholly undecided question—and it is scarcely to the credit of our science that it should be still undecided—whether the quality of the food has or has not an influence upon the frequency of the fits. Upon theoretical grounds it has been contended that a highly nitrogenous diet should increase the number of the fits, and a lowly nitrogenous diet should diminish them. But whether the theory is or is not borne out by facts is still undecided. Dr. Wilks and Dr. Jackson have published cases in which a lowly nitrogenized diet has been attended with a diminution of the fits. Dr. Gowers and others have published cases in which, under the same circumstances, the fits have been more numerous. But it is obvious that such a question is not to be decided by the results of one, or two, or half-a-dozen, or a score of cases. We must have hundreds of cases. And what circumstances could possibly be more favourable to the prosecution of an investigation of this kind than those in which patients are placed in our asylums? We have not to trust to the half-hearted action, and the careless and unintelligent or untrained observation, of the relatives of the patients. We have the whole lives of the patients at our disposal. We have them continuously under the observation of trained and skilled attendants, so that the facts collected cannot be otherwise than trustworthy. If it be suggested that the thing is impracticable, the reply is that it has already been done. Dr. Merson has placed his epileptic patients upon a special diet deficient in nitrogen, and has obtained a definite result, which, so far as it goes, is in accordance with what would theoretically have been expected. Compared with what might be done by our whole Association working together, his results have been small, but with his opportunities he has done much, and his great

achievement has been to lead the way and to prevent an answer of *non-possumus*.

From the influence of food the transition is easy to the influence of drugs. We know that the bromides have a powerful influence upon the frequency and severity of the convulsions, but we know no more. Is it visionary to suppose that by a widely-extended series of observations we might advance our knowledge from the qualitative to the quantitative stage, and obtain some more definite knowledge than we have now, not only of the class of cases most affected by the drug, but of the degree to which improvement may be attained? Then, too, we might vary the mode of administration of the drugs. Dr. Gowers recommends a method of administration by very large doses, amounting to five and six drachms repeated for a week or so. His authority is great, but his method has never been tried upon a scale which would enable any trustworthy conclusions to be drawn. The members of this Association have material and opportunity beyond any other observers for giving a trial to any such method as this.

Then the condition of the optic disc during the convulsion is still unsettled. In private or hospital practice the opportunities for observing it are few. It is seldom that an observer happens to be present during the actual occurrence of a fit. But in our large asylums, in which 70 or 100 or even 200 or more epileptics are aggregated together in a single ward, scarcely five consecutive minutes in the day go by without the occurrence of a fit, and the opportunities for the observation of this and other phenomena of the convulsion are almost boundless. How many epileptics are actually resident in the asylums of this country our statistical tables do not enable us to say, but since about 1,300 are admitted every year, and since the majority of these come to stay, the field for observation is manifestly enormous, and, if observations were systematically carried out, it cannot be questioned that some at least of the questions that still remain uncertain would be ascertained with practical certainty.

Again, I have a strong impression, founded on the observation of a good many cases, that the occurrence of convulsion is common as an intercurrent phenomenon towards the close of life in insane persons who are dying of the result of their brain disease. Is this impression well-founded or is it not? Only by the method of collective investigation can this question be determined.

Even to mention the other questions that are amenable to this method of investigation would take me too long. It is said that in puerperal insanity the prognosis varies with the distance in time of its onset from the date of confinement. Is this true or no? What is the relative duration of the different forms of general paralysis? What is the proportion of cases of this disease in which the spinal symptoms precede the cerebral by a definite interval of time?

I have indicated but a few of the matters that could be included in the scope of a collective inquiry, but I trust I have been able to show that much good and useful work could be done by the method proposed. There are many problems waiting solution that could be solved by no other method, and that could be satisfactorily solved by the method proposed. These investigations would not only throw light upon many dark places in which our knowledge is admittedly imperfect, but their results would have an immediate practical bearing on treatment. I submit, therefore, that they are eminently proper and desirable investigations for this Association to undertake, the more so as they cannot be made by individual effort.

It is true that no very striking results were obtained by the Collective Investigating Committee of the British Medical Association, but some very useful results were obtained, and, if we can obtain results only equally useful, we can afford to disregard the absence of any very striking or sensational character. Further, our means of investigation are of far more complete character than those at the disposal of the British Medical Association. We have the whole lives of our patients subject to our inspection and regulation, and in proportion to the superiority of our advantages should be the superiority of our results.

As to the mechanism by which the investigation should be pursued, no doubt we should have to appoint a committee, but the *personnel* of the committee is a matter for mature consideration, and cannot be settled now. By so doing we might easily include members who would not have the time or the interest to work at the matter, and we might exclude members who would have both. Our best course would probably be to resolve that a committee be appointed, and to leave the membership to be settled at a future occasion, general invitations being meanwhile issued to members to co-operate in the scheme.

Discussion on Dr. Mercier's Paper.

Dr. NICOLSON—I have great pleasure, sir, in rising to express our gratitude to Dr. Mercier for introducing this important subject to us, and taking the trouble he has done, and is always ready to do, in bringing before the Association questions which are not only of great importance in themselves, but which are calculated to draw, more especially from the junior members of the Association, their capacity for work and for making observations which would be of advantage not only to our present patients, but also to those of our successors who take an interest in developing the material which is placed at their disposal. The way in which this particular kind of work should be carried out is almost the greatest difficulty in regard to it, because, as Dr. Mercier points out, a committee that may be the most desirable committee for investigating one subject may not be the most desirable group of individuals to carry out another investigation; and therefore it rather seems to me that if a General Committee were appointed who would have it as their duty to select smaller committees for carrying out the investigation of each individual question that seemed ripe enough for some clear demonstration and elucidation, we might in that case be able to arrive at something like satisfactory results if an attempt was not made to do too much. The great risk in working out observations of this sort is that the questions before the investigators are sometimes too numerous, sometimes too general, and sometimes too conflicting the one with the other. I think the utmost advantage would arise if simple points were taken upon which different minds being focussed, there would be the likelihood of a definite conclusion being arrived at, which, if not final, would at least be the basis of work for others who cared to take them up, and who might find their investigations tally with the conclusions arrived at by the committee, or have some further suggestion to offer. I think we always feel with reference to Dr. Mercier that, although we may not always agree with his conclusions, his intellect is not of the humdrum order: it may not rest, it requires something fresh, and I am sure that in him we have the very individual who would be most capable of planning out a scheme by which most excellent results of this sort could easily be attained. It is a work we can face easily if we get the men capable and willing to help him, to help the Council, and to help the Association generally in carrying out a most desirable and laudable sphere of observations. He has named some of those points that come most readily to the minds of inquirers; and I am sure to every one who takes a little trouble there would soon occur other matters to add to the number. The one that occurred to me while he was speaking was that vexed question of the relation of alcohol to insanity, where the two become so jumbled up together that, as a matter of

fact, we know not whether we are talking about an alcoholic condition or a mental condition, and the relative positions of cause and effect are obliterated and too often lost sight of according to the mental bias of the individual who for the time being is speaking upon the subject. I am sure something much more definite could be put into the mouths of those who are called upon to speak upon the subject were some small committee appointed to carry out the inquiry, even in a limited sense, but upon some definite footing. I am sure that there are many of us here who have a great deal to say on the subject, so that it is a matter of misfortune that the hour is so late; but I do hope sincerely that this subject will not be lost sight of, but will take root, and that the Association may be guided in appointing a committee that will find the materials for a body of workers in this fruitful area of observation.

Dr. RAYNER—Mr. President, I quite join with Dr. Nicolson in thanking Dr. Mercier for bringing this subject forward, and I hope he will carry it to a successful issue. Some ten or eleven years since I brought the same subject forward and obtained a resolution in favour of its being carried out by the Association. I regret to say that it never went any further. I sincerely hope Dr. Mercier will be able to have his proposals carried out, and that we shall see in future a very good and useful work done in this way. I should have great pleasure in proposing that a committee be formed to carry out the observations.

Dr. PERCY SMITH—I should like to ask whether it is competent for this particular meeting to appoint a committee, as Dr. Rayner has raised the question. Would it not be better to take this discussion as a warning to the Annual Meeting that the subject will then be brought forward? I would even suggest that Dr. Mercier put it on the agenda of the Annual Meeting, and that in the meantime he think over the matter and take steps to ascertain who would be likely to support him in this proposal. All of us, I am quite sure, would do our best to aid him. For a long time I have looked upon it as the most efficient way of obtaining knowledge of that class of disease which we are always called upon to treat; but there has always lacked someone to lead and take direction of the various points of inquiry. I think we have a capable leader in the person of Dr. Mercier, and I think that probably if the names of the committee were suggested by him or by anybody else at the Annual Meeting, after due consideration such a committee would be appointed. That, in my opinion, would be entirely in order.

Dr. HAYES NEWINGTON—Experience in this field is, of course, still limited, but it seems to me that this is a question rather of the most desirable mode of procedure than of whether collective investigation is a good thing or not. I think from procedure on the lines which Dr. Mercier has suggested great good would result.

Dr. DOUGLAS—I think the suggestion thrown out by Dr. Rayner indicates the method to be followed, and, if in order, I should venture to suggest, or put in the form of a resolution, “that this matter be referred to the Council of the Association for the purpose of drawing up a scheme and submitting it to the Annual Meeting.” In that way I think we should get it into form. The matter would go before a large meeting, interest would be excited, and the investigation set on foot under the best conditions.

Dr. STANLEY GILL—Might I point out that it would be impossible to carry that through unless we had a special Council Meeting. The Annual Council Meeting before the Annual General Meeting takes place on the same day, and a subject like this could not be carried through efficiently half-an-hour before the meeting. [Dr. DOUGLAS—I would suggest, then, a special Council Meeting.] I think a special committee should be appointed to assist Dr. Mercier, so that they could draw up formulæ to submit to the Annual Meeting.

The PRESIDENT—As far as I understand the rules of our Association it is perfectly in order for the present meeting to appoint a committee for this purpose. The matter comes forward consequent on a paper, notice of which has been duly given in the notice paper in the usual way. It appears to me, therefore, that it is open to the members to do what they wish in that matter. It would be impossible to make any progress in any work of the kind, or any other work, if everything that was proposed in discussion on a paper, due notice of which had been given, was then deferred for three months before anything further was done. This perpetual reference backwards and forwards to Councils and subsequent meetings is in itself a bad thing. I am inclined to rule that the proposal is justified by our rules in this case. Nevertheless, as a matter of tactics, I do not see what is to be gained by the nomination of a committee to-day, because I am sure everyone who is interested in these questions, as everyone present I daresay is—and we all listened to Dr. Mercier’s remarks with interest—must know that to undertake such difficult work as a large measure of investigation requires a selection of workers of quite a different nature from what could be made sitting here this afternoon and discussing them in a casual way. Having spoken on the question of order and on the question of policy, I should like to say a word or two, if the meeting will bear with me, as to the facts and the ideas which Dr. Mercier has laid before us. Collective investigation, as he has said, has been tried in another place, and in another place it has failed; and there are probably many reasons which might be adduced as having caused its failure elsewhere which would not be operative among us. Nevertheless, it is an ominous fact that it has failed elsewhere; and even among us I am afraid that the success that would attend collective investigation will not be as great as Dr. Mercier is inclined to hold. I hope he will

induce a considerable number of members of this Association to join him in collective investigation, and will induce them to do a good deal of work, and devote a good deal of thought to their work, which some of them seem to find excuses of some kind or another for avoiding just at present. But that any very satisfactory results will come of it I must say I am not hopeful, and for several reasons. Collective investigation means collective intellectual labour if it is to be of any value. The mere shooting of rubbish in the shape of statistical tables would not advance anything a single step. We have plenty of statistical tables already, and by taking a shovelful of them from one place and piling it on to a shovelful in another, and calling it "collective investigation," I do not think we get much more forward. It would require that the subjects to be investigated should be minutely defined. We will have to be sure that our investigators mean the same thing by the same words. There will be the desperate personal equation in the statements of each one of the investigators. I fear that these difficulties will prevent any great measure of success coming from this scheme. It looks very pretty, and "hope springs eternal in the human breast." I hope something will come of it, but, for the reasons I have endeavoured to explain, I doubt it. I am not in the habit of throwing cold water upon other people's labours, and I hope that good work may be done under the name of "collective investigation;" but I believe that when all is done we come to this, that certain facts observed by certain acute observers, such as Dr. Mercier, and their bearing thought out from various points of view, will be of service to science, and that the mass of so-called facts scraped together in any sort of way, by any sort of men, will remain just as they are at present—shot rubbish.

Dr. URQUHART—Mr. President, I must confess to a certain feeling of soreness consequent upon your remarks, because I happen to have served as a local secretary to the Committee of the British Medical Association, to which uncomplimentary reference has been made. You say no good has accrued; but if you want to look up any information upon old age, for instance, there is only, so far as I am aware, the work of Professor Humphrey for reference. It was based upon collective investigation. We had this same question before us at our last meeting in Scotland, and appointed a small committee to consider how the subject could be best approached, and I was then very happy to offer what assistance I could. The success of this new departure depends, I think, upon the man who will take the trouble to imbue his fellows with the spirit of collective investigation, and induce them to deal with the questions; and unless, when the answers are obtained, he will arrange and abstract them, or induce his colleagues to do so, we need hardly pass from this initial stage. As I understand, Dr. Mercier has asked that those members of the Association who are interested will hand in their names and express their determina-

tion to aid in this work. I shall therefore be very willing once more, in spite of what you have said, sir, to put down my name as one who offers all the assistance in his power to a scheme of collective investigation.

Dr. MERCIER—I have certainly every desire to take advantage of the opportunity afforded me of replying to the President's criticisms. It seems to me that for a gentleman who has never before thrown cold water upon another worker's suggestions, the President has to-day achieved a degree of success, without practice, which only shows how much his ability might achieve if turned into a more profitable channel. I cannot think the suggestion is so very infertile. Undoubtedly there is a great deal in what the President says, but it only shows that we must take care that the investigation proceed along definite lines, that we must know exactly what we are inquiring about, and it must be definitely understood that each worker is working at the same thing as the others. If that is done, and care is taken to exclude the personal equation (which, however, cannot be excluded altogether) and to exclude ordinary sources of fallacy, I am perfectly certain we shall obtain valuable results; and although, as I said, it is true that the collective investigation of the British Medical Association did not achieve the results that were expected of it, it was yet by no means unfruitful. The idea that has got abroad as to its unfruitfulness has been generated by the contrast between the work that was done and the work that was expected to be done. If the original expectation and anticipation of what was going to be achieved had been a little less extravagant, the general opinion of the result of that investigation, I think, would have been a far more favourable one. As to the mode of procedure, there are obvious reasons why it would be useless for this meeting at once to appoint a committee. We do not know who the workers are who would be glad to take a part in it. We might appoint gentlemen who were too busy or otherwise occupied, or not interested, and who would take no share in the investigation, and fail to appoint other members who have leisure upon their hands; and who have the opportunity and would be glad to take part. Therefore the best method of proceeding was that I suggested, namely, to insert a notice in our Journal, or by some other means to call the attention of members of the Association generally to the fact that a Collective Investigation Committee is about to be formed, and to ask those who are willing to serve, and who have opportunities of observation, to send in their names and join the committee. That being done, the committee could be formed. I think it is quite open to this meeting of the Association to sanction such action, and, in fact, to proceed to a resolution that a committee be formed, but not to proceed to nominate the members of the committee until, perhaps, the next meeting. I therefore propose that a committee be formed for the purpose of conducting collective investigations.

This motion being seconded by Dr. HAYES NEWINGTON, was carried unanimously, in announcing which the PRESIDENT said he was personally glad of the result, and he begged to assure Dr. Mercier that if he would accept his (however unworthy) services he would be very glad to serve on that committee. It was valuable to have what the theological lawyers called an *advocatus diabolici*, and perhaps he might be of some use in that capacity.

On the Clinical and Pathological Relations of General Paralysis of the Insane. By REGINALD FARRAR, M.A., M.D. Oxon., Assistant Surgeon, Stamford and Rutland General Infirmary.

There are no hard and fast lines in pathology.—SAVAGE.

General paralysis of the insane seems to have been first recognized and described by Willis, in 1672. It was fully described and established as a definite disease by Bayle, in 1822. It received its present title from Calmeil, in 1826.

It is now, according to Dr. Bristowe, "universally recognized as a specific disease." The Congress of Alienists in Paris, 1867, addressing itself to the question raised by Lassalle in his "Paris Thesis," 1843, whether general paralysis is a disease *sui generis*, or merely a complex of symptoms, determined that it is neither a complication nor a mode of termination of insanity, but a definite pathological entity. Drs. Mickle, Mendel, Voisin, and most other authorities have given in their adhesion to the "doctrine of unity" in general paralysis; which doctrine has been most emphatically set forth by Dr. Clouston in the words: "This disease is not only not a variety of insanity, but a true pathological disease of the nervous system, as distinct from all other varieties of insanity, and from all other nervous diseases, as small-pox is from scarlatina, or consumption is from rheumatism."

It is the object of this paper, while conceding, with Dr. Maudsley, that the symptoms of general paralysis "constitute the most definite and satisfactory example of a *clinical variety* of mental disease," to maintain that neither its symptoms nor its pathology entitle it to be regarded as a *species*; that the term general paralysis cannot reasonably be held to imply more than a congeries of symptoms, due to diffuse interstitial cortical encephalitis, from whatever cause arising, and to uphold its essential identity with certain varieties of insanity hitherto regarded as distinct from it.

This view receives support from Th. Simon, who regards the disease as a "symptomen-complex," and from Dr. Savage, who in several passages expresses his belief that, "in the true acceptation of the word, general paralysis is not a definite and specific disease, but includes various forms of nervous degeneration."

The names of diseases have no final or specific value, but are "merely convenient expressions for their recognition." (Dr. Reynolds.) Disease is not an entity, but "a complex or sum-total of morbid changes in both structure and function." (Hilton Fagge.) In nosology, therefore, there are, properly speaking, no species, and it is a misnomer to call any diseases *specific*, except such as depend on the action of a specific cause, such as a parasite or micro-organism.

The tendency to exalt clinical varieties into species is an example of the fallacy known as the "idol of the marketplace," and the fallacy has more than a logical or theoretical importance. Let me illustrate my meaning. An author writes a treatise on a clinical variety of disease, perhaps hitherto unrecognized, and which, henceforward, acquires a special name, sometimes his own, as Graves' disease, or Addison's disease, presenting by way of illustration certain typical cases. So far he does good service by adding a new type to the nosology and furthering the investigation of disease in general.

But in presenting his picture, in order that the type shall be recognized, it is almost inevitable that the outlines should be unduly sharp. He must define and circumscribe, giving prominence only to characteristic lesions and pathognomonic symptoms. Thus it frequently happens that the scope of the disease is unfairly limited, aberrant and unusual varieties being suppressed or overlooked; and what is in reality only a name for a complex of certain lesions and the symptoms arising from them, a sum-total of morbid changes in structure and function, is erected into a substantive entity: an artificial species is created, and other diseases belonging essentially to the same class are often wrongfully excluded in the endeavour after a spurious uniformity and in accordance with an arbitrary definition.

This has been the case with general paralysis of the insane, the study of which has, moreover, been retarded, as often happens, by an unfortunate nomenclature, unfortunate because either the paralysis or the insanity may be in abeyance, and yet the disease essentially exist. It is an

axiom in morphology that species is determined by constant characteristics. Chronic cortical encephalitis will be found to be the constant and the *only constant* determining characteristic of general paralysis, and though it is perhaps too late to hope to alter a name so firmly embedded in the nosology as general paralysis, this would have been, I venture to think, a preferable name for the disorder; for the morbid unity of general paralysis, an artificial disease which each author defines as he pleases, is a phantom concerning which it is vain to wrangle; the morbid unity of chronic cortical encephalitis is a question which, in whatever manner it be answered, admits of no misunderstanding: the differential diagnosis of general paralysis of the insane involves the pronouncement of a Shibboleth; the differential diagnosis of chronic cortical encephalitis is a matter capable of microscopical demonstration.

I have assumed hitherto, and it is well-nigh universally admitted, that general paralysis is an organic disease of the encephalon; it is defined as such by the three principal monographers of the disorder. "On the whole," says Dr. Mickle, "we may view general paralysis as essentially commencing with hyperæmia and ending with chronic cortical degenerative cerebritis." Voisin defines the disease as "une affection inflammatoire de l'appareil cerebro-spinal caractérisée par ramollissement de la substance grise;" Mendel as "eine diffuse interstitielle corticale Encephalitis, die ihren Ausgang in Hirnatrophie nimmt."

Nevertheless, certain authors, among them Th. Simon and Baillarger, have denied that organic change necessarily exists in the brain or meninges in general paralysis, even when it runs its full course, v. Rabenau going so far as to maintain that disease of the brain existed only in a few cases of general paralysis, and treating the disorder as functional, or a mere neurosis. It is sufficient to say that this opinion conflicts hopelessly with the weight of evidence. Dr. Mickle says, "I have never made the necropsy of a general paralytic without finding very obvious naked-eye changes in the cerebro-spinal nervous system and its protecting tunics."

Bonnet and Poincaré propounded a very ingenious vasomotor theory of the disease. They found pigmentation, sclerosis, and fatty substitution in the cervical sympathetic ganglia, and maintained that "the alterations found in the

encephalon were the consequences of disorder in the cerebral circulation, following impairment of the function of these ganglia owing to their diseased condition" (Mickle). It is obvious that, even if this theory can be substantiated, it only sets the origin of general paralysis a stage further back. The disease still remains an encephalitis even though the organic brain change be due to vaso-motor disturbances arising in the cervical sympathetic ganglia.

But the theory breaks down upon investigation. Mendel points out that the autopsies on which Bonnet and Poincaré rely were made on cases of long standing, in which it was impossible to prove that the sympathetic changes were primary, and not secondary. Niemeyer, Voisin, and Dr. Savage assert that a pigmented and granular state of the sympathetic ganglion-cells is not an abnormal condition; and all authors seem to be agreed that, while on the one hand, in many cases even of advanced general paralysis, absolutely nothing characteristically pathological can be found in the cervical sympathetic system, on the other hand, the changes described by Bonnet and Poincaré are often met with in cases of simple chronic insanity, and even in the bodies of mentally healthy persons. Simon has compared the condition of the sympathetic in general paralytics with its condition in those who have died of acute diseases, and has failed to detect anything abnormal.

There remains the question, Is the essential lesion producing the disease known as general paralysis of the insane ever situate in the spinal cord? Are there cases in which the brain is found to be normal while the spinal cord is at fault?

This question must be answered in the negative. The spinal marrow in general paralysis may be normal, or it may be profoundly degenerate. The cerebral lesion may be primary, or it may be, and doubtless often is, secondary to a lesion of the cord; but in all cases where the diagnosis of general paralysis can be fairly established there will be found a degree of cortical cerebritis.

There is an interesting variety of the disease which is described by nearly all authors on this subject, known as "General paralysis without insanity." Dr. Gowers describes "cases of what may be called pseudo-general paralysis, in which the characteristic physical symptoms exist almost alone, merely loss of memory and slight optimism representing the mental disturbance." These cases, he says, are far from rare.

This group of cases might be thought to lend colour to the hypothesis of a spinal origin of general paralysis, and Voisin differentiates such cases from general paralysis proper, and ascribes them without hesitation to spinal or bulbar lesions. Mendel points out, however, that whereas somatic symptoms, including a greater or less degree of motor paresis, are of the essence of general paralysis, nevertheless in acute cases of the disease the condition of the cord is almost invariably normal; while even in cases of long standing there is often no lesion discoverable in the cord.

In proof of the possibility of a connection between cortical encephalitis and paralytic, or paretic, motor symptoms, Mendel quotes the physiological experiments of Fritsch and Hitzig and of Ferrier, and also the numerous instances in which such symptoms are undoubtedly associated with a focal lesion of the cortex. He points out, further, that the cortical origin of somatic symptoms in general paralysis is rendered probable by the rapid changes in extent and intensity of the paralytic manifestations, and by the fact that paralysis in this disease is, in the majority of cases, not simple, but complicated by symptoms of motor irritation, tremors or epileptiform clonic convulsions, a combination characteristic of cortical lesion, but absent in paralysis depending on injury or disease of the corpora striata, pons, or spinal cord. Dr. Mickle very strongly supports the same view.

This explanation will in all probability cover the cases of so-called "General Spinal Paralysis," of which Dr. C. B. Radcliffe has, on very insufficient clinical and pathological evidence, made a special disease, which he elaborately differentiates from general paralysis, concerning which he nevertheless makes the following noteworthy admission:—"I am disposed to think that the cases in which the mental powers are obviously weakened will be found to be at least as numerous as those typical cases in which those faculties are natural."

By followers of what I may call the "pigeon-hole" method in nosology, by which I mean the tendency to label clinical cases as though they were botanical specimens and as though the human frame were a homogeneous unit, incapable of suffering from two diseases at once, much ingenuity has been wasted on the differential diagnosis of tabes dorsalis and general paralysis. Mr. Bevan Lewis, who calculates that tabes dorsalis, "in the strict sense of the

term," occurs in fully 15.9 per cent. of general paralytics, has pointed out "the close alliance (if not identity) of the morbid processes underlying" these two disorders; and Dr. Savage has drawn attention to the frequency with which general paralysis develops on old locomotor ataxy. He attributes this occurrence, and Dr. Mickle concurs in the same view, to a direct propagation of lesion from the spinal cord to the brain, in cases in which there is a tendency to progressive degeneration of nervous tissue, a view which is in harmony with our knowledge of the pathology of tabes dorsalis.

To discuss, as Dr. Bristowe does, the differential diagnosis between general paralysis and tabes dorsalis is about as profitable as to discuss the differential diagnosis between sciatica and toothache. General paralysis is the name by which we recognize the symptoms of a particular disease in the encephalon, tabes dorsalis, the name given to a kindred lesion of the spinal cord. When the symptoms of brain disease and spinal cord disease co-exist it is reasonable to infer that both tracts have suffered, either simultaneously or successively, or by propagation upwards or downwards. Even in cases which stop short of the characteristic symptoms of general paralysis it is well known that locomotor ataxy is often accompanied by mental changes; if we are to adopt Hitzig's axiom that "all mental diseases are nothing else than the outward functional manifestations of cerebral diseases," we must infer that such mental changes indicate cerebral disorder, for the spinal cord *per se* cannot originate mental symptoms. A diagnosis which treats the two processes as if they were mutually exclusive, is manifestly unwarrantable.

Disseminated sclerosis has yet more intimate affinity with general paralysis. I am not prepared altogether to deny that there exists a distinct disease, insular sclerosis, or "*sclérose en plaques disséminées*," as described by Charcot, in which the presence of isolated and circumscribed patches of sclerosis somehow produces the "symptomen-complex," or average of symptoms clinically associated with this disease. But I maintain —

1.—That this is a very rare disease.

Hilton Fagge, a very painstaking observer, could not find a single case which could be attributed to disseminated sclerosis in the pathological records of Guy's Hospital between 1854 and 1873.

2.—That many cases of so-called disseminated sclerosis are in reality cases of general paralysis or cortical encephalitis.

To this effect I may quote Dr. Gowers:—"Cases have been described by Westphal, Leyden, and Langer, in which symptoms closely resembling those of insular sclerosis have existed during life, without any post-mortem lesion to which they can be ascribed. It is possible that most of them have been cases of general paralysis of the insane, the symptoms of which vary widely."

3.—That many of the constant symptoms of disseminated sclerosis can only be explained on the hypothesis of a co-existent diffuse cortical encephalitis.

All authors seem to be agreed that some impairment of the mental faculties is a well-nigh constant symptom of disseminated sclerosis, the most frequent change, according to Dr. Gowers, being an undue complacency and contentment. Charcot mentions two patients who exhibited the characteristic *délire des grandeurs*. Apoplectiform convulsions and coma are also included among the frequent symptoms of this disease, and Dr. Bristowe says that the supervention of epileptiform attacks is to be anticipated. These symptoms, I maintain, can only be explained on the hypothesis of a co-existent diffuse cortical encephalitis.

4.—That according to most authors, including Mickle, Mendel, Schüle, Voisin, and others, disseminated patches of sclerosis are frequently found post-mortem in cases of general paralysis.

5.—That the lesion in disseminated sclerosis is not confined to the apparently circumscribed plaques, which alone can be detected by the naked eye, but has a definite tendency to spread and become diffuse.

Erb says that in disseminated sclerosis it is probable that a gradual transition to a truly diffuse sclerosis may take place. Hilton Fagge says that "in thin sections the plaques of sclerosis are found not to be sharply defined at their edges, as they appear to the naked eye; on the contrary, the sclerosis fades off very gradually into the healthy tissue. Dr. Moxon remarks that granule-cells are more numerous at the circumference of the patches, and in the apparently normal brain-tissue beyond than towards their centres.

I conclude that no absolute line of distinction can be drawn between disseminated sclerosis and general paralysis of the insane.

There are four forms of brain-poison that engender organic cerebral disease, having a close pathological alliance, if not identity with general paralysis—lead, gout, syphilis, and alcohol.

In a paper read before the Medico-Psychological Association in February, 1880, Dr. Rayner showed that lead-poisoning sometimes produced a condition closely resembling general paralysis, such as Tanquerel describes under the term "lead encephalopathy." In the discussion that followed Dr. Savage stated his opinion that true general paralysis might result from chronic lead-poisoning, an opinion which he has repeated elsewhere.

Voisin denies altogether the existence of saturnine general paralysis, which, with characteristic dogmatism, he declares "Doit être rayée du cadre nosologique"; but Mendel frankly allows lead-poisoning as a determining cause of true general paralysis; and Dr. Mickle cites several authors to prove that not only do symptoms practically identical with those of general paralysis arise from chronic plumbism, but that in many such cases the characteristic lesions of cortical encephalitis are found post-mortem.

With regard to *gout*, unfortunately, but little evidence is forthcoming. Dr. Clouston says, "Gouty insanity either terminates in recovery or runs on to congestion and inflammation of the membranes of the brain." This sentence is very suggestive, and I am inclined to think that more might be made of the subject. Drs. Bristowe, Hilton Fagge, and other authors allude to the nervous phenomena, convulsions, mania, apoplexy, paralysis, etc., due to what is known as retrocedent gout; and, from what we know of the general cerebral and nervous irritation caused by diffuse gouty poison, and the signal relief to such symptoms when the precipitation, as it were, of this poison gives rise to an attack of acute gout, it is reasonable to suppose that the prolonged action of uneliminated uric acid, unrelieved by acute gouty arthritic attacks, may in some cases give rise to organic cerebral degeneration. But the diagnosis of retrocedent gout is hard to establish; for in the absence of gouty attacks the diagnosis is not likely to be entertained, and when they do occur they act as a safety valve to the system, and a man who has had one attack is likely to have others, and so to escape the cerebral effects of retrocedent gout. The affinity of gout to cerebral hemorrhage, or more broadly to what Doutrebente has called "*l'hérédité des tendances congestives*,"

is well known, and Ball and Régis, as well as Christian and Ritti, have shown that it is to this diathesis that general paralysis belongs.

A fertile cause of chronic degenerative cortical encephalitis is syphilis. Of course not every case of syphilitic insanity comes under this head, for there is a transitory mania that sometimes occurs in the secondary stage of syphilis, not necessarily involving any of the somatic symptoms of organic brain disease, and which is in general completely amenable to treatment. Of this Dr. Clouston has given examples. I am not concerned with this variety, but with the diffused form of syphilitic encephalitis which has been fully described by Lancéreaux, and of which Dr. Maudsley says it is "a diffuse albumino-fibroid exudation of low form, glueing the membranes to the surface of the brain. At the outset it consists of an exuberant growth of connective tissue, which afterwards undergoes more or less fatty degeneration; and it certainly has not any character by which it can be distinguished as a specific product."

Voisin and others have expended much ingenuity on the differential diagnosis between syphilitic encephalitis and ordinary general paralysis. I believe that Dr. Savage's view is the true one, that "there is no possible line to be drawn between some cases of syphilitic nervous degeneration and general paralysis of the insane; and that true general paralysis may be caused by syphilis alone, or combined with other causes." Voisin's statement, that the anti-syphilitic treatment constitutes "*une véritable pierre de touche*," certainly does not accord with the experience of English alienists, for syphilitic encephalitis is notoriously as incurable as ordinary general paralysis (I do not of course include under this head the transitory mania of secondary syphilis); and, again to quote Dr. Savage, "Whether the general paralysis be due to syphilis or to any other source is a matter of almost total indifference. In these cases you have no hope, for whatever has caused the degeneration matters little if it is certainly started."

Approaching the question from a statistical standpoint, there can be no doubt that a history of syphilis occurs in a very large proportion of general paralytics. Kjelberg, indeed, holds general paralysis to be merely a form of cerebral syphilis. This is going further than we have any warrant for, but we may safely accept Mendel's estimate, who, from a very careful analysis of 201 cases, found undoubted

secondary syphilis in 109, or more than 50 per cent. On the other hand he discovered syphilis in only 28 per cent. of cases of "primary," or non-paralytic, insanity. Mendel points out that just as syphilis may produce the lesions of *tabes dorsalis*, so there is no ground for denying that it may produce a simple irritative interstitial encephalitis, which cannot be distinguished pathologically, or by its clinical effects, from that of ordinary general paralysis.

Alcoholic insanity frequently merges into general paralysis. I do not assert that every case of alcoholic insanity is a case of general paralysis, but, making due allowance for those cases in which the abuse of alcohol is a symptom, rather than a cause of the disease, it is beyond dispute that a large proportion of cases of undoubted general paralysis are the direct result of alcoholic excess. Mickle has prepared a table from the Commissioners' Reports in which he shows, from a total of more than 4,000 cases, that excess in drink is the assigned cause in 21 per cent. of general paralytics, this one cause far outweighing in importance all other assigned causes. I maintain, therefore, that chronic alcoholism, especially in neurotic subjects, tends to set up a progressive and fatal cortical encephalitis, clinically and pathologically indistinguishable from ordinary general paralysis, and that many cases assigned to alcoholic insanity, and differentially diagnosed from general paralysis, are genuine examples of the latter disease.

Of the many attempts at differential diagnosis of alcoholic insanity from general paralysis, the most important and ingenious is that of Mr. Bevan Lewis, who asserts that while alcoholic insanity is always, primarily and essentially, an *endarteritis*, true general paralysis is always, primarily and essentially, a *periarteritis*, commencing in the perivascular lymph channels.

Mr. Bevan Lewis speaks very positively of the absolute value of this distinction, which I regret that considerations of space forbid me to examine in greater detail. I cannot but think, however, that he lays too much stress upon it, and somewhat strains its application, for, according to other authorities, *endarteritis* is found among the primary lesions of ordinary general paralysis. Voisin describes the vascular implication of general paralysis as "*une lésion initiale endarterite aiguë ou chronique.*" According to Mickle the vascular degeneration affects all three arterial tunics, the intima as well as the muscular and adventitial, though it is

true that both allow that the change is most marked in the adventitial coat, and both these authors lay stress on the tortuous and varicose condition, with numerous bulgings and fusiform dilatations, which Mr. Bevan Lewis describes as "so highly characteristic of alcoholic insanity."

Mendel describes in the larger cerebral vessels (in general paralysis) a condition of "endarteritis chronica deformans," and of the arterioles he says explicitly that the multiplication of nuclei is not confined to the adventitia, but occurs also in the media and in the longitudinal nuclei of the tunica intima.

We are therefore justified in concluding that Mr. Bevan Lewis' differential test has nothing of a pathognomonic character, and not only Mr. Bevan Lewis, but all other authors are agreed that the morbid anatomy of alcoholic paralysis, in its final stages, differs in no respect from that of ordinary general paralysis. Mendel says, "As with syphilis, so with alcoholic paralysis, when diffuse interstitial encephalitis is established, a differential diagnosis is no longer possible."

My belief is that, whatever difference exists, clinically, between typical general paralysis and chronic alcoholism culminating in paralytic dementia, is due to the fact that, as Dr. Clouston puts it, by a course of chronic soaking "the finer points of moral character and feeling are rubbed off." Whereas in the typical general paralytic, who is often at the commencement of his attack a vigorous and capable man of the world, rather above than below the average in intellectual capacity, the exaltation, grandiose delusions, and restless energy are but the insane exaggerations of his normal mental activities, thrown off the balance by some sudden disturbing agency, the tippler has been blunting and dulling his faculties by years of indulgence, till he has no intellect left to become deranged, and passes more gradually and insensibly into a condition of dementia. But the final result in both cases is the same, brain congestion, thickening of membranes, and erosion of the cortex giving rise to dementia, which ends in stupor, coma, and death.

It is worth noting that Ball and Régis, who have so thoroughly investigated the vital statistics of insanity, found that while general paralysis differs essentially in its vital relations from all other varieties of insanity, it exhibits a very close parallelism with chronic alcoholic insanity.

I am endeavouring to demonstrate that the pathological process of cortical degeneration is uniform in its progress and termination whatever its cause, and whatever the condition of the brain at the onset of the attack. These factors materially influence the symptoms to which the process gives rise in any given individual, but the final results, both as regards the mode of death and the brain changes by which it is accompanied, are substantially the same for all cases. Thus, just as cortical encephalitis will produce different symptoms, more intense and dramatic in a vigorous and capable professional man than it originates in an ignorant clown, or in a chronically drink-fuddled sot, who glides by almost imperceptible stages into stupid dementia, though the last states of these men be clinically identical, so it is reasonable to suppose that, in an old and worn-out brain, the symptoms to which it gives rise will differ from those manifested by an adult in the prime of life. The one, as it were, slides down a gentle slope, the other is hurled down a precipice, but both alike meet at the bottom of the hill; and death of the higher brain centres, be it gradual or acute, is uniform in its results.

If this be true, as I shall hope to prove it is, general paralysis, so called, does not differ specifically, but only accidentally, from the nosological type known as senile dementia. The differential factor consists, not in the disease attacking the individual, and it cannot be too often insisted on that disease is not an entity, ("like cats and dogs" as Florence Nightingale puts it), but in the age and condition of the individual attacked.

Dr. Clouston, one of the most extreme advocates of the morbid unity of general paralysis, says of the disease: "I look upon it as being equivalent to a premature and sudden senile condition, senility being the slow physiological process of ending, general paralysis the quick pathological one."

That is precisely my contention, but Clouston treats of senile dementia in a separate chapter from general paralysis, and elaborately differentiates the one from the other. If we can prove, however, that the pathology of both is substantially identical, while whatever differences there may be in the symptoms is accounted for by the respective potentialities of the adult and the senile brain, we shall be justified in classing both under the common category of cortical encephalitis, an important step in the direction of nosological uniformity and simplification.

In proof of my contention I select the following lesions from among those which Dr. Clouston gives as typical of senile dementia :—

Thickening of the calvarium ; thickening of the dura mater, which usually adheres to the skull-cap ; thickening and opacity of arachnoid and pia mater, which latter is sometimes found to be adherent to the convolutions ; pachymeningitis hæmorrhagica ; cerebro-spinal fluid superabundant, milky, and full of microscopic *débris* ; the grey substances of the convolutions irregularly thinned and soft in texture, the perivascular canals being enormously enlarged ; atrophy of parts of convolitional surface ; miliary aneurisms and pin-point apoplexies ; the lining membranes of the ventricles granular, and the lateral ventricles enlarged from interstitial brain atrophy.

Microscopically : Degeneration of large cells in the inner layers of the convolutions, with loss of their processes ; atrophy of smaller cells and nuclei ; enlargement of vascular canals ; and the *débris* of granules and hæmatin crystals. In many cases the nerve cells and fibres gradually disappear, leaving only an irregular loose reticulation of cell walls, neuroglia, and atrophied vessels.

It cannot honestly be said that this pathological *ensemble* given by Dr. Clouston as descriptive of senile dementia differs materially, if at all, from the commonly recognized pathology of general paralysis. Indeed, it might very well stand as a description of the typical lesions of that disease.

With regard to symptoms, Dr. Clouston well illustrates the difference of potentiality from mental aberration by saying—“ In the young man there exists an organic craving for action, which, not being gratified, there results organic discomfort. In the old man there is an organic craving for rest, and not to gratify that causes organic uneasiness.” We get, as he says, an immense variety of mental symptoms. A marked type is that of pure senile elevation, with delusions of great possessions and power. Such delusions, existing along with mild maniacal exultation and the senile articulation, “ are very like cases of general paralysis ; they are constantly diagnosed as such. But general paralysis scarcely ever appears after 60, and never after 65.”

Similarly Simon disposes of the differential diagnosis with marvellous simplicity, according to the age of the patient—“ Over 60, dementia senilis ; under 60, general paralysis.”

Thus if a man is affected with cortical encephalitis at 59, and dies in his 61st year, he is a general paralytic at the beginning of his illness, but ceases to be such on his 60th birthday, and dies a senile dement. If cortical encephalitis may never receive the name of general paralysis after the age of 60, *cadit questio*; but surely this is reducing nosological classification to an absurdity. Simon adds naively that in many cases the symptoms are alike in the two diseases, and that this is necessarily so, as in many the pathology is identical. I maintain that this is tantamount to saying that the two diseases are fundamentally one and the same.

I am not attempting to ignore or to minimize the force of the differential symptoms on which Marcé, Mendel, Voisin, and others rely to establish a diagnosis. What I maintain is that these symptoms have no specific or pathognomonic value as indicating different diseases, but result from the difference of the soil in which the seed is planted. I believe that the pathological process underlying general paralysis and senile dementia is identical, and the symptoms analogous in both, the differences being accounted for by the fact that the brain of the adult is, so to speak, in unstable equilibrium on a higher, and the brain of the old man in relatively stable equilibrium on a lower, plane.

Closely allied to senile insanity is paralytic insanity or organic dementia, which is defined by Dr. Clouston as "that form of mental disturbance that accompanies and results from such gross brain lesions as apoplexies, ramolissements, tumours, atrophies, and chronic degenerations of the brain, affecting the convolutions and their functions either primarily or secondarily." Concerning this he asserts—"It has nothing whatever to do with general paralysis," and again that it differs from general paralysis in not being a *specific* disease of the frontal convolutions.

To say that general paralysis is a *specific* disease of the convolutions is to beg the whole question, and, while freely conceding that primary cortical encephalitis in the adult furnishes a striking clinical *ensemble* sufficiently dramatic to warrant its being studied as a separate clinical variety under the name of general paralysis, I venture to maintain that, neither clinically nor pathologically, can any *essential* difference be demonstrated between this variety of primary encephalitis and that which occurs as a secondary result of gross cerebral lesions.

In paralytic insanity we meet with tremor of the tongue,

tremulous articulation, which, when the convolutions themselves are affected, resembles that of the second stage of general paralysis, inequality of pupils, congestive attacks, with apoplectiform or epileptiform seizures, motor paresis and paralyzes, and mental symptoms of every variety, from raging mania to quiet melancholia, but tending always finally to dementia, and ending in coma and death.

As Dr. Clouston says: "In a brain with general senile degeneration and diseased arteries a local lesion occurs, and we have it exciting and lighting up a general convolitional flame." Precisely, but I fail to perceive in what essential respect such cases differ from those cases of pathological propagation as from spinal tabes dorsalis, propagation along the optic tracts in optic neuritis, propagation along the auditory nerve, or upwards from a Wallerian atrophy of one of the motor nerves of one of the fingers, etc., etc., which Dr. Clouston himself adduces as instances of general paralysis, or why such cases should be regarded as instances of *specific* disease of the frontal convolutions, while cortical disease by propagation from a focal lesion, such as a limited cerebral hæmorrhage, is pronounced to have "nothing whatever to do with general paralysis."

Even Voisin admits that a focal cerebral lesion, such as apoplexy, may lead by propagation to true general paralysis, for he allows that it is impossible to establish a differential diagnosis between two conditions which give rise to the same symptoms and present similar lesions.

Turning our attention now to the other extreme of life, we may ask whether a cortical encephalitis substantially identical with that of general paralysis does not sometimes occur in the young, and there is great attraction in the hypothesis which Voisin suggests, that certain cases of idiocy are cases of general paralysis occurring in childhood.

Dr. Wiglesworth has recorded a case of general paralysis undoubtedly commencing at 15, in a girl who died at the age of 21. Two cases of undoubted general paralysis, in which the diagnosis was confirmed by a post-mortem examination, are recorded by Dr. Clouston as occurring at the ages of 16 and 12 respectively; Leubus and Duchek record cases occurring at 17 and 18, Guislain at 17, Dr. Köhler saw a case of apparent general paralysis in a girl aged 6, and Claus declared he had seen it in a young idiot girl. Hilton Fagge relates, but without apparently recognizing their significance, two cases of cortical encephalitis, one quoted from Dr. Wilks, oc-

curring in a girl of 14, the other in an infant of eighteen months; in both these cases the pathology, and in the first the clinical history also, corresponded accurately with that of general paralysis.

Some of the cases of inflammatory and of hypertrophic idiocy, most of which die early, with or without fits, and some with paralytic symptoms, as related by Dr. Savage, would seem to belong to the same category. Wedl has described pathological changes identical with those of general paralysis in the brains of three congenital idiots. It is well known that general paralytics are particularly prone to engender idiot children. While not disputing the comparative infrequency of general paralysis in early life, and its elective affinity for the age of adult vigour, I maintain that there is nothing of a specific or pathognomonic character about this election; and just as the same process gives rise in the adult to a complex of symptoms known as general paralysis, and in the old man to a complex of symptoms, less intense, and more slowly evolved, known as senile dementia, so it is not unreasonable to suppose that this process may at times occur in the young, and escape recognition, the symptoms being modified in conformity with the age, and not conforming to the clinical type which we recognize in the adult by the name of general paralysis of the insane. On the whole, perhaps, we cannot hope as yet formally to identify this disease in children; still it were as well to bear such a possibility in mind, and to allow our views of the disease to be unbiassed and open to extension. A further example of the manner in which an inadequate nomenclature based partly on clinical phenomena, partly on imperfect pathological definitions, and on distinctions often quite arbitrary, may serve as an idol of the market-place, and conceal from view the true nature and extension of pathological disorder, is afforded by the way in which chronic meningitis, cerebral congestion, softening of the brain, and other terms describing more or less accurately abnormal cerebral conditions, are used by authors as if they represented independent nosological entities, specifically distinct from allied cerebral conditions passing under other names. It is one of the many unfortunate results of the practical divorce of lunacy from other branches of medical study that general physicians often treat general paralysis of the insane as if it were a disease which, belonging to the exclusive province of alienists, had no concern for themselves, and with which

they were under no obligation to be acquainted, and that even eminent neurologists are unused to witnessing autopsies in lunatic asylums, and are to a great extent ignorant of the valuable pathological material to be found in them.

Thus Hilton Fagge speaks of chronic diffused cerebritis as an extremely rare disease, of which he can only find two examples, both in children, entirely ignoring in this connection general paralysis, which is a very common disease and which accurately corresponds to this definition. Similarly, Dr. Spencer Ramskill describes chronic meningitis as "a very rare affection," disregarding "that form of the affection which is complicated with chronic inflammation of the superficial layer of the cortical substance of the brain," viz., general paralysis, "as the affection is always treated of in conjunction with insanity," as if this fact removed the disease altogether from the province of the physician. On the other hand, Dr. Ramskill considers that chronic meningitis, though of rare occurrence in middle age and early life, is not so rare in old age, and quotes from Maclachlan a description of it which corresponds in all respects with ordinary senile dementia. But the lesions of senile dementia are certainly not confined to the meninges, and I have given reasons above for believing that the disease is practically identical with general paralysis, the symptoms being modified only by the age of the patient.

In this connection it is worth while recalling that the disease, *i.e.*, general paralysis, was first described by Bayle under the name of "chronic meningitis," a name which, though it does not cover the whole ground, is based on a pathological fact, is accurate as far as it goes, and approximately adequate. Chronic cortical encephalitis, or meningo-encephalitis, were a preferable term, but when the disease was rechristened by a name based on purely clinical phenomena nothing was gained and much lost, the malady being unduly specialized, and unnecessary limitations being superimposed, while its pathological basis was, as it were, thrust out of sight.

It would not be too much to say that general paralysis covered many cases of congestion, and of chronic softening of the brain, and the great majority of cases of cerebritis, yet these conditions are described by Drs. Russell Reynolds and Bastian to the well-nigh complete ignoring of general

paralysis. These authors, after giving a description which is no doubt clinically and pathologically accurate, so far as it goes, "of this condition (*i.e.*, cerebritis), so far as it comes under the cognizance of the physician," add, "It should be stated, however, that many pathologists of the French school look upon general paralysis of the insane as a disease due in part to a species of chronic cerebritis." But all alienists of any importance, whether French, as Voisin; German, as Mendel and Simon; or English, as Mickle, Bevan Lewis, and Savage, look upon general paralysis as due to chronic cerebritis, and include this view in their definitions of the disease. It appears to me that a description of cerebritis "as it comes under the cognizance of the physician," having no reference to the cerebritis of insanity, as it comes under the cognizance of the alienist, has about as much importance as a treatise on the fauna and flora of Europe compiled from observations on Hampstead Heath.

Drs. Reynolds and Bastian insist on progressive deterioration of cerebral faculty, and paralyzes, hemiplegic or general, as essential features of chronic softening of the brain. As an instance of the pathological importance of asylum material, Dr. Bevan Lewis found that out of 853 fatal cases of insanity, 463, or more than half, exhibited a greater or less degree of cerebral softening.

Voisin has attempted to make an independent disease of *folie congestive*, which he differentiates, on wholly insufficient grounds, from general paralysis. This form is not, so far as I am aware, recognized as a clinical variety by other alienists, and the cases on which he grounds his observations were probably cases of general paralysis in an early stage. In another place Voisin himself speaks of a congestive process as forming the essential lesion of general paralysis. This is in accordance with the views of most authorities.

Dr. Mickle seems to lean to this view, and quotes in its support the experiments of Mendel, in which intermittent rapid rotation in dogs produced symptoms and lesions identical with those of general paralysis. According to Dr. Mickle, some cases of cerebral tumour, perhaps by the vaso-motor disorder, and therefore encephalic circulatory change they induce, give rise to expansive signs, as in general paralysis, or produce dementia as well as motor signs. Voisin admits that his *folie congestive* may, though, as he thinks, rarely, pass into general paralysis.

I am not of course contending that every case of encephalitis, still less every case of cerebral congestion, cerebral softening, or cerebral tumour, is a case of general paralysis, which is, for me, not a specific disease, but a convenient clinical term for a *symptomen-complex* or average of phenomena remarkably uniform in a large majority of cases associated with chronic meningo-encephalitis. But I maintain that by the study of diseases in too exclusive a dependence on nomenclature, or by what may be termed the pigeon-hole method, many valuable nexus and analogies are lost sight of, and, in particular, that for neurologists to treat of such conditions as cerebral softening and cerebral congestion without reference to general paralysis of the insane, or to the pathological material of asylums, and, on the other hand, for alienists to treat of general paralysis without reference to allied cerebral conditions that do not always find their way into asylums, is a mutual error that cannot but retard the advance of cerebral pathology; and, pursuing the same metaphor, the remedy I would propose is to break down the partitions between neighbouring pigeon-holes and, disregarding to a great extent the labels which they bear, to study diseases of the brain as a whole, subordinating details to a comprehensive grasp of the subject in its entirety.

It remains to consider the relations of general paralysis to so-called simple chronic mania. At one time there was a tendency to regard simple mania as a functional disease of the brain, in opposition to general paralysis, which has always been recognized as involving gross organic degeneration. But, on the one hand, a case of general paralysis terminating early, as from pneumonia or other intercurrent disease, may present at the autopsy no obvious changes. I once witnessed a post-mortem at Bethlem Hospital on a typical case of acute general paralysis. A very careful examination revealed no lesions appreciable to the naked eye, beyond the presence of minute "ice-plant" granulations on the calamus scriptorius, which were pointed out by Dr. Savage. I submitted portions of the frontal cortex from this case to microscopical examination by a careful and competent pathologist, who pronounced them to be specimens of normal brain.

On the other hand, Dr. Maudsley says that in cases of simple chronic insanity, when the degeneration has been extreme and long continued, "morbid changes are seldom looked for in vain."

Dr. Maudsley insists very strongly on the fact that the morbid changes usually associated with general paralysis, "thickening and opacity of the arachnoid, morbid adhesion of the pia mater to the grey substance beneath, local discoloration, or softening, or superficial induration of the cortical layers, more or less atrophy of the whole brain, particularly of the convolutions, with greater firmness of its substance, enlargement of the ventricles, with serous effusion into them, diffuse pachymeningitis, and degeneration, atheromatous or calcareous of the arteries," all the changes, in short, which are fundamentally attributable to "a rank or exuberant growth of connective tissue, and a coincident or sequent decay or destruction of the proper nervous elements," "though more common in general paralysis than in any other form of insanity, are by no means peculiar to it, nor are they constant in it," but may be found in many cases of simple chronic insanity.

There is, therefore, no pathognomonic lesion of general paralysis. Equally, on the other hand, there is, as Dr. Savage observes, "no single pathognomonic symptom of this disease." Delusions of grandeur, and insane exaltation, are often found in simple chronic mania, while general paralysis may simulate any and every variety of insanity: inequality of pupils, lingual and facial tremor, pareses and paralysees, cerebral seizures; none of these symptoms are pathognomonic. There is not one that may not be encountered in simple chronic mania, alcoholic, saturnine, or syphilitic insanity.

Again, if the demarcation between simple, or, as Mendel expressly terms it, functional, insanity and general paralysis were as absolute as Dr. Clouston, M. Voisin, and others would have us believe, if general paralysis were, as it has been called, a specific disease, the occurrence of general paralysis in a simple chronic maniac would be a rare and accidental phenomenon, as purely fortuitous as an attack of influenza in a man suffering from secondary syphilis, and, indeed, Dr. Clouston, who has witnessed the transition in one case, frankly treats the occurrence as accidental and of no significance; but Voisin, though no man could be more firmly convinced than he of the absolute distinction between the two, admits with naïve and reluctant candour, apologizing profusely for the "regrettable" confusion that may hence arise, that the resemblances are such in some instances as to deceive even the very elect, that there are many and

definite relations between simple mania, or congestive mania, and general paralysis, that both may arise from the same causes, and may pass into and become general paralysis.

This transition, Voisin leads one to infer, is by no means uncommon, and he quotes numerous cases in illustration of it, from Calmeil, Baillarger, Parchappe, and others.

Thus we see that general paralysis, though not an invariable, perhaps not even a frequent, is yet a perfectly natural and, so to speak, legitimate outcome of simple chronic mania, while the pathological conditions most frequently associated with general paralysis are by no means peculiar to it, but may be found in greater or less degree in all cases of long-standing insanity.

And this brings me to the conclusion towards which I have been working, which is that there is nothing whatever of a *specific* nature about general paralysis; precisely the same causes that produce simple mania in one case will produce general paralysis in another, the determining factor being the susceptibility of the patient.

I have heard Dr. Savage, who has a genius for happily-suggestive metaphor, propound what he calls his "ripening pathology." Just as a slight blow, which has no appreciable effect on an unripe or an already rotting pear, causes in the ripe fruit a bruise which becomes the focus of a progressive and spreading degeneration, so the causes which lead to simple, and perhaps transient, insanity in immature or in senile brains will, in a man in the prime of life, with a brain in an unstable equilibrium, cause a progressive cortical encephalitis, or, as has been picturesquely said, "light up a general convolitional flame."

General paralysis may be said to require a certain *modus* for its development. It is not every man that is capable of developing general paralysis; a stolid or a mentally flabby man seldom does so, but among general paralytics may be found some who have been master spirits of the world. The typical victim is a man between the ages of 35 and 45, at the zenith of his intellectual and physical powers, of a sanguine temperament, great mental activity, and ardent imagination. In such a man, given a certain nervous diathesis, and a brain in unstable equilibrium, together with a sufficient exciting cause, overwork, worry, drink, or whatever it may be, and there results a cerebral inflammation of what I may call (without unduly insisting on the term) a sthenic, a more or less rapidly progressive type; the very activity of the brain-

cells, which lends a certain character of exaltation to the delusions, accelerates their destruction, and the flame spreads with a violence proportioned to the inflammability of the material on which it feeds (the activity of the brain-cells), till it has burnt itself out.

The hereditary relations of general paralysis, and whether or no it should be classed with the insane diathesis, have been matters of some dispute. Dr. Savage declares, somewhat too summarily, "the general paralytic has a non-neurotic history;" Morel and others have held that the disease is rarely or never hereditary; Voisin pronounces it to be hereditary in the majority of cases, and quotes Calneil to the effect that among the ancestors of general paralytics (in one-third of all cases) may be found every variety of insanity; König and Simon also give a percentage of about a third; Mendel of 34·8 per cent.

Recent researches have, however, brought to light the diathesis to which the disease indisputably belongs. Lunier, writing in 1849, seems to have been the first to strike the right note. While insisting on the importance of heredity in the causation of general paralysis, he points out that the ancestors of general paralytics have been apoplectic, paralytic, epileptic, or demented rather than functionally insane. Verga, Doutrebente, and other authors have held similar views.

The matter has been finally settled and placed on a sound statistical footing by MM. Ball and Régis in an interesting and authoritative series of papers communicated to "L'Encephale" in 1883 on the families of the insane. From an exhaustive consideration of vital statistics, they clearly show that general paralysis does not belong to the same diathesis as so-called functional insanity, but to the cerebral, or, as Doutrebente calls it, "L'Hérédité des tendances congestives." It is interesting to note that, on their showing, general paralysis as measured by vital statistics has very intimate affinities with alcoholic insanity.

In conclusion, my object in this paper has been to demonstrate that general paralysis is in no sense a specific disease, but a clinical variety of chronic diffuse interstitial cortical encephalitis. I admit that the term general paralysis may usefully be retained as indicating a sufficiently well-marked clinical type, but by comparing it with allied cerebral conditions I have tried to show that its essential identity with some of these has been obscured by the mania for differential

diagnosis that possesses such writers as Dr. Clouston and M. Voisin. The term cortical encephalitis includes not only all varieties of general paralysis, but many other conditions hitherto wrongly differentiated from it, for all varieties of cortical encephalitis are pathologically homogeneous, and though clinically they furnish many different *types*, it is a grave error to treat these as distinct nosological *species*.

CLINICAL NOTES AND CASES.

Case of General Paralysis occurring in a Girl Aged Nine-and-Three-Quarter Years. By EDWIN L. DUNN, M.B., etc., Senior Assistant Medical Officer, Berks County Asylum.

E. E. C., female, was admitted to the Berks County Asylum on March 28th, 1894. It was stated in the certificate to be the first attack, and of five months' duration. She was described as dangerous, but neither epileptic nor suicidal.

Family History.—There is no family history of alcohol, phthisis, or insanity.

History previous to Admission.—She was born January 16th, 1884. The cause of insanity was stated to be a fall which she had about Easter, 1893, but there is no history of her head being injured, and she returned to school in a few days. On October 14, 1893, she was admitted to the Royal Berks Hospital at Reading. There she was stated to be suffering from hydrocephalus and chorea. Her mother states that she was "rather strange" before her admission to hospital. Previous to this, however, she is described as having been a child of average intelligence. She was able to read and write, run errands, and so on.

On admission to hospital she is noted as being "pale and thin, looking older than nine years, of weak intellect, and suffering from slight choreic movements."

On November 7th she is noted as having shown manifestations of excitement alternately with depression. Pupils unequal. General nutrition improved.

On November 18th, as she was very noisy, constantly screaming out and disturbing the other patients, she was transferred to the O.P. department.

During her stay in hospital her nightly temperature rose on a few occasions to 99°, and once to 100·4°.

After leaving hospital she began to show well-marked symptoms of insanity. She is stated to have suffered from sudden fits of crying. At times she was restless and violent, at others silent and depressed. She did not recognize her parents, and complained of

Plate I.



Fig. 1.



Fig. 2.



Fig. 3.



Fig. 4.

To illustrate Dr. Greenlee's paper in April No., 1895.

Plate II.



Fig. 1.



Fig. 2.



Fig. 3.



Fig. 4.

To illustrate Dr. Greenlee's paper in April No., 1895.

"imaginary loss of money." Her speech began to fail at the time of her entrance to the asylum.

On admission to the Berks Asylum the patient is noted as "anæmic. Pupils semi-dilated. Right reacts normally; left is fixed. Head of large size. Tongue straight, slightly furred. Palate not unduly arched. Body extremely well nourished. Heart and lungs normal. Pulse 104. Knee-jerks present. No clonus."

Mentally she showed profound dementia. No reply to queries could be obtained from her. Never speaks except to cry "Mother" occasionally. She constantly cries without apparent cause. Is vicious; bites and scratches those around her. She requires feeding with a spoon, and is unclean in habits.

The following is a brief *résumé* of her case while in this asylum:—

On April 21st she is noted as menstruating. Previous to this she remained in the same demented state as on admission. She was constantly grinding her teeth and showed considerable difficulty in swallowing.

Except that her physical condition gradually deteriorated there is no change to record till September 18th. On that date she had an attack of epileptiform convulsions, chiefly affecting the right side, and followed by paresis. On September 23rd the paresis had passed off. It was noted that she walked with an inclination of her body to the right. The left pupil was fully dilated, and the right contracted.

October 26th.—There is marked dilatation of the left pupil, and flattening of the left side of the face. The right pupil is semi-dilated and reacts sluggishly. No reactions in left.

December 10th.—She has been growing very feeble for some time. Her appearance is wizened and that of an old woman. Lies in bed grinding her teeth and sucking and picking the bed-clothes. She is only able to swallow a small quantity of food at a time without regurgitation.

February 7th, 1895.—She has become much more feeble; is almost moribund. Takes no notice of anything. Swallows with extreme difficulty, and regurgitates most of her food. Is constantly grinding her teeth and screaming out. Very dirty in habits.

She sank and died on February 26th, 1895.

Autopsy 36 hours after death; weather cold.

The body is very emaciated. There is a small bed sore over right trochanter.

Skull cap is dense and brittle; shows total absence of *diplœ*. There is excess of cerebro-spinal fluid. Dura is firmly adherent to skull cap in middle line. There are no clots in sinuses. On removing dura the left hemisphere of the cerebrum is found to be covered by a large rusty-coloured false membrane. This is from two to three m.m. in thickness. It is adherent to the dura at its under surface, but strips easily therefrom. It is likewise detached with ease from the leptomeninges.

The leptomeninges are tough, thickened, and opaque; they are adherent to the gyri throughout on both sides, with the exception of the anterior two-thirds of the first and second frontal and inferior temporo-sphenoidal gyri on both sides, and the left fusiform and lingual gyri. The summits of these excepted gyri show a smooth surface after stripping the leptomeninges, while those of the other portions of the brain present the typical worm-eaten appearance.

The gyri are of average complexity and somewhat wasted. Brain substance as a whole is much softened except in occipital region on both sides.

On section the grey matter is of average thickness; it is slightly hyperæmic. White matter is very œdematous. Basal ganglia are hyperæmic. Ventricular ependyma over both caudate nuclei is markedly granular. Ependyma of fourth ventricle granular to an extreme degree. Cerebellum, pons, and medulla appear normal. Basal vessels healthy. Brain weight, 35 oz.

Right lung shows slight basic congestion. Left lung normal. Heart normal. Liver shows small patches of fatty degeneration throughout its substance. Both kidneys are pale and greasy on section, otherwise normal. Spleen normal. Stomach is dilated; walls of stomach and intestines thin. There is total absence of omental fat. Pelvic viscera normal.

Microscopical Examination.—Fresh sections were cut from the motor area of the cortex. As these were not cut until some sixty hours after death, considerable difficulty was found in getting satisfactory sections, necessitating the cutting of portions of several gyri. This may account for the fact that the appearances presented were far from uniform; on the whole, however, they were extremely suggestive of general paralysis. In the superficial layer of the cortex, the flask cells normally found at the edge were increased in number, and more deeply stained than in healthy specimens, and in its lower half there was a plentiful overgrowth of the scavenger elements.

The cells in the Betz region were in many instances surrounded by scavenger cells, their vascular process and the tentacle attached to the nerve cell being very well seen in many sections. Where this clustering of scavenger cells around the motor cells existed, the latter had undergone fuscous degeneration, often to a marked extent.

The cell-laminæ between the Betz groups and the surface layer of cortex were free from scavenger cells. But they presented a crowded appearance from the enormous number of nuclei interspersed amongst the nerve cells; these were placed singly or in groups, and when having a linear appearance probably denoted the course of a vessel.

The vessels generally were increased in number, and showed free nuclear proliferation on the adventitia. In the deeper layers

of the cortex they were almost concealed by an overgrowth of deep-stained nuclei.

The cells other than those of the Betz groups were not notably affected.

The foregoing appearances were not constant in all sections, but they may be taken to embrace the principal of the morbid changes existing throughout the parts examined.

Remarks.—The above case, which in its symptoms, course, termination and post-mortem appearances appears typical of general paralysis, seems to be of interest from the extremely early age at which the disorder appeared. If we take the disease as having commenced at or a little previous to the patient's admission to hospital in October, 1893, we find that the morbid process commenced at the age of 9½ years. I have no doubt, however, that from the state of her case on admission to the Berks County Hospital for some months previously she had been a subject of general paralysis. The patient's mother, from whom the history was obtained, was unfortunately uneducated and unintelligent, so that it was impossible to accurately fix the commencement of the disorder.

Among other points of interest we may note the short duration of the disease, which terminated fatally without intercurrent disorder in fifteen or sixteen months. This, together with a case published by Drs. Thomson and Dawson ("Lancet," February 16th, 1895) does not correspond with the deductions drawn by Dr. Wiglesworth ("J.M.S.," July, 1893) from an analysis of eight cases of general paralysis occurring at puberty—that in these cases the disorder tends to be prolonged.

The rapid onset of dementia and absence of grandiose ideas is noteworthy, the only trace of the latter being the complaints of "imaginary loss of money." This corresponds with other published cases.

The fact of menstruation being present and appearing at a period when the disease was well developed, is worth remark, as in previous cases the signs of puberty have, as a rule, been absent.

There is no doubt whatever but that published cases of general paralysis, which at one time was regarded as a disease of middle life solely, occurring in the young, are daily becoming more frequent. Whether this fact is due to more careful observation and improved methods of detecting this disorder, or to a parentage in these cases which has

been affected by *fin de siècle* conditions of existence, would be difficult to say. To me, at least, the former appears the more rational view.

I am indebted to Dr. Murdoch, the Superintendent of the Berks County Asylum, for permission to publish this case.

Notes on a Case of Ataxic Insanity. By JAS. VINCENT BLACHFORD, M.B., Assistant Medical Officer, Bristol City Asylum.

A. T., 44, single, optician. Admitted Feb. 1, 1894. He had cut his throat eight days before, and had been under treatment in the Bristol Infirmary up to the day of his admission. No history of insanity, phthisis, or intemperance in the family could be obtained. He had always been an excitable, nervous man, and had contracted syphilis some years previously. He was said to have been temperate as regards alcohol, but to have lived a fast life.

On admission patient was a thin, straight-featured, refined-looking man, hair dark and scanty, eyes grey.

Thoracic and abdominal organs apparently healthy.

Tongue protruded straight, steady, rather large and flabby, but clean.

Sight and hearing apparently good.

Pupils equal, react to accommodation, but not to light.

Plantar reflexes very slight, probably diminished.

Knee-jerks absent.

No ankle or patellar clonus.

Gait ataxic. Patient turned round with difficulty, and could not stand with eyes shut.

Arms and hands not ataxic.

Complained that his feet felt numb.

Mentally.—Was very depressed; said that he had cut his throat because it was stopped up, and he was afraid that he would be unable to swallow, and would be miserable for the rest of his life; also that he saw faces about him and on the walls.

Feb. 2.—The day after his admission he was slightly convulsed, but soon recovered, and was afterwards very weak.

Feb. 4.—Was somewhat stronger.

Feb. 7.—Complained that everything he took turned to acid on his stomach and caused him pain.

Feb. 8.—Urine tested. No albumen; no sugar.

Feb. 19.—Said he could not swallow, and that his throat was stopped up; when compelled to, however, he swallowed his food, and did not bring it back, although he tried to.

Patient continued in an extremely depressed state, taking no in-

terest in anything, and always saying that he should die, and should never be any better in this world, till *March 12*, when he had a convulsion at 4 a.m., and passed his water in the bed; he was again convulsed from 6.30 to 7 a.m.

March 14.—Had become conscious, though very weak; was very incoherent, and full of delusions about his inside.

March 16.—Hands were becoming ataxic.

March 18.—Was suddenly convulsed and lost consciousness; after the fit had passed off he did not regain consciousness, and his muscles kept constantly twitching, the convulsion and twitching affecting his left side only, namely, the arm and neck, the leg not being affected.

March 19.—Was reported to have been convulsed five times during the night.

March 21.—Patient was still unconscious, and had been constantly convulsed at short intervals, the convulsions being strictly limited to the left side, the leg being now also involved. During the intervals between the attacks he was able to swallow liquid nourishment when placed in his mouth. Pulse 122; very weak; pupils equal; contracted.

March 28.—Patient died at 6.20 p.m., never having completely regained consciousness since the 18th. Since that date he had been constantly convulsed on the left side, having had altogether 269 attacks.

At the post-mortem examination on *March 30th* the following appearances were found:—

Skull cap thin.

About two-and-a-half ounces of fluid in subarachnoid space.

Brain weighed 5½ ounces. There was slight atheroma of vessels at base. Membranes were congested, and œdematous on the motor areas of both sides.

Pia mater stripped easily.

Substance fairly firm. Slightly congested.

Choroid plexus congested.

Ganglia at base apparently normal.

The cord was unfortunately spoilt in the process of hardening, but several sections of the right ascending frontal convolution at its upper part were made.

On examining these microscopically a great part of the superficial layer of the cortex appears to have been washed away, but in that which remained were seen numerous colloid bodies, and also a large number of spider cells.

The former were confined to the superficial layer; the latter were scattered throughout all the layers.

Some of the motor cells were very feebly stained, and contained large masses of pigment. The vessels of the cortex did not appear to be increased in number, nor did the number of the perivascular nuclei appear appreciably in excess.

I have examined the records of all the cases dying since 1890, and can only find one other with similar symptoms. The following is briefly his case:—

E. T., 44, married, clerk. Admitted October, 1889. Died August, 1891. Two years before his admission patient suffered with lightning pains and an ataxic gait; the ataxy had gradually increased up to the date of his admission.

On admission ankle clonus, cremasteric reflex, and patellar reflexes were absent.

Localization of objects was defective.

He could not stand with his eyes shut, and had the characteristic walk of locomotor ataxy.

Mentally was very depressed, refused most of his food, and later on thought he had the plague.

He gradually got worse, always being depressed and having recurrent attacks of the lightning pains. He died suddenly on August 8th, 1891, twenty-two months after his admission.

At the post-mortem examination the pia mater was found to be thickened and its vessels congested, but it stripped easily from the cortex.

The brain substance was soft and friable.

Weight of brain 49½oz.

Remarks.—This case is an instance of the difficulty occasionally felt of clearly differentiating the mental symptoms occurring in some cases of locomotor ataxy and those in general paralysis. From the fact of the bulbar implication in both of these diseases there is a tendency when the former affection is present to ally the mental symptoms to general paralysis.

The question arises as to whether this was a case of general paralysis, with ataxic symptoms, or of locomotor ataxy, with mental symptoms.

In favour of the latter it may be urged that all the physical symptoms were those of typical locomotor ataxy. The feeling of constriction in the throat and acid sensation in the stomach was probably due to pharyngeal and gastric crises.

Then there were the early and permanent loss of knee-jerks, the ataxic gait, feeling of numbness in the feet, and Argyll Robertson pupils. These occurring in the same subject, and remaining permanent, were very strong evidence of locomotor ataxy.

On the other hand, the rapidity of the course and the mode of termination in convulsions were symptoms which

are not, as a rule, met with in ordinary locomotor, and were more in favour of general paralysis.

The very rarity of such cases opens the question as to whether they may not be coincidences of the two diseases in the same subject; the exalted ideas and happiness of the general paralytic being clouded and rendered melancholic by reason of his physical sufferings.

If it is, indeed, a case of locomotor ataxy, with mental symptoms, it must be of a more acute type than usually occurs.

If, on the other hand, it is general paralysis with ataxic symptoms, it must be considered as one of those rare cases which Dr. Bevan Lewis describes as "bearing testimony by its clinical history to the clear alliance (if not identity) of the morbid process underlying tabes dorsalis and general paralysis."

Notes of a Case of Removal of Foreign Bodies from the Vagina. By W. RUSSELL STRAPP, M.B., Assistant Medical Officer, Inverness District Asylum.

The following notes of a case of insertion of foreign bodies into the vagina may be of some interest to the readers of this Journal, chiefly on account of their long existence there, and of the comparatively slight local or constitutional effect produced thereby.

M. D., æt. 51, was admitted into the Inverness District Asylum on July 7th, 1875, suffering from mania, with delusions of suspicion, and from these conditions she still suffers, though to a less marked degree. In addition she seems to have directed her attention specially to her genital organs, while many of her ideas and much of her language was more or less of an erotic nature.

Until three years ago, her bodily health was excellent. In May, 1892, she suffered from leucorrhœa, for which she was treated *secundem artem* with but little success. In November, 1892, this still continued, and in May, 1893, she was suffering from a peculiarly offensive and profuse vaginal discharge, then reported to have been caused by patient forcing a foreign body, said to be a candle-extinguisher, into her vagina. The woman herself seems to have admitted this, and remembered both the time and order of insertion of the various foreign bodies. In May, 1893, attempts were made to ascertain definitely the true state of matters, but all failed owing to the difficulties met with from firm fibrous

bands closing up the vagina and other causes. Subsequent attempts were made with a similar object, but without success. About the middle of April, 1895, the patient first came under my direct notice, suffering from an abundant and very foetid leucorrhœa, being at this time very irritable and excited, while her conversation partook much of the nature of mock modesty.

On vaginal examination, a dense fibrous ring was felt about one inch from the vulva, and resisting the passage of the index finger. This was thought to be caused by the wide end of the candle-extinguisher. Accordingly, on April 28th last, she was anæsthetized to determine whether this were so, and to secure the removal of the foreign body. I at once satisfied myself of the presence of a metal instrument filling up the vagina and posterior fornix, and covered up and bound down very firmly by dense tough fibrous tissue. After considerable difficulty, as care was necessary and the metal was so firmly bound down, I succeeded in removing, firstly, a thin wedge of wood, two inches long, one inch broad at base, and three-eighths of an inch thick; secondly, an ordinary candle-extinguisher, two and three-quarter inches long, and one and a quarter inch broad at the wide hollow base, and provided with the hook usual on such articles. The apex of the extinguisher was towards the vaginal roof, while the base was towards the vulva. The piece of wood was lying inside the candle-extinguisher. Lastly, I removed a round brass ball, two and three-quarter inches in circumference, with a short stem a quarter of an inch long. All these had formed a large cavity extending five inches from the vaginal orifice up into the posterior fornix, which had been pushed up towards the pouch of Douglas to form the required space. No fistula or other complication was discovered. The patient is now rapidly convalescing, and expresses great satisfaction over the removal of her "trouble."

Remarks.—A lesson which may be drawn from the preceding case is the importance of ascertaining accurately the source of all leucorrhœal discharges in the insane, always remembering the possibility of foreign bodies being present. Further, were the vagina examined in every case of post-mortem examination, it might reveal the fact that foreign bodies were more frequently present in this situation than is generally supposed.

Acute Mania in a Case of Pelvic Cellulitis. By J. CHRISTIAN SIMPSON, M.B.

The rarity of this complication in the course of pelvic cellulitis is sufficient reason for my publishing the following notes of it.

Mrs. N., aged 33, has had three children; her puerperia were normal, and she enjoyed good health till February, 1894, when symptoms of pelvic trouble first began. These were thought to be due to some retroversion, and a Hodge pessary was introduced, which seemed to give some relief. She then went to Devonshire, and while there had so much pain that the doctor removed the pessary and said that no displacement existed. After the patient returned home a consultation was held, and a retroversion again diagnosed and treated by a large ring pessary. Her medical attendant tried the effect of electricity, and for this purpose had frequently introduced a sound. During this treatment menstruation recurred twice with only a fortnight's interval, and there was much pain. On June 28th I was called to see her. She was in considerable pain, and had not slept for nearly three weeks from one cause or another. No electricity had been given her for about ten days. On removing the ring the vagina was found to be acutely tender, especially in the left fornix and posteriorly. The uterus was not retroverted and was fixed. Patient slept for twelve hours after the removal of the ring, and it was hoped that the cellulitis would soon be amenable to ordinary treatment. On July 1st, when seen about ten o'clock in the forenoon, she was excited and hysterical, thought she was going to die, and would not lie down in bed. She was ordered to continue the mixture of hydrobromic acid and strychnia which was prescribed the previous day. She did not sleep next night, and looked "raised" in the forenoon. At 1.30 p.m. I was hurriedly summoned, and found her lying in bed acutely maniacal, tearing the clothes, grimacing, and perfectly incoherent. The 125th of a grain of duboisine was injected, and nourishment ordered to be given freely. At 7 p.m. she was somewhat quieter, and had had short snatches of sleep; pulse 120; duboisine not repeated.

July 3rd.—Patient had a fair night and seemed more sensible; pulse 120, temperature 99.4. She had no subjective pain, and the pelvic condition was much the same; took food well; bowels moved by enema and urine passed; the 250th of a grain of duboisine was injected. In the evening the temperature was 100, and the pulse 120. The same dose of duboisine was injected.

July 4th.—Mental condition worse; delusions as to being full of devils and other religious ideas; temperature 100 and pulse 120.

Taking nourishment well, but passing foul smelling motions and urine in bed. Duboisine repeated, as patient was still very restless. In the evening a certain amount of softening was felt high up in the rectum; temperature 101.2 and pulse 120.

July 5th.—Becoming more dull and apathetic, behaving very dirtily, and still passing everything in bed; temperature 100, pulse 116. Duboisine repeated; taking food well, though tongue foul and offensive; evening temperature 101, pulse 120.

On July 6th Mr. Skene Keith kindly saw her with me, as there were doubts whether there was any pelvic suppuration. He found the uterus generally enlarged, the fundus reaching to three inches above the pubis. It was completely fixed by general pelvic exudation, and behind the cervix there was a spot the size of a shilling decidedly softer than the surrounding parts, and it appeared as if an abscess might form. The rectum was patulous, and this soft spot was also detected by this examination. The prognosis given was favourable both as to the pelvic and mental conditions. Mr. Keith recommended the continuance of the hot douches and glycerine plugs which had been administered before she became so restless.

Next day after a brisk purge the temperature was 99.4, and pulse 112. She was still apathetic and dirty, and tried to tear her labiæ. The evening temperature was 100 and the pulse 116. Duboisine was repeated.

On July 8th she was much better, and asked for the bed-pan. No further appearance of suppuration; temperature 99.2, pulse 112. Still thinks she has some devils, but she has no pain. Paraldehyde, in 20 m. capsules every two hours till sleep was produced, was substituted for the duboisine. Temperature and pulse as before.

July 9th.—Had a nice sleep after the second dose of paraldehyde; pulse 108, temperature 99. No feeling of softening now felt, bowel moved by enema, douches and plugs continued.

July 11th.—Temperature normal, pulse 98. Mental condition quite clear at times, and at others she thinks there are fewer devils.

July 13th.—Temperature and pulse now normal both night and morning.

July 20th.—Patient able to sleep without any hypnotic, eating well, and though irritable at times is very much improved. The roof of the vagina was painted every third day with strong iodine till July 30th, when menstruation reappeared after six weeks amenorrhœa. There was no pain whatever. She now has no irritability, and apparently the delusions have quite disappeared. Her opinion is that she feels better than she has done for months.

OCCASIONAL NOTES OF THE QUARTER.

Collective Investigation.

If any sign were required to give assurance of the vitality of the Medico-Psychological Association, it is not far to seek in the hearty reception accorded to recent proposals to form Committees for the purposes of collective investigation. When Dr. Mercier put his paper on the agenda of the last Annual Meeting, it was generally felt that it would elicit promises of active support, and regrets were expressed that time did not permit of this important subject being dealt with at Dublin. There has, however, been no serious loss of time, as opportunity will, no doubt, be found to convene members specially interested in the course of the forthcoming Annual Meeting in London, when definite proposals, methods, and aims can be discussed and the plan of action agreed on.

The Committee appointed at Glasgow, on the initiative of Dr. G. M. Robertson, have not yet met, and it may be that their report will not proceed on the identical lines indicated by Dr. Mercier. But it is a question whether such work should not be undertaken in sections, and the general results compiled and abstracted from the facts ascertained in various parts of the kingdom. If a general agreement as to the scope, methods, and subjects for investigation were conceded, it would seem that the actual work might be distributed by districts with advantage in respect of accuracy and celerity. The general averages for the whole population of the kingdom would, doubtless, prove of great value; but the differentiation of the statistics relative to well-defined districts would be an additional gain. In formulating opinions regarding certain broad facts of lunacy, we can at present base our conclusions upon the Reports of the Commissioners in Lunacy for the three countries; but there are many questions at issue which can find no place in formal Blue Books. Again, there are so strongly-marked differences, racial and social, between the natives of the Eastern Counties of England and those of Wales, for instance, that any collective investigation would prove incomplete in so far as it might fail to take into account the geographical distribution of the facts elicited. The comparative rarity of

general paralysis in Ireland and of epilepsy in Scotland has been repeatedly the subject of comment. We might fairly expect more accurate and more detailed information should the Committees entertain the idea of investigating these conditions.

When it is considered how many facts lie unclassified and lost to the scientific world in the records daily and painfully compiled by asylum officials, there cannot but be regrets that years have elapsed without a serious effort to arrange and publish the mass of facts that have accumulated. The well-defined and indubitable facts relating to the daily life of the insane are buried in innumerable case-books and multitudinous reports. There is now a reasonable hope of vivifying them. We have been laden, and we have laden others with the laborious duty of recording. Let us, therefore, brighten toil and fructify it.

No doubt, from time to time the records of particular asylums have been laid under contribution, and so form the groundwork of our knowledge and our ready means of checking or verifying individual experience. But, in many cases, these observers and recorders, working separately, have laboured under obvious disadvantages in drawing conclusions from a limited area. They have not always been able to deal with figures applicable to a wide range; they have not always been able to correct their opinions by reference to the experience of others. There are obvious disadvantages in dealing statistically with small numbers, in failing to correct the personal equation, in hazarding a general statement which may prove to be strictly local in its application.

The much-abused statistical tables of the Association, prepared and authorized after long and careful consideration, have now been in general use for some twelve years and await the attention of our collective investigators. It is a rare thing to take up an asylum report altogether incomplete as to these tables. The labour and expense entailed by their annual production should assuredly be recognized by the Association responsible for their adoption, and a general *résumé* of their contents should be published. The President is not alone in casting doubts on the trustworthiness of these statistical tables. It has been hinted that unworthy expedients are sometimes in use to obtain a just balance. But the Committee will, doubtless, examine such of the tables as they may decide to deal with in minute detail, and

only accept for their purpose what bears the stamp of accuracy and what admits of indubitable asseveration. There is no one sanguine enough to believe that the tables of causation can be more than approximately true, and the vexed question of classification of mental states will, as heretofore, afford opportunity for lively discussion. Nevertheless, there are many other points which present no such disadvantages, and a well-considered plan of action cannot fail to elicit much that will be of permanent value.

We have been careful to avoid entering upon the obvious difficulties in the way. There are always more than enough of those whose delight it is to shout that there is a lion in the path—they have no difficulty in discerning a whole menagerie. We deprecate great expectations and will be well content with the day of small things. It is very certain that friendly, energetic, and capable workers, operating in different parts of the country, animated by a common enthusiasm and proceeding on well-defined lines of action, will not fail to place on record results of the utmost value, results which will command the attention and the gratitude of the scientific world.

Fair Play.

What has become of the Report on the Inquiry at St. Ann's Heath? The weeks and months pass, and the shameful allegations Mr. Labouchere scattered broadcast are in danger of being forgotten. It was a serious and specific charge—nothing less than the “slow torturing to death of a helpless maniac.” The colours were laid on with a lavish hand—“in all the blood-stained records of modern lunatic asylums there is not to be found a more sickening and horrifying story.” Mr. Asquith followed up this precious rhodomontade by appointing a Commission, which proceeded on extremely doubtful authority. The Speaker of the House of Commons, assisted by Dr. Savage, made a full investigation, in the course of which every facility was granted for the elucidation of the case at issue. The responsible managers of St. Ann's Heath Asylum welcomed the inquiry, and after much labour and anxious care the facts are set forth by Mr. Gully. But the Report remains unpublished. It has not been called for by any private member. Mr. Labouchere, having obtained so much sensational “copy,” having served it up with vitriolic sauce, leaves it in the limbo of cynical

forgetfulness. Will no other touch this unclean thing? We have a right to expect that when foul charges are made and investigated, the result should be brought into the light of day. An important institution has been assailed, its responsible directors vilified, the work of all connected with lunacy administration imperilled, defamed, and abused. We demand justice!

O'Reilly v. the Governors of the Richmond Asylum: Interpretation of Recognizance Clause of the Act 30 and 31 Vic., c. 118.

An interesting case was tried in Dublin, in December, 1894, and a decision given of very great importance as to the interpretation of the Act known as the Dangerous Lunatics Act (30 and 31 Vic., c. 118).

Under this Act the majority of the patients in the Irish District Asylums find their way into those institutions. Its provisions, which are extremely simple, are really no more than modifications of an earlier Act, under which, before the existence of District Asylums, lunatics were sent to the Irish prisons.

Its chief enactment is that the Magistrates (one stipendiary or two ordinary justices sitting together) shall have the power of committing by warrant to the district lunatic asylum any person who shall have been arrested "under circumstances denoting a derangement of mind and the intention of committing an offence for which he or she might be indicted." This charge having been made the bench is required to satisfy itself that the individual is insane, and the dispensary medical officer having signed a medical certificate to the same effect, the patient can be forthwith committed.

-The process is convenient because it is summary and permits of immediate committal. It is bad because it makes insanity a crime, and because it is so vague that it is capable of great abuse. Patients committed under this Act are legally known as "dangerous lunatics" (or idiots, as the case may be), but to have done something denoting an *intention* of committing some offence for which one could be indicted is a very insufficient proof of "danger." Nineteenths of the patients in Irish Public Asylums have been committed under this Act, and in most of the cases the intention of offending is indicated by some trifling threat, or by the mere use of bad language.

Sometimes, however, very dangerous patients are thus admitted, and then a singular provision which the Act contains, and which betrays its origin, may lead, and sometimes has led, to deplorable consequences. After setting out how patients may be discharged who have recovered, one of the final clauses of the Act runs thus:—

“ Provided always that nothing herein contained shall be construed to restrain or prevent any relation or friend from taking such person (i.e., the person who has been committed to an asylum under this Act) under his own care and protection if he shall enter into sufficient recognisance for his or her peaceable behaviour or safe custody.”

These words have been always heretofore interpreted to mean that the patient, even though uncured or unimproved, *must* be handed over to the friend who enters into recognizances. To the lay mind indeed it is hard to know what other meaning language so plain and emphatic could bear.

However, there was a patient in the Richmond Asylum who was not only dangerous by Irish law, but was also dangerous in the opinion of the Superintendent, and the latter declined to discharge him on recognizances. The man's friends took the case into the Court of Queen's Bench, where it was dismissed, and then into the Appeal Court, where it occupied the attention of the Lord Chancellor and three other judges for two days. It was decided by the unanimous decision of all the judges that the Act conferred no new right on the friends of the lunatic with regard to obtaining his discharge, but that it merely stated that existing rights should not be interfered with, and as no such right existed before this statute was passed the clause remains permissive and is not mandatory. Therefore it is within the discretion of the asylum authorities to retain a patient even though recognizances have been entered into. Whatever we may think of the almost jocularly misleading nature of statutory phraseology, there can be no doubt that this decision will put an end to a practice fraught with the utmost danger and which often worked most injuriously. The asylum authorities who had the courage to see this matter out deserve to be complimented. We learn that the trial attracted a good deal of attention in legal circles on account of the remarkable ability displayed by the advocates on both sides, especially by Mr. Moore, son of a distinguished Dublin physician, who appeared for the asylum, and to whose ingenious arguments the decision is probably due.

PART II.—REVIEWS.

Alleged Increasing Prevalence of Insanity in Scotland: Supplement to the Thirty-Sixth Annual Report of the General Board of Commissioners in Lunacy for Scotland.

Thorough, lucid, readable, this Report might be taken as a model of what all such Reports should be. Following a similar special Report on the part of the Irish Inspectors as regards lunacy in Ireland, the general conclusion arrived at is practically the same. Whether treated generally, or in some special aspect, as in the "Memoranda" embodied in the Report, the statistics of insanity "afford no evidence that mental unsoundness is to-day more prevalent in Scotland than it was in 1858." Scotland is fortunate in possessing accurate statistics of insanity from the year 1857, when the General Board of Lunacy was instituted, all lunatics, wherever placed, being under the official cognizance of the Commissioners, with the exception of a very small class, viz., those residing under private care and not kept for profit; and as these must form but a small proportion of the whole they may be regarded as a negligible quantity.

The Report opens with a preliminary statement on the part of the Board as a whole, which is in part a retrospect of their views on the subject as previously expressed from time to time in their Annual Reports. And in connection with this three important extracts from former Reports are appended; one (Appendix D) discusses the effects of the Government rate in aid; a second (Appendix E) deals with the causes of the increase of pauper lunacy; and the third (Appendix F) shows that the increase of pauper lunacy is not due to the registration as pauper patients of persons who would formerly have been registered as private patients. The remainder of the prefatory Report is devoted to a short summary of the three "Memoranda" contributed respectively by Sir Arthur Mitchell, Dr. Sibbald, and Mr. Spence, which form the principal and most interesting part of the Supplement. In thus procuring information on special aspects of insanity in the form of memoranda from highly competent authorities, the Board took a new departure, the reason for which is stated as follows on page viii. of their Report:—

"It appeared to us, when the request for this Report was

made, that it would not serve any useful end merely to repeat views and arguments which we have expressed every year in our Annual Reports, and that, therefore, if fresh light was to be thrown upon the causes of the increase of the number of registered lunatics, it would be necessary to make researches in new directions, if possible, in the hope that something might be found which would confirm, modify, or disprove the conclusions we had formerly arrived at."

The memoranda were the outcome of this view of the Commissioners, and no one can rise from the perusal of them without acknowledging the wisdom which prompted this course. Regretful allusion is made to the paucity of information in regard to the assigned causes of insanity. Progress on this head, in the opinion of the Commissioners, has been *nil*. In their Report in 1861 they dwelt on the utter untrustworthiness of any information supplied on this subject; and after an interval of thirty-three years they find themselves unable to modify that opinion. To-day, as then, notwithstanding a protracted experience and conscientious effort, they feel compelled to regard any available information on this subject as practically valueless. Even "when the fullest knowledge is possessed of the patient's private history, the true origin of the disease must often remain a mere matter of speculation." Few, if any, of those who have studied the subject will feel inclined to question this opinion. The etiology of insanity, it is to be feared, will long remain an insoluble enigma, and it seems almost as hopeless a task to try and trace the phenomena of insanity in any individual case back to their primal source as would be an endeavour to follow the course of a strand of nerve fibres up to their ultimate origin from individual cells in the cortex. The difficulty in either case is strictly analogous. It is due to the extreme complexity of the elements involved, which constitute a tangled skein such as no methods of research as yet discovered are adequate to unravel. It is a discouraging fact, perhaps the most discouraging fact connected with the study of insanity.

Sir Arthur Mitchell's paper is purposely limited in scope, his evident object being to study the question of the increase of insanity under the simplest conditions under which it occurs. He has, therefore, selected one particular district, the Barony Parish, Glasgow, as being one where disturbing elements appear to have been at a minimum. In this happy hunting-ground things and people pursue the even tenor of

their way for ten years at a stretch, with almost unruffled smoothness. "The social condition of the population (about 300,000) has undergone no important change during the ten years 1883 to 1892. The industries and occupations of the people have been practically the same. There have been no bursts either of prosperity or depression." The population has increased steadily and evenly. Just sufficient asylum accommodation, no more. No great surplusage inviting an inrush of patients, no scarcity of space preventing legitimate admissions. Careful examination of every case previous to admission by a medical man, specially appointed for that purpose, an arrangement which indicates the prevalence of very enlightened views, and is highly creditable to the Parochial Board. It would probably be difficult to find another region equally favourably conditioned for the purpose in hand.

A comparison of the number of first admissions in each of a successive series of years is considered the most reliable means of gauging the increase of insanity or the reverse. From column G of Sir Arthur Mitchell's first table we learn that during the ten years under review the number of persons registered for the first time as pauper lunatics of Barony Parish varied in an irregular fashion from year to year from a maximal proportion of 47 per 100,000 of population to a minimal one of 36·7. If the decade be divided into two quinquennials the average annual "crop" of pauper lunacy during the first is found to be 41·4 per 100,000 of population as compared with 40·1 during the last. According, therefore, to the admittedly best criterion, there was an actual decrease in the yield of insanity during these ten years.

On the other hand, there was a steady and continuous rise in the number of pauper lunatics under care, as shown in Table II., from 471 in 1883 to 731 in 1893, or from 176 to 226 per 100,000, denoting an increase of 28 per cent. These figures furnish a striking demonstration of the effects of accumulation pure and simple. Here we have a district in which there was no increased, but if anything a decreased *production* of insanity, and yet a large increase taking place in the *amount* of insanity. How this is brought about is quite evident from a glance at the figures, and may be made intelligible to minds of even infantile capacity by the apt, though not altogether novel illustration from the realm of finance which Sir Arthur Mitchell uses, showing how capital

(representing total number of insane) can increase owing to expenditure (discharges and deaths) being less each year than income (new cases). If the income instead of fluctuating, as in the illustration, were to remain precisely the same from year to year, even if it were to diminish somewhat, there would still continue to be an increase of capital so long as income continued to be in excess of expenditure. It can thus be shown conclusively, to use Sir Arthur Mitchell's words, "that there can be a largely increased stock without any increased production." Herein lies the *rationale* of accumulation. *Voila tout!*

It would be erroneous, however, to conclude that all Scotland was as favourably circumstanced as the Barony Parish. If the same quinquennials be taken as before, the annual yield of pauper lunacy is found to have risen from an average of 39·8 per 100,000 in the first to 42·2 in the second; an increase of 6 per cent. This rate of increase is only about half what it was in Ireland during the same period, viz., 11·5 per cent. But Ireland is still far behind her sisters as regards provision for her insane population. She is still the Cinderella of asylum administration, and is at present, no doubt, undergoing the process of "levelling up," described in Dr. Sibbald's paper, which has reached, or all but reached, its completion in Scotland, a consummation devoutly to be wished for Ireland also, but which we can only look upon yet as afar off. England would seem to occupy an intermediate position between the other two countries in this respect, but the published statistics do not enable us to estimate accurately the annual increase of its pauper lunacy.

Not the least interesting part of Sir Arthur Mitchell's paper are the brief "General Remarks" at its conclusion, conceived as they are in a broad and philosophical spirit. As, for instance, where, speaking of a change of opinion as to what constitutes certifiable insanity, he says:—"Such a change easily occurs, because insanity, like lameness or blindness, is relational. In times of peace recruits are rejected as being lame or as having defective sight, who would at once be accepted in times of war as being sound in both respects. A man may be lame *quoad* some occupations who is not lame *quoad* others. So men can be and are held to be insane in certain circumstances or positions and for certain objects, who would not be so held in different circumstances and without such objects." A quasi-judicial utterance which must receive general endorsement.

Or take the following passage, pregnant with suggestiveness, one which, as Trousseau used to say of Graves' lectures, might well be written in letters of gold :—" What ever tends to weaken or injure the bodily health must have a more or less bad effect on the mental health, and must, therefore, influence the production of insanity. Nothing would tend so much to lessen that production as to make everyone the intelligent guardian of his mental and bodily health, and so to make old age a chief cause of death, and perhaps also of insanity. But the ignorant and the vicious, as well as the poor, we shall always have with us, and the laws of health will not cease to be broken in countless ways, with disease of body and disease of mind as the outcome. Men will continue to eat and drink what injures them, to gratify their passions to excess, to over indulge in religious or political excitement, to work beyond their strength in the furtherance of projects of ambition, to clothe and house themselves without regard to health, and in many other ways to neglect or violate the laws of health. All these things influence the production of insanity."

Could this passage be given a wide publicity, or be inscribed as a "writing on the wall" in the street, the Church, the school, the Senate hall, the meeting-house, and the chamber of revelry, it might play the salutary rôle of the coffin at the ancient Egyptians' feasts, and, by arresting public attention, it might, to some extent at least, tend to reduce the sway of those evil agencies which operate towards the increase of insanity. It gives to an oft-quoted sentiment a new emphasis and meaning probably not contemplated by the Roman poet—

"Sunt lachrymæ rerum, et mentem mortalia tangunt."

Dr. Sibbald's paper is of a more comprehensive character. It discusses the larger question of the increase of insanity generally in Scotland, while Sir A. Mitchell only deals with a particular instance. The aim of the second paper is very much akin to that of the first, viz., to show that the increase in the number of registered insane does not indicate an increased prevalence of insanity. This is fast becoming a well-worn theme. But, granting this, we could ill spare this latest contribution towards its elucidation from the pen of Dr. Sibbald, treating it, as he does, with vividness and originality, and infusing fresh life into the dry bones of lunacy statistics. A superficial examination of these in

other countries, no less than in Scotland, is always apt to excite considerable alarm—alarm, moreover, which is not unreasonable when it is found that in Scotland, for instance, the proportion of insane to population has risen from 192 per 100,000 in 1858 to 325 in 1894. Closer examination, however, will aid in dispelling this feeling, and Dr. Sibbald proposes to himself the task of showing “that the administrative and other changes which have taken place during the past half-century made it probable that there would be a large increase in the number of persons classed as insane, and that this increase was likely to take place even though there might be no increase in the amount of mental disease.” The methods of the two writers, therefore, differ. Sir C. Mitchell demonstrates a fact, and, using the inductive method, argues *ex uno disce omnes*. Dr. Sibbald, on the other hand, on *à priori* grounds, and reasoning deductively, argues that, given such and such conditions, a large increase in insanity might have been predicted as likely to occur, and then proceeds to show how it actually has occurred. That a similar result should have been reached by two opposite methods of argument is at least strongly presumptive of the correctness of that result. Where many roads meet a city is near.

The historical aspect of the question is first touched upon by Dr. Sibbald in a brief, but deeply interesting, *résumé* of the condition of the insane before the middle of the present century, from which time the general adoption of the modern humane treatment of the insane may be said to date. The initiation of this great philanthropic movement was, it is needless to say, in great part due to the noble efforts of William Tuke and his descendants, the removal from amongst us of one of whom, most gifted and beloved, we have only lately had to deplore (*vixit post funera virtus*). Miss D. L. Dix receives a well-merited tribute of praise for her self-denying efforts in the same cause in the United States, where she visited more than 9,000 insane, who were destitute of proper care and attention. “And of this vast and miserable company sought out in gaols, in poorhouses, and in private dwellings, there have been hundreds—nay, rather thousands—bound with galling chains, bowed beneath fetters and heavy iron balls attached to drag chains, lacerated with ropes, scourged with rods, and terrified beneath storms of profane execration and cruel blows.” On a par with this was the condition

of the insane in the British Isles, as has been shown by the late Dr. Hack Tuke, and when Miss Dix visited Scotland things were no better there. Not alone could the dark places of the earth be said to be full of the habitations of cruelty, but here, in countries which boasted of being in the van of civilization, nameless horrors were being perpetrated on perhaps the most hapless and helpless class of human kind. Still, as Dr. Sibbald is careful to point out, there was some excuse even for those who were in immediate charge of the insane in those days; they cannot be wholly condemned. That unseen, but always felt, influence, which we call the spirit of the age, dominates men's views and convictions, and on these their actions are based. There was but little difference between the way in which keepers of asylums regarded the inmates of them and the ideas respecting them which were currently held by the public at large. Scientific psychology did not exist, and the old theory of demoniacal possession was still largely accepted, and the treatment employed was in consonance with that theory, its outcome and reflection. And so no voice was raised in remonstrance. "The feeling excited in the popular mind by the statement that a person was insane was one of repulsion rather than of sympathy. When the insane were seen to be harshly treated public feeling was not outraged."*

The condition of things, then, which existed at the time when the old bad system began to be replaced by the new was this: There was a deficiency of asylum accommodation for the insane poor; the existing asylums had acquired an evil reputation, which made people unwilling to make use of them unless when it was unavoidable; a feeling of disgrace was associated with insanity, which led to concealment of its existence in many cases. Moreover the term insane appears to have been applied only to the more turbulent and dangerous cases, such as "involved danger or inspired fear," while many who would now be regarded as fit inmates for

* As an instance of the tenacity with which, in spite of advancing knowledge, old and exploded beliefs still hold their ground, it may be mentioned that not very long ago a highly intelligent and educated professional gentleman, hailing from the Metropolis, remarked to the writer that it was his firm belief that all insanity was due to possession by devils, that suicide was the natural ending for it in the designs of Providence, and that in his opinion the impulse ought not to be interfered with, but that the insane should be allowed to put an end to themselves and "go to their own place!" Difficult to believe, but nevertheless a fact.

an asylum were not classified as insane at all; consequently the number of insane at that time was probably largely understated. Meantime a change in public opinion had been in progress, followed by an awakening of the public conscience, leading to the appointment of the Royal Commission in 1855, and subsequently to legislation as embodied in the Act of 1857, which may be regarded as the starting-point of the realization of the hopes of philanthropic workers in the cause of the insane. By the Act of 1857 local authorities were made responsible for providing adequate asylum accommodation for the insane poor, aid being given by the State for the purpose, and on them also was to devolve the duty of sending every suitable case to a district asylum. By it also the General Board of Commissioners was constituted, who were entrusted with the general supervision of the insane wherever confined.

The immediate consequence of this Act was the "levelling up" process described by Dr. Sibbald. Up to the date of the passing of the Act, and for some time after, asylum accommodation was very unequally distributed throughout the country. Some counties, such as Ayr and Shetland, had none, others, notably Edinburgh and Forfar, were fairly well supplied. An examination of the statistics of that period shows that the proportion of insane to population was highest in those counties where there was most asylum accommodation, lowest where the accommodation was *nil*, or very limited. In the latter case difficulties of transit were, no doubt, the cause of this. It is a proved fact, therefore, that "wherever asylum accommodation for the insane poor was of easy access, previous to 1855, the number of pauper lunatics in establishments was especially large. The presence of an asylum is shown to have been associated with a high proportion of patients for the county." Thus in the county of Edinburgh the pauper lunatics numbered 202, and in Forfar 162 per 100,000 of population, whereas in Ayr and Shetland the proportion was 82 and 64 respectively. In the two former counties asylums were located within easy reach; in the two latter there were none, and the nearest asylums in neighbouring counties were difficult of access. The Act of 1857, however, changed all this. New asylums were erected in the districts where none had been before, and by the year 1874 all the existing asylums were open for the reception of patients. During these sixteen years the ratio of pauper insane in establishments to population in the

whole of Scotland rose from 96 to 151 per 100,000, or an increase of 55. If, however, the counties are divided into three groups, each containing about a million inhabitants, the first comprising those counties which had the highest ratio of insanity in 1858, the second those which had a medium, and the third those which had a minimum ratio, the increase in the third class is found to have been exactly double what it was in the other two classes. The increase, in fact, in each of Classes I. and II. was 42 per 100,000, while that of Class III. was 81. During the same period the proportion of pauper lunatics in private dwellings had decreased, and it might be thought that the increase of insane in establishments was chiefly due to the transference to them of patients previously under private care. But as the decrease in the one class was only about one-fourth of the increase in the other the greater part of the latter remains to be accounted for. Dr. Sibbald points out that only two explanations are admissible:—"Either (1) there was in the year 1858 a much larger amount of insanity among the poorer classes in Edinburgh than there was among the poorer classes in the rest of Scotland, and that insanity had since that time been spreading in the rest of Scotland while it remained stationary in Edinburgh; or (2) that the administration of pauper lunacy in the rest of Scotland had been approximating to the administration in Edinburgh, the increase in the numbers shown in the Annual Reports of the Board being entirely accounted for by administrative changes. The latter alternative, it will be admitted, is the only one consistent with reason. It lends no support to the view that insanity had been increasing." The county of Edinburgh is taken as a normal standard of what the proportion of insanity should be, because, owing to its having been provided with adequate asylum accommodation, the ratio of insanity in that county had remained practically the same from 1858 to 1874.

The first stage in the "levelling up" process closes with the year 1874. Dr. Sibbald selects this date because all the district asylums had been provided by then, and in the following year the Government grant in aid came into force. During this first period, therefore, the increase in pauper lunacy may be regarded as mainly, if not altogether, due to increased asylum accommodation. After that date other factors came into play. There can hardly be any doubt that the grant was responsible for some of the increase. The

fact mentioned by Dr. Sibbald, that during the four years preceding 1874 the average annual increase in the number of pauper lunatics in establishments was 90, while in the succeeding five years it was 240, does not admit of any other explanation. It amounts to this, that at the end of the five years there were 750 more than there would have been had the rate of increase been the same as it was during the preceding years. (The effects of the State contribution are discussed at greater length in Appendix D, which will repay perusal). Another influence operating in the same direction was the change in the character of asylums. Confidence in their management was being gradually established. The improvements in their structure and surroundings, the increased comforts provided for patients as regards dietary, clothing, recreation, and nursing, the abandonment, as far as possible, of coercive measures, and the providing of congenial employment for all who were capable of work, in a word the substitution of the hospital for the prison, had by degrees wrought a great change in the public mind both as regards asylums and with respect to the very nature of insanity, which now began to take its proper place in the department of nosology, and to be no longer regarded as a supernatural visitation. As a natural consequence asylum treatment of the insane has been steadily rising in public estimation, concealment of insanity is rarely resorted to, medical treatment is eagerly sought after, and even the subjects of mental aberration themselves not unfrequently voluntarily place themselves under supervision. Truly a "marvellous change in the attitude of public opinion."

But if medical science has influenced public opinion as regards the true nature of insanity, public opinion has in turn reacted on the views of medical men as to what constitutes certifiable insanity. In his remarks on this subject Dr. Sibbald emphasizes the fact that there is no fixed standard by which to judge. "The distinction between soundness and unsoundness of mind is exceedingly vague. It is as impossible to fix the position of the line which divides them, as to say where daylight ends and darkness begins." As Sir A. Mitchell has previously said, insanity is "relational," and the fitness of any particular patient for an asylum must be largely determined by circumstances outside his insanity. But as formerly, owing to the ill-odour in which asylums were held, there was a reluctance on the part of medical men to consign a patient to them unless it was absolutely

unavoidable, in these latter times, owing to the change in the character of asylums, there is, if anything, an ultra-readiness to make use of them not merely as hospitals for the cure or alleviation of mental disease, but as harbours of refuge for worn-out wrecks of humanity whose mental breakdown is merely the concomitant of physical decrepitude, an item in the general process of dissolution. The extent to which this alteration in medical opinion has increased the number of certified insane cannot be estimated in figures, but there is very little doubt that Dr. Sibbald is correct in his general conclusion that, owing to it, "many persons now come upon the register as lunatics who would not formerly have been so placed. Amongst these may be included not a few of lunatics in poorhouses, many of whom previous to the Act of 1857 had been classed as ordinary paupers."

These several causes, along with the primary one of fuller asylum accommodation, have contributed to prolong the levelling-up process from the year 1874 up to the present. That the process has continued is shown very conclusively by a comparison of the statistics for Edinburgh and Leith with those of Glasgow, districts selected by Dr. Sibbald because closely resembling each other, although not precisely similar. In 1858 the proportion of pauper lunatics to population in Edinburgh and Leith was 219 per 100,000, in Glasgow 114, or but little over half. In 1874 Edinburgh had remained practically stationary, the proportion being 218, whereas Glasgow had increased to 151, and in 1894 this had further advanced to 237, while Edinburgh had reached 253. In other words, from 1858 to 1894 in the Edinburgh district there was a rise of only 34 per 100,000, whereas in Glasgow it amounted to 123, a difference of 89, which represents the degree of levelling up which occurred in the western city. Again, if we revert to the three groups of counties previously compared it will be found that during the period from 1858 to 1894 the increase in the first group (those with the highest proportion of pauper lunatics in establishments in 1858) was 86 per 100,000, or a rise of 62 per cent.; in the second (those which had a medium proportion) the increase was 97 per 100,000, a rise of 110 per cent.; and in the third (those which had the lowest) the increase was 165 per 100,000, or a rise of 270 per cent. After what has been previously stated the significance of these figures is obvious. They "show how the introduction of a uniform system of

administration tends to approximate the statistics of such a condition as pauper lunacy, which, before that system had been introduced, were widely dissimilar."

It would extend this notice to an inordinate length to discuss in detail the several remaining points touched on by Dr. Sibbald, such as the connection of ordinary pauperism with pauper lunacy, a direct relationship; and the preponderance of both, and of the increase in both, in rural as compared with town districts. The influence of the death-rate is examined, and found to be insignificant. The question as to how far the increase in first admissions, or attacks, which undoubtedly exists, may be held to denote a real increase in insanity is carefully, if briefly, considered, the fact that many cases (*e.g.*, those of senile insanity) are now placed on the register which would not formerly have been brought upon it, suggesting a doubt as to whether there is any actual increase in the production of insanity at the present day over what there was, say, thirty or forty years ago.

Two considerations of a cheering character must not be overlooked. The age statistics, both in lunacy reports and in the census tables, show a decided diminution in juvenile insanity. According to the former during the period from 1877 to 1887 the number of inmates of asylums under twenty-five years of age shows a decrease of seven per 100,000 of population. And according to the census tables in the ten years from 1881 to 1891 there was a most remarkable decrease, amounting to no less than 66 per 100,000 of population in the proportion of total lunatics and imbeciles under twenty-five years of age, from which Dr. Sibbald draws the consoling inference, given with a caution, however, that "these figures appear to show that the rising generation is much sounder in mental constitution than that of 1881, and if this is true, it may fairly be expected that they will be better able, in after life, than their predecessors were, to resist the influences which produce insanity."

Another consideration of a hopeful nature is to be gathered from the statistics of private patients, with respect to which the following quotation will suffice:—"The absence of any increase in the number of annual admissions is one of the strongest indications that there is no real increase in the amount of mental disease in the country. If mental strain, and the other evil influences alleged to be characteristic of modern life, is producing an increase in the amount of

insanity, it ought to show itself especially in the classes above the ranks of manual labour. That it does not do so is a strong reason for believing that the influences of modern life, taken as a whole, do not tend to produce more insanity than the influences which were previously in existence." This view is shrewdly argued at greater length in a subsequent paragraph.

The mortality from nervous diseases having increased considerably during recent years, it has been inferred that insanity, belonging as it does to that class, must have also increased. Dr. Sibbald discounts this inference to a certain extent by pointing out that many diseases are now referred to the nervous system which used to be differently classified, and that "in the rural districts, which are the districts yielding the largest proportion to population of registered lunatics, there is the smallest proportion of deaths registered as due to nervous disease." Another consideration suggests itself here *per contra*. The mortality from nervous disease cannot be regarded as a reliable index as to the prevalence of nervous disease. There are numbers of nervous diseases, including various forms of insanity, which never kill. They seem never to get beyond the stage of functional derangement, and death in such cases is due and assigned to disease of some other organ than the nervous system. And the experience of most medical men in general practice would, we believe, bear out the view that there is a very decided increase in the prevalence of nervous disease, especially functional, at the present day.

The extent to which alcohol can be said to induce insanity is a matter of doubt. All statements as to the causation of insanity which appear in admission orders are more or less open to question and unreliable, and no trustworthy conclusion can be drawn from them. But the fact that the deaths registered as due to delirium tremens and chronic alcoholism show a decrease in the decade 1882-1891 from the number in the previous decade of 31 and 13 per cent. respectively would seem to indicate at least a probability that the influence of drink as a cause of insanity is on the decline.

The exigencies of space preclude a detailed examination of Mr. Spence's paper, which concerns itself solely with the statistics of private patients. His main conclusion is at one with those of the preceding papers, namely, that there is "no indication of an increased prevalence of mental disease,

such tendency to change as is shown indicating a tendency towards a decreasing production of insanity rather than a growth of production." One quotation will suffice to show in what close agreement Mr. Spence is with his colleagues: "Mental break-down, resulting from such things as the restlessness and worry of modern life, the struggle to acquire and maintain social status, the mental tension involved in competition at school and college, are frequently referred to as accounting for a supposed growth of insanity. If, however, the figures given in this paper be held to bear out, as it is believed they do, the conclusion that there has been no increased liability to insanity during the past fifteen years in that section of the community from which private patients are drawn, it follows either that the evil effects of these and such like causes of insanity had reached their limit at least fifteen years ago, or if not, that these effects, in so far at least as regards the number of persons certified insane, are neutralized by circumstances in modern life tending to mental health, because the section of the community which is here shown not to have been increasingly productive of insanity, includes those classes which are by general admission exposed more than others to the special kinds of strain referred to."

It may be useful to summarize the conclusions arrived at in the Report, some of which are succinctly stated in Appendix E, and others at the close of Dr. Sibbald's paper. From the latter the following are extracted:—

The numbers of persons on the register has greatly increased since it was first instituted, but the increase is due chiefly, and perhaps entirely, to causes which do not involve a belief that there is an increase in the amount of mental disease.

The increase consists mainly of an increase in the number of pauper lunatics in establishments.

A large proportion of the increase is due to mere accumulation independent of any increase in the annual production.

The number of persons admitted into asylums as private patients has not increased.

There has been a decrease in the number of inmates of asylums in regard to patients below twenty-five years of age.

The following causes of the increase are enumerated in Appendix E, most of them being also stated in Dr. Sibbald's paper:—

1. The erection of new asylums for pauper lunatics,

specially affecting localities in which no asylum accommodation for such previously existed.

2. The readier means of access to asylums due to increased facilities for travelling.

3. The gradual dying out among the public of feelings of dislike and suspicion towards asylums owing to the adoption therein of humane and enlightened methods of treatment.

4. The greater readiness among the poorer classes to send relatives to asylums.

5. The growing unwillingness of the poorer classes to submit to all that is involved in keeping an insane relative at home.

6. The greater willingness of parochial authorities to recognize claims to parochial relief on the ground of insanity.

7. The stimulus, both to the readiness to seek relief and to the willingness to afford it, which has resulted from the State grant-in-aid.

8. The widening of medical and public opinion as to the degree of mental unsoundness which may be certified to be lunacy.

The above conclusions may be accepted as supported by evidence little short of absolute proof, and may, in fact, be adopted henceforth as truisms. Many of them have been reached before, both by the Scottish Commissioners themselves and by others who have investigated the question, but it is doubtful if they have ever been put forward in such coherent sequence, and with such cogency of argument as in this Report. Anyone who wishes to thoroughly grasp the present position of the lunacy question should read the pamphlet from cover to cover. It is one of the most interesting and important contributions to the literature of this subject which has yet appeared.

The Insane and the Law. By G. PITT-LEWIS, Q.C., R. PERCY SMITH, M.D., F.R.C.P., and J. A. HAWKE, B.A., Barrister-at-Law. J. and A. Churchill.

Quite apart from its merits, this volume deserves a special welcome from the members of the Association, for that it is, we believe, the first work of psychological interest in the production of which medicine and law have avowedly laboured side by side. It is a matter of general knowledge that in

lunacy matters the two professions, though animated by a common desire to do the best for humanity, have been divided on many important issues, often to the prejudice of humanity. We believe that a definite attempt to adjust differences such as is now made will bring about that which heated arguments and trenchant writings have left unaccomplished.

The names of the legal members of the literary partnership now set up command respect, which will not be lessened by the issue of this book; while in Dr. Percy Smith, who is responsible for the medical aspect, we must recognize one who has not only taken a deep, if not a very affectionate interest in lunacy law, but also one who has more than average opportunities day by day of following the practice thereof where it comes in close connection with his practice as a physician. A distinct benefit arising from this collaboration is that the reader need not pause to think whether a statement or argument would have been differently presented had a member of his own profession evolved it. Everything may be taken to have been submitted to both medical and legal reflection.

The authors at the outset recognize the difficulties in the way of framing a valid definition of insanity, and are not prepared to formulate one themselves, or to adopt any existing one; in fact they quote with approval Lord Coleridge's remark that he supposed that a witness who was asked for a definition did not consider it possible to give one, seeing that insanity assumes so many forms.

We may here remark that the unfortunate though unavoidable absence of exactness in the meaning of terms so much used in contention must be counted as a principal cause for difference in opinion when we come to deal with the conditions denominated by those terms. Uncertainty prevails everywhere; when we read at page 57 that "medical men are a little predisposed to, what is vulgarly termed, make out every man to be mad," we can only wonder in what sense the epithet is used by the authors. Is it certifiable madness? or is it just a little failure to reach that standard of perfect and all round soundness of mind to which no mortal can hope to attain? Yet the truth of the assertion must depend on what is really intended by the use of the word. So too, what is a dangerous lunatic? Must a man be actively homicidal or suicidal to come under the term, or need he only passively tend to cause danger to himself or others? There is no accepted

definition as far as we know, yet decisions have turned and may yet turn, under the common law, on the applicability of the qualifying term to a case. Even with "partial insanity," as our authors point out, some use the term in relation to time, that is as an equivalent of "intermittent" insanity, while most people use it to denote an insanity which does not affect the whole of the mind. It seems to be almost hopeless to arrive at settled principles of universal applicability in the face of this inexactness of basis.

The work itself has two distinct aspects, being both a book of reference and a book of instruction. As a book of reference it contains the Lunacy Acts of 1890 and 1891 set out in full, with the schedules and the various forms. There will also be found a statement of the legal practice pursued under these Acts, and on inquisition. This portion, though compressed within quite reasonable limits, is clear, reliable, and bristles with references to decided cases. It is to be expected that in a work, especially in one which starts on new lines, there will be things in the first edition which will need reconsideration in a second. For instance, in dealing with the question of protection to those who have to do with placing a patient under restraint, it is stated (p. 107) that this protection does not extend to the person actually signing an order. This was true before 1890, for then the signer was he who is now the petitioner. But now the signer, who is the judicial authority, is specifically protected by section 330, and we presume also by his office. Further we find no reference to the case of *Toogood v. Wilkes*, in which the Judge laid down the principle that when an action is brought against the signer of an order, report, or certificate, and the defendant seeks to have a summary stop put to the action (under sub-section 2 of the same section), it is incumbent on the defendant to prove good faith and reasonable care, and not on the plaintiff to prove the absence thereof. The shifting of the *onus probandi* apparently discounts the amount of protection afforded. Nevertheless there are but few such matters to correct, and we can heartily commend the sufficiency and handy arrangement of material.

The value of the work lies, however, beyond the mere statement and marshalling of facts, however much time and care may have been entailed in their preparation. It is the enunciation and application of the principles on which facts have been constructed that distinguish it from all others.

On the medical side we have a short but comprehensive description of the elements and various forms of mental aberration and its principal symptoms. At first sight this description might appear to some to be too slight and sketchy, but we consider it to be quite sufficient for its purpose, and that its condensation has been the result of a happy selection of only that material which is essential. The remarks on feigned insanity are particularly good. So, too, on the legal side, we find set out from the very beginning, though naturally at greater length, the reasons for ordinances the necessity for which is not always easily recognized by a non-legal mind.

A very useful summary of the various conditions under which law and insanity meet each other is given. There are eight relations between the two set out, and in each the legal criterion is given. Shortly put they are:—

1. Inquisitions, the question being whether the patient is so unsound as to be incapable of managing himself and his affairs.

2. Placing in an asylum (or under certificates?), for which he must be a proper person to be taken charge of and detained under care and treatment.

3. Indictments for illegally receiving a lunatic, the question being whether the person so received was or was not insane or of unsound mind in the sense in which the word is medically and scientifically used.

4. In all civil cases (except in actions coming under 5 and 6) to which an alleged insane person is a party, the question of insanity has no legal importance whatever.

5. Cases where a person has, without complying with the requirements of statute law, taken upon himself to restrain an alleged insane person, and an action for false imprisonment has been brought; the question is whether the lunatic was dangerous to himself or others.

6. In actions against an insane person on an alleged contract made by him; the question is whether first he was so insane as to be unfit to make it, and next whether his insanity was known to the other party.

7. In criminal cases the question is whether at the time when the act was committed the accused knew right from wrong with regard to such act.

8. Will cases, the question is whether at the time of the alleged testamentary act, the testator was suffering from such insanity as might be reasonably supposed to have in-

fluenced (or in one view of the law did actually influence) such testamentary act.

These conditions are separately worked out with such an amount of explanation as will enable a non-legal reader to grasp the subjects as matters of science rather than of rule of thumb. We can only refer to one or two.

In view of the recent reopening of strife between law and medicine concerning criminal responsibility of the insane, in which, indeed, one of the authors took a prominent part, though less as a combatant than as a mediator, the long chapter devoted to this subject will be read with interest. Commencing from the time when insanity was no defence, the successive steps by which a merciful and indulgent feeling has broken down the rugged doctrines of mediæval law are set forth. It is shown how, in spite of the occasional resistance of particular authorities—*e.g.*, Lord Brougham—the tendency of the law has been to depart farther and farther from the ancient criterion of absolute total insanity, from the dictum of Mr. Justice Tracey, who held that a man was not entitled to acquittal on the ground of insanity “unless he was totally deprived of his understanding and memory, and doth not know what he is doing any more than an infant, a brute, or a wild beast.” The moral of this interesting tale of advance lies in the latest judicial utterance, that of Mr. Justice Wright, who, in 1892, at Warwick, said “the responsibility of an accused person must depend upon the answer which must be given to the question, ‘Could he help it?’” Surely this is the point towards which medical opinion has been tending these many years, and if such a dictum is permanently upheld, any further difference must be confined to the clinical details of a given case.

The chapter on testamentary capacity treats the subject very exhaustively and brings it up to the latest date. The best known cases, *e.g.*, “Waring v. Waring,” “Banks v. Goodfellow,” etc., are set up as landmarks by which we can judge of the slow change which has come over the legal mind in this matter also. The nature of the change is much the same as that shown in the preceding subject, consisting, as it does, in the increased recognition of the fact that sanity and insanity may co-exist in the same person in varying proportions, each bearing for itself its appropriate responsibilities and privileges.

We may cordially accept the views expressed by the

authors in the following passages:—"Medical men should neither blindly run a tilt at the old legal principle that a knowledge of right from wrong is the ultimate test of responsibility, nor can they reasonably hope to get it altogether eliminated from English law; nor should lawyers, for their part, insist too rigidly upon a literal construction of their time-honoured formula without making some attempt to so construe it as to make it meet the spirit and knowledge of the particular age in which it is sought to apply it." Again, "it would be inconsistent with the whole of the history of the law of insanity (as given above), and, indeed, with the whole spirit of English law, to say that the growth of this branch of the law was suddenly stopped at any given point, and then become rigid and inelastic." We are tempted to make one further extract, a quotation from the late Mr. Justice Stephen, which will be found on page 220: "Many things have been said which would have been better left unsaid;" "in dealing with matters so obscure and difficult, the two great professions of law and medicine ought rather to feel for each other's difficulties than to speak harshly of each other's shortcomings."

Medical men who are likely to be called upon to give evidence in Courts of Law will find here and there useful hints as to what they may or may not say. For instance, it will not be wise for them to give any opinion as to a man's responsibility, lest they should be peremptorily told that this is not their business.

We must take note of two suggestions that are to be found in the book. The first, for which the authors are not responsible, is that a "case" involving the criminal responsibility of an insane person should be carried to the Court for Crown Cases Reserved for the purpose of eliciting a formal rule or definition. We venture to think that while juries can be found who will, as has been the case more frequently of late, have the courage to "take the bit between their teeth," and while we have judges who will ask juries if the accused "could help it," it will be a pity to limit such a process of wholesome change. It is true that some prisoners may have the bad fortune to be tried by judges and juries less favourable, and may, therefore, suffer injustice, but a formal ruling must be more or less inelastic and can but afford an average of justice to all in whose cases it comes to be applied; under it some who should suffer will go scot free and others will suffer undeservedly.

The other suggestion belongs to the authors entirely. It will need much questioning before its principle can be accepted.

They propose that in all criminal cases where a defence of insanity is set up, and in inquisitions, the present jury should be ousted in favour of one composed in a very special way, viz., of a president, in the shape of a permanent chief commissioner, who should be either a medical man or lawyer, and of six other jurymen. Of the seven, two should be medical men, and two lawyers, while the other three should be residents in the neighbourhood possessed of certain qualifications, e.g., a university degree, holy orders, being justices or bankers, etc. Questions of sanity, except those arising under the modern Lunacy Acts and tried by a Master in Lunacy, are to be tried before this tribunal, which should sit in open Court, the verdict of the majority being accepted. As far as inquisitions are concerned, though the cost might in some cases be prohibitive, we think that such a proceeding would be very superior to trial by the ordinary jury, who, in their endeavour to procure what they think to be justice to the defendant, so often cause great injustice to his friends and the general public. But in criminal cases we are not sure that so highly specialized and probably contentious a body would be as likely to forego scientific theory as an ordinary jury does. We believe that, given fair play and but little judicial direction as to abstract law, twelve men of good common sense will arrive at the truth as easily and justly as men of superior education.

In conclusion, we must say that we believe that this book has been conceived in a right spirit, that it has been compiled with conscientious care, and that it fully warrants a ready and extensive reception by those for whom it has been specially written.

The Foundations of Belief, being Notes Introductory to the Study of Theology. By the Right Hon. ARTHUR JAMES BALFOUR. London: Longmans, Green & Co. 1895. 12s. 6d.

Were this work a commonplace treatise on theology, or a mere dialectic of ancient formulas, there would be no necessity to record its publication in these columns. But this emphatic and closely-reasoned volume, finely significant of the age, brilliant and eloquent as it left the distinguished

author's hand, commands an attention worthy of the theme on the part of those who may welcome his arguments with enthusiasm, as well as of those who may entirely disagree with both methods and conclusion. To such as find it necessary to keep abreast of current thought in regard to philosophy, a study of Mr. Balfour's latest contribution is indispensable. We lose much by neglect of the masters of philosophic teaching. A psychology which fails to take into account the arguments of metaphysics, and records that ultimate certitude is reached, or the last word is said when the very latest theory of the brain cell is recounted, requires such a corrective as is administered by the volume now before us. It would seem, indeed, that theories and systems can only be but tentative, and that they merely serve to mark the high-water level (perhaps the low-water level) for the time being.

It cannot be that Mr. Balfour will secure a unanimous verdict in the conduct of such a thorny case. On the one hand, representative men whose opinions have been classed under the indefinite term "naturalism," will not fail to accentuate their internal differences, as well as to maintain their opposition to the conclusions of the author. On the other hand, the scrupulously orthodox will find cause for alarm in Mr. Balfour's sceptical and destructive criticisms, and, however well they may agree with him in the end, must of necessity disapprove of his methods.

It could not fail to happen that the teaching of Spencer, Comte, and Huxley would provoke a retort proportionate to the issues involved, and to the rapidity of the growth of the schools founded so lately. To these Mr. Balfour has applied his mordant criticism of methods and results, and in the end finds it easier to satisfy himself of the insufficiency of a "naturalistic" creed than of the absolute sufficiency of any other. In like manner he tilts at transcendental realism, and, in what is perhaps the most interesting chapter to us, professes to find certitude in authority rather than reason. He arrives at the conclusion that our beliefs are almost wholly due to a process with which reason has nothing to do, and exalts custom or authority over reason with many ingenious and illustrative arguments. He holds that reason plays a very small part in the life of the individual, that other psychical and physiological processes are the main factors. And so with regard to authority. It is for him non-rational, and the necessary source of the presuppositions necessary to

organized knowledge. But it will be objected that authority is in a state of continual flux, and that it is authoritative only in so far as it commends itself to reason; and further that reason itself is no fixed quantity. Mr. Balfour refers to the belief in witchcraft having died a natural death, and says that it has not been worth anybody's while to devise arguments against it. How was this "natural death" compassed? Was it not by the labours of Reginald Scot and those who joined in his protest against the "authority" of the 16th century? Nor does it seem to us that Mr. Balfour is happier in his reference to "mesmerism" when he states that for two generations the rationalistic bias perverted the judgment of the most distinguished observers. Authority should not move nimbly, on the alert to conform to the fleeting fashion of the hour. Rather should it rectify sedately and maturely, as some old wine reminiscent of sunshine and showers, the resultant of natural forces and human energy, but preserved from the heats and frosts of the passing years.

We pause at the entrance to the last part of the book where Mr. Balfour pursues his argument to show the adequacy of Christianity alone, and founds his position upon the "needs" of humanity. He would be indeed alien to the common sentiment of our later civilization who should cavil at such a passage as this: "I like to think of the human race, from whatever stock its members may have sprung, in whatever age they may be born, whatever creed they may possess, together in the presence of the One Reality, engaged not wholly in vain in spelling out some fragments of its message. All share its being; to none are its oracles wholly dumb." At such a point Mr. Balfour commands assent.

If the ambiguities and difficulties inherent in Mr. Balfour's undertaking carry with them a sense of doubt as to whether his earlier criticism of "naturalism" could not be applied to his later constructive efforts with similar destructive effects, it cannot be said that he leaves his audience chilled and despondent. His spiritual sense is not less remarkable than his intellectual qualities; nor is his book merely the graceful exercises of an interesting personality, a man of affairs setting forth the fleeting fancies of his leisure moments to beguile the curious reader. It is, in fact, a record of glowing thoughts and hard-won conclusions concerning problems of vital importance. As such we heartily commend it.

The Etiology of Osseous Deformities of the Head, Face, Jaws, and Teeth. By EUGENE S. TALBOT, M.D., D.D.S.
Chicago: Keener Co. 1894. Pp. 487.

Although this elaborate work is the production of a dental pathologist dealing primarily with his own specialty, it is of wide interest, especially to the alienist. Dr. Talbot has found—as every specialist who takes up his own subject in a really scientific and philosophic spirit must find—that his specialty leads by imperceptible steps to the deepest and most general problems of pathology or of life. His earlier researches had led him to protest against the doctrine that irregularities of the teeth and jaws are merely the result of local and not constitutional conditions. He was thus forced to extend his inquiry into the departments of oral and nasal medicine, and then to include the surgery of the eye, ear, and face, all more or less intimately related to dental medicine. This naturally leads to the consideration of the widest problems of nervous pathology. Among the subjects to which one or more chapters are devoted are climate, intermixture of races, crime, prostitution, moral insanity, intellectual degeneracy, idiocy, consanguinity. Developmental neuroses affecting the regions in question, especially palate, teeth, and jaws, are dealt with in much detail. A series of cases with photographs shows the results of various arrested developments on the face. Attention was called in this Journal to Dr. Talbot's study of criminals when it first appeared in the "Alienist and Neurologist." He shows that all the defective classes possess an unusually large number of deformities of the jaws and teeth; deformities of the palate are not more common among idiots than among other defective classes. Fairly obvious stigmata of degeneration in the face he finds in about 45 (medical and dental students) to 65 (crowded cities) per cent. among the ordinary population; from 85 to 95 per cent. among habitual criminals, drunkards, paupers, prostitutes, etc.

Dr. Talbot's account of the architecture of the dental arches is very lucid, and he deals fully and carefully with the V-shaped and saddle-shaped arches and their origin, as also with deformities of the vault of the mouth. It is not, however, easy to summarize the results of Dr. Talbot's manifold discussions and tables of statistics.

It is possible to dissent from the author's conclusions on various points, but it is impossible not to find his work of great practical utility in observing the numerous marks which a defective nervous system leaves upon the jaws and teeth, and the bony tissues of the face and head generally, or in tracing the significance of such marks. Apart from its utility, the book is of interest from the many-sided way in which the author approaches his subject, and from the variety of the facts—very largely the result of his own observation—which he brings forward to illuminate the problems he raises. The value of the volume is greatly increased by the illustrations, which (with the exception of some skulls of criminals, etc.) are excellent, and not less than 461 in number, mostly original.

Le Criminel-Type dans Quelques Formes Graves de la Criminalité. Par ARTHUR MACDONALD. Paris: Masson. 1894.

The author of this book—which is published for the first time in French, under the able supervision of Dr. Contagne—is a specialist in the subject of abnormal children to the United States Bureau of Education, and has been a lecturer at Clark University. He is perhaps best known for his work in summarizing European investigations in criminology, etc. His efforts in this direction are not, however, specially remarkable. Dr. Macdonald's peculiar gift lies in the skill and enthusiasm with which he seeks to probe various obscure recesses of the human mind by personal inquisition. He has frequently obtained permission to be shut up for the night with criminals of various kinds in order to obtain their confidence, and has published minute records of such interviews. The present volume contains very detailed histories, obtained in this manner, of several boys and young men guilty of cruelty or murder, and often possessing perverted sexual instincts. Not only does the author seek to reveal the thoughts and feelings of the young criminal, and the motives that impelled him, but he also studies the anthropometry of the subjects, and brings together all the evidence concerning their characters which he can obtain. These studies will seem to many readers excessively detailed, and so

for most immediately practical purposes they doubtless are. Our knowledge of the criminal mind is, however, still so vague that Dr. Macdonald's searching and elaborate inquiries deserve to be received with gratitude.

Il Cervello in Relazione con i Fenomeni Psicici. By DOTT. GIOVANNI MINGAZZINI. Torino: Fratelli Bocca. 1895. Pp. 204.

Alienists who attended the last International Medical Congress will easily recall the sympathetic personality of the chief secretary of the Psychiatric Section, Dr. Mingazzini, director of the Pathological Laboratory of the Rome Provincial Asylum. Dr. Mingazzini's name has been known for several years in connection with various reliable studies bearing on the brain and skull. In the present volume, which is very clearly and carefully written, he brings together the results of these studies, duly co-ordinating them with the results obtained by other workers in many countries. As the book will probably find few English readers it may be worth while to summarize some of the conclusions reached by one of the most prominent of the younger Italian workers in this field.

The book may be described as a morphological study of the cerebral hemispheres, considered with relation to zoological, racial, and individual evolution, sexual differences and pathological variations. The author seeks to carry on the work of Ecker, Bischoff, Giacomini, Cunningham, and Calori by producing an exact study of the significance of the manifold varieties presented by the surface of the human cerebral hemispheres.

The first chapter deals at considerable length with the cerebral hemispheres in the anthropoid apes and the human foetus. Mingazzini has helped to fill in the details of our knowledge of this matter, but there is nothing novel in his general conclusions. He shows that the human brain bears no close resemblance to any one anthropoid brain, but that there is a broad general similarity between ontogenetic and philogenetic cerebral development.

In the following chapter he deals cautiously with sexual differences, and concludes that as regards the position of the Sylvian fissure observers are not at present agreed, and

that the same may be said as to the relative dimensions of the lobes, that the parieto-occipital fissure is after the eighth month deeper in males, that the calcarine fissure is placed more forward in males, and is sometimes more irregular; that the frontal lobe in males is more tortuous and more deeply grooved; that the parieto-occipital arch is relatively high in women and the interparietal sulcus relatively long, and that the antero-posterior length of the insula is relatively greater in men.

In the following chapter on the brain in various human races, the chief point brought out is the frequency of the stigmata of arrested development among the so-called lower races; the convolutions are often simpler, and the fissure of Rolando may be approximated to the frontal pole.

The next chapter deals with the brains of persons of genius or of unusual intelligence. In men of genius, the author shows, the brain offers no certain indication of intellectual eminence either by the greater richness of frontal or parietal lobes or in the mantle generally. A high degree of complexity in the parietal and frontal lobes is, however, more frequently found in intellectual persons than among the ordinary population.

A discussion of the brains of criminals leads to the conclusion that there is no special type of brain in criminals, but Mingazzini finds that, so far as the evidence goes, there is far more ground to assert (with Giacomini) the frequency of anastomoses of convolutions than (with Benedikt) the frequency of anastomoses of fissures. The brains of criminals only differ from those of normal persons by showing more frequent anomalies and more frequent signs of arrested development.

A chapter on the brains of the insane and deaf-mutes is relatively short, and chiefly resolves itself into proof of the frequency of minor abnormalities in the cerebral hemispheres of idiots.

The chapter that follows, on the microcephalic brain, is, however, of considerable length, and leads up to a broad concluding discussion of the subject generally. Entering on the much-debated questions that group themselves around atavism, Mingazzini seeks to harmonize opposing views by insisting that it is impossible to raise any barriers between atavism and pathology. "An atavistic record is simply a sign showing that the evolution of an organ has not proceeded with complete and normal regularity; disease is a

necessary condition for the appearance of the atavism." A philogenetic record, he goes on to remark, has precisely the same value when it appears on the surface of the cerebral mantle as when it appears on any other organ, so that when we are judging of the normal or abnormal character of an organism we must seek for atavistic characters everywhere. The presence in man of a supernumerary vertebra or rib, of muscles peculiar to other vertebrates, of an enormous vermiform appendix, an external ear resembling that in the macaques or the cynocephali, a caudal appendage or a supernumerary finger are all signs of the same value as a lacking convolution or a superficial cuneus. There is no such thing as a normal person, and one or two such signs of abnormality or of degeneration—if we prefer to call them so—have little significance. But as we proceed to the insane, the epileptic, idiots, and criminals, we find such stigmata increase, and Mingazzini agrees with Näcke that "a man who presents numerous signs of degeneration must always be suspected as regards his mental, nervous, or moral state." After finally insisting that we are not entitled to go further and assert the existence of a "criminal type" of man, the author brings to a conclusion his interesting and judicious survey of this large field.

The Medical Annual and Practitioners' Index, 1895.

This book of reference has entered upon its thirteenth year, a fact which sufficiently indicates that it is supplying a want, and that it will need no formal introduction.

Among articles specially worthy of notice is a valuable contribution by Mr. Snell on Eye-sight as influenced by School Life; Dr. W. Ramsay Smith deals with the subject of Angio-Neurosis, Dr. Allan McLane Hamilton with many of the disorders comprehended under the heading of Neurology; Dr. Shuttleworth comments upon Thyroid Treatment in Sporadic Cretinism, Craniotomy in Microcephalus, and other forms of Idiocy, and the Relation of post-nasal Adenoids to Mental Dulness; and Dr. James Shaw deals with the Diagnosis and Treatment of Acute Mania, Climacteric Insanity and Paranoia.

The third section, a miscellaneous collection of more or less useful information, contains a review of Sanitary

Science in 1894 by Dr. Priestley, and an alphabetical list of the Lunatic and Idiot Asylums and Homes for Inebriates in the United Kingdom.

Altogether the present maintains the standard of former medical annuals, and, as is usual with this publication, it is well printed and generously illustrated.

An Introduction to Comparative Psychology. By C. LLOYD MORGAN, Principal of University College, Bristol. London: Walter Scott, Limited. 1894.

Though modestly styled an "Introduction," this book covers much ground in the field of psychology, and is well worth careful and painstaking study. Prior to embarking upon his voyage of discovery into practically unknown countries, the author makes his confession of faith; he is a Monist and an ardent Evolutionist. For the proper elucidation of the difficult problems of mind many assumptions are made, many definitions must be assumed, but the salient feature of the work is the fair and critical spirit which pervades it, and the absence of anything approaching dogmatic conclusions. His great aim is to endeavour to teach by legitimate process of scientific induction the most probable interpretation of zoological psychology, and, by comparing this with the psychology of man, to ascertain by what steps the lower faculties of animals may have passed by natural process of development into the higher faculties of man. The keynote of modern biology being evolution, we are logically bound, says the author, to regard psychological evolution as strictly co-ordinate with biological evolution. In the case of higher vertebrates with brains somewhat similar to our own, we are justified in considering their psychical states in association with the functional activity of their cerebral hemispheres, and we find corresponding degrees of complexity in them. Mr. Lloyd Morgan is well advised in excluding the consideration of insects and invertebrate animals generally from his present purpose, for the nature of the sense-experience of insects, for instance, is apparently so different to ours from the difference in tactual, visual fields, etc., that we cannot pretend to know anything but the vaguest generalities concerning their psychology.

As introspective study is the basis and foundation of all comparative psychology, the various attributes, characteristics, and phenomena of human mind are fully and ably considered in successive chapters dealing with the wave of consciousness, suggestion, and association, memory, perception of relations, etc., etc., each one of which is in succession followed by a corresponding chapter dealing with the presence, modification, or absence of such attributes or characteristics in animals. The author not unfrequently departs from the well-trodden paths of psychology into interesting new fields, and his excursions are always instructive and most stimulating to thought; but it is especially on these occasions that we feel either the deficiency or vagueness of the psychological vocabulary, or the comparative paucity of English words when contrasted with the German language. Such words as *idea*, *object*, *reason*, *perception*, etc., have truly manifold duties!

The absence of psychological knowledge on the part of the majority of observers who have related anecdotes about animals (often carefully observed, it is true) is certainly to be regretted; for, in order to extend our knowledge, facts accurately recorded must be interpreted in the light of sound psychological principles. One such principle the author lays down as a canon. It is that in no case may we interpret an action as the outcome of the exercise of a higher physical faculty, if it can be interpreted as the outcome of the exercise of one which stands lower in the psychological scale. As a result of many of his own experiments on animals which the author details, and of the analysis to which he subjects them, as well as many others previously recorded, we gather that animals (higher vertebrates) have inherited facilities for the association of ideas, and they often exhibit differential associations which even involve considerable power of discrimination in sense-experience, most of these associations being associations by contiguity. Their memory is of the desultory type, and not systematic. Whilst, both in the delicacy of their sensory adornment and in the ability to deal with their environment by sense-experience, animals are probably in some respects distinctly in advance of man, there is no guidance by description and explanation in their acquisition of perfected skill, the method employed being that of trial and error. They do not seem to have any inherited acquaintance with the nature of anything. As regards their habits, we must

not be too ready to put them down to instinct without taking the trouble to ascertain by careful observation and experiment how far these habits, though *based* on an innate capacity for motor response (*i.e.*, at first automatic), are rendered definite through imitation, parental teaching, and tradition. For instinctive action, consciousness is only an epiphenomenon. Passing to the important question, Do animals perceive relations? the author concludes that animals have powers of indicative communication which is primarily suggestive of emotional states, and secondarily (and probably only incipiently) suggestive of particular objects, but there is not any definite evidence that they possess powers of *descriptive* intercommunication involving the perception of relations. Facts observed which apparently would lead one to join issue with the author on this point can be completely explained, he shows, on the hypothesis that there is sense-experience only involved. The author's candour and critical spirit are nowhere better exemplified than in this connection, for we must remember that if once the perception of relations and the beginnings of retrospection be granted as possible by natural process of mental development, the key of the evolutionist position is won. Animals are not rational beings in the sense of appreciating or thinking the why, the what, and wherefore of events, although Mr. Lloyd Morgan freely admits that there are on record anecdotes of animals which cannot be readily interpreted as the outcome of sense-experience only.

Chapters XVIII. and XIX. deal with the relation of mental evolution to evolution in general, and the author endeavours to show that the selective synthesis which gives unity to the individual mind is of like nature with that which a study of evolution discloses throughout natural occurrences. Much of this is perforce speculative. Incidentally we note that though not denying the possibility of the inheritance of acquired characters, the author is disposed to agree with Weissman, who thinks "it not proven nor necessary," and to whose germ-plasm theory the doctrine is well-nigh fatal. But the evidence which Herbert Spencer has adduced in its support is not to be lightly dismissed.

We congratulate the author on this valuable work. Facts have been looked at fairly and squarely, and deductions carefully drawn. Opportunities for the investigation of examples of apparent reason in animals occur from time to time. Let us hope that they may be utilized to the full and

investigated experimentally, so as to extend our knowledge in the direction in which the author has travelled. The hope is cherished that one of the Universities may found a chair of comparative psychology. Perhaps the new University for Wales will adopt the suggestion, and the chair could not be better filled than by one upon whom has fallen the mantle of Mr. Lloyd Morgan.

Les états intellectuels dans la Mélancolie. Par GEORGES DUMAS. Paris: Félix Alcan, Éditeur. 1895.

In this small work Dr. Georges Dumas studies the associations of ideas in melancholia, dealing principally with the simple and delusional forms of melancholia, in which the intellectual condition is more easily analyzed or observed. The affective state (depression), paresis of the will, and general slowness of thought and perception being especially marked symptoms of melancholia, these are the ones upon which the author dilates in his thesis; and he endeavours to show how they are related to the intellectual states of the patient.

In the second part of the book a discussion of the emotional element in melancholia, or the organic state as it is called, is introduced, and this is also investigated in its relation to the intellectual states.

The notes of some of the typical cases of melancholia observed by the author are given, and incidentally it is shown with what consistency Shakespeare drew the character of Hamlet.

Among the conclusions drawn by the author we may direct attention to the following:—

Whatever the origin of melancholia (for instance, as a primitive condition of mental depression, or secondary to an intellectual state, *i.e.*, consecutive to a delusion), we have on the one hand an affective state and on the other a mind which seeks to explain it; synthesis occurs. Thought is always governed by the sole law of synthesis; the thinking ego exercises its rule to the end; so that if a state of depression exists, it seeks for reasons to explain the depression; if a depressing idea dominates the mind, the fixed idea is justified by accessory reasons and the melancholic state supervening causes no surprise; if there is paralysis of the will, the

inaction is explained by some vain pretext; finally, if there is impulsiveness, the cause is placed outside the ego, *i.e.*, the impulse is attributed to some other personality. There is, so to speak, an internal necessity for logic, and even for a feeble or clouded mind a fact without cause is a monstrosity which cannot be admitted.

Adopting the view of Lange, Ribot, and others, Dr. Dumas thus explains an emotion: An idea, a sensation, or image can by association determine certain movements; and the consciousness of these movements constitutes joy or sorrow as the case may be—that is an emotion. In this connection he draws attention to the similarity of organic phenomena observed in cachectic states (malarial, etc.) and melancholia, and looks upon the asthenia present in cases of melancholia of organic origin as the intermediary stage in the evolution of mental depression or stupor. Rejecting the classical theory of emotions and adopting the more modern physiological one, we would say that at the basis of melancholia we find not an emotion—a kind of mysterious entity, but physiological phenomena—movements. And in intellectual melancholia, the order of evolution is: an idea, then organic phenomena (vasomotor constriction, obliquity of eyebrows, depression of the angles of the mouth etc.), and finally a confused perception of these—*i.e.*, melancholia. So that, whatever its origin (whether from physical causes or consecutive to an idea), melancholia is always the consciousness of the organic state which results; or in other words the organic state is fundamental. The practical results of this law are of course most important; it follows for instance that material causes, nutrition, aeration, etc., play in the constitution of the character at least an equal part with moral causes, such as education, principles of conduct, etc. This also explains the success of our empirical treatment in melancholia which may be summed up in the late Prof. Ball's words: "Nothing can be more efficacious than good food, rich in nitrogenous materials, and easy of digestion." This is a suggestive and thoughtful essay.

PART III.—PSYCHOLOGICAL RETROSPECT.

1. *German Retrospect.*

BY WILLIAM W. IRELAND, M.D.

New Methods of Hardening Preparations.

Dr. Marcus describes ("Neurologisches Centralblatt," No. 1, 1895) a method of hardening nerve tissues, which has met with approval in the clinique for nervous diseases at Stockholm. He finds his method better than hardening in Müller's solution or in spirits. The prepared tissue remains more elastic and is less liable to contract. The process takes from two to four weeks. Dr. Marcus has tried this method upon the spinal cord of a tabetic patient. After hardening there was a marked difference between the white fresh part and the posterior columns, which assumed a brownish-grey translucent appearance. After hardening the sections were coloured by the Weigert Pal method.

Dr. Marcus gives the following directions for making preparations :—

After the spinal cord has been hardened from two to four weeks in $\frac{1}{2}$ per cent. ferrol I cut off a piece $\frac{1}{2}$ cm. thick and leave it in Müller's solution at a sustained temperature of 37° C. for a week.

Then I leave it for a day in 95 per cent. solution, and again a day in absolute alcohol, and then imbed it in celloidin. After making sections on the microtom I replace the slices immediately in Müller's solution in the stove for about a week, then wash them quickly in spirit and leave them immersed for about two days in coloured solution of logwood. I then proceed to the colouring and differentiation as described by Pal.

The colour which I obtained is very distinct. The medullary sheath is a beautiful blue; all the degenerated portion is completely dyed.

I also brought out, as found by Dr. Reimer, that the ganglion nerve cells become very distinct, and that their nuclei come out very clearly.

Nomenclature of various Nerve Cells.

Dr. Nissl ("Neurologisches Centralblatt," No. 3, 1895) proposes a precise nomenclature of the different types of cells, without which it is impossible to ascertain and describe their variations from the normal state.

He regards an exact appreciation of the changes in the cells as the basis of a true pathology of the nervous system. This should

be worked out by observations upon animals. Nissl already claims to have made noteworthy progress. He assures us that we can now answer in the affirmative the question formerly so much disputed: Whether, after poisonings with lead, arsenic, phosphorus, etc., typical alterations may be found in the nerve cells. Not only has Dr. Nissl found such changes after chemical and bacterial poisons, especially that of tetanus, but he has been able to produce them by sections, separating the motor tracts from the muscles by deprivation of food, and by the application of electricity. He even claims to be able to distinguish the cells excited by electricity from their neighbours which have not been so influenced.

Spinal Lesions in Alcoholic Neuritis.

Dr. Heilbronner exhibited to the S. W. German Psychiatric Association at Karlsruhe ("Allgemeine Zeitschrift," li. Band, 5 Heft) preparations of nerve tissues by Nissl's method,* which brought out alterations in the finer structure before the ganglion cells were visibly affected. In the case of an old drunkard who had been treated for chronic delirium in the Breslau clinique there were marked symptoms of alcoholic neuritis. In the anterior horns of the spinal cord Heilbronner detected progressive degenerations of the nerve cells, passing from a muddy colour in the nuclei to the filling up of the whole cell with turbid coloured masses. He thinks that in farther cases of neuritis the spinal cord should be carefully examined by Nissl's method, when we should likely cease to have negative results in the examination of the spinal cord after neuritis.

Wasting of the Nerve Fibres in Insanity.

For many years microscopists would do nothing but study the vessels of the brain and the nerve cells. To the latter they assigned this and that function very much as they pleased. At last came Dr. Tuczek, who began to pay attention to the nerve fibres. In 1884 he described the wasting of the fibres with axis cylinders in the grey substance of the brain in general paralytics. After this other observers found this alteration not only in paralytics but in epileptics, chronic demented, and idiots. Dr. Ad. Meyer, in a paper read at Dresden ("Allgemeine Zeitschrift," li. Band, 4 Heft) has also found this wasting of the fibres in mania and prolonged melancholia as well as in a case of paranoia with hallucinations. Dr. Meyer finds that the delicate fibres in the

* Nissl's staining method has been described by Dr. Goodall in the *Journal* for April, 1894, p. 313. See also a more detailed account in the "*Centralblatt für Nervenheilkunde*," 1894, Juli.

middle layer of the grey matter are the first to disappear. After them, or sometimes about the same time, the tangential fibres of the outer layer of the cortex, and then the elements of the third layer are affected in such a degree that the alteration can be recognized by the naked eye. This advanced process of degeneration is observed in the last stages of general paralysis. Dr. Meyer is disposed to think that the whole physical accompaniment of the mental action may be in the network of fibres, and that the nerve cells may have only a nutritive function. He considers that many of the symptoms of insanity are owing to disturbance of association connected with wasting of the nerve fibres. Dr. Tuczek said that only in isolated cases of paranoia had wasting of the fibres been observed. The disappearance of the fibres in general paralysis was noted at various parts of the brain, but oftenest in the frontal lobes. Except in general paralysis, in intoxication, in imperfect development, and perhaps in senile dementia, he had never seen this disappearance of the fibres in the cortex.

The Circulation in the Brain during Epilepsy.

Professor Bechterew, of St. Petersburg, in an original communication to the "Neurologisches Centralblatt," No. 23, 1894, gives an account of some further researches made in his laboratory by Dr. A. Todorski. The results of Dr. Todorski's previous observations have been already noticed in the Journal for October, 1891, p. 608. It was shown by experiments on animals in which convulsive attacks had been artificially excited, that the blood pressure both in the central and distal ends of the carotids was increased during the tonic period of an epileptic attack. Dr. Bechterew tells us that it was urged against these experiments that he did not take into consideration the alteration of pressure in the great veins of the thorax and abdomen. To meet this objection, Dr. Todorski has set about a new series of experiments to ascertain the amount of blood pressure, not only at both ends of the carotids but also at the veins issuing from the brain, during the epileptic attacks.

For this purpose he introduced a canula into the peripheral and central ends of the carotid and into the trunk of the outer jugular vein as explained in the earlier experiments (see "Neurolog. Centralblatt," 1891, No. 22) with mercury manometers.

For the jugular the canula was fitted either with a manometer of the same kind or with one of thinner calibre, with a 25 per cent. solution of sulphate of manganese. The registration was effected with the drum of Ludwig's cymograph.

These experiments showed that at the beginning of the tonic period of the fit there was an increase of blood pressure, both at the ends of the carotids and at the jugular veins. The increased pressure in the veins persisted during the duration of the epileptic

attack. The increase or diminution of the pressure in the carotids kept equal measure with the pressure in the jugular veins, save that in some cases when the convulsions were very violent the pressure in the carotids was higher than that in the veins.

By another series of experiments made upon animals, in which a trephine opening had been made in the skull, Dr. Todorski ascertained that the pressure of the cerebro-spinal fluid was in all cases equal to the pressure of the carotids.

In conclusion, Professor Bechterew states, as the result of all these experiments, that during epileptic fits there is an increased flow of arterial blood to the brain.

In the next paper in the "Neurologisches Centralblatt," Dr. Bechterew recommends the use of *adonis vernalis* in combination with the bromides against epilepsy. He also observes that in some cases of "heart-epilepsy" with increase of the blood pressure, *digitalis* may be usefully added to the bromides. He has also in some cases found the addition of codein to be of service.

On Hysterical Somnolence.

Dr. Löwenfeld gives us the result of his numerous observations upon this difficult subject ("Centralblatt für Nervenheilkunde," 1895, Mai). He distinguishes between an indolent or lethargic habit with a tendency to fall readily to sleep, or to indulge in long sleeps, and the condition in which the tendency to somnolence passes into hysterical attacks and sleep walking. Some patients suffering from cerebro-asthenia remain for a long time in a drowsy or torpid condition, unable to make any sustained mental exertion, and these often sleep long and heavily, but without any attacks of hysteria or somnambulism.

The hysterical condition is often preceded by a feeling of weariness, want of energy, and disinclination and incapacity for business. The patient is depressed and the memory for recent events is weakened. He or she readily drops asleep. If this undue tendency to somnolence be resisted, there is a feeling of heaviness or constriction in the head, sometimes headache, and the eyelids of the patient are weighed down. If the patient still continues to struggle against it, he may pass into a state of excitement. In general, however, the somnolence gains upon the person till resistance is overcome and the will becomes paralyzed; he then passes into the state of hysterical somnolence. Some writers talk of the appearance of a second personality always hid behind the first, which now becomes more strong when the first is enfeebled. Dr. Löwenfeld more soberly describes this second condition as the result of a subtraction from the first ego. It is not a second personality, but the first personality with some capacities enfeebled or in abeyance, especially the power of

exerting the will and the memory of the ordinary circumstances of life which accompanies our normal being, the where, how, when of our daily life. It is not clearly explained how this change takes place, but it is preceded by a process of brain exhaustion, to which some people of a hysterical constitution are peculiarly subject. Dr. Löwenfeld thinks that it may be a species of auto-intoxication. He has observed that in patients so affected the attacks of hysterical somnolence were preceded for several weeks by diminution of the appetite for food and drink, diminution of the urine, increased constipation, and the loss of healthy sleep. He was able to show by injections in guinea pigs an increased toxic power in the urine of such patients. Dr. Löwenfeld sees an analogy in this somnolent condition of hysteria to the drowsiness observed in diabetes or uræmia. He has tried a variety of medicinal dietetic and hygienic means against this overpowering somnolence without perceptible effect from any save from *Essentia Spermin Pöhl*. This has proved of some use subcutaneously or "per os." He finds the cost of this preparation an objection.

Unilateral Hallucinations.

Dr. Higier (quoted in "Zeitschrift für Psychologie," 21 März, 1895) describes two interesting cases of this affection, accompanied by hemiopia. The first patient was a widow, 46 years old, who suffered from headache and a peculiar disturbance of the power of walking, which came on in the evening. During her stay in the hospital at Vienna she had a right-sided hemiopia, with general circumscription of the field of vision. Three or four times a week she suffered from headache on the left side, with hallucinations in the field of vision, occupied by the hemiopia. She saw on the right side figures, a garden, a lake, and other things which, being steadily regarded, appeared to become smaller or greater. On the eyes being shut the visions disappeared for a short while, again to reappear. She knew that they were only hallucinations. These attacks gradually disappeared, along with the hemiopia. Higier will not admit any hysteria in this case, and supposes the symptoms to be owing to a periodic spasm of the vessels in the visual region of the left hemisphere, perhaps followed by anæmia.

The second patient was a woman of 24, who had for some time suffered from various nervous complaints, such as headache and giddiness. On admission to the hospital it was observed that she had paresis on the right side, with hyperæsthesia, trembling, increased tendon and skin reflexes; paralysis of the oculo-motor nerve of the right eye; Graefe's symptom in the right eye, and incomplete hemiopia on the left. In this patient there were twice

visions in that part of the eye affected by hemiopia. She saw figures on the left side.

The first hallucination was preceded by loss of consciousness.

Dominant Ideas.

Much discussion has taken place ("Allgemeine Zeitschrift," li. Band, 5 Heft) on the significance of what Dr. Wernicke has called "Überwerthige Ideen," which we may render by dominant ideas. There are some fixed ideas which occupy the foreground of consciousness, but do not connect themselves with any train of thought, and there are others which seem to become the focus of other ideas which painfully affect the mind, deeply influence the thoughts, and may in the end rule the conduct. These dominant ideas may be real or only imaginary, arise in the patient's mind or be introduced from without. It would appear that such thoughts find their readiest soil in a weak or diseased brain. On the other hand, we cannot say how far an idea of a painful or violent character may so powerfully affect the brain as to modify its function for a long time, and in some cases be the origin of a delusion.

Dr. Koppen describes a case of a weak-minded man who had a special talent for mechanics. He was employed by an inventor in the preparation of a flying machine, which was to be an improvement of the well-known Lilienthal's system. He heard a great deal from the inventor of his expectations for the future which such discoveries awaken. These ideas filled the man's mind day and night; he thought of nothing but the flying machine, and pondered and worked at the improvement of the parts. Carried away by these ideas, he stole pieces of old iron which he either sold in order to obtain money for materials for the inventions, or used in making the flying machine. This was discovered, and after examination he came under observation in the Charité. Here he gave out that he hoped to gain millions with his flying machine in a very short space of time. He thought he saw preparations for his execution in a heating valve in the prison. In the Charité he occupied himself the whole day with making drawings of the machine and considering explanations and copying passages out of a pamphlet by the inventor about the flying machine. The idea which had been implanted in this man's mind, and so deeply occupied his thoughts and attention, was so far reasonable that it was of importance that Lilienthal's flying machine should be improved, but in his weak mind it became the starting point of delusions.

Hallucinations of a Deaf Paranoiac.

Dr. Cramer read before the Psychiatric Association at Berlin ("Allgemeine Zeitschrift," li. Band, 5 Heft) an account of a deaf

patient who, being affected with chronic paranoia, had been treated in the asylum of Eberswalde. He was 37 years old, and had been born deaf; but had been educated and learned to be a portrait painter. When admitted he was much excited and violent. He was very suspicious, not at all communicative, and very difficult to handle. In about ten months he began to improve, and engaged in outdoor work. A year after he again resumed his painting, and was willing to converse. Dr. Cramer framed a number of questions which the deaf man answered in writing. Instead of hallucinations of hearing, for he could not hear, he imagined that communications were made to him by the ordinary signs used by the dumb, and through the words which he had been taught to utter by muscular exercises of the mouth and throat, and also by studying the motion of the lips in others. In these ways he thought that obscene ideas were introduced to his mind. Cramer took occasion to observe that it was a mistake to believe that in all our thinking heard words are used. In this he is convinced that there are great differences, some men transacting thought through the acoustic form of words, others through the revival of images formed from the movements of the organs of speech or the sensation of accomplished muscular effort.

Latah.

Dr. van Brero, physician in the asylum at Buitenzorg, Java, describes ("Allgemeine Zeitschrift," li. Band, 5 Heft) a nervous disorder called *latah*, which is common in that island. The affection is characterized by the patient executing movements and uttering sounds against his will. These motions may be repetition of voluntary ones, or done from the suggestion of others. The sounds uttered are generally disconnected words or expressions in vulgar use. Sometimes there is an evident paraphasia. An attack is easily excited; sometimes a look or a movement of the head from another person is enough to set it on. The intellect is not affected, and the patient is quite aware of what he is doing, but the power of the will is not sufficient to check the motions. Dr. van Brero had three female patients in the asylum who were affected by *latah*, though this was not the ground of their admission. He is not aware how far the *latah* may predispose to insanity. He thinks the malady consists in an increased excitability of the nervous system, which must extend to the cortex. There is a paralysis of the will. The affection is distinctly hereditary, and those affected are mostly women. He observes that the natives of Java have a mental feebleness which prevents them becoming independent in thought and action, so that there is always a weak development of individuality. *Latah* takes a middle place between diseases such as hysteria and epilepsy, in

which a nervous impulse is followed by muscular contractions and greater or less loss of consciousness, and those "obsessions" in which the will is conquered after a long struggle with morbid influences. Dr. van Brero concludes his paper by defining *latah* as a hereditary cerebral neurosis, from which arise *schokinesia*, *coprolalia* and *echolalia*. Instead of the vulgar term of *latah* he proposes the more sonorous title of provoked imitative impulsive *myospasia*.

2. *Education of Idiots and Imbeciles in Scandinavia.*

The following is an extract from a letter from Hr. Jakob Soethre, Superintendent and Proprietor of the Institution for Imbecile Children at Ekelund, near Bergen, addressed to Dr. W. W. Ireland, Mavisbush, Polton:—

"As regards our special domain, education of imbeciles, there is nothing of peculiar interest to be related so far as our country is concerned. Things are going on regularly at the line once drawn up. It will take a good while yet before we get the law of 1881 fully carried out as regards the imbeciles; but we take a little step forward every year and in the end I expect we will reach the aim, *i.e.*, education of all teachable imbeciles.

"For Sweden a Royal Commission was appointed last year in order to draw up a proposal for a law somewhat like ours in Norway, to be laid before the Riksdag. And this Commission finished its mandate some months ago, and laid its matured proposals before the Educational Department. The starting point of this measure seems to be that a sufficient number of establishments for idiots and imbeciles, asylums, schools, and workshops are to be provided by the Government, together with the county and parish, at the same time as the education of abnormal children should become compulsory. In Sweden they have already established quite a number of small institutions for idiots and imbeciles, scattered over the country. Most of them have only about twenty to thirty inmates, are superintended by ladies, and carried on more or less as a kind of charitable institution.

"In Finland they got their first imbecile school four years ago—a private home for half a dozen idiots at Jakobstad excepted. On the 3rd January, 1890, the Pertulla Anstalt for imbeciles was commenced with seven pupils in hired premises in the suburb of Helsingfors. It was established by Mr. Edvin Hedman much in the same way as the starting with us, Mr. Hedman having gained his first knowledge of the subject at Thorshaug, near Christiania, through about two years' practice and study. In 1892, the Government granted Mr. Hedman 70,000 marks as a

loan, which enabled him to purchase for his institution the Pertulla Villa.

"This establishment has at present some half a hundred teachable imbeciles of both sexes, at the age of six to eighteen years, maintained by parish, county, and state.

"Last summer in June my wife and I took a trip down to Denmark with the intention of combining a holiday excursion with visits in Danish imbecile schools and asylums. I had not been there for thirteen years, and was now pleasantly surprised to see the great improvement that had taken place during that time. There are now in, and in the suburbs of Copenhagen established good homes and schools for all kinds and degrees of intellectual and bodily infirmities, most of them connected either with the Kellerske Aandsvage Anstalt, or those at Bakkehus and Ebberøedgaard. This last establishment is quite new and will be the largest of the kind in Scandinavia, being calculated for about 500 inmates. It is situated in a picturesque landscape in the middle of the island of Sealand, and is connected to Bakkehus as asylum department and industrial home. These and other Danish institutions made a very good impression upon me, and in fact I am inclined to think that no other country, not even approximately, has—compared with number of population—done so much for the welfare of idiots and imbeciles as is done in Denmark."

3. *Insanity Among Criminals.*

From time to time, we apprehend, it falls to the lot of all physicians in public asylums to receive into their institutions insane patients from gaols. After inquiry into the history of the offence, there will not infrequently be considerable reason to believe that the prisoner was insane at and before the date of the act. It often happens in the case of a minor offence that the patient is a general paralytic, and his condition on admission to the asylum makes it certain that the disease was present long before the offence was committed. It is in cases of this kind that we have reason to regret the failure adequately to recognize the relationship between criminology and psychology in this country. In Belgium, as our readers are aware, a commission, consisting of well-known alienists, exists, for the examination of the inmates of prisons. The "American Journal of Insanity," July, 1894, contains a paper upon the subject by Dr. H. E. Allison, according to whom there exists among the "life men" in prisons (American, we presume), a very great proportion of insanity. In many cases the subsequent history shows that

insanity must have existed when the act for which the prisoner has been sentenced was committed. Dr. Allison is of opinion that "insanity in all classes of criminals is too often overlooked, or when recognized, the popular desire is to hold them both sane and responsible." The article from which we quote once more calls attention to what, in our opinion, is a much needed reform in our methods of disposing of and dealing with cases of crime.

PART IV.—NOTES AND NEWS.

MEDICO-PSYCHOLOGICAL ASSOCIATION.

A General Meeting of the Medico-Psychological Association of Great Britain and Ireland was held at the Rooms of the Association, 11, Chandos Street, Cavendish Square, on Thursday, May 16th, 1895, under the presidency of Conolly Norman, F.R.C.P.I.

The following members were present:—Robert Jones, H. Gardiner Hill, Donald Mackintosh, H. J. Macevoy, Edward East, J. D. Bradburn, Sutherland Rees Phillipps, G. E. Blandford, H. Corner, Bonville B. Fox, David Bower, Henry F. Winslow, W. Douglas, Thomas J. Compton, J. Beveridge Spence, H. Hayes Newington, E. B. Whitcombe, C. S. Morison, Ernest D. White, G. E. Shuttleworth, P. W. Macdonald, Charles J. Sells, W. F. Menzies, R. Percy Smith, Maurice Craig, D. Nicolson, Charles Mercier, W. C. Ellis, J. Peeke Richards, James Chambers, J. F. Woods, T. Seymour Tuke, T. Outterson Wood, C. Hubert Bond, H. A. Benham, Stanley A. Gill, Henry Blake, T. E. K. Stansfield, E. Marriott Cooke, A. R. Urquhart.

The minutes of the last General Meeting were read and confirmed.

DR HACK TUKE.

The PRESIDENT said: Before we proceed to the business that is on the agenda paper I shall ask you to bear with me for a few moments while I refer to a circumstance that is painfully fresh, I am sure, in the memory of all who are in this room. I refer to the sad loss which our Association has sustained in the death of our late lamented friend Dr. Hack Tuke. It is quite unnecessary talking here, and talking to you, to dwell upon the many claims that Dr. Hack Tuke had upon our regard as a physician and as a man. His services to our Association have been of most eminent character, and he has been, of all the members of our Association, the most distinctly representative man for many years past. His editorship of our Journal has brought it to that high repute and character which it maintains all over the world. At the present time, while the death of Dr. Tuke is still fresh in our memory, we are, perhaps, not so well situated as we will afterwards be, those of us who survive, to measure the greatness of the work which he has done through a long and industrious life. We rather think of those terms of intimate personal friendship which subsisted between most of the members of the Association and this most kindly and lovable man. None of us, I suppose, have failed from time to time to benefit by his advice, always most freely and generously given; and I am sure that none of us failed to benefit by his example. He has shown to us and to all the world a singular instance of a life devoted to hard and steady work, a life every moment of which—at least during those years that most of us juniors have known him—was thoroughly and usefully occupied. We knew him as an eminent man of science, and as a kind friend, and as a thoroughly

honest English gentleman. I think, therefore, that it becomes our duty, at this; the first general meeting that we have held since his death, to express the feeling of regret which we, in common with all physicians in this country and all the friends who knew him, have experienced in his death. I say all physicians in this country; but we who are officially connected with the Association, and I daresay many private friends also, have received most touching acknowledgments of the high regard in which he has been held all over the world. I myself have received letters from men eminent in our specialty and in other sciences in France, in Germany, and in America, and the Honorary Secretary has received a number of similar letters. These furnish a wonderful unanimity of testimony as to the regard in which Dr. Hack Tuke was held, not only as a physician, but also as a man. None of the letters that I have seen have failed to praise his kindness and his numerous admirable social qualities. Dr. Savage promised me that he would be present this afternoon for the purpose of supporting me in my very feeble and unworthy efforts to do justice to the subject on which I have spoken. Unfortunately, however, he is unable to be present. He writes to me saying:—

“I am most grievously disappointed at not being able to be present at the meeting this afternoon in person to express, however inadequately, my deep feelings of regard and esteem for Dr. Hack Tuke, who for many years was associated in the editorial work with me, or rather, I with him. No one knew the power of work, the kindly consideration for others which he always showed, but those behind the scenes. Others might reap the reward: that the work was done was all that really concerned him. His example is one never to be lost sight of, and I will only too gladly be associated in any way I can with any efforts to establish a suitable memorial to the historian of our specialty.

“I am, yours truly,
 GEORGE H. SAVAGE.”

(Signed)

With regard to the last few words of Dr. Savage's letter I suppose it is in the knowledge of many members of the Association that it is in contemplation to establish a memorial to Dr. Hack Tuke. The proposal to do so came simultaneously from several quarters throughout the United Kingdom. At a suitable time this matter will be further brought under the notice of every member of the Association.

Dr. BLANDFORD—Mr. President, I heartily endorse all that you have said with regard to our late lamented friend, Dr. Daniel Hack Tuke. I am sure that all in this room mourn his loss, as I certainly do. I was greatly shocked when I saw the announcement of his death in the papers, for up to that time I had not heard even of his illness, which, as we all know, was a very short one. He was such a constant attendant at our meetings that it hardly seems as if there could be a meeting here without his well-known face; and I am sure that no one took a greater interest than he in the work of this Association and in its welfare. He not only took an interest in this Association, but, as you all know, he took an intense interest in the welfare of the insane generally. He worthily carried out the traditions of his family, the traditions of his great ancestors. During a long life he devoted himself to the welfare of the insane and those who had the care of them. He did this for many years, as you know, as a labour of love, and up to the last he worked devotedly in the cause. You know how great was the labour he bestowed on that monumental work, “The Dictionary of Psychological Medicine,” labour which, I fear, very much tended to bring about the end which we now deplore. I know, and I daresay many of you know, how he worked nights and days to bring it to a conclusion. He also edited our Journal for a great number of years at the same time that he was doing other work, and an editorship, as I daresay some of you know, is an office which entails considerable labour, too. But in all that he did, whether it was work of that kind or whether it was in daily association with us all, he was always the friend of all, ready to give advice and counsel to all and to help all. He was to those who knew him a faithful friend, and to all a just, upright, and honourable gentleman.

Dr. RAYNER—Mr. President, I fully endorse all that you and Dr. Blandford

have said in regard to Dr. Tuke, and it would be waste of time for me to recapitulate. Still, there are one or two points on which I should like to say a word or two. As an old friend and neighbour who had seen him daily for many years past no one could feel more deeply than I do or appreciate more fully the many noble characteristics which he possessed. The one great feature, I think, of his life and of his work is his truthfulness. In all his writings there is no effort at egotism, at putting forward his views simply as his views. He always asserted simply and plainly the truth. Again, his freedom from prejudice is wonderful, his toleration for everybody else's views, and at the same time his steady, persistent, quiet way of holding to his own views. I cannot help feeling that he got much of this from his association with the Society of Friends, who of all the persecuted sects were the first by their quiet determination and persistence to obtain freedom and religious liberty. I might say a great deal more, but these two points I felt had not been touched upon, and I thought I would like to add them.

The following resolution, submitted by the **PRESIDENT**, and a copy of which the Secretary was instructed to forward to the family of Dr. Tuke, was then unanimously passed :—"That this Association, assembled in general meeting, desire to express their deep sense of the loss which the Association has sustained in the death of Dr. Daniel Hack Tuke."

A ballot having been taken on the names of the applicants for membership of the Association, the **PRESIDENT** declared the following gentlemen duly elected :—

Charles Oliver Stanwell, L.R.C.P. and S. and L.M.Edin., Senior Assistant Medical Officer, The Retreat, York.

Dr. George Fowler Bodington, Medical Superintendent, Provincial Asylum for the Insane, New Westminster, British Columbia.

Herbert Barraclough, M.B., Assistant Medical Officer, Borough Asylum, Nottingham.

John Frederick Briscoe, M.R.C.S.Eng., Resident Medical Superintendent, Westbrooke House Asylum, Alton, Hants.

Walter Russell Strapp, M.B., C.M.Edin., Assistant Medical Officer, District Asylum, Inverness.

Walter Adam, M.B.Edin., Grahamstown Asylum, South Africa.

John Conry, M.D.Aber., Fort Beaufort Asylum, South Africa.

Dr. **MERCER** read a paper on "The Collective Investigation of Mental Disease." (See Original Articles.)

Dr. Andriezen being unable through illness to attend and read a paper which he had promised, the proceedings then terminated.

MEETING OF THE SOUTH-WESTERN DIVISION.

A meeting of the South-Western Division of the Medico-Psychological Association was held at the City Asylum, Fishponds, Bristol, on Thursday afternoon, April the 4th. There were present Dr. Nicolson (in the chair), Drs. Wade, Fox, Morrison, Benham, Aveline, Bristowe, Bullen, McBryan, Cobbold, Stewart, Robinson, Blachford, Soutar, Eager, and Macdonald (Hon. Sec.), and Drs. Swain, Brown, and Wathen (visitors). The President of the British Medical Association, Dr. Lane Fox, of Bristol, apologized through Dr. Benham for his unavoidable absence.

The minutes of the previous meeting at Bath were read and confirmed.

A VOTE OF CONDOLENCE.

The **CHAIRMAN** suggested that their first duty would be to pass a vote of condolence with Mrs. Tuke and her family in the distressing and melancholy bereavement under which they were suffering. Dr. Hack Tuke for many years had taken a prominent and leading part in the Association. As editor of the *Journal*,

he had done much work of the highest order. He was sure it only required a suggestion on his part in order that this proposal should be adopted, and, therefore, without entering into the virtues which Dr. Tuke possessed, and which they all knew so thoroughly, he would simply formally put it to them that such a course should be adopted, knowing as they all did that the Association had lost in him its most influential and most interested worker.

Dr. MACDONALD submitted for the approval of the meeting the following resolution :—"That the South-Western Division of the Medico-Psychological Association desire to express to Mrs. Tuke and family their deep sense of the great loss the Association has suffered by the death of Dr. Hack Tuke, editor of the Journal of the Association, and formerly President. We cannot find words sufficiently expressive of our feelings, for we thus early recognize that by his death the Association has sustained an almost irreparable loss. His great and conspicuous abilities, his large-heartedness and true friendship were the pride and honour of the Association, as well as the help and guide of every member."

The resolution was unanimously carried.

THE REPRESENTATION ON THE COUNCIL.

The CHAIRMAN said it seemed that by the rules of the Association it was necessary for the division to forward the name of an honorary secretary to the Council, and he thought it almost went without saying that the name of the honorary secretary should be that of Dr. Macdonald, who had so much interested himself in the work up to the present time. If he will be good enough to continue the work he has so well begun, I feel we could not do better than again ask him to accept the office, feeling so grateful as we do to him for his past services (hear, hear).

Dr. STEWART said he seconded the resolution with very great pleasure, and it was carried with acclamation.

The CHAIRMAN remarked that the other question was whether they should suggest a member of the Council for the division. He did not know whether a name had to be forwarded, or whether this was merely a new idea. The suggestion had just been handed to him, and he should like to ask some further explanation as to whether it was an element of contention or a duty. He did not know himself what the rules applicable to this particular subject happened to be. He should like Dr. Macdonald, if he would, to explain a little more about the section.

Dr. MACDONALD said he would ask first of all to be allowed to thank them for asking him to continue the work of their honorary secretary. Up till now he had not had the opportunity of thanking them for originally asking him to undertake the work. It was, as the Chairman knew, a matter of great regret to him that through no fault of his own he was not able to attend the last meeting at Bath. He therefore desired to take this his first opportunity of thanking them for the honour they had done him, and he could assure them that if hard work on his part would help to make the division a success it would not be wanting. (Hear, hear). He did not see at all for his own part why it should not be a success; the work already done had fully justified their existence, and he hoped it would continue to do so. One word regarding the question of their representation on the Council. It was no new thing and nothing antagonistic at all. It was simply this: that it was a great help to the General Council if they did get suggestions. He might say that at a meeting of the Scotch Division the other day names were suggested for the Council, and it occurred to him that it would also be of assistance if that division would suggest a name for the Council to consider when they filled up the six vacancies in July. It would be a help to the Council more than anything else.

Dr. FOX said as far as he remembered—and he did not think his memory played him false—the principle hitherto adopted had been for members of the General Council to be chosen in direct proportion to the representation of the different class of asylums. A certain number represented County Asylums, a certain number Borough Asylums, a certain number Private Asylums, a certain number

the State Asylums, of which their President was the ornament, and there might be other interests represented. Up to the present time he thought the number of the Council had been in direct relationship to that representation. He was not saying one word in favour of the old system being a preferable one to the new one suggested, but at the same time it was well that a clear understanding should be come to, and, if possible, the two systems might be made to work into one another. It was no secret, he supposed, to say that there had been a certain amount of heart-burning and friction in days gone by with regard to the Council, and certain interests, or certain parties had thought that they were not adequately represented. He thought they should be careful in anything they did not to engender any jealousy or ill-feeling between themselves and the parent stock.

Mr. MORRISON explained that the system now in vogue was by general vote of the whole Association. Anybody might nominate and anybody might vote. He thought he was right in saying that the system mentioned by Dr. Fox of taking a certain number from one class of asylum and a certain number from another had been done away with, and in future the thing was to be worked upon an entirely different basis by common vote of the whole Association. He did not think that division had any right to suggest that a certain number should be put upon the Council. It would be entirely against the spirit in which the rules had been lately framed. Therefore he should have an amendment to the motion, because it went against the whole spirit of the rules, which had been fought out after so much trouble and delay. If the whole thing had to be revised again, he thought it would neither be beneficial to the Association nor tend to that general peace and harmony which they now hoped to see with regard to its working.

Dr. MACDONALD—I am inclined to think Dr. Morrison has misunderstood the question. It is entirely for the members. If you think it will lead to friction by all means don't suggest anybody at all. I merely suggested it to you for your consideration thinking it would be a guide and help to the General Council, who have before now experienced great difficulty in selecting gentlemen to serve.

Dr. WADE said, as regards the power of members nominating people, that was an absolute farce. At the last Dublin meeting when the ballot papers went round it was discovered that one gentleman was not eligible for re-election, and it was then stated that every member might vote for anybody he liked. The result was that a gentleman was elected on a very small minority of the votes present. This was evidently not the intention. A great number of those present abstained from voting at all, and the gentleman was elected on something like six votes in a meeting of 30.

The CHAIRMAN said what occurred to him about it was this. They, as a division, had a perfect right to think out what would be to their own advantage, and also what they thought, from their particular standpoint, would be to the advantage of the Association generally; and then if they thought they had a reasonable case to put before the Council they might do so. He was bound to say in this particular case he scarcely saw sufficient grounds for starting a new system which appeared to be somewhat at first sight of a revolutionary description. There were some of them on the Council. If there was any risk of the division not being represented, or if it so happened that the division was not represented, then they would have a very good case and a cause for complaint. But he did not see that at the present time they had any reason. The division was at present, he thought, fairly represented, and he thought it would be somewhat ungenerous of them to attempt to force the hands of the Council by asking them to go to a vote on a question raised by that division. If they had a stronger case and were not represented he was quite sure the Council would see the force of the argument, and proceed immediately to elect some one from their division to represent them. But it introduced an entirely new element with regard to the election of members of Council if every division was to send forward a name. His own personal recollection of the meetings, and election of new members of the Council, was that every care was taken to represent all possible interests. His own feeling in the matter, on the present occasion, would be to let the subject drop, and not come to any division upon it. Having talked the matter over, those of them who were on the Council

would understand the feeling of the division, and would be able, he hoped, to represent that feeling in the presence of the General Council of the Association. If those present thought this would meet their desires he thought they might well let the matter rest for the present, and see how things went on in the future, when if necessary they might take some more active steps. That was what he would suggest.

The matter was thereupon allowed to drop.

THE NEXT PLACE OF MEETING.

The CHAIRMAN said their next business was to fix the date and place of their next meeting.

After some discussion it was decided to hold the next meeting at Exeter, on October 15.

Dr. BRISTOWE read a further contribution on "The Relations between General Paralysis and Chronic Renal Disease" (see Original Articles) in continuation of a previous communication on the subject, made at a meeting of this division.

Several remarks followed from Dr. BULLEN and Dr. MORRISON, in which both paid a warm tribute to Dr. Bristowe on the interesting character of the paper, but there was practically no discussion, owing to the limited time at the disposal of the members. For the same reason, Dr. Macdonald's paper on "The Nursing Staff—Thoughts and Reflections, with Remarks on a New Departure," was held over till the next meeting.

THE QUESTION OF GRATUITIES.

Dr. LAW WADE moved the following resolution: "That it is desirable that powers be given to the Visiting Committees of asylums and hospitals for the insane to grant gratuities to the widows or orphans of officials who may die after long service, or be fatally injured in the discharge of their duties." Dr. Wade said his name had been put down to initiate the discussion, but he did not know that there was very much scope for it, the matter being one upon which he thought they would be all pretty well agreed. It would probably be a revelation to those connected with a good many county asylums to know that the Visitors had not at present such a power granted them. It was only recently, after a Local Government Board audit, that they discovered that no power was given in the Lunacy Act to committees of asylums to grant any gratuity, reward, or pension to a man's relatives after his death. The position they stood in to-day was just this: That if any of them were killed, their relatives would get absolutely nothing, but if they were disabled the committee would be empowered to grant a pension. They could, no doubt, all recollect an accident which happened in a Lancashire asylum last year, where a superintendent was very badly injured; if it had happened that, instead of being merely injured, he had met with his death, nothing whatever could have been done for his family. He had written a letter to Dr. Murray Lindsay, who he need hardly say was always to the front when a question of this kind came forward, and the following extract from his reply referring to another case was, he thought, very much to the point: "The sad death, after a short illness, of our head attendant, Harry Bird, on 19th October, from blood poisoning contracted in the execution of his duty in the post-mortem examination room, cast a heavy gloom over the asylum, both among patients and staff, some of whom, myself amongst the number, followed him to his last resting-place in Mickleover Churchyard. He left behind him a widow and eight children (the youngest twins not quite two months old) totally unprovided for, with the exception of one girl, who is earning her own living as a nurse. A subscription among the staff for the widow and family was very quickly set in motion, speedily followed by a village subscription fund, in addition to which, by the kind advocacy of the committee, a sum of £150 was granted by the County Council, subject to the sanction of the Local Government Board, which has since been obtained. A feeling of disappointment was felt and expressed that there is no provision in the Superannuation Clauses of the Lunacy Act, similar to the provision in the Police Superannuation Act, for granting any gratuity, pension, or annuity to the widows or

orphans of attendants who receive injuries in the execution of their duties and die therefrom. This man had been 8½ years in the service of the asylum as head attendant, also lately acting as conductor of the band." In their own asylum last year, the clerk, who had been in the asylum for a period of some thirty years, died just about the beginning of December, and the committee at the next meeting held after his death unanimously voted that his salary to the end of the year be paid to the widow. When the auditor came he pointed out to them that this was absolutely beyond their power, that it was absolutely illegal. He said, however, that as they had voted it in a perfectly straightforward manner, and as he considered it himself to be a perfectly right and reasonable thing to do, he would recommend it to the Local Government Board, and he had no doubt that on his recommendation they would at once sanction the payment. At the same time, he suggested that those interested in asylum work should move in the matter; he believed it himself to be clearly an omission in the Act, and he had no doubt in his own mind that if the question were taken up the omission would be rectified. There was one passage in the Lunacy Act of 1890 which seemed to point conclusively to the fact that it was an omission. There was a clause inserted which provided that in case an officer was transferred from one asylum to another under the same local authority, all his services should be counted towards any pension or gratuity to which he might be entitled. The word gratuity appeared there for the first time in the Act, which appeared to have been very carelessly put together. Evidently the framer of the last section was not aware that there was no provision for a gratuity before. He had spoken to some members of his own Committee of Visitors who were perfectly in agreement with him that such a power should be granted. They did not ask by the resolution that they should in case of death be compelled to grant a gratuity, but simply that it should be within their power to do so if they thought fit. Dr. Lindsay had suggested that it might be of some assistance to Dr. Cassidy if a copy of the resolution was sent to him, so that he might lay it before his committee, who were at present considering the question of pensions for the Lancashire asylums.

Dr. MACDONALD said he had much pleasure in rising to second the resolution, though he did not know that it was necessary for him to add anything to what Dr. Wade had said. He thought the resolution would appeal to all of them. It certainly did seem hard that in such a case as Dr. Wade had mentioned, where a head attendant died in the discharge of his duties, nothing whatever could be done for his widow and children. It seemed a very opportune time to bring forward a motion such as this, when they remembered that within the space of twelve months two superintendents were assaulted and might have died, leaving their widows and children without any gratuity. Considering all the facts mentioned by Dr. Wade, he thought they were fully justified in doing what they could to try and meet the omission. It would be the proper course, according to the rules, that if the resolution were carried they should direct him to forward it to the Council of the Association.

Dr. MORRISON thought it should also go to the chairmen of the various committees in the division. One of the difficulties in connection with resolutions of this kind was that the committees had no chance of discussing the matter.

The CHAIRMAN thought it would be the proper thing in the first place to put the resolution to the meeting, and if any other question arose that would be a matter for subsequent consideration. If there was one thing he was disposed to suggest it was that they should take steps themselves to obtain for Visiting Committees the power to grant gratuities. He felt quite sure that as to the desirability of such power being given them the question met with their unanimous approval. From instances which had come under his observation he was quite convinced that the Government authorities recognized the desirability of granting some pecuniary compensation to widows and families of those who died under circumstances such as had been detailed, and as to the local authorities and the County Councils he was convinced that they would be prepared to entertain the matter favourably. He thought the time had come when the resolution might be

formulated and sent up to the Council as a fit and proper thing to come before the annual meeting. He saw no reason why this could not be done.

The resolution was carried, and the Chairman's suggestion accepted.

The CHAIRMAN suggested whether Dr. Morrison's proposal might be considered. For his own part he saw no reason against taking advantage of every possible means at their disposal that would tend to strengthen the case for them. It was for the meeting to decide whether such local steps should be taken. At the same time he suggested whether it could not be done on the initiative of the various superintendents.

Dr. BENHAM—The superintendent might approach his committee and get their influence in the matter.

The CHAIRMAN—Supposing Dr. Morrison puts it in that way, that superintendents of asylums be requested to inform their various committees of what steps are being taken, and invite their help.

Dr. MORRISON thought it should go from the hon. secretary as representing the whole division. This, he was convinced, would have more weight than any individual effort. He would move this as a resolution.

Dr. BENHAM seconded, and it was agreed to.

The CHAIRMAN said he was pleased to see Dr. Wathen with them. He would be able to see that they were unanimous in the matter, and no doubt the members would be very pleased to hear anything he had to say.

Dr. WATHEN accorded the division a hearty welcome on behalf of his committee, and said he had every sympathy with the general terms of the resolution. No man who had any esteem for his fellows could feel otherwise. He thought if they all put their shoulders to the wheel and brought Dr. Wade's resolution prominently before the various Members of Parliament representing them in their divisions, and in addition to this take every opportunity of influencing their committees, it would go a good way towards achieving the object they had in view. In the present day if anything was to be got from the Government it was by co-operation and continual hammering away.

The CHAIRMAN said it now only remained for him to return the thanks of the division to the committee of the County and Borough Asylum of Bristol for having so kindly placed the asylum rooms at their disposal, and also to Dr. Wathen for having been with them to represent his committee. Their thanks were also very warmly due to Dr. Benham for his generous hospitality.

The formal proceedings then terminated, and the members drove to the Grand Hotel, Bristol, for dinner.

MEETING OF THE IRISH DIVISION.

A meeting of the Irish Division of the Association was held at the College of Physicians, Kildare Street, Dublin, on Thursday, May 23rd. The President occupied the chair. The other members present were Drs. W. R. Dawson, Arthur Finegan, John Eustace, Thos. Drapes, John R. Burke, Alex. Patton, George R. Lawless, W. H. Garner, John Molony, H. M. Eustace, Henry Cullinan, and Oscar Woods (Hon. Sec.).

The minutes of the last meeting were read, confirmed, and signed.

Elizabeth J. Moffatt, M.B.Lond., B.A., Junior Assistant Medical Officer, District Asylum, Mullingar, was balloted for and elected a Member of the Association.

It was proposed by Dr. FINEGAN, and seconded by Dr. DRAPES, that Dr. Oscar Woods should be nominated for election as Secretary to the Irish Division, and a resolution to that effect was adopted unanimously.

It was unanimously resolved "That the Irish Division of the Medico-Psychological Association of Great Britain and Ireland assembled in stated

meeting, desire to express the sorrow which they, in common with other members of our Association, experience in the death of our venerable associate, Dr. Daniel Hack Tuke."

It was also unanimously resolved "That this meeting desire to record their regret at the death of Dr. J. F. Duncan, ex-President of the King's and Queen's College of Physicians in Ireland, who was President in the year 1874-5, and for many years a respected member of the Medico-Psychological Association of Great Britain and Ireland."

Dr. JOHN E. BURKE read a paper on "The Increase of Insanity and its Prevention." Remarks were made by Drs. DRAPES, PATTON and OSCAR WOODS, and Dr. BURKE replied.

The PRESIDENT stated that he had been requested to read the following communication by Dr. E. L. Fleury, A.M.O., Richmond Asylum, who was unavoidably absent.

CLINICAL NOTE ON AGITATED MELANCHOLIA IN WOMEN.

In undertaking to describe separately a single variety of melancholia, one lays oneself open to the objection that the varieties of this disease are in no sense distinct species, and may be only stages, in the history of a single case, which at different times may present the characteristic features of each one of the types of melancholia. This is undoubtedly true. Though typical examples of each variety may contrast markedly with each other, still, through numerous gradations, they shade off into one another. The patient who is suffering from simple melancholia, who is lucid, coherent, and who seeks in vague fears of impending misfortune the cause of his or her depression, may seem a very different being from the unfortunate sufferer, rigid and immovable, in melancholic stupor. But the stuporous melancholic was not stricken into this condition at once. He began, perhaps, with vague depression, loss of interest in life, and loss of sleep. Then a delusion grew, and became a peg to hang the depression upon. And so his misery grew and deepened, till he petrified into a rigid and silent statue of anguish.

And in like manner do the other varieties of melancholia shade off into and alternate with each other.

Still, all this being granted, agitated melancholia constitutes, if not a species, a distinct and recognizable clinical type; and, though it does sometimes alternate with other conditions, and though it probably develops gradually, growing, as so many other forms of insanity do, out of a condition of simple melancholia, *i. e.*, causeless uneasiness, vague depression, loss of appetite, and sleep, and so forth, still it often happens that a case of agitated melancholia presents the same marked and characteristic features from the time it first comes under asylum treatment till the sufferer gradually convalesces or succumbs, worn out, to some intercurrent malady.

Under the name of agitated or motor melancholia I purpose to attempt some description of a group of cases characterized by the presence of an intense degree of mental anguish, which is not endured in silence, but finds expression in physical manifestations, such as constant restlessness, noise, and lamentation. It is often associated with impaired physical health. The course of the disease is usually prolonged, and the prognosis is uncertain.

The above applies to a typical case. There are, of course, milder examples of the same type, and other cases, to be referred to hereafter, in which agitated melancholia alternates with some other condition, or in which the attack is brief in duration and dependent upon a definite exciting cause. I have classified the cases of agitated melancholia I have met with into three groups, according to the three principal periods of life at which I have found the disease to occur. 1. In young women from nineteen to twenty-eight years of age. 2. At the climacteric. 3. In the senile period.

Each group of cases has to some extent its distinct characteristics. The most

typical cases are found in the first group. Of these my youngest sufferer was 19, my oldest 27 years of age. Nearly all of them had definite delusions, firmly held, and showing no tendency to variation. These delusions were generally ideas of extreme moral unworthiness and wickedness. They believed that they were lost body and soul, or that they were changed into the devil. The latter delusion is not at all infrequent. In these young cases motor restlessness was a most marked feature. The sufferers were scarcely still a moment, wandering up and down, wringing their hands incessantly, or if seated rocking to and fro. They were continually wailing, sobbing, and crying. They caused the greatest irritation to other patients by following them about, plucking at their dress, and addressing distracted appeals to them. As a result such patients frequently sustain injuries. They make great demands on the care and patience of their attendants. As a rule they are intensely suicidal, and require the closest watching. Sleep is almost entirely absent; the patient rises from her bed and wanders about all night. Curiously enough, I found that most of my young cases showed no tendency to refusal of food. They pick at their fingers, bite their nails to the quick, and pull out their hair.

Along with the above evidences of profound mental affection there often coexists a surprising coherence of speech and clearness of memory. When the patient can be induced to stop wailing and lamenting for a moment she will often answer questions coherently, and give a clear account of her former life and the onset of her illness, though her statements are, of course, coloured by her delusional ideas.

She generally knows where she is, and comprehends perfectly the nature of her surroundings. She understands and recollects all that goes on around her. She often displays great ingenuity and watchfulness in her attempts to escape, generally with suicidal intent. I give three illustrative cases.

CASE I.—J. D., aged 24 years. Single. Occupation, school-teacher. Suffers from indigestion and dysmenorrhœa. No known heredity. Before the attack came on, she had been worried and anxious about the illness of a relative, and had also been probably somewhat overstrained, working for examinations. Her own account of the onset of her illness was as follows:—She had been recently separated from a person for whom she entertained a regard. She wished earnestly to hear from him. For a month she prayed fervently for a letter, but without avail. Then she left off praying altogether, and gave up going to Mass; she considers that she turned from God altogether, and she felt that she had undergone a change. She was no longer herself. She had been changed into the devil. When she looks into the glass she sees the devil's face.

This patient was intensely suicidal, and before admission had flung herself over the bannisters at home, striking the side of her head against the floor, and thereby producing a hæmatoma of the left ear.

On physical examination, there was found to be impairment of percussion note and tubular breathing at the right apex.

An attempt was made to keep the patient in bed, but it was quite unavailing. She would wander about the ward, barefooted, in her night-dress, beating on the door, and wailing incessantly, "You might send me home, you might have some pity, get a cab and send me home, send for my mother," etc., etc. She was continually on the watch for a chance to commit suicide, attempting to choke herself with the bed clothes or tearing a strip off her night wrapper and tying it tightly around her neck. She used also to try and swallow buttons.

When she had been about two months in the asylum, she suffered from dysentery; the illness made no difference whatever to her mental state. She continued to try and choke herself with the sheets, and when convalescent made a determined attempt at escape. Her continual cry was, "Let me go home." She gave great annoyance to the other patients, and on one occasion attacked one of them and tore out a quantity of her hair. She continued to

believe that she was changed into the devil, and said she was going to hell for being so wicked, and giving so much trouble and annoyance to everyone.

When she was first admitted, there was no evidence of hallucinations. Later on, however, she said that a voice had told her that she was damned, and another time she heard the devil under the bed. And this, although she believed herself to be the devil! Hallucinations were not a prominent feature, however, in her case.

Her anguish and restlessness continued unabated; she became very thin, sickly, and cyanotic.

About six months after admission, she developed a hæmatoma of the right ear, probably traumatic in origin. She never refused food. At length signs of advancing consolidation were detected in the lungs, and the patient sank and died of phthisis a year after admission.

Various forms of sedative treatment were tried in this case. Somnal, in one and two drachm doses, gave some temporary relief. Naphthalin produced no improvement. Opium deadened the mental suffering to some extent, and the patient came to know that it had this effect, and used to beg piteously for her medicine.

CASE II.—L. C., a tall strong looking country girl, aged 19 years. There was probably some neurotic heredity in this case. A sister died of "water on the brain," and another sister was ill with some nervous affection. The patient had gone through worry and mental trouble owing to the illness of relatives and the death of her father. She had suffered severely from dyspepsia. She herself, as did the patient in the preceding case, attributed her illness to moral causes. In her own words "it was a fret I took over a boy." She had been fretting about a lad who parted from her and went off to America.

On admission, she was very frightened and emotional, crying, and entreating to get away. She said she got annoyed and it all flew to her head. She was greatly distressed by a queer sensation—not a pain—in her head.

She expressed no obvious delusion in the course of our first interview. But after being a little while in the asylum she announced that "the devil had her chained here. She was lost body and soul."

She was, I think, the most restless patient I have seen. Even while in the dining-hall she would require to be held by two or three attendants, and once I saw her climb on to the dining table and run along it. She would seize on the officers as they passed, imploring them to liberate her, and so firm was her hold that it was a matter of the greatest difficulty to get away from her. She made a terrible noise, shrieking continually, "The devil has me chained. I'm lost body and soul. I'm in my perfect senses," and so on. She never refused food, and her physical health continued good.

She remained in this distressing condition for three months. In the fourth month improvement set in somewhat suddenly. Six weeks later she was discharged recovered.

CASE III.—C. M., aged 24 years. A young married woman physically healthy. No information as to heredity. She had met with domestic trouble in her married life.

Apparently her mind first became unhinged during her pregnancy. Before her first baby was born she ran away from home.

After parturition matters did not improve, and just before her admission to the asylum she attempted suicide by jumping into the canal.

On admission she was profoundly depressed and weeping. But she was quite coherent, and gave a very clear account of herself. She said she was brought to the asylum because she was mad. "God afflicted me with this." She thought that she was very wicked and had undergone such a change that she was no longer a human being. A day or two later she asserted positively that she had been changed into the devil.

She was very restless, noisy, and sleepless. She would not sit down to her

meals, but used to wander about the dining-hall clasping her hands and appealing to the other patients to know if she would ever get home. At night she would wander about the dormitory, going from one bed to another, disturbing everyone. She used to sway herself from side to side, lamenting that she "gave up God," and saying she was Antichrist, doomed to all eternity. There was no evidence of hallucinations, visual or auditory. She was always on the watch for an opportunity to escape. She never refused her food. She had a hæmatoma on one ear, caused by another patient striking her with a boot.

She continued unimproved and suffering intensely for rather more than a year. At the end of that time she was attacked by erysipelas of the face. She made a good recovery, and from that time her mental condition improved, and she was discharged recovered fourteen months after admission.

In concluding the consideration of this group of cases I note the following points. There is generally a history of mental worry and strain before the onset of the attack. The illness will probably be long, and the issue is doubtful. If the physical health is poor, and especially if there is any tendency to phthisis, the patient will probably succumb. Hallucinations are either absent or not much talked about.

As regards treatment, abundant nourishment is required, and the patient should be kept much in the open air, and as much away from other patients as possible. Sedatives will be required, and suffering is lessened by the regular administration of ether and opium—the latter in somewhat full doses.

I now pass to the consideration of agitated melancholia, as met with in women at the climacteric.

At this time of life typical cases are less numerous, agitation in elderly women having a tendency to pass into stupor.

The prognosis of a marked case of agitated melancholia at the climacteric is generally bad. The depression is profound. The patients are intensely suicidal. They have delusions which mostly refer to some evil that they believe to be impending, or some injury which they think is to be done them. They have not, as a rule—at least I have not found in them—that sense of moral guilt so noticeable in the young cases. They are often hypochondriacal, complaining of bodily illness without apparent cause. They have, as a rule, auditory hallucinations. They do not, generally speaking, refuse food. Their physical health is poor. Not infrequently there is a history of alcoholism. My two most typical cases, here given, were drunkards. Like the young cases they are often coherent in speech, the memory is clear, and they are tolerably cognizant of their surroundings.

CASE I.—M. A. R., a married woman, aged 46. Addicted to drink by her own confession.

Menstruation had ceased about three months before the onset of the attack.

There had probably been considerable domestic unhappiness; the husband was said to be a drinker as well as herself, and the son had recently enlisted.

The patient said that about a month after the cessation of menstruation she began to suffer from "stupidness," and growing depression of spirits. She lost her sleep, and fretted about the children. About ten days before admission she (being drunk at the time) attempted to cut her throat, and inflicted a tolerably severe wound, which at the time of her admission to the asylum was secured by catgut stitches. After the suicidal attempt she was treated at a general hospital, but her depression continued extreme, and necessitated her removal to an asylum. At our first interview she was very depressed and emotional, crying and complaining, fretting about her children. She said that on her way up from the lodge she met a woman who told her she (patient) was here for life. She believed she would never see her family again. This was the only approach to a delusion I could at this time elicit from her. About a fortnight later she was

wailing and lamenting, asserting that she was going to prison. Then she believed that she was going to be killed, and threatened to cut her throat again. The wound was healing well, and the stitches were removed. One morning early she managed to tear the wound open to a considerable depth. Fresh stitches were inserted, the patient being put under chloroform. There was some degree of cellulitis around the wound, but ultimately it did well. The patient was found to be suffering from Bright's disease. She continued acutely depressed, lamenting loudly, believing she was going to be killed, and asking for a dose of chloroform.

Five months after admission she was attacked with diarrhoea and incessant vomiting, to which she speedily succumbed.

CASE II.—S. T., aged 56. Widow. Habits intemperate. On admission she was very restless and fidgety, pinching her limbs, and tightly clutching the hands of anyone who came near her. She told me that her husband had died six months previously, and ever since his death her lodger had been persecuting her and trying to get her out of the house. She believed that this person had spread evil reports against her, accusing her of immorality. She had auditory hallucinations, heard noises speaking ill of her and threatening her.

Some days after admission she became very depressed and frightened, saying someone was going to kill her. She slept badly, but took food pretty well. She soon became quite frantic in her apprehensions of impending death. She used to walk about the dormitory of a night and pull the other patients out of the beds. When brought in and out of the dayroom she offered the most desperate resistance.

About a month after admission she was attacked with dysentery. Being removed to the fever block, she imagined she was taken away in order to be killed, and was restless and terrified, begging continually that she might not be murdered. By degrees she came to talk less about this fear, but her agitation and restlessness did not subside. She refused stimulants and resisted physical examination, pinching the hands of her attendants when they came near her. At other times she would pinch herself. She was continually craving for various articles of food or drink, asking over and over again, with the most distressing persistency, for the same thing. One request being granted, she would immediately prefer another. She was altogether a terribly trying patient. There was some appearance of moral perversion. She would bring entirely groundless charges of unkindness against her attendants, and reproach the doctor for cruelty when the remedies ordered did not please her. She succumbed about 10 weeks after admission.

Agitated melancholia in senile women is neither so well marked nor so characteristic as at the two periods already described. The feeble and aged frame is unable to bear for long the stress of severe mental agitation. The patient either succumbs quickly or passes into a condition of stupor. The motor restlessness is not so marked. The patients sit up in bed, moan, and rock themselves to and fro. But they do not wander about the room and annoy others. They have not strength to do so. They are suspicious and resistive. Their delusions are of the apprehensive kind. They believe someone is coming to forcibly remove them, to murder them, etc. They are very suicidal. They are not so lucid or coherent as the younger cases, and generally will not talk much, suspecting everyone around them.

As before said, the condition of motor agitation may be only an incident in the history of a melancholic case. It not unfrequently is a stage on the way to profound melancholic stupor, especially (as stated above) in senile cases. Sometimes the stupor and the agitation alternate. I have seen a patient dull and in semi-stupor when she first came under observation, then rousing up into a condition of agitation and terror, then relapsing into the stuporose state again.

In this case there were varying delusions, ideas of moral unworthiness, and determined refusal of food. The patient was 68 years of age. She died three months after admission.

Another patient, E. M., aged 60 years, was on admission in a condition of profound depression and agitation, wailing and rocking herself to and fro. She believed that she had committed murder, was lost body and soul, and that she was to be burnt. She was very resistive and refused food.

About five months after admission she became very quiet, took no notice of anything, and never spoke unless when spoken to, and then she would answer as briefly as possible. She remained in this condition for about six weeks, and then became for a short period intensely restless, agitated, and resistive, continually struggling with the attendants, and trying to escape from the ward. She quickly relapsed into her former silent and passive condition. She died of phthisis and dysentery eight months after admission.

These cases of stupor, alternating with extreme agitation, appear to me to resemble, if not to be identical with, the class of cases described under the name of *katatonía*.

As may be inferred from above examples the prognosis is extremely bad.

Attacks of agitated melancholia, due to a definite and obvious exciting cause may, I think, be divided into three groups, according to the nature of that cause, thus:—(1) Alcoholic, (2) puerperal, (3) epileptic.

These cases present the following points in common. The attack is usually brief in duration, and the symptoms very acute. Prognosis as to recovery from the individual attack is good, except in the puerperal cases, which sometimes end in death. There is not that comparative lucidity and coherence which was referred to in the description of the first group of cases. The patient is often entirely oblivious of the nature of her surroundings. There are hallucinations, visual and auditory. The delusions are ideas of terror and impending danger, not generally involving a sense of moral guilt. The patient is suicidal, but many apparently suicidal attempts are in reality efforts to escape from imaginary enemies—such as an attempt to jump through the window.

The alcoholic group may be held to include ordinary cases of *delirium tremens*, which, as I think Dr. Clouston points out, are really cases of agitated melancholia, with predominance of visual hallucinations. Such cases being generally associated with certain bodily symptoms, and running a comparatively brief course, are ordinarily looked upon more as illness than insanity, and are not generally sent to asylums. There are, however, certain cases of agitated melancholia, directly consequent on alcoholic excess, which do not present the febrile temperature and other bodily symptoms of *delirium tremens*. The following case exemplifies this:—

P. M., aged 36, married. She had been addicted to drink for about six years, and was believed to be drinking heavily shortly before the attack.

Early one morning she got out of bed, saying someone was at the window. She then jumped through the window and ran down the street. Later in the same day she was brought to the asylum. She was in a condition of profound terror, saying, "When am I going to be killed? He said he would cut me up. He said he would cut my eyes out—the big cross man." She continually expected to see this imaginary person enter the room. When the doctor came in she thought he was going to cut her tongue out. Her terror always seemed to increase when she looked at the window. She said she saw something looking through it.

She attempted suicide by tying her shoe strings round her neck.

In two or three days her terror had subsided; but she regarded us with suspicion and disfavour, as she believed we were working electric currents on her. She soon lost this idea, and when sent out to the care of her husband, rather over a fortnight after admission, appeared perfectly well.

When at large she resumed her old habits, with the result that after eleven months she had to be sent back to the asylum, having again attempted to throw herself out of window. This time she imagined she saw the devil, decorated with great horns, and nails of red hot iron. He called to her, saying, "Come, come," and she felt forced to obey, and smashed the window to get to him. She recovered very quickly, and was discharged well in three weeks.

Most of these cases run the same course. Speedy recovery, when abstinence from stimulants is enforced, is too frequently followed by speedy relapse consequent on return to former modes of life.

In those puerperal cases in which the mental disorder assumes the melancholic type, the onset is generally late, that is, 4-5 weeks after delivery. These cases do not generally exhibit motor agitation as a prominent symptom. I have, however, seen very acute agitated melancholia coming on shortly after delivery, and speedily proving fatal, as in the following case:—

B. K., aged 24 years, unmarried. Her baby was born 13 days before admission, and she was stated to have been ill three days. On admission she was depressed and terrified, keeping up a perpetual moan of, "Blessed Virgin help me." She was quite oblivious of her surroundings. She was inclined to refuse food. She talked a little, but quite incoherently, rambling about "the way they punished me," and saying, "This is hell." Her breath was offensive; she was very tremulous and prostrate. She died in eight days.

Agitated melancholia is not infrequent in epileptics, generally coming on after a fit. The attack is usually very acute and very brief. The patient, who is in a paroxysm of terror on admission, may be composed and fairly rational two or three days later. But the inter-paroxysmal condition generally exhibits more or less mental impairment, frequently weak-mindedness and deficient memory—sometimes persistent delusion. Nevertheless the change in the patient is very striking.

K. B., an elderly single woman, an epileptic. On admission she was very agitated and restless, turning her head from side to side as if listening intently. She thought we were all going to be killed.

All night long she was very restless, jumping out of bed and getting up to the window. Next day she was acutely depressed, rocking herself on her chair and saying she was "struck with death." Three days later she was composed and quiet, but did not know where she was, or remember the particulars of her attack. She told us that she took fits every 6-7 weeks, and after them she got very nervous and frightened. In about a week's time she would be well—that is, would have returned to her usual inter-paroxysmal state.

Epileptics, liable to this form of neurosis, do not, as a rule, have an attack after each fit or bout of fits. Sometimes the latter occur and recur without effecting any obvious change in the mental condition. Why the same patient should become melancholic after some convulsions, and not after others, I am unable to surmise.

In summing up these notes I may add that I have noticed in agitated melancholics a liability to suffer from diarrhoea and dysenteric symptoms, which not infrequently lead to fatal results.

It is remarkable, however, in many cases how life and a certain degree of health are preserved under a degree of mental anguish that at first sight seems as if it must speedily wear the patient out.

These cases most sadly illustrate the practically unlimited capacity for suffering with which the human organism is endowed. And too often nothing brings them relief but death.

A discussion followed, in which Drs. JOHN EUSTACE, FINEGAN, LAWLESS, CONOLLY NORMAN, DRAPES, MOLONY, and HENRY EUSTACE took part.

LUNATICS IN WORKHOUSES.

By permission of the Division, Dr. WOODS introduced the question of dealing with lunatics in workhouses, and after some discussion, in which the following—Drs. DRAPES, FINEGAN, LAWLESS, JOHN EUSTACE, and the PRESIDENT—joined, the following resolution was unanimously adopted:—"That the time has arrived when provision should be made for the large number of lunatics in the workhouses of the country at present uncertified for, not properly cared for, and treated not as lunatics, but merely as paupers, and that a copy of this resolution be sent to the Inspectors of Lunatics."

A paper promised by the PRESIDENT under the title of "Opuscula Clinica" was postponed owing to the lateness of the hour.

Dr. FINEGAN proposed, and Dr. DRAPES seconded, that the next meeting of the Irish Division should be held at the Limerick Asylum on a date to be fixed in the month of October.

SIR JOHN BUCKNILL.

Honneur aux armes, honneur par les armes! We have much pleasure in congratulating our veteran colleague Sir John Bucknill on the splendid reception he met with in Exeter. Full of years and honours he found himself amid the scenes of his early labours, surrounded by troops of friends, and personally thanked by the Commander-in-Chief for his patriotic and magnificent service to his country. The idea which sprung from his active mind in 1852, fertilized by his careful enthusiasm, has now attained its full development in the fact of 224,525 efficient volunteers ready to defend their country should occasion unhappily arise.

No doubt to us, who regard Sir John Bucknill first of all as a physician whose achievements in the field of modern medicine are most noteworthy, it seems extraordinary that no mention of his life work and world-wide reputation should be made on this occasion. That a by-product, a recreation of his busy life, should eclipse his services in the care of the insane is surely the very irony of fate. As for us who remain in the ranks of the battalions of the specialty, and labour at the bugle call of science in the entrenchments thrown up against the encroachments of folly and disease, we must be content with the pale reflection of the glory Sir John Bucknill has achieved, in that we can claim him as a colleague, and as one who was ever ready to wield sword or pen for the good of his fellow men.

FIRE AT THE OXFORD COUNTY ASYLUM.

We regret to record that a disastrous fire occurred at the Littlemore Asylum on the 15th April, causing the destruction of the three-storey block containing the female observation wards. It is supposed to have originated in a spark from a defective chimney. Fortunately the outbreak was noticed about eleven o'clock in the forenoon, at a time when a competition of fire brigades was going on in the neighbourhood, and, by a curious coincidence, just as the Chairman was about to alarm the asylum brigade in order to test efficiency. Under the direction of the officers, the patients were speedily removed and accommodated elsewhere, and it is gratifying to learn that none of them suffered injury. Unfortunately an unusual number of accidents occurred amongst the firemen, who worked energetically to save the lower part of the building, in the face of a fierce fire which spread with great rapidity owing to the high wind. Mr. Sankey is to be congratulated on the completeness of his arrangements, which resulted in the safety of patients and staff, and the salvage of the greater part of the bedding, so that the committee are able to assure the friends of patients that the occupants of the block are well cared for in the main building.

DR. HACK TUKE AND THE "AFTER-CARE" ASSOCIATION.

It was natural that a physician whose family tradition—his great-grandfather was founder in 1792 of the famous "Retreat," York—and whose own specialty had brought him into close sympathy with the circumstances of mental invalids, should feel warm interest in their "after-care."

In a letter of Dr. Hack Tuke's, written in May, 1879, occur the words: "The subject has my hearty approval and sympathy, and if the Journal can be made the medium of any communication or appeal on the subject, I am sure my co-editors, as well as myself, would be pleased to afford the opportunity. Unless unavoidably prevented, I shall certainly be at the meeting." The meeting referred to was held on 5th June, in the same year, at the house of Dr. Bucknill—the *birth-place of the Association*—39, Wimpole Street. On that occasion the resolution was proposed by Dr. Lockhart Robertson, and seconded by Dr. Hack Tuke, "That this meeting do form itself into an Association." Dr. Bucknill was invited to take the office of President, and the Rev. H. Hawkins that of Hon. Secretary. On the 27th November another meeting was held at Dr. Bucknill's house, when Dr. Hack Tuke seconded the motion "that the Earl of Shaftesbury be requested to act as the patron of the Association of After-Care." At the same time a resolution was proposed by Dr. Savage, and seconded by Dr. Claye Shaw, "That the object of this Association is to facilitate the readmission of female convalescents from lunatic asylums into social and domestic life." And it was resolved, Dr. Lockhart Robertson proposing and Dr. Hack Tuke seconding, "That it is not desirable at present to form a distinct home, but to carry out the above object by endeavouring to board-out convalescent patients in cottages or other houses."

Shortly afterwards Dr. Tuke was careful to note that the formation of a "Home" was not to be considered as *negatived*, but only in *abeyance*. He wrote: "I should not have seconded it if the words 'at present' were omitted. The resolution means that we must move step by step, and that we by no means close the door to forming a distinct home whenever a majority thinks the time has come to proceed with one." He had previously remarked, "*Festina lente* will have to be the motto of our Association for some time, I think, and eventually we may see our way to more heroic measures."

Early in December, 1879, the Earl of Shaftesbury accepted the office of President of the Association. In a communication received from him occur the words, "Your letter entitled 'After-Care' has deeply interested me. The subject has long been on my mind." At the first anniversary in 1880, held again in Wimpole Street, Dr. Tuke was present. A previous letter from the latter had referred to an unfavourable "prognosis" of the Society. "I much regret to hear so discouraging a report of the state of the health of our bantling, and when its excellent and sensible nurse . . . feels discouraged, I confess it is serious." He expressed his intention of attending the anniversary meeting at Dr. Andrew Clark's, if at home, in 1881, and was present in the ensuing year at Dr. Ogle's, on which occasion he was joined by Lord Shaftesbury in calling attention to the need of some house or room in which the Association's business could be transacted. Later on a query occurs in one of our late Chairman's letters, "Whether the time has not come for appointing a paid officer?" Lord Cottesloe kindly welcomed the Association at his house in Eaton Place in 1883. On this occasion Dr. Hack Tuke remarked that no progress was made, and supported the suggestion that a person should be appointed to promote the Association's work. The meeting in 1884 was held at the house of Lord Brabazon (afterwards Earl of Meath), 83, Lancaster Gate, when the Earl of Shaftesbury (for the last time) took the chair. Dr. Tuke proposed to refer the question of the institution of a "Home" to a special committee. In May, 1885, a bazaar in aid of the funds of the Association was held at the Kensington Town Hall, when Dr. Tuke was among those who ad-

dressed the company. Later in the same year he spoke at a meeting held at Bethlem Royal Hospital, where also a second meeting was held in the autumn, when Dr. Tuke referred to the boarding-out system, which it might become desirable to utilize. It is to be noted that at this meeting a resolution was proposed by Dr. Norman Kerr, and seconded by Dr. Hack Tuke, "That Lord Brabazon be requested to accept the office of President," with which invitation his lordship eventually complied.

At a meeting in the autumn of 1886—Dr. Hack Tuke being present—Mr. H. Thornhill Roxby was unanimously elected secretary. From that date the Association entered upon a more active and fruitful stage of existence. 83, Lancaster Gate, by kind favour of the Earl and Countess of Meath, became the local habitation of the Society, and Dr. Tuke the permanent chairman of its monthly meetings. For this office he possessed excellent qualifications—tact, patience, courtesy, deference to the views of others while holding his own, and skilfulness in the guidance of the subject before the meeting. The punctual presence, kindly gravity, and apposite remarks of our late Chairman will long be remembered. His aid was also at the service of the Association on exceptional occasions, as when he formed one of a deputation to the late Cardinal Manning, in order to enlist his Eminence's sympathies on behalf of "After-care," especially of convalescents of the Roman Catholic faith; or as when he attended a meeting of visitors from London and neighbours of the Colney Hatch Asylum within the walls of that building. From time to time he visited the Society's temporary "Home" at Redhill, in which he was much interested.

Dr. Tuke's important connection with the "Journal of Mental Science" enabled him to render valuable service in making better known the requirements of "After-Care." Not only did the editors (of whom he was one) admit into its columns a paper bearing that title, but they appended to the article a special note calling attention to its contents. On other occasions, also, the Journal was rendered contributory to the advancement of the project. His correspondence must have been voluminous, yet his communications, though necessarily brief at times, were urbane and to the point. He presided for the last time at the Association's monthly meetings on Thursday, 14th February. The business was protracted, but the Chairman was still patiently pursuing it when the writer, little thinking it was a last farewell, took his leave. Those are pleasant lines connected with his memory—

"But cheerful in the light around me thrown,
Walking as one to pleasant service led;
Doing God's will as if it were mine own,
Yet trusting not in mine, but in His strength alone."—WHITTIER.
H. H.

LOUIS FLORENTIN CALMEIL.

The month of March, 1895, was a most fatal one to mental science. Two great alienists disappeared—Hack Tuke in England, Calmeil in France. Dr. Louis Florentin Calmeil had well-nigh reached his 97th year; he was born on the 9th of August, 1798, at Yvernav in Poitou. Sent as a pupil to the College of Poitiers, he began in the school of this town his medical studies. Anxious to obtain more extensive knowledge, he repaired to Paris and became a pupil of Bostan at the Salpêtrière. In the old and famous hospital he had the privilege of seeing the great Pinel and of attending the lectures of Esquirol. Ferrus was the assistant of Pinel, and Jean Pierre Falret, Félix Voisin, Georget, Trélat, and Leuret. Foville laboured with Calmeil under the direction of these illustrious masters. When Calmeil reached 24 years, he obtained the title of *interne* at Charenton, and lived there during 50 years. His first master in Charen-

ton was Royer-Collard, who died in November, 1825, and was succeeded by Esquirol. Esquirol remained resident superintendent until his death, which occurred on the 12th of December, 1840. During the whole of the time Calmeil was the assistant and the friend of the great alienist. Achille Foville, who succeeded Esquirol, kept his post until the revolution of 1848. The service was then sub-divided; Archambault obtained the men's ward, Calmeil that of the females. But Archambault soon left the establishment to take the direction of a private asylum in Paris (now Dr. Motet's house), and Calmeil became the Superintendent of Charenton. In 1872 he retired and moved to Paris, and during 23 years lived in a quiet retreat at Fontenay sous Bois with his wife and amongst his pupils, who paid frequent visits to their old and loved master. Calmeil enjoyed to the last the plenitude of his faculties, and died on the 11th of March, 1895.

He was an Honorary Member of the Medico-Psychological Association of Great Britain and Ireland, and of the Société Médico-Psychologique de Paris.

Some of Calmeil's principal books and notices are as follows:—

Observations de ramollissement du cerveau (publiées dans le livre de Rostan, 1820).

De l'épilepsie étudiée sous le rapport de son siège et de son influence sur la production de l'aliénation mentale (Thèse, Paris, 17 Juin, 1824, No. 110).

De la paralysie considérée chez les aliénés (Recherches faites dans le service et sous les yeux de Royer-Collard et d'Esquirol, Paris, 1826, in 8vo).

Des maladies de la moelle épinière (Paris, 1839, in 8vo).

De la folie considérée sous le point de vue pathologique, philosophique, historique et judiciaire (Paris, 1845, 2 Vol., in 8vo).

Rapport médico-légal sur l'état mental de J. R. inculpé d'homicide volontaire (Annales Médico-Psychologiques, 1856, Vol. ii., p. 66).

Traité des maladies inflammatoires du cerveau (Paris, 1859, 2 Vol., in 8vo).

Dans le Dictionnaire in 30 volumes, les articles: Aliénés—Catalepsie—Cauchemar—Céphalalgie—Céphalée—Contenance—Contracture—Delirium tremens—Encéphale—Extase—Hallucinations—Idiotie—Imbécillité—Magnétisme animal—Manie—Migraine—Moelle épinière—Monomanie—Système nerveux—Paralysie générale des aliénés—Ramollissement cérébral—Suicide.

Dans le Dictionnaire encyclopédique des sciences médicales, l'article: Des maladies intercurrentes des aliénés.

RENÉ SEMELAIGNE.

Correspondence.

To the Editors of "THE JOURNAL OF MENTAL SCIENCE."

SIRS.—It is not usually judicious to reply to a critical notice of a book sent for review, but when matters of fact are in issue it becomes necessary; hence I trust you will find room for the following remarks on your notice of my book on "Lunacy Law for Medical Men."

Your reviewer complains that "there is a tendency to overload the text by reference to cases, so that, for instance, the busy practitioner will find he has to read through six pages of matter under the head of Medical Certificates before he finds the paragraph pointing out that the examination upon which he bases his certificate must be made within a period of seven days before the presentation of the petition." As a matter of fact the case is even worse than your reviewer states it, the number of pages preceding the paragraph in question being seven. Whether the verification of statements by reference to decided cases is a disadvantage, is a matter of opinion; but the "overloading of the text" in the instance quoted consists of a reference to *one* case, the reference

occupying eight lines out of the seven pages. Whether the paragraph concerning the respective dates of the certificate and the presentation of the petition should have had precedence, is another matter of opinion. For my own part I must confess to a conservative habit of mind, and an old-fashioned prejudice in favour of taking things in their logical order. Hence it was that I thought it desirable to treat first of the question whether a certificate should be made at all, before treating of the circumstances and conditions under which it should be made.

Your reviewer states that "under the head of Urgency Orders there are eight pages (pp. 41 to 48), but the practitioner having waded through them has to turn to p. 80 to find that he must have personally examined the patient, not more than two clear days before the reception of the patient." This statement displays the disadvantage of the method pursued by your reviewer. If he had read the pages 41 to 48 in the ordinary manner instead of "wading through" them, he would have discovered that the information required is given on p. 44 as well as on p. 80, and in the index he will find that p. 44 is referred to as the place in which this information is given.

The next objection is that in the index no mention is made of "single patients," by which, I presume, is meant patients in single care, but as more than one-third of the book is entirely devoted to this class of patients, it is evident that any mention of them in the index must have been followed by references to more than 50 pages, which would scarcely have added to the value of the index.

"Frequent reference," says your reviewer, "is made to the rules of the Commissioners in Lunacy, and . . . it seems to us that no book on Lunacy Law for the use of medical men can be complete without them." This comment shows a curious inability to apprehend the object of the book, which is, not to repeat the whole of the provisions of the Lunacy Law, but to extract from the Act and the rules made under the Act, all the provisions by which general medical practitioners have to be guided in dealing with insane persons. It was expressly with the object of saving the practitioner the trouble of going through the whole of the Act and the rules, in order to discover the particular enactments with which he is concerned, that the book was written, and this object is stated in the preface.

Your reviewer is "well aware that it is by no means an easy task to condense an Act of Parliament." This may or may not be so, but as no attempt is made in my book to do anything of the kind the statement appears to be somewhat irrelevant. "But," he goes on, "when the condensed form is mixed up with references, quotations from cases, and general rules for guidance, it is likely to become somewhat distracting for the unfortunate reader to find what he wants." It will be observed that this criticism is made upon an assumption which deprives it of all value. It assumes that the book is intended to be a condensation of the Lunacy Act. So far from that being the case the book is intended to be an expansion and explanation of those provisions of the Act which affect the general practitioner of medicine. Whether a book of this character would be improved if the references to authorities were omitted, if illustrative cases were omitted, and if general rules for guidance were omitted, I must leave "the unfortunate reader" to judge. Whether the reader will "find what he wants" depends to some extent upon what he does want. If he wants to find a condensation of an Act of Parliament in a book which professes to be an expansion of certain parts of that Act, he is, indeed, unfortunate, but his misfortune is native, and is not imposed upon him by

Your obedient servant,

CHAS. MEECIE.

ERRATA.

In Dr. Campbell's article in the April Number of the "Journal of Mental Science" on "The Breaking Strain of the Ribs of the Insane," page 232, Figures 5 and 7 should exchange places. Page 263—For "*It is obvious*," line 21, to "*such as omitted*," line 29, read—

"It is obvious from the extreme uniform reduction in thickness of the rim of compact bone (its average thickness is only .255 m.m.), from the absorption of the medullary trabeculae, and from the flattened shape consequent upon the latter two changes, that a rib such as this could not possibly possess a high breaking strain, and that such ribs might be extensively fractured by such a fall as the patient is described as having had. Another point concerning this and other similar ribs which must not be omitted,"

GASKELL PRIZE.

The examination for the Gaskell Prize will take place on Friday, July 19th, 1895, at 10 a.m., at Bethlem Hospital, London.

EXAMINATION FOR THE CERTIFICATE IN PSYCHOLOGICAL MEDICINE.

The examination for the certificate of proficiency in Psychological Medicine will be held on Thursday, July 18th, 1895, at 10 a.m., in London, at Bethlem Hospital; in Edinburgh, at the Royal Asylum, Morningside; in Glasgow, at the Royal Asylum, Gartnavel; in Aberdeen, at the Royal Asylum, Aberdeen.

Applications for admission to these examinations should be sent not later than Thursday, July 11th, 1895, to the Registrar (Dr. Spence, Burntwood Asylum, Lichfield), who will be happy to supply any further information respecting the various examinations in connection with the Association.

EXAMINATION FOR THE CERTIFICATE OF PROFICIENCY IN MENTAL NURSING.

The next examination will be held on Monday, the 4th day of November, 1895, and candidates are earnestly requested to send in their schedules, duly filled up, to the Registrar of the Association not later than Monday, the 7th day of October, 1895, as that will be the last day upon which, under the rules, applications for examination can be received.

NURSING CERTIFICATES.

The following persons obtained the certificate of proficiency in Mental Nursing at the examinations held in May, 1895:—

County Asylum, Hatton, Warwick.

Males.

George Ashbourne, Thomas E. Andrews, Robert Allen, Thomas Busswell, George Betteridge, George Bambridge, William Hamilton Gillespie, John Garrison, Thomas Harrison, William Kench, George Thorpe, Arthur Mobbs, Michael O'Shea, Almuth Prestwich, James Pamment, George Payne, Arthur Wimbush, Caleb Judah Soley.

*County Asylum, Mickleover, Derby.**Males.*

Jeremiah John Mordy, Frederick Wicks.

Females.

Sarah Allen, Elizabeth Evans, Rachel Rosa Edwards, Sarah Ann Harrison, Helen Moffat.

*County Asylum, Littlemore, Oxford.**Males.*

Thomas Brooks, Charles Kempson, Ernest Neale, Henry C. Shattock, William Savings, Jonathan Walters.

Females.

Mary Brazier, Mary Ann Bryning, Louise Sabin, Catherine Thompson.

*County Asylum, Rainhill, Lancashire.**Males.*

William Cowie, Charles Duffy, Owen Davies Evans, Walter Ellwood, Ernest Edgar Haynes, Joseph Halsall, John Jeffrey.

Females.

Sarah Jane Crossley, Sarah Hatfield, Mary Homer, Martha Emily Lloyd, Minnie Louise Mitchell, Ellen Rawlinson, Alice Ward.

*County Asylum, Stafford.**Males.*

Jesse Beck, Edward Corfield, William Henry Moss, Benjamin Lewis Haynes.

Females.

Elizabeth Bedson, Annie Evans, Fanny Follows, Isabel Hall, Lucy Ann Limer, Margaret Lloyd, Mary Jane Peill, Fanny Parsons.

*County Asylum, Burntwood, Staffordshire.**Males.*

James Prosser Burgess, Daniel Derry, James Gray, Henry Sanders, George Stevenson.

Females.

Charlotte Brown, Beatrice Wells.

*County Asylum, Brookwood, Surrey.**Males.*

Louis Fancote, David Lewis, Thomas Henry Lovegrove, George Merah, James Charles Parsons, Stephen Spooner, James Townsend, Charles Edwin Valler, Charles Watson.

Females.

Clara Barter, Edith Kate Bennett, Texie Elizabeth Brodribb, Lily Browning, Sarah Busby, Rose Adeline Clauss, Emma Frances Collins, Maud Lambirth, Sarah Lovell, Maria Gwendoline Rogers.

*County Asylum, Winterton, Durham.**Males.*

Cuthbert John Bower, John Augustus Crisp, Daniel McLennan, Hugh Niven, Charles Henry Smith, William Swithin Stacey.

Females.

Catherine M. Cameron, Elizabeth Durham, Louisa Fahy, Beatrice Harper, Emily Herbert, Agnes Hamilton, Elizabeth Annie Jones, Effie Myra Moore, Emily Ellen Powell, Alice Eleanor Stacey.

*County Asylum, Morpeth, Northumberland.**Males.*

Robert Flint, John William Thompson.

*West Riding Asylum, Menston, Leeds.**Males.*

Edwin Carter, William George Day, William Wallace Endicott, Alfred Halliday, Edgar Halstead, George Maud, James Newsome, Tom Newsome, Joseph Henry Roberts, Walter Stead, George Vernon.

Females.

Mary Clark, Lilly Hirst, Annie Ibbotson, Kate Jones, Mary Alice Mitchell, Mabel Marshall, Sarah Ann Snaith, Grace Umpleby, Polly Williamson.

*West Riding Asylum, Wakefield.**Males.*

John Vincent Conroy, Alfred Hallas, John Smith Leadbeater, Horatio Nelson Pitt, George Weaver, William Todd, Pickerman Waroup.

Females.

Mary Elizabeth Ryder, Elizabeth Hunt, Edith Ann Bist, Mary Woodcock.

*West Riding Asylum, Wadsley, Sheffield.**Males.*

John William Bland, William Henry Bennett, Charles Bisby, Walter Hawksworth, William Homyard, William Henry Moorhouse, George Golding Norton, Walter Maw, Samuel Benjamin Stringfield, John Woodcock, Edward H. Stratton.

Females.

Mary Hannah Ashforth, Annie Blair, Annie Bland, Polly Boulding, Gertrude Bagehaw, Thurza Green, Janie Horsfield, Maria Mason, Nellie Morton, Annie Rowbury, Clara Swann, Alice Stead, Lizzie Taylor, Gertrude Ellen Willett.

*London County Asylum, Cane Hill.**Females.*

Sophia Phoebe Bryant, Anna Louisa Culot, Alice M. Dawe, Jessie Dimond, Frances Driver, Martha Finch, Grace M. Giles, Martha Harling, Anne E. Jones, Annie Meech, Bessie Partington, Elizabeth Rowe, Julia Marie Sorrell, Christina Yeats.

*Joint Counties Asylum, Carmarthen.**Males.*

George Davies, David Evans, George James Hodges, George Jeremy, William Lewis, William Powell.

Females.

Martha Barnett, Annie Mary Davies, Elizabeth Jane Davies, Catherine Lewis, Margaret Jones, Lucy Jefferson, Mary Thomas.

*Broadmoor Asylum, Wokingham.**Males.*

William Isaac Burgess, John Doran, William Goddard, John William Payne, William Slyfield, George Wiggins.

*Birmingham City Asylum, Rubery Hill.**Males.*

Edward Green, Harry Howarth, John Hill, William Henry Hextall, John Edwin Robinson.

Females.

Letitia Mary Appleton, Annie Hextall, Kate Henson, Annie Bullock, Minnie Chavasse Burton.

*Northumberland House Asylum, London.**Females.*

Wilhelmina Etohes, Emily Websdell.

*The Retreat, York.**Males.*

William Coates, Thomas Darley, Richard Thornton.

Females.

Sarah H. Berriman, Isabelle Threapland, Mary Threapland, Frances Sarah Towse, Isabel Carr, Gertrude Robinson.

*Coton Hill Asylum, Stafford.**Males.*

Henry Arthur Beardsall, Henry Horton, Alfred Henry Robinson, Thomas Robinson.

Females.

Nellie Dodd, Lizzie Jones, Annie Newbould, Annie Pitt, Sarah Ann Silvester.

*Warneford Asylum, Oxford.**Females.*

Sophia Gammon, Fanny Osgathorp, Eliza Preston.

*Hoxton House Asylum, London.**Males.*

Charles Bridge, Henry Barrow, James Oliver.

Females.

Emily Barlow, Esther Bentley, Rose Gale, Mary Reith.

*Bethlem Hospital, London.**Males.*

John Holler Buchanan, Alfred Crighton, Walter Day, William Wreford Dingle, Richard George Masters, Walter Norton, Sydney Norton, William Cressy Slattery.

Females.

Sarah Adams, Mary Louisa Crutchfield, Evelyn Morris, Sophia Ann Maria Neville.

*Holloway Sanatorium, Virginia Water.**Males.*

Charles Ernest Callender, George Harrison, John Charles Ingham, Bevis Lightwood, Ralph Lightwood, Beresford Seymour Smyly, David Slyfield, William Robert Smith, Henry William Turner.

Females.

Constance Holgate Andrew, Jeannie Duddy, Elsie Georgina Gould, Nellie Huitson, Emma Langford, Josephine Triphook, Clare Webb.

*Borough Asylum, Derby.**Female.*

Kate Robertson Sinclair.

*Borough Asylum, Nottingham.**Males.*

James Fletcher, William Henry Hall Charles Frederick S. Marsh, James Shirtliff, Samuel Underwood.

Females.

Beatrice Cross, Gertrude Dexter, Alice Maud Fenton.

*City Asylum, Bristol.**Males.*

Sydney Bennett, Joseph Broome, George Brown, Lionel Hall, William Hale, George Parnell, William Slade.

Females.

Isabel Kate Cooke, Amelia Dowden, Annie M. Down, Kate Gould, Mary Marshall, Lillie Norman, Ellen Pritchard, Alice Thompson.

*City Asylum, Exeter.**Males.*

John Frederick Thomas Crook, John Edward Geary, William Miller, Thomas Bartlett Sanders, Thomas Steer, William Henry Symes.

Females.

Minnie Crosswell, Emma Fewins, Jane Harriss.

*Borough Asylum, Plymouth.**Males.*

Sydney Herbert Gregory, James Osborne Lang, Frederick Meyrick, Harry Rick, Albert Robbins, Ernest George Westlake.

Females.

Elizabeth Ainsley, Emily Dewdney, Lucy Hutchins, Sarah Ann Lethbridge.

*City of London Asylum, Stone.**Male.*

Charles Peter Collins.

Females.

Elizabeth Frances Glennie Gordon, Sarah Josephine Curran.

*District Asylum, Larbert, Stirling.**Male.*

William Coutts.

Females.

Mary Matheson, Maggie Gordon, Lillias Aitken.

*Parochial Asylum, Woodilee, Lenzie.**Males.*

Richard Finlayson, James Gardiner, James Grant, Donald McKeohnie, William Moore, George Munro, Robert Murray, Duncan McGregor, John Milne, James Simpson Marr, David Stewart, Charles Welsh.

Females.

Mary Jane McHardy, Jennie McQueen, Jane Thomson, Annie Wright.

*Crichton Royal Institution, Dumfries.**Females.*

Margaret Beattie, Annie H. Bell, Jane Laidlaw, Rachel Symington, Christina Stewart, Agnes Watson.

*Royal Asylum, Gartnavel, Glasgow.**Females.*

Barbara Forteith, Agnes Parvin, Maud Rae.

*Royal Asylum, Morningside, Edinburgh.**Male.*

James Johnstone.

Females.

Annie Brown, Janet Ewan, Isabella Grant, Elizabeth Logan, Margaret MacCulloch, Isabella Murphy, Agnes McIntyre, Eliza Mary Peter, Hannah McDonald.

*District Asylum, Londonderry.**Males.*

William Kerr, William Latta, Matthew Maynes, James McLaughlin, Alexander Pinkerton, John Ross, John Smyth, William Smyth, Thomas McDaid.

Females.

Annie Maria Moore, Annie Moore, Margaret Tedlie.

Fifty-two candidates (27 females and 25 males) failed to satisfy the examiners.

Returns have not been received in time for publication in this number of the Journal from Bethnal House Asylum, London, E., the District Asylum, Limerick, and the Grahamstown Asylum, Cape Colony.

The following questions were on the paper:—

1. Enumerate the bones forming the skull?
2. State the course the blood takes from the right auricle to the lungs; thence to the heart; from the heart to the general system and back to the heart?
3. Define "Illusion," "Hallucination," and "Delusion."
4. What is meant by "Reflex Action": give examples?
5. If a patient cuts a hand deeply how can you tell whether an artery is, or is not, cut? If you feel sure that an artery is cut what would be the first step you would take to arrest bleeding?
6. In taking the temperature of a patient what fallacies may arise? State what precautions you would take to ensure accurate observations.
7. What is meant by (1) Congenital Imbecility and (2) Dementia?
8. Describe the general mental condition in a patient suffering from Dementia?
9. How would you deal with a patient during and after an Epileptic fit?
10. Mention some of the mental symptoms which call for early report to the Medical Officer?
11. If you are in charge of a considerable number of patients in a ward, what daily rules would you follow for ascertaining if any of them had escaped from observation?
12. If you are in charge of a patient in a private house, on what points would a daily report be expected from you by the Doctor?

MEDICO-PSYCHOLOGICAL ASSOCIATION.

The next Annual Meeting will be held at the Rooms of the Association, 11, Chandos Street, Cavendish Square, on July 25th, 26th, and 27th (three days). Circulars containing full particulars will be issued.

FLETCHER BEACH,
Hon. General Secretary.

IRISH DIVISION.

The next meeting of the Irish Division of the Association will be held at the Limerick Asylum on Thursday, October 10th.

OSCAR WOODS,
Divisional Secretary for Ireland.

SOUTH-WESTERN DIVISION.

The autumn meeting of this Division will be held at Exeter on Tuesday, October 15th.

P. W. MACDONALD,
Divisional Secretary.

PAUL TESTIMONIAL.

The subscription list to this fund will be close on the 14th July. The presentation of the Testimonial will take place at the Annual Meeting.

Members of the Association wishing to contribute are requested to forward their subscriptions to the Hon. Treasurer, Dr. H. Rayner, 2, Harley Street, W

HACK-TUKE MEMORIAL.

Members of the Association who have promised to contribute or are desirous of subscribing to this fund are requested to send cheque or postal order to the Hon. Treasurer without delay, in order that some estimate of the probable extent of the fund may be arrived at before the Annual Meeting.

Appointments.

FELVUS, C. P., L.R.C.P. and S.E., has been appointed Junior Assistant Medical Officer in the Dorchester County Asylum, Dorset.

CAMPBELL, KEITH, M.B.Edin., has been appointed Assistant Medical Officer in the Perth District Asylum, Murthly, *vice* Felvus.

MOFFITT, ELIZABETH J., M.B.London, B.A., has been appointed Junior Assistant Medical Officer to the District Asylum, Mullingar.

THE JOURNAL OF MENTAL SCIENCE.

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VOL. XLI.

PART I.—ORIGINAL ARTICLES.

Presidential Address delivered at the Fifty-fourth Annual Meeting of the Medico-Psychological Association, held in London, 25th and 26th July, 1895. By DAVID NICOLSON, M.D.

GENTLEMEN,—My first duty is to convey to you my grateful appreciation of the honour you have done me in placing me in this chair. I am not unmindful of the great names which, in the course of more than half-a-century, have gone to make up an honourable tradition in the history and work of our Association. That tradition has assuredly lost none of its dignity whilst in the keeping of Dr. Conolly Norman, our retiring President, who has just now placed in my hand the "hammer" of office.

I accept the responsibilities of the position, and I am the more willing to do so because I feel assured that in my endeavours to carry out successfully the year's work, I shall have the sympathy and the support not only of the official body of the Association, but also of the members generally.

Not the least of the responsibilities is that of the Presidential Address, and in this matter I have felt that you would not unnaturally expect me to deal with the subjects which have most occupied my attention during the past eight-and-twenty years. It is, therefore, my intention to submit for your consideration, and for your criticism, some notes, necessarily of a general character, on

CRIME, CRIMINALS, AND CRIMINAL LUNATICS.

Crime.

Definition of the term Crime.—Sir James Fitzjames Stephen, in his "History of the Criminal Law of England," defines crime as "an act or omission in respect of which legal punishment may be inflicted on the person who is in default either by acting or omitting to act."

The same authority says that "the criminal law is that part of the law which relates to the definition and punishment of acts or omissions, which are punished as being—

1. Attacks upon public order, internal or external.
2. Abuses or obstructions of public authority.
3. Acts injurious to the public in general.
4. Attacks upon the persons of individuals or upon rights annexed to their persons.
5. Attacks upon the property of individuals or rights connected with, and similar to, rights of property."

The analysis of the occurring crime in a nation has to deal with it mainly under two heads—

1. Its numerical amount.
2. Its character and intensity, *i.e.*, its classification.

In submitting for your consideration some notes connected with this subject, I must begin by saying how extremely fortunate I am in having ready to hand the new issue of the judicial statistics for England and Wales which has reference to the year 1893.

In this blue book the criminal statistics of England and Wales have been entirely remodelled, and the tables reconstructed upon the basis recommended by a Departmental Committee, presided over by Mr. Leigh Pemberton, of the Home Office.

The official "introduction" deals with the more important results obtained from the revised tables, and its compiler, Mr. C. E. Troup, has given a very clear and able exposition of the statistics from various standpoints.

Crime in England and Wales.—During the year 1893, 669,281 persons were prosecuted for various offences. Of these 550,295 were males and 118,986 were females.

The following is the character of the persons prosecuted:—

Habitually engaged in Crime.	{	As Thieves...	...	...	11,680
		As Receivers	...	...	100
		Otherwise	...	...	1,343
					13,023
Prostitutes	...	...	...	...	16,410
Vagrants	...	...	...	...	24,830
Other persons of bad character	...	...	...	...	39,994
Habitual drunkards	...	...	...	...	25,340
Previous character good or unknown	...	...	...	...	529,584

This gives us the very considerable total of 139,697 whose character was known to be "not good," *i.e.*, not good from the police point of view.

The huge army of persons prosecuted includes upwards of 600,000 persons who were tried summarily for non-indictable offences—offences, that is, of a minor description—the following being some of the numerically conspicuous ones:—

Assaults	75,862
Malicious damage (breaking windows, etc.) ..	19,627
Offences against Vagrancy Laws	48,501
" " Game Laws	9,493
" " Police Regulations	78,042
Drunkenness	168,927
Offences against the Education Act	63,015

On this subject the Committee say that "the great mass of non-indictable offences are acts which are injurious to life and property or to the general welfare in their *tendencies*, but which cannot, as regards their *immediate effect*, be classified under any of the five specified heads. Thus the most common of all summary offences—drunkenness—is not in itself injurious either to persons or property, but is a condition which tends to produce crimes against both persons and property. The offences against the Education Acts are still more remotely removed from the ordinary heads of crime."

The list of offences which the Committee have drawn up, and which has been adopted in the statistics for 1893, is as follows:—

Indictable Offences tried Summarily.

Simple Larceny. Offences punishable as Simple Larceny. Larceny from the Person. Larceny by a Servant. Embezzlement. Receiving Stolen Goods. Endangering Railway Passengers. Destroying Railways. Offences under the Post Office Laws. Other Indictable Offences committed by Children under 12.

Other Offences tried Summarily.

Adulteration of Food and Drugs. Assaults:—Aggravated; on Constable; Common. Betting and Gaming. Brothel Keeping. Cruelty to Animals. Cruelty to Children. Diseases of Animals Act, Offences against. Dogs, Offences in relation to. Elementary Education Acts, Offences against. Explosives, Offences in relation to. Fishery Laws, Offences against. Game Laws, Offences against:—Night Poaching; Day Poaching; Unlawful Possession of Game, etc.; Illegal Buying and Selling of Game; other Offences. Highway Acts, Offences against:—Offences by Owners and Drivers of Carts; Obstructions and Nuisances; Locomotives; Bicycles. Housing of the Working Classes Act, Offences against. Indecent

Advertisements. Indecent Exposure. Intoxicating Liquor Laws, Offences against:—Drunkenness; Permitting Drunkenness on Licensed Premises; other Offences against Public Order; Illegal Sale of Drink; Offences against Closing Regulations; other Offences. Labour Laws, Offences against:—Intimidation; Breach of Contracts; Offences under Special Trade Acts; Offences under Truck Acts; Mines Acts; Factory Acts; Shop Hours Act; other Acts for Protection of Labour. Malicious Damage:—To Animals; to Fences, etc.; to Trees, Shrubs, etc.; to Fruit, etc.; other Offences. Merchant Shipping Act, Offences against. Military and Naval Law, Offences against:—Army; Navy; Volunteers. Parks, Commons, and Open Spaces, Offences in relation to. Pawnbrokers' Acts, Offences against:—Offences by Pawnbrokers; Unlawful Pledging; other Offences. Police Regulations, Offences against:—Unlawful Possession; Metropolitan Police Acts; Town Police Clauses Acts; Borough Bye-laws; County Bye-laws; Local Acts and Bye-laws. Poor Law, Offences against:—Neglecting to maintain Family, etc.; Misbehaviour by Paupers; Stealing or Destroying Workhouse Clothes; other Offences. Prevention of Crimes Acts:—Offences by License Holders; Offences by Supervisees; Special Offences by twice Convicted Persons. Prostitution. Railways, Offences in relation to. Revenue Laws, Offences against. Sanitary Law, Offences against:—Public Health Acts; Infectious Diseases Acts; Public Health (London) Act, 1891; Local Acts and Bye-laws. Stage and Hackney Carriage Regulations, Offences against. Stealing:—Animals; Fences, etc.; Trees, Shrubs, etc.; Fruit, Plants, etc.; Receiving Stolen Animals, Fruit, etc. Streets and Buildings. Sunday Trading, etc. Tramway Acts, Offences against. Vaccination Acts, Offences against. Vagrancy Acts, Offences against:—Begging; Sleeping out; Gaming, etc.; Possessing Picklocks and other Implements; Found in Inclosed Premises; Frequenting; other Offences. Weights and Measures Acts, Offences against. Wild Birds Protection Acts, Offences against. Other Offences.

Although in any comprehensive estimate of the amount of crime in the country it is necessary to include non-indictable offences, it is not this class of crime that I propose occupying any portion of your time with to-day; I therefore proceed to deal with *Indictable Offences*. They include "all serious offences which directly affect the person or property."

With only a few exceptions which may be tried summarily, indictable offences are tried at Assizes or Quarter Sessions.

The Committee have prepared the following list of Indictable Offences.

Class I.—Offences against the Person.

1. Murder. 2. Attempt to Murder. 3. Threats, conspiracy, or incitement to Murder. 4. Manslaughter. 5. Wounding, and other

acts endangering life (Felonies). 6. Endangering Railway Passengers. 7. Malicious Wounding and other like offences (Misdemeanours). 8. Procuring Abortion. 9. Concealment of Birth. 10. Unnatural Offences. 11. Attempts to commit Unnatural Offences. 12. Indecency with Males. 13. Rape. 14. Indecent Assaults on Females. 15. Defilement of Girls under 13. 16. Defilement of Girls under 16. 17. Householder permitting Defilement of Girls. 18. Procuration. 19. Abduction. 20. Bigamy. 21. Child Stealing. 22. Abandoning Children under two years. 23. Cruelty to or neglect of Children. 24. Assault. 25. Intimidation and Molestation. 26. Other Offences against the Person.

Class II.—Offences against Property with Violence.

27. Sacrilege. 28. Burglary. 29. Housebreaking. 30. Shop-breaking. 31. Attempts to break into Houses, Shops, &c. 32. Entering with intent to commit Felony. 33. Possession of Housebreaking Tools, &c. 34. Robbery and assaults with intent to rob. 35. Extortion by threats to accuse of crime. 36. Extortion by other threats.

Class III.—Offences against Property without Violence.

37. Larceny of Horses, Cattle, and Sheep. 38. Larceny from the Person. 39. Larceny in House. 40. Larceny by a Servant. 41. Embezzlement. 42. Larceny of Post Letters. 43. Other aggravated Larcenies. 44. Simple Larceny and minor Larcenies. 45. Obtaining Goods, &c., by false pretences. 46. Frauds by Bankers, Agents, Directors, &c. 47. Falsifying Accounts. 48. Other Frauds. 49. Receiving Stolen Goods. 50. Offences in connection with Bankruptcy.

Class IV.—Malicious Injuries to Property.

51. Arson. 52. Setting fire to Crops, Plantations, &c. 53. Killing and Maiming Cattle. 54. Malicious use of Explosives. 55. Destroying Ships. 56. Destroying Railways. 57. Destroying Trees and Shrubs. 58. Other malicious injuries.

Class V.—Forgery and Offences against the Currency.

59. Forgery and uttering (Felony). 60. Forgery (Misdemeanour). 61. Coining. 62. Uttering or possessing Counterfeit Coin.

Class VI.—Other Offences not included in the above Classes.

Offences against the State and Public Order:—63. High Treason. 64. Treason Felony. 65. Riot. 66. Unlawful Assembly. 67. Other Offences. Offences against Public Justice:—68. Extortion by Officers, &c. 69. Bribery, &c. 70. Perjury. 71. Escape and Rescue. 72. Other Offences. Offences against Religion:—73. Blasphemy, &c. Offences against Law of Nations:—74. Piracy.

75. Slave Trade. 76. Libel. 77. Poaching. 78. Indecent Exposure. 79. Keeping Disorderly Houses. 80. Other Nuisances. 81. Suicide (attempting to commit). 82. Other Misdemeanours.

The numerical analysis of indictable offences is so intimately associated with *the classification of crimes* in relation to their character and intensity that I propose taking them together, as the simpler and more advantageous method of bringing them under your consideration.

Taking the five years 1889-93 as a fair basis for working out our further calculations, it is found that the average annual number of crimes committed (*i.e.*, crimes reported to the police) was 84,000, giving a proportion of 289 crimes committed per 100,000 of population.

During the same quinquennial period the average annual number of persons tried for indictable offences was 56,472, giving a proportion of 194 per 100,000 of population.*

It will be seen that, for the purpose of classification, the Departmental Committee have prepared a list of 82 indictable offences, under which the whole range of serious crime is reduced to an intelligible system. The Committee have adopted the old sub-division of the 82 indictable offences into six classes, not as being free from objection or criticism, but because any alteration would be a means of complicating comparative statistics in future years with past years.

The following, then, are the six classes into which the 82 indictable offences are sub-divided :—

Class I.—Offences against the person.

Class II.—Offences against property with violence.

Class III.—Offences against property without violence.

Class IV.—Malicious injuries to property.

Class V.—Forgery and offences against the currency.

Class VI.—Other offences.

Whatever merit this classification may have for statistical purposes in relation to questions of legal administration, it is not well adapted for the purpose (which is of primary interest to members of this Association) of searching for a psychological counterpart, or equivalent in general terms, for the various kinds of crime.

* During the corresponding period the average daily number of

prisoners in local prisons was	...	...	...	...	...	13,329
And the average daily number of prisoners in convict prisons was	...	...	...	...	...	4,393
Total	...	...	...	...	...	17,722

Some years ago I rearranged these six classes so as to bring them more into accordance with our requirements, and the following are the *Groups*, four in number, into which I was able usefully to condense the six classes without any such violent disruption as would cause the position of the accompanying figures to be dislocated.

The following table shows this grouping, together with the number of crimes committed, and of persons tried at assizes and quarter sessions and also the proportion to population in each of the four groups.

	Crimes Committed.		Persons Tried.	
	Annual Average 1889-93.	Proportion per 100,000 Population.	Annual Average 1889-93.	Proportion per 100,000 Population.
GROUP I. : Offences against the Person.				
<i>a.</i> Crimes of violence	1,897	6·52	1,440	4·95
<i>b.</i> Sexual crimes	1,619	5·57	1,151	3·98
Total of Group I.	3,516	12·09	2,585	8·89
GROUP II. : Offences against Property (with or without violence) for spoil or gain	77,903	267·96	8,561	29·43
GROUP III. : Malicious injuries to Property	560	1·93	270	·93
GROUP IV. : Miscellaneous Offences. ...	2,021	6·95	568	1·95

The following is the percentage of persons tried in the four groups:—

GROUP I.	{	Offences against the Person—		
		<i>a.</i> Crimes of violence... ..	12·2	21·5
		<i>b.</i> Sexual crimes	9·2	
GROUP II.	{	Offences against Property for		71·4
		spoil or gain		
GROUP III.		Malicious injuries to Property		2·2
GROUP IV.		Miscellaneous offences		4·7

100·

An easy continuation of the analytical process enables us to still further re-arrange and simplify the four groups into

three *Divisions*, by the absorption or distribution of Group IV. among the other three groups, thus:—

Division.	Crimes.	Percentage of Cases in each Division.
I.	Violence to Person or Property...	15
II.	Sexual Offences	10
III.	Offences against Property for spoil or gain	75

This simplification of crimes into three primary divisions discloses to us the composition of the psychological counterpart of classified crime. Taking "crimes generally," this counterpart or equivalent comes out in the following proportions, the term "propensity" (an extension of thought towards action) being used to express the outward activity in a criminal direction of three primary emotions or psychical states which are referred to under the generic term of "dominant mental origin" (as regards crime).

Propensity (in criminal activity).	Dominant Mental Origin.	Percentage of cases.
Thievish, etc. ...	Acquisitiveness ...	75
Malicious	Malice	15
Lustful	Lust	10

So far as crimes are concerned, it is shown that acquisitiveness, malice, and lust are the three dominant seats of origin in the mind, and in this threefold centre, therefore, crime is to be regarded as having its genesis.

Their contiguous and allied emotions and ideas come into play in varying proportions in different individual criminal offences. To take one instance: just as the "dominant" malice stretches away down through hatred, resentment, anger, spitefulness, and the like, so does crime against the person and property stretch away down from murder, through manslaughter or assault with intent, to cruelty and neglect, or to an act of incendiarism or of cattle-maiming. And so in the cases of acquisitiveness and of lust.

THE PSYCHOLOGICAL GENESIS OF CRIME.
Crimes Generally.

Number of Indictable Offences.	Class.	Description of Crimes.	Group.	Description of Crimes.	Percentage of persons tried.	Division.	Propensity (in Original Activity).	Per-centage of Cases.	Dominant Mental Origin (Primary Emotion).
26	I.	Offences against the person.	I.	Offences against the person:	21.5	I.	To violence to persons or property.	15	Malice.
10	II.	Offences against property with violence.	II.	(a.) Crimes of violence.	12.2	II.	To sexual acts.	10	Lust.
14	III.	Offences against property without violence.		(b.) Sexual Crimes.	9.2					III.	To thieving, fraud, etc.	75	Acquisitiveness.
8	IV.	Malicious injuries to property.	III.	Malicious injuries to property.	2.2				
4	V	Forgery and offences against the currency.							
20	VI.	Other offences.	IV.	Other offences.	4.7				
82									

Group IV. absorbed in Divisions I., II., and III.

The development of the scheme which I have indicated to you is given in the Table on page 577, in which it will be seen that the 82 indictable crimes or offences are subdivided into *six classes*, then into *four groups*, and ultimately into *three divisions*, which are thereafter traced to their seat of origin in the mind.

I venture to think that the scheme will be helpful to us when we try to think out, each one for himself, an estimate of the meaning or value of the term "crime" when used in the abstract with reference to this phase of our social life. It is indeed remarkable that as much as 75 per cent. of it has reference to the acquirement of property by thievish and fraudulent means, or, in other words, that more than seven-tenths of our crime stands in some relation to the means used for earning a livelihood.

So much for *crime*; the further question of the *criminality*—or the moral intensity—of the particular crime has reference to the external circumstances in which the crime is committed, and to the motive which more directly led up to it. The criminality of the man who steals some food for his starving children is to be viewed in a very different light from that of the man who robs his master to pay for his seaside outing. Or again, the man who kills his neighbour, whom he has caught in the act of adultery with his wife, is a criminal of a very different sort from the man who murders his neighbour in order that he may marry his widow, or in order that he may steal his money. I do not mean to enlarge upon this point, but it is one that must not be lost sight of.

Criminals.

Coming now to *Criminals*; we have seen that the psychological basis, or starting point of crime in criminals, is referable practically to three primary emotions, acquisitiveness, malice, and lust. Now, a study of infants and children (and their proclivities) reveals to us not only their intense selfishness, but also the fact that acquisitiveness (the desire to seize and take possession of) and violence, not to say malice (chiefly in the forms of anger, resentment, and destructiveness), are perhaps the most prominent features of their mental activity. An honest process of self introspection will recall to the minds of many of us—it does so to mine, at least—occasions when, being taken in hand as children, with unusual firmness by our loved and loving mother, our childish malevolence made us wish for ourselves a temporary death, so that the poor soul might be sorely grieved; but we

attached one condition to our wish, and that was that during our death-period we might have one eye, as it were, alive and open to enjoy her mortification at having thwarted or corrected such a perfect creature as we felt ourselves to be. It is doubtless this "amiable" frame of mind that finds its occasional terminus in the actual suicide of children of tender years.

The criminal-like or criminal instinct for acquisitiveness or for violence is to be regarded as a factor of mental life from its birth to its close without limitation as to social status, or as to the kind of ancestral or parental heritage or environment. This instinct is a universal birthright, which we human beings share with all animals; and it would be our natural characteristic through life, were it not for the gradual development in us of certain higher and inhibitory intellectual and volitional processes, such as prudence, reflection, and a sense of moral duty. These processes go to make up that self-controlling capacity whose function in the conflict of motives it is to steer us aright and to prevent the dominant emotion from exploding or expending itself in some form of crime or vice.

In proportion as this development is prevented, or stifled, either owing to original brain defect or by lack of proper education and training, so is there a risk of the individual lapsing into criminal-mindedness or into actual crime.

And this risk becomes accentuated if the parents and their associates are people of vicious or drunken habits. And, lastly, the risk becomes compulsion where parents of the criminal class wilfully educate and train their children to a life of crime. With regard to this point of possible ultimate mental development, one might here be disposed to ask a question as to the effect of interchanging 1,000 apparently healthy children *at birth* between the lowest (so-called criminal) classes and the upper social classes. So far as *mere amount of resulting crime* is concerned, I am not prepared to say that I think there would necessarily be any material difference. I believe the lower-class child would be taught to adapt itself to the higher level of its surroundings, just as the better-born child would run the risk of becoming criminal-minded or criminal under the influences and training that attach to its existing conditions of life. The average would be maintained on one side and on the other.

Juvenile Criminals.

Referring again to the Judicial Statistics we see that the proportion of crimes committed by children and youths is

enormously great. It is found that of 43,835 persons convicted, 17,902, or 41 per cent., were under 21 years of age; and of 30,902 convicted of larceny, 14,064, or 45 per cent., were under that age.

To estimate properly the proportion of juvenile criminals, we must take the figures in relation to the total population of each age:—

Proportion of criminals at each period of age to total population at that age.

—	Total Number of Persons convicted of Indictable Offences.	Proportion per 100,000 of Population of same Age.
Under 12	2,009	24
12 to 16	6,595	261
16 to 21	9,298	331
21 to 30	10,862	245
30 to 40	7,824	204
40 to 50	4,190	143
50 to 60	1,879	92
Above 60	1,178	56

It would therefore appear that from 16 to 21 the proportion is much higher than at any other age, and that the proportion declines steadily as life advances.

Proportion of young offenders in different classes of crime.

Some interest attaches to the proportion of young offenders in different classes of crime:—

—	Percentage under 18.	Percentage 16 to 21.
CLASS I. { Crimes of Violence	2·20	14·73
{ Crimes against Morals	4·97	20·58
CLASS II. { Burglary, Housebreaking, &c.	5·07	38·22
{ Robbery and Extortion	2·42	24·19
CLASS III. generally	21·72	21·17
Larceny from the Person	6·42	22·92
Larceny by a Servant	13·38	27·69
Simple Larceny	24·56	20·92
False Pretences	2·15	11·98
CLASS IV. generally	27·69	12·82
CLASS V. { Forgery, &c.	1·23	12·08
{ Coining, &c.	·61	23·78
CLASS VI.	—	9·49
Total	19·55	21·21

These figures and comments speak for themselves, but special attention should perhaps be given to the fact that nearly one-fourth of the persons convicted of larceny are children under 16; and that more than one-third of the convicted burglars are youths between 16 and 21.

These statistical results ought to be clearly borne in mind when the question of criminals from a social standpoint is under consideration. For if one-third of convicted burglars are youths between 16 and 21, and one-fourth of the thieves are under 16, it is apparent that they had not reached an age when ideas as to personal responsibility and duty to society could be regarded as fully developed or matured. Nor are we, any of us, at the age referred to, at our mental best as regards our capacity for emancipating ourselves from the evil effects of disadvantageous, or defective, or vicious education and training.

With regard to sex, it is found that, taking all indictable crimes, 82 per cent. of the persons convicted are men, against 18 per cent. women.

What is Criminal Anthropology?

It has been the fashion for some years—but I am bound to say more in other countries than our own—to deal with the practical psychology and the crimes and conduct of criminals and the criminal classes under such imposing designations as criminology, criminal anthropology, and the like. Well, I have no more objection to the use of these terms than I would have to the use of the terms doctorology, parsonology, shoemaker anthropology as applied to the study of other groups of men who follow special occupations in life.

Writers give us a copious and precise history of the anatomical configuration, the physiological eccentricities, the complexion, the shapes of the ear and nose, the tattoo marks, etc., in certain criminals. We get a striking and elaborated account of their numerous fearful crimes, of their atrocious mental peculiarities and hideous moral obliquities. This analytical and biological process is applied by those who call themselves criminalists to a comparatively small group of criminals; and by implication, and even more directly, it is made applicable to criminals generally. The whole picture is by some writers exaggerated to distortion as regards even the few, and it is in its main features so spurious and unfair as regards the many that it becomes impossible to regard the conclusions or assumptions to be either authentic or authoritative. Just fancy Butler's "Lives of the Saints"

being taken as a just appreciation of the lives, and characters, and dispositions of our clergy and others who devote themselves to good works or to the "religious" life!

One has no more right to deal with criminals as criminalists do than one has to depict the mental and moral defects of a few of the clergy and to say that the picture applies to the clergy generally, or to the robust-minded honest and pious clerics and theologians whom we have learnt to admire and respect.

If the personal analysis of a few criminals and their peculiarities is to give us a "criminology," a similar process applied to an investigation of the physical, mental, and moral peculiarities (by no means difficult of detection) of a small minority of agricultural labourers, ought assuredly to give us a "Hodgology." The generalized process would be equally warrantable in one group as in the other; and it would in like manner be equally unjust and offensive in the one case as in the other. The prevalent relationship of "crime" to the means used by criminals for obtaining a livelihood must not be forgotten; and it is not for us to stamp "criminals" as lunatics or quasi-lunatics, or to place them on a special morbid platform of mental existence, merely because they prefer thieving, with all its concomitant risk, to more reputable, if more laborious, modes of maintaining themselves.

But my objection does not rest only on the impossibility and injustice of crediting criminals generally with characteristics, anatomical, moral, and otherwise, culled from the selected biographies of a few of the class under the guise of a so-called science. I object to the criminological method because it is not only useless, but misleading, to us when we seek to apply it in detail in individual cases. I hope the day will never come when, in our official examination into the mental condition of suspected persons, or persons lying in prison upon a criminal charge, we as medical men will be expected to produce our craniometer for the head measurements, and to place reliance upon statistical information as to the colour, size, or shape of any organ.* A man is sane or insane, criminal or lunatic, apart from and without regard to such sources of information. Each case must be taken on its own merits, and above all, and first of all, the man must be allowed to speak for himself, and to give his own "reason for the hope that is in him."

* This of course is a totally different question from that of the utility of "anthropometry" in the identification of Habitual Criminals.

The criminalist explores for anatomical, physiological, intellectual and moral evils and obliquities in the structure and personality of the criminal; he finds them, he tabulates them. He does not seek for good: he therefore neither finds it nor tabulates it. If we are to give the devil his due, why not the criminal?

No human being is absolutely good; every human being has more or less a predisposition to evil doing. In all our work as regards this question of crime and its genesis, it behoves us to begin by giving effect to the scriptural maxim, "There is none that doeth good." All the rest is a matter of comparison and of degree; and the outcome of all our average life's experience in observing and dealing with others is a demonstration of the desirability of not being "extreme to mark what is done amiss" and the desirability of trying to find some modicum of good in everybody.

The anthropological method of estimating the criminal must fail, just as its application to the insane would fail, because it does not include circumstance and motive in the computation, and because without these no standard of capacity, or of conduct, or of responsibility can be regarded as trustworthy or even possible.

Again, if the criminalist tells us no more and no less than the truth, and if the criminal is what he would have us believe, our hopes for the betterment of the class by education and for the reformation of the individual by punitive measures, prison discipline, and other available means, are crushed.

But what are the facts? Whatever value we may attach, and rightly attach, to heredity as regards the quality of brain in individuals, there can be no sort of question as to the value and influence of domestic and social environment, and of education and training, in moulding and forming the character, especially during the more plastic periods of infancy, childhood and youth.

Look at the results given in the Report for 1893 of the Inspector of Reformatory and Industrial Schools of Great Britain in the case of many boys and girls who, but for this training, would undoubtedly drift into vicious ways and become professional criminals.

The results of *Industrial Schools*, as tested by the proportions doing well, convicted, doubtful, and unknown, of those discharged in 1890, 1891, and 1892 were as follow:—

The total discharged in those three years, omitting deaths,

transfers, and committals to Reformatory Schools, was 11,299, viz., boys 9,065 and girls 2,234.

Of the 9,065 boys, 168 had since died, leaving 8,897 to be reported on—7,638 or about 86 per cent. were doing well.

207	"	2	"	doubtful.
351	"	4	"	convicted or re-committed.
701	"	8	"	unknown.

Of the 2,234 girls, 55 had since died, leaving 2,179 to be reported on—1,829 or about 84 per cent. were doing well.

151	"	7	"	doubtful.
22	"	1	"	convicted or re-committed.
177	"	8	"	unknown.

Comparing these numbers with those of last year, we see that on the 31st December, 1892, the total number was 11,312, viz., boys 9,033 and girls 2,279.

Of the 9,033 boys, 169 had since died, leaving 8,864 to be reported on—7,596 or about 86 per cent. were doing well.

193	"	2	"	doubtful.
394	"	4	"	convicted or re-committed.
681	"	8	"	unknown.

Of the 2,279 girls, 65 had since died, leaving 2,214 to be reported on—1,818 or about 82 per cent. were doing well.

139	"	6	"	doubtful.
25	"	1	"	convicted or re-committed.
232	"	11	"	unknown.

The results of *Reformatory Schools* were as follow :—

The total discharges for this period, exclusive of transfers, were 51,421, viz., 42,049 boys and 9,372 girls.

They were disposed of as follows :—

	Boys.	Girls.
To employment or service	15,005	5,329
Placed out through relatives	14,005	2,848
Emigrated	3, 33	231
Sent to sea	5,750	...
Enlisted	1,014	...
Discharged from disease	599	235
Discharged as incorrigible... ..	284	113
Died	1,023	350
Absconded, not recovered... ..	1,133	266
Total	42,019	9,372

The results of the years 1890, 1891, and 1892 were as follows:—

Number discharged in the three years, 4,066, viz., 3,600 boys and 466 girls.

Of these 83 had died, viz., 70 boys and 13 girls, leaving 3,530 boys and 453 girls to be reported on.

Of the boys—2,770 or about 72 per cent.	were doing well.
58	” 2 ” were doubtful.
537	” 22 ” had been convicted.
165	” 4 ” were unknown.

Of the girls—348 or about 76 per cent.	were doing well.
35	” 8 ” were doubtful.
22	” 5 ” had been convicted.
48	” 11 ” were unknown.

Also look at the results of the work of Discharged Prisoners' Aid Societies, which are capable of even more useful development.

All prison statistics show, too, how amenable to discipline the great bulk of prisoners are. No doubt they have a sufficient motive in the fear of punishment, but this is supplemented by hope of reward.

So in the outer world if a sufficient stimulus to well-doing can be found for the criminally-disposed, the battle is half won.

Criminal Lunatics.

Leaving out a dozen who were either surety or military prisoners or vagrants, the number of criminal lunatics at the end of 1893 was 716.

The proportion of criminal lunatics to population has varied very little for the past 10 years.

The following series of tables shows the offences of criminal lunatics and their classification.

Since Broadmoor was opened, in 1863, up to the end of 1893, 2,102 patients had been admitted, and of these one half, viz., 1,050, had committed murder or manslaughter or had attempted to murder, &c.

The number of Criminal Lunatics in England and Wales under detention on the 31st December, 1893, and their offences are shown in table on page 585.

CLASSIFICATION of the CRIMES and SENTENCES of all Patients admitted into Broadmoor (including readmissions) from the opening of the Asylum to the 31st December, 1893.

Classified with reference to the Period at which Insanity was recognized.

CRIMES.	Total Number admitted from the Asylum during the 31st December, 1893.		Certified to be Insane whilst awaiting Trial, or Judgment.				Found Insane by Jury on Arraignment.		Acquitted on ground of Insanity, or found Guilty but Insane (in terms of "Trial of Lunatics Act, 1853.")		Reprised on the ground of Insanity.		Certified to be Insane whilst undergoing Penal Servitude.		Certified to be Insane whilst undergoing shorter Terms of Imprisonment.					
	M.	F.	M.	F.	T.	M.	F.	T.	M.	F.	T.	M.	F.	T.	M.	F.	T.			
Murder	333	236	50	25	75	65	60	125	197	141	338	33	1	34	18	9	27			
Manlaughter	30	18	2	5	7	8	2	10	5	4	9	...	...	...	15	7	22
Attempt to murder, maim, &c. ...	316	48	20	1	21	62	8	70	191	33	224	...	...	...	73	6	79
Concealment of birth ... ..	...	3	1	...	1	2	2	2	...	...	...	...	...	...	...	...	1
Desertion of child and child stealing	...	1	1	...	1	3	3	3	1	...	...	...	...	...	23	...	23
Rape	27	27	1	...	1	3	3	9	9	...	...	...	...	...	3	1	4
Assault, common	20	3	1	...	1	11	...	11	5	...	...	...	...	...	10	10	1
Do, with intent to ravish	27	27	1	...	1	...	...	...	...	...	...	...	...	...	1	...	1
Do, indecent	1	...	...	...	...	...	...	...	...	...	...	...	...	...	10	10	1
Unnatural offences	24	...	...	...	...	4	...	4	8	...	...	...	...	...	10	10	1
Treasonable and seditious offences	7	...	...	...	...	3	...	3	2	...	...	...	...	...	1	...	1
Burglary and housebreaking	135	8	5	...	5	10	1	11	9	...	...	...	...	...	108	6	114
Robbery on the highway	6	1	...	...	...	...	...	...	...	...	...	...	...	...	6	1	7
Robbery with violence	13	2	15	...	...	...	...	...	...	...	...	...	...	...	12	1	13
Sheep stealing... ..	9	...	...	...	...	...	...	...	...	...	...	...	...	...	6	...	6
Horse stealing... ..	11	...	...	...	...	...	...	...	...	...	...	...	...	...	7	...	7
Larceny and petty thefts	305	139	3	1	4	13	3	15	7	4	11	...	...	...	275	120	395
Frauds and embezzlements	5	5	...	...	...	...	...	...	...	...	...	...	...	...	5	5	5
Receiving stolen goods	11	2	13	...	...	...	...	...	...	...	...	...	...	...	11	2	13
Obtaining goods by false pretences	11	11	...	...	...	...	...	...	...	...	...	...	...	...	7	7	7
Arson and malicious burning	112	9	5	...	5	25	2	27	53	2	35	...	...	...	48	5	53
Willful damage and other malicious offences	4	3	7	...	...	2	...	2	1	...	...	...	...	...	1	...	1
Forgery	8	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	1
Uttering counterfeit coin, coinimg, &c...	17	4	21	...	...	...	...	...	...	...	...	...	...	...	17	4	21
Riot and breach of the peace	1	1	2	...	...	...	...	...	...	...	...	...	...	...	1	...	1
For want of sureties... ..	1	3	4	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Libel	3	3	3	1	1	1	...	1	1	...	...	...	...	...	...	...	...
Under the Vagrant Laws	3	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Night Poaching, being armed	1	1	1	...	...	...	...	...	...	...	...	...	...	...	1	...	1
Felony (not otherwise described)... ..	49	9	58	1	...	2	1	3	6	2	8	...	...	...	38	4	42
Threatening by letter	9	1	10	...	...	1	3	3	4	...	...	...	...	...	2	1	3
Other misdemeanors... ..	4	1	5	1	...	1	...	1	...	...	...	...	...	...	2	...	2
Deserters from the army and navy ...	6	...	6	...	...	...	...	...	...	...	...	...	...	...	5	...	5
Insubordination as soldiers	30	...	30	...	...	...	...	...	...	...	...	...	...	...	30	...	30
Attempting self-murder	10	1	11	1	1	2	...	2	8	...	...	...	...	...	...	...	...
Total	1,609	483	2,102	92	34	126	220	79	496	186	682	33	1	34	742	167	900	26	36	52

JUDICIAL STATISTICS.

Class.	OFFENCE.	Numbers detained on 31st December, 1893.						
		Total Number.			Classification.			
					Queen's Pleasure Lunatics.		Secretary of State's Lunatics.	
		Total.	Males.	Females.	Insane on Arraignment.	Acquitted on ground of Insanity or Special Verdict of Guilty but Insane.	Certified Insane before Trial.	Certified Insane after Trial.
	INDICTABLE OFFENCES.							
I.	1. Murder	328	199	129	69	184	37	38
	2. Attempt to Murder	111	93	18	23	71	7	10
	3. Threats or conspiracy to Murder	4	4	...	2	2	...	...
	4. Manslaughter	21	15	6	4	6	5	6
	5. Felonious Wounding	48	44	4	9	26	5	8
	6. Endangering Railway Passengers	3	3	...	...	2	...	1
	7. Malicious Wounding	37	31	6	3	25	7	2
	9. Concealment of Birth	1	...	1	1	...	...	...
	10. Unnatural Offences	11	11	...	4	5	...	2
	11. Attempts to Commit Unnatural Offences	1	1	...	...	...	...	1
	12. Indecency with Males	1	1	...	1	...	...	...
13. Rape	6	6	...	3	...	...	3	
14. Indecent Assaults on Females	4	4	...	2	1	1	...	
15. Defilement of Girls under 13	16	16	...	7	2	1	6	
16. Defilement of Girls under 16	1	1	...	...	...	...	1	
21. Child Stealing	1	...	1	...	...	1	...	
23. Cruelty to Children	1	...	1	1	...	...	...
24. Assaults	6	6	...	...	5	...	1	
II.	28. Burglary	13	13	...	6	1	2	4
	29. Housebreaking	6	6	...	2	2	...	2
	30. Shopbreaking	4	4	...	2	2	...	...
	31. Robbery	1	1	...	...	...	...	1
III.	37. Larceny of Horses and Cattle	4	4	...	...	1	2	1
	38. Larceny from the Person	4	3	1	...	...	...	4
	40. Larceny by a Servant ... ..	...	...	...	...	...	...	...
	41. Embezzlement	1	1	...	...	...	...	1
	44. Simple Larceny and Minor Larcenies	23	15	8	6	...	3	14
	45. Obtaining by False Pretences	7	6	1	2	1	2	2
46. Receiving Stolen Goods	1	1	...	...	...	...	1	
IV.	51. Arson	29	28	1	10	11	4	4
	53. Killing and Maiming Cattle ...	2	2	...	1	...	1	...
	58. Other Malicious Injuries... ..	3	...	3	...	1	...	2
V.	59. Forgery and Uttering (Felony)	2	2	...	...	1	...	1
	60. Uttering Counterfeit Coin ...	2	1	1	...	...	...	2
VI.	63. High Treason	2	2	...	1	1	...	...
	76. Libel	2	2	...	1	...	1	...
	81. Suicide (attempting to commit)	9	7	2	2	4	3	...
	Total Indictable Offences ...	716	533	183	162	354	82	118

Number of Criminal Lunatics under Detention on the 31st December, 1893, and the Number per cent. in each of the Four Groups :—

	Total.	Per cent.
GROUP I.		
Offences against the person :—		
Crimes of Violence	561	78·3
Sexual Crimes	40	5·5
	601	83·9
GROUP II.		
Offences against Property for gain ...	68	9·4
GROUP III.		
Malicious injuries to property	34	4·7
GROUP IV.		
Other Offences	13	1·8
	716	100·

If these Figures are rearranged under the Three Divisions as in the case of crimes generally, the numbers come out in the following proportions :—

PSYCHOLOGICAL GENESIS OF CRIME.

Crimes of Criminal Lunatics.

Division.	Propensity (in criminal activity).	Percentage of Cases.	Dominant Mental Origin (Primary Emotion).
I.	To Violence to Person or Property ...	83	Malice.
II.	To Sexual Acts	7	Lust.
III.	To Thieving, Fraud, etc.	10	Acquisitiveness.

The following interesting and instructive comparison shows that the criminal tendency in the sane is towards *plunder*, while in the insane it is towards *violence* :—

Division.	Percentage : Crimes generally.	Percentage : Crimes of (Criminal Lunatic).
I. Violence	15	83
II. Sexual Acts	10	7
III. Thieving, etc.	75	10

Gentlemen, the task which I proposed for myself is, for the day at any rate, concluded.

I have, in the first instance, sought to trace out by a process of analysis the psychological counterpart or equivalent of crime, and to show what are the dominant mental origins of the three ultimate divisions into which crimes are separable. But although the scheme is drawn up and tabulated with reference to *criminal* conduct as the outcome of certain modes of mind, it is quite capable of application to conduct to which the word "criminal" does not attach; as, for instance, to what is termed *sin*, or to other forms of conduct in ordinary life where there is a noticeable deviation from an average standard of honesty (in word or deed), of sexual purity, or of personal sympathy.

I have, in the second instance, tried to demonstrate the unreality of what has been termed "criminal anthropology," in so far as that term seeks to apply to criminals generally the natural history of a few criminals who show exceptional peculiarities. This I have done without, I hope, appearing to question the accuracy of the observations, so far as they go, on some criminals by competent authorities, or to impugn the motives of writers on the subject. I object to the term *criminology* or *criminal anthropology*, based as it is on the study of a minority of criminals, being taken as applicable to criminals generally, just as I would object to the term *anthropology*, if based only on the observation of one or two races of men, being taken as applicable to *man* generally.

In the third place I have shown how widely the type of crime and the mental origin of crime in the criminal lunatic differ from the type of crime and the mental origin of crime in the criminal generally; and in this relation it is of more than passing interest to observe how very largely the offence of the mere criminal connects itself, and has to do with the earning of a livelihood for the criminal himself and his family in this particular way, and not in one of the many accepted forms of industrial occupation.

Gentlemen, I thank you for the patient hearing you have given me.

Discussion on the President's Address.

At the conclusion of his address, Dr. NICOLSON said that he felt it to be a great pleasure to have with them on that occasion Sir Edmund du Cane, whom he regarded as a man whose responsibilities and value were known only to those who had an opportunity of rightly gauging them. He had been liable to misrepresentation and misunderstanding on the part of those criminologists who dealt

with the few and extended their characteristics to the many. He was, therefore, glad of that opportunity of saying that he felt that Sir Edmund du Cane had guided a serious and solemn work to a most satisfactory state in his own particular department.

Sir EDMUND DU CANE—I did not come here, sir, with the smallest intention of saying anything on the subject of your address, still less did I come here with any idea that I should be referred to personally. I am entirely in accord with you, sir, in thinking that too much is made of the idea that criminality is a special quality of the mind. It has nothing to do with it. A person may be very wise and yet be a criminal; he may be a great fool and yet be a criminal. There are many specimens of both sorts in our prisons. I admit also that there is a vast number of people who become criminals because they have not got the sense to see that it is better for them not to; but when so many of those who put forward these doctrines try to prove that people are criminals because they are born criminals, and because they cannot help themselves, I think that they are leading the public astray. A great many criminals adopt that line for want of motive impelling to an honest life; and, although I am not one of those who say that there is no remedy but punishment, I think the proper course is to train them up properly in early life. When they have once adopted evil courses, however, you must supply to them by punishment that motive which they have evidently not got in their own constitutions. I can give a curious instance of the result of punishment. In the course of my experience, a good many years ago, the convict prisoners at Chatham, from some motive which we could never perfectly discern, formed a habit of malingering by wounding themselves. They used to put themselves under waggons, trucks, and so on, anything in order to damage their limbs, no doubt hoping to escape labour. We tried in every way to find out what could be the particular incentive to follow that course. Of course there are people who say, when such things happen, that there must be something wrong in the treatment. We tried to discover whether it was those who were on long sentences and despondent, whether it was those who were much punished, etc., but we found no general rule by which one could say that it was the product of a certain state of mind induced by any particular feelings. The Director of Prisons and I consulted, and agreed that we would try strong measures—that we would try whether, this being such an abnormal condition of things, flogging the men on an appropriate occasion would have any effect. Therefore, when an appropriate case occurred, no great harm having resulted, the man was flogged. This is what he said afterwards: "I never would ha' done it if I'd known there was a bashin' attached to it." That kind of malingering ceased like magic; it never occurred again. I have always borne that incident in mind as showing that it is often some counteracting force, the fear of punishment it may be, which is a necessity in order to put a stop to crime. But I apply that, of course, only to those who are beyond the period of life in which you can arrest crime by training. The first thing to be done, sir, as your figures have shown, is to lay hold of these persons whilst they are young, and so prevent them falling into the way of crime. If you can do that, you check it at the source, and, as crime has been largely diminished in that way, you might, in the course of time, stamp it out almost entirely.

Dr. ORANGE, in moving a vote of thanks to the President, said—We must all feel greatly indebted to you, sir, for the admirable address to which we have listened and the views you have enunciated. It is to be hoped that your words will sink into our minds and be productive of much good. With regard to the question as to how much crime may be due to training and how much to natural propensity, it seems to me that the principle applied by an old theologian to prayer and works holds good, viz., you ought to pray as if everything depended on prayer, and work as if everything depended on work. So with regard to training, as compared with the germ we all bring into the world with us—both have to be considered and each has its influence. There can be no

doubt as to the difference in the natural capacities of different individuals; but it is very hopeful to hear that if a large number were taken from the lower stratum of society and transplanted at birth into the upper, you think the result, on the whole, would not be very different. On the whole probably it would not, but, at the same time, much of what is relatively good and relatively bad is perhaps only slightly relatively good and slightly relatively bad. There is a large amount of good in human nature which would be brought out under such circumstances, and there is also a certain amount of bad. Circumstances have much to do with this matter. Many of us have been in the habit of thinking with regard to a proportion of those persons who are the despair of prison authorities—variously called “instinctive criminals,” “born criminals” (we are all more or less “born criminals”), and “habitual criminals”—that there would seem to be underlying their more manifest crimes a certain amount of impairment or defect of mind which hampers them from their birth, which prevents them from succeeding in the race of life, which intensifies their evil propensities and lessens their power of contending against these propensities, and which renders them, on the whole, more liable to fall into crime than ordinary human beings. And with regard to that class of persons, one small, but perhaps practical, suggestion might be made, that since their inability to run the race of life like ordinary human beings will show itself at an early period of their history, it may be no useless precaution, when a juvenile offender is brought for the first time before a magistrate, to obtain the school history of that child. A certain proportion are known to the directors of schools to be distinctly below the average of capacity, and this knowledge should have what effect and value might be thought attachable to it.

Dr. CLOUSTON, in seconding this vote of thanks, said—Of this I am quite sure, that every one of us, whether we agree or not with Dr. Nicolson's views, are heartily obliged to him, and feel that we have listened to a most suggestive piece of scientific work. It is very delightful, sir, to notice the optimism that seems to pervade this meeting of the Association. I have known a time when it was not so. This morning we have had submitted to us a report which seems to show that the law of the country as regards criminal responsibility is absolutely perfect, and you have now pooh-poohed the great black shadow that seems to be thrown over science by the work of Lombroso and other criminologists. You have told us there is nothing in it; there is no such thing as criminology, no such thing as any special connection between the depraved organization of a defective brain and crime. I am certain that most of us will scarcely agree with you in your optimistic view of criminology and its psychological relations. No doubt most of us who have looked through the books of Lombroso and Havelock Ellis and others are inclined to admit that it is a little overdone by some of our continental brethren, but to say that the mass of criminals in this country are merely criminals by want of opportunity of doing good, by want of education, and not by their organization, is absolutely contrary to the results of psychological investigation for the last fifty years. I once had occasion to carefully examine the inmates of the Edinburgh prison, and if there was one thing that impressed itself upon me it was that I had to do with a degenerate aggregation of human beings. You say that something like 45 per cent. of the criminals for certain offences are under twenty years of age. Why are they under twenty years of age? Because undoubtedly the inhibitory power of the brain is not yet developed. They have not attained adolescence. They are to a very large extent virtually at that age criminals by compulsion. We cannot believe that such a class exists except by virtue of their organization. I think, sir, that you have disproved part of your thesis by giving us these statistics, but your optimistic view of criminology does us good. It enables every one of us to think more hopefully of our fellow creatures.

Dr. CONOLLY NORMAN—On one point I thoroughly agree with Dr. Clouston. I think, sir, your address has done us all a great deal of good, and I think that any address, even if we could not follow it in all its details, which exposes the

puerilities of criminal anthropology is distinctly an advantage. We are all more or less familiar with the elaborate treatises on tattooing and similar subjects which have been lately published on the continent. A distinguished writer, who is accredited with having founded the new science, has recorded a mass of observations on criminals to prove certain theories which are worked out in a truly astounding manner. Crimes are traced from their first appearance in the Sundew and Pinguicula. They wind up, however, pretty much in this manner:—If a man has not a perfectly-chiselled ear or a Grecian nose, if he has learned, when a boy, to tattoo his arms, he is hopeless. Everything that evolution, culture, training and education can do for him is of no avail, for behold his nose is a little crooked and the lobe of his ear is adherent to his cheek! It is really astounding the vogue that this puerile nonsense has obtained, and I think, sir, that the Association is indebted to you inasmuch as, with extreme and characteristic moderation, you have touched upon this subject, not happily in as strong language as I have indulged in, for I have given up the cares of office and its responsibilities, but in that calm and robust way that I hope will be always characteristic of the mode in which Englishmen will engage on these questions

The PRESIDENT—Gentlemen, I have to thank you sincerely, not only for having listened to what I had to say, but for having so kindly expressed your estimate of the work which I have tried briefly to put before you. It has, of course, been impossible for me in a few minutes to exploit the work and the writings of years and of numbers. I have simply taken a few leading points and asked you, after giving my own opinions with regard to them, to criticize or to displace them by what you may find more accurate. When Dr. Clouston says that I overlook the origin of crime in certain groups of individuals, or groups of individuals at certain ages, he rather misstates the beliefs I wished to convey to you in that matter. I wish to take this earliest opportunity of saying that I am entirely in agreement with much of the phraseology and the descriptions of the criminologists, but I repeat—and this is the point which I wish to make quite clear—that these descriptions only apply to a minority of criminals. What I object to is that a description—honest, true, verbose if you like—applicable to the few should be held up to the world as being applicable to the whole criminal class. I have never said that there is no truth in what these criminologists, or criminal anthropologists, or criminalists, say. There is truth in it. But having begun at the wrong end by analyzing the body and mind of a few individuals, they have built up by a process of synthesis a scheme which cannot possibly be conceded as generally applicable. That is my own belief after sifting the matter from beginning to end during nearly 30 years' work in prisons and in Broadmoor. I deny that there is any such thing as a criminal neurosis or a criminal psychosis, or an instinctive criminality which belongs to a group of persons who make themselves amenable to law, which changes from time to time, under which an act may be a crime to-day and to-morrow no crime. In the days when I was quite willing to make discoveries I contributed a few papers to the *Journal of the Association*. On looking through them I found a section which very nearly fits in with what I have been trying to say to-day, and which, with your permission, I shall read as an explanation of the position of the criminologists in this particular relation. I pointed out more than 20 years ago, in a series of papers on the "Morbid Psychology of Criminals," that if we take a certain section at the lower end of the criminals in convict prisons, there is a proportion varying from two to five or even ten per cent., whose mental condition is such that in order to place them among sane prisoners we must lower our platform of sanity; or, if we wish to call them insane, we must raise our standard of the mental conditions which go to make up insanity above the ordinarily recognized level. Dealing with that class of criminal, I accept the descriptions of the criminologists, but I decidedly decline to accept the mental condition of this limited class as a fair average sample of the mental condition of the ordinary criminal. After

describing the difficulty of fixing the percentage of this lower group of the criminal class in prison, I go on to say :*—" Similarly, it is found outside, that there are dull-minded creatures who go on harmlessly from day to day labouring at their farm or navy work without any mental preoccupation of a criminal nature. But although it cannot be said of them that they seek an occasion of doing wrong, or committing themselves criminally, yet in the face of temptation, and when such an occasion comes, or is thrown in their way, they are unable to resist it, and thereby become criminal. There is something wanting in them which should enable them to restrain themselves under such circumstances. This 'something'—which comprises a mixture of ready judgment, forethought, and healthy volition—is the common factor in this case of weak-mindedness and criminality. It is this which here links together crime and mental weakness; which makes crime an expression of mental weakness; and which, if you will, makes crime, but assuredly *not all crime*, a form of insanity. The same mental defectiveness which prevents the harmless labourer resisting a temptation to crime, oftentimes necessitates his being treated as weak-minded when a prisoner. But the bearing of this case, where we start with mental deficiency, is altogether different from that of the great proportion of criminals who have been convicted, and whose criminality shows itself as a positive propensity to evil-doing. These last, not unintelligent, and quite capable of balancing motives, deliberately, and in spite of their consciousness of its risk, prefer crime to an honest livelihood such as would fall to their share. Such men have said to me, 'I am a thief, and I don't see that I'll ever be anything else. I never did like work much. Of course there's risk, but I'll chance my luck again.' Now, apart from the moral and social degradation (which the already thief does not feel), and the risk of a 'lagging' or sentence to imprisonment (which he is willing to run), there is surely no madness in an idle-minded fellow preferring to live like a gentleman by helping himself directly from moneyed pockets instead of sweating his life out with a pick and shovel at 14s. a week. I fail to see insanity in this, any more than I do in the forged bill of the man of business, or in the sanded sugar and spurious tea of grocers who knowingly adulterate their goods."

*Experimental Psychology in Relation to Insanity.** By W. H. R. RIVERS, M.D.Lond., M.R.C.P.

Up to the present time the experimental movement in psychology has been directed chiefly to the study of methods by which mental phenomena may be subjected to exact investigation, and by which they may receive for purposes of comparison some kind of quantitative expression. So far as these methods have been perfected they have been directed mainly to the investigation of general psychological laws, and of the relation of psychological to physiological processes. Comparatively little has been done in the way of application of these methods to elucidate practical questions; little attention has been paid to individual psychology and to the exact nature of the differences which distinguish the

* "Journal of Mental Science," Jan., 1875.

† Read at the Annual Meeting of the Medico-Psychological Association, July, 1895.

various types of normal and abnormal mind. The more theoretical work of experimental psychologists has naturally a great interest for students of insanity, and must affect their conceptions of abnormal mind, but the special question which I intend to consider is of a more direct and practical kind, viz., the possibility of using the methods of experimental psychology to help directly in the study of the problems of insanity.

One of the first, if not the first, to study the practical application of psychometric methods was Francis Galton, and among other observations of his are some on weak-minded children made at Earlswood.* At the present time the chief worker in this field is Professor Kraepelin, director of the asylum at Heidelberg, who has for many years been occupied in devising and elaborating methods capable of use with the insane. He has already done much, not only in the direct investigation of insanity, but also in the study of questions closely related to those of mental pathology. At the beginning of the present year he began to issue a new publication, "Psychologische Arbeiten," in which his researches and those of his assistants and pupils will appear, and the first number contained a valuable introduction by himself, in which he described the principles and methods by which those researches will be conducted. Through the kindness of Professor Kraepelin I have had the opportunity of studying these methods at Heidelberg, and I cannot carry out the purpose of this paper better than by giving an account of his work.

A large number of preliminary researches have been carried out with the object of finding methods most suited to the investigation of abnormal mind, and these necessarily have to be of the simplest character possible. Any method which is to be so used must first be thoroughly tested in one individual; the influence of fatigue and practice, of diurnal periodicity and of various other factors must be determined, and, secondly, the method must be tested on a number of individuals to ascertain the influence of differences of mental constitution or temperament, and to discover the different ways in which fatigue, practice, etc., act on different people.

A large part of Professor Kraepelin's researches has been devoted to these preliminary inquiries, and this work not only serves as the foundation for a systematic plan of measurement of mental capacity, but has also in itself brought out

* "Mind," Vol. xii., p. 79, 1887.

many points of direct importance to mental pathology. We are accustomed to speak of different types of individual, to which we give names, of which "neurotic," "melancholic," "unstable," may be taken as examples. These empirical types, however, are more or less vague, and the names are used by different people in different ways. An individual psychology, based on exact investigation, should give us the means of defining and classifying these types. As, following Galton and Charcot, individuals may be classified as visuals, audiles, or motiles, according to the nature of their mental imagery, so may we hope to classify them in other departments of mental life. As an instance of a step in this direction, I may mention that Oehrn* has found that different individuals show great differences in the influence of fatigue on mental work. If the amount of mental work of two hours be represented by a curve it is found that in most individuals the curve ascends at first owing to the influence of practice being greater than fatigue, and that it after a time descends owing to the influence of fatigue becoming predominant. Oehrn found that the summit of the curve occurred at very different times in different individuals, and that the effect of fatigue might be so marked that the curve showed a descending course from the beginning. In fatiguability and the power of recovery from fatigue we have properties of the individual of great importance from the psychiatric point of view, and it is probable that investigations of this kind will be of much use in the definition, and, later, in the diagnosis of temperaments and of morbid diatheses.

Another most important branch of Kraepelin's work has been the investigation of abnormal influences on the mind, viz., of drugs and of excessive fatigue. His work † on the effects of alcohol and other drugs on mental processes is well known. In alcohol and over-fatigue we have two recognized causes of insanity; it is common knowledge that alcohol produces a condition which may be regarded as temporary insanity, and Kraepelin regards the mental effects of alcohol and other drugs as artificial insanities which can be investigated under conditions favourable for experimental inquiry. Moreover these conditions may be regarded as affording opportunity to study insanity in

* "Psychologische Arbeiten," Bd. i., Heft i., S. 92, 1895.

† "Ueber die Beinflussung einfacher psychischer Vorgänge durch einige Arzneimitteln," Jena, 1892.

its incipient stages; stages which in actual practice do not come under the eye of the physician, or, if they do, would be unsuited for exact investigation. Professor Kraepelin goes farther and suggests that experimental investigation of artificial insanities of this kind should be combined with the investigation of the effects of alcohol, etc., on the brains of animals, and that by combination of the two lines of research, anatomical in animals and psychological in man, we may obtain some insight into the intimate nature of abnormal mental processes, and of their physiological concomitants.

These two branches of Kraepelin's work, the study of individual differences and of abnormal influences on mind, not only furnish important contributions to our knowledge of insanity, but they provide the best possible training for the direct application of psychological methods to the study of the insane. Anyone who wishes to apply these methods must to a certain extent learn the difficulties and dangers of psychological experimentation by work of this kind. Kraepelin and his school have already had much experience of the practical utility of their methods in the direct observation of insane patients, though at present comparatively little has been published. Enough, however, has been done to enable Kraepelin to speak very positively of the practicability of exact investigation of the insane.

I will now pass on to the methods which are used at Heidelberg for these ends. Most have as their basis the measurement of time, either the measurement of the time taken by a given mental operation, or the measurement of the amount of mental work performed in a given time, but the special point of the methods is the combination of this quantitative basis with the analysis of certain qualitative features which vary according to the nature of the mental operation measured.

The ordinary forms of reaction time are employed, and, according to Kraepelin, employed with success on the insane. The more complex forms are used more than the simple reaction-time experiments, the one most extensively in use being that of choice time. I may here call attention to an important difference which distinguishes the use of reaction-time experiments as practical methods of investigating mental capacity from their use as means of physiological or psychophysical inquiry. When the experimenter with the latter aim in view measures reaction times, he is met by

several disturbing occurrences, by premature and by false reactions; the individual observations may vary widely from one another, and the mean variation may be so large that it impairs or destroys the value of his results. His object is to get rid of premature and false reactions, and to reduce his mean variation to a minimum. In the practical application, however, to the study of an individual these abnormal factors, which only annoy the theoretical experimenter, become in themselves of great interest and possibly of greater importance than the actual times measured. Thus in employing the measurement of choice time to test the susceptibility of an individual to the influence of alcohol, it is the increase in the number of premature and false reactions which is of importance rather than the change in the time taken. In such a test a certain number of choice times are measured on successive days. On alternate days no alcohol is allowed; on the other days a dose of alcohol is given before the experiment, and by this method, which eliminates the influence of practice, the number of premature and false reactions on the days on which alcohol is taken, compared with that on normal days, gives a measure of the influence of alcohol on motor excitability and on the ease with which ideas give rise to impulses, a point which is of medico-legal importance.

Another form of reaction-time experiment employed is that of association time, and this is especially valuable owing to the possibility of combining the factors already considered with analysis of the associations which are formed. This method, combined also with the analysis of the associations which occur in simply writing down a series of words without time measurement, has been largely employed by Dr. Aschaffenburg, and has brought out many interesting results, some of which have been published.*

The second class of method employed by Kraepelin is the measurement of some simple kind of mental work. The kinds employed include counting, adding, writing, reading, learning figures by heart, and learning syllables, according to the method of Ebbinghaus.† Of these, adding and learning by heart have been most widely employed. Under Professor Kraepelin's direction I made use of the former method in a small investigation on fatigue and recovery, carried out during a visit to Heidelberg this summer, and I hope later

* "Archiv. f. Psychiatrie," xxvi., S. 597.

† "Ueber das Gedächtniss," Leipzig, 1885.

in bringing this work before the Association to have an opportunity of describing more fully this method and some of the results obtained by its use. I will only say now that rows of figures, specially printed for the purpose, are added or learnt by heart continuously during certain times, varying according to the nature of the investigation. A signal sounds every five minutes, when the worker notes by a mark the amount added or learnt, and the amount of work done in each five minutes can afterwards be ascertained. Although the mental operations involved in these methods are simple, I think there can be no doubt as to their practicability in investigating mental capacity, and it was by their use that the effects of fatigue in different individuals were ascertained by Oehrn.

Among other researches by these methods which have been already published, is one by Bettmann* on the influence of previous physical and mental work respectively on the capacity for mental work. Work of this kind may be regarded as supplementing the work of Mosso† on the influence of mental fatigue on muscle work, and Kraepelin is continuing the investigation of the relations of mental and physical work by the comparison of the results obtained by the methods already mentioned with those obtained by means of the ergograph.

Other methods employed include the testing of sensibility, and especially the capacity for perceiving small stimuli—the estimation of time intervals, the testing of the depth of sleep, and most recently investigation of the characters of handwriting by a new and ingenious instrument, devised by Kraepelin, and called by him the “Schriftwage.”

In order to test the chief features of any individual mind as regards capacity for mental work, susceptibility to fatigue, power of recovering from fatigue, etc., Professor Kraepelin has devised a method of taking a “psychical present state,” in which the methods of adding and learning by heart are employed for different times and with pauses of different lengths on five successive days, the work of each day occupying about an hour and a half. The method is fully described in his introduction to the “*Psychologische Arbeiten*,” and the author believes that by its means it is possible to obtain considerable insight into many of the chief mental characteristics of an individual.

* “*Psych. Arbeiten*,” Bd. i., S. 152, 1895.

† “*Du Bois Raymond's Archiv*,” 1890, S. 89.

I have here pointed out several ways in which experimental psychology may be useful to the study of insanity. The measurement of mental capacity, however, is capable of very wide application, and the methods which are found useful in the investigation of pathological problems may be found to be useful in other departments of practical life. They are capable of employment for the study of vexed questions in regard to education. Kraepelin has also devoted attention to this aspect of the subject,* especially in relation to the question of over-working school children, which is perhaps even a more serious problem in Germany than with us. Some of the investigations carried out in his laboratory have bearings in this direction. The work by Bettmann already mentioned is held to furnish evidence against the practice customary in German schools of sandwiching a lesson in gymnastics between two periods of mental work, a practice also condemned by Mosso on the ground of his experimental inquiries. Other observers, as Burgerstein† and Höpfner,‡ have carried out investigations directly on school children by more or less exact methods. Their work has been chiefly on the influence of fatigue, and its practical bearing has reference to such questions as the most suitable length of a school lesson. Work similar to that of Oehrle on the individual differences of children should prove useful in the examination of children who appear to be unable to stand the ordinary work of a school class, and this branch of practical psychometry should be especially interesting to us, partly because the simple methods which are found to be suited to children will probably also be suited to the insane, and *vice versa*; partly because these educational problems are mainly matters of hygiene, and should be investigated by members of our profession.

[The paper was illustrated by a demonstration of the measurement of choice reaction-time, as carried out in Professor Kraepelin's laboratory. Hipp's chronoscope was used; the signal was one of two vowels, and was given with Kraepelin's lip key, which closed the circuit on depression; the reagent broke the circuit by means of one of two Morse keys, using the right hand for one vowel and the left hand for the other.]

* "Ueber geistige Arbeit," Jena, 1894.

† "Trans. 7th Internat. Congress of Hygiene," London, 1891, Vol. iv., p. 87.

‡ "Zeitsch. f. Psych. u. Phys. d. Sinnesorgane," Bd. vi., S. 191, 1893.

Discussion on Dr. Rivers' Paper.

Dr. RAYNER, in moving a vote of thanks to Dr. Rivers, said that he was only expressing the views of the meeting by stating that they were extremely indebted to him for his deeply interesting communication and demonstration.

Dr. PERCY SMITH said he would have liked to have heard a little more from Dr. Rivers as to the nature of the cases in which Prof. Kraepelin had employed this method. One could understand that a certain number of patients would give more or less accurate answers, but he supposed that an asylum afforded a rather limited field of application. For instance, one would prefer not to have a clock or battery near a maniacal case; on the other hand, the melancholic was so utterly wrapped up in his own troubles that he would be unable to give his mind to anything of the kind, except, perhaps, from the fact that it might be a novelty, and so attract his attention for a few minutes. No useful result was likely to follow its employment in such cases. With regard to demented, of course one would obtain evidence of delayed reaction, confusion or inattention; while with regard to general paralytics he should think that the results would be extremely untrustworthy. Again, as Dr. Rivers had stated, it involved a most tremendous expenditure of time, and he fancied that most superintendents had their time so fully taken up that but little was left to devote to such investigations. No doubt in some public asylums the expense required for such a purpose would be voted at once; but there were a great many who would think more than twice about the cost of such an apparatus.

The PRESIDENT did not think that the difficulties raised by Dr. Percy Smith with regard to the expenditure of time and money were so much in question, as, given the time, the apparatus, and the person, could definite results be obtained? In his opinion it would require a sane man to be able to obey the word of command in the proper manner; and the necessary process of education would not suit the disposition of many of their patients. Again, he had to consider the complaints of patients at Broadmoor that he worked batteries on them from his office. If he established an instrument of that kind there, he would not be able to give such a perfect denial as he could now. Apart from these points, however, if they could bring their minds to accept the records of the apparatus and the terms of explanation, important conclusions might be arrived at. At present he was sceptical, but perfectly willing to maintain an open mind to fresh developments and more definite results.

Dr. YELLOWLEES wished to know how mental fatigue was tested. He could understand the difficulty of teaching an insane patient to follow even such simple instructions as were necessary in the process, but in what way were they to get a lunatic to apply his mind so as to induce fatigue?

Dr. URQUHART asked whether the apparatus shown was a better one for their purpose than that which had been used by Dr. Bevan Lewis? It would also be interesting to know whether Dr. Bevan Lewis's work was in any way invalidated by that put before them to-day, or whether his results were corroborated by the more intricate apparatus.

Dr. RIVERS said that, so far as he knew, Dr. Bevan Lewis had only described experiments in simple reaction time, while Kraepelin thought simple reaction time of comparatively little value compared with more complex times. Besides, reaction time was only one of Kraepelin's methods. With regard to testing mental fatigue, that was done by giving the lunatic, or other subject, an hour's work (such as addition) to perform, but this method could only be carried out on a limited number. The amount of work done was noted at each quarter of an hour. Points were thus obtained, from which could be constructed a curve of work. His own opinion was that these methods would be chiefly of use in the study of those cases which did not go to asylums. The German psychiatrist had an enormous advantage, as nearly all the asylum physicians of Germany had under their charge cases of nervous diseases (which in England would be under the care of the neurologist) as well as such as would here go to the alienist.

The objections offered to the application of Kraepelin's method to the insane did not, to his mind, at all alter the very great value of the results already obtained, the light thrown on problems such as the influence of work on normal and abnormal minds in normal and abnormal conditions. The objection to an electrical battery in an asylum was surely not insuperable, nor was the expense very great. The initial cost, especially in the absence of a supply of electricity, would be considerable, but a very great deal could be done by simple methods. He believed that the necessary expenditure of time would be the chief obstacle to the introduction of this method into England. Over a hundred observations could be made on an ordinary patient in about twenty minutes with the apparatus he had shown, and facility comes with practice.

Rest and Exercise in the Treatment of Nervous and Mental Diseases. A discussion opened by T. S. CLOUSTON, M.D., and J. BARRY TUKE, M.D., at the Annual Meeting of the Medico-Psychological Association, July, 1895.

DR. CLOUSTON.

I believe it is an absolute matter of fact that at the present time different physicians, both in private practice and in asylum practice, use different methods in regard to their newly-admitted patients, as far as in their treatment rest and exercise are concerned. I do not recollect that we have discussed this important question, nor do I recollect any definite paper on the subject by any competent authority. It therefore seems clear that the subject is one which demands our consideration.

Of late there has been a tendency to carry out what might be called rest in a much larger degree than formerly. I understand that it is the routine practice in many institutions to put a newly-admitted patient to bed for two or three days, or for a week or a fortnight, and in some cases even for as long as a month. Now this is so contrary to the practice of other men, and has arisen in so comparatively late years that it seems clear we ought to give some reason for the faith that is in us, whatever our practice be. There has also, I think, been a tendency of late to regard rest and exercise as if they were antagonistic modes of treatment; and the question as to how far they are antagonistic and how far merely complementary to each other is one for our discussion.

We have firstly to define the terms; secondly, to get at the symptoms, mental and bodily, present in the cases where those two respective modes of treatment can be ap-

plied; thirdly, to ascertain the etiology of the cases; and, lastly, to get at the pathological conditions existing in the brain cortex, the general condition of the patients, and the possibility of applying either mode of treatment in a definite and scientific way.

Now, what is *rest*? Rest, as used medically, might fairly be defined as the complete or partial cessation of certain functions in an organism or in a single organ which has been overworked or irritable, or is in a weak or morbid condition. The very idea of "rest" implies previous overwork or weakness. Cessation of working in a strong organ is not therapeutic rest. More than that, used medically, "rest" conveys the idea of having a definite aim and purpose, its object being to restore. Any rest, in fact, that is not restorative is not medical rest. And what is *exercise*? Exercise, I conceive, is the purposive activity of any organism or organ with the view of benefit or restoration to health. All the forms of massage, friction, etc., are undoubtedly forms of exercise in this medical sense. Both words, however, used medically, must refer to their purpose and object. Mere arrest of function is not rest, mere activity is not exercise, in the medical sense. There is no doubt that Nature provides physiologically for both conditions in all normal organisms, and both are absolutely needed for health. They occur usually in alternation or sequence, except in the case of some of the constantly working organs, such as the heart or lungs. In normal individuals the craving for rest or the craving for exercise is usually the test and measure of their physiological necessity. In insanity, as we shall see, this conscious craving is lost, and we have therefore to substitute for the patient's sensations our own medical deductions with regard to the case. As therapeutic agents, rest and exercise have been used from the very earliest times, but their scientific application and explanation are, I think, better understood nowadays. They are capable of being used in many diseases, not merely in nervous or mental diseases, and are also, I think we will all admit, capable of being used to do both much harm and much good in both these classes. I am not aware, however, of any one certain test by which you can say that their use is demanded in any one disease whatsoever. Their advantages and disadvantages are being at present ascertained in such diseases as they are used in. Hilton had to discover where rest was curative,

and Weir Mitchell had to discover where massage was beneficial by experiment.

There are some things to be kept in mind in discussing brain and muscle rest and exercise. Muscle may be exercised by direct stimulation, or through the mental and motor centres of the brain cortex. Mind can only be exercised through the activity of its own centres. In treating a case of insanity the muscles may be exercised alone, or through the brain; and we may excite mental activity on many lines, intellectual, affective or volitional. It is particularly to be kept in mind that the exercise of one brain centre may bring rest to another, and that our direct power to give rest to mental centres is often very limited. In a healthy man the way to produce the highest mental activity is commonly to suspend voluntary muscular action, special sense action, and digestive activity.

Now what are the recent uses and reasons of both forms of treatment in insanity? In old times, undoubtedly, the prevalent idea in treating the insane was against exercise. Insanity in many of its forms implied an undue exercise of nervous and muscular energy, and all sorts of expedients were resorted to in order to keep the patients quiet. Chains, restraints of all kinds, strong rooms, opium, antimony—all sorts of measures, mechanical and chemical, were used. These had their day, and they had a fair trial as attempts to still morbid muscular exercise and give rest, nervous and muscular; but they were not found curative. The idea of using normal muscular exercise in walking, working, dancing, massage, etc., as a direct means of producing subsequent brain rest and quiet and "distraction" of the mind from morbid ideas, is really of modern growth. It is undoubtedly to a large extent the foundation of the modern asylum routine system; it has been the system which the various visiting medical Commissioners in Lunacy have urged on us in the treatment of our patients for many years. A man was generally blamed if he kept his patients too much in the house or at rest; he was never blamed, so far as I know, if he over-walked them, overworked them, or kept them in the open air all the time. Speaking for myself, I have preached exercise in season and possibly a little out of season. One is apt to become prejudiced as to its almost universal applicability, but I have seen exercise of body, combined with that sensory mental exercise "distraction" of the mind, obtained by new

scenes, pleasant surroundings, new work, new amusements, do immense good in early and later stages of insanity. Its effects on the cases where it has seemed to do good—and these were in my judgment by far the majority—were, firstly, to produce sleep, which is the *sine qua non*; secondly, to calm maniacal and melancholic excitement; and, thirdly, to improve the working of the secretory and excretory glandular system, setting them in action in a degree otherwise unobtainable—kidneys, skin, liver, all the organs of excretion. Further, it had the effect of promoting healthy metabolism and nutrition, and of stimulating the blood-forming glands and apparatus by the circulation of an increased amount of oxygen in the blood. And, lastly, it made the patient forget for the time being his depression and even his delusions, by breaking into his morbid train of thought and dispelling ideas tending to become fixed; and generally made the inmates of a large asylum more contented, more quiet, more manageable, and more human. As an illustration I may quote a case of chronic mania where at one time there had been much exhaustion, but who through the ordinary routine of exercise had got into a static condition of moderate quiet. She happened, however, to have a strangulated hernia, for which she was operated on and had to be kept in bed. She did very well for ten days, but then the old symptoms of acute mania returned, and for nearly a week she remained in that state. It was impossible to allow her to get up for exercise. It was manifest to me that she was suffering from the want of a physiological outlet for her muscular and nervous morbid energy, so that the excitement was, as it were, bottled up in the brain cortex. That, I think, was an illustration of the good effects following exercise—only in a very striking degree. That being so, we will all, I fancy, practically admit that in a vast number of cases these effects are to be got.

But does not exercise do harm in some cases? I have no doubt that it does in a few. I do not doubt that I, and probably most of us, have over-exercised some of our patients and produced muscular and nervous exhaustion. I can recall some cases of my own in which this took place. Probably, however, I have under-exercised still more. Still it is no excuse from a scientific point of view for having killed one patient by an overdose of medicine, that that medicine is extremely beneficial to many others when properly applied. We have no right to do harm to any individual patient by

over-straining a system. The important point to ascertain is: What class of cases does exercise benefit, and what are the indications which would enable us to say it does harm? Can we get any reliable indication as to the application of such rules as we lay down theoretically so as to do good always and never do harm? In fact, can we answer the clinical therapeutic question, What are the symptoms that call for a certain remedy?

The obvious and first consideration to the physician is that we have very different conditions of brain and body in different classes of insanity and individual patients, and that in the same case we have different stages in which at one stage exercise might be demanded, and at another stage rest might be requisite. Then there is one question which we ought to discuss to-day: In the early stages of mental attack, before the symptoms have become much developed, how are we to apply these powerful remedies? I feel quite certain that I have arrested many attacks of insanity by prescribing hard walking in the fresh air day by day up to the point of conscious exhaustion. No doubt those patients had rest at night, but the real treatment was almost excessive undue physiological exertion. I believe, however, as I have said, that I have done harm in a case or two by the same measures in the early stage. Now, why the difference? Perhaps the difference has resulted from the first class of case where benefit resulted being that of young patients. They were fairly nourished and moderately muscular; they were in no extreme condition of thinness and nervous exhaustion, such as we speak of under the name of "neurasthenia;" they had no weak point in any one of their organs—heart, lungs, etc. Their bodies were sound. The mere cortical condition of the brain was, I believe, very much the same both in the cases which derived benefit and those which were harmed. It was the condition of organs other than the brain that was different.

With regard to *rest*, I am quite certain, as I shall mention, that I have seen it do harm. And it is therefore a serious and responsible matter for anyone to advocate such a course. Rest, in the sense of staying in bed during the whole twenty-four hours, is applicable as a therapeutic agent to cases where we have extreme neurasthenia, where we have such exhausted conditions as the puerperal state, those suffering from bodily diseases, those who have been manifestly and clearly exhausted by over-exertion. But about this question

of over-exertion I shall have a word or two to say presently. As a general rule a commencing attack of insanity is not well treated by rest in bed. With regard to puerperal cases, I may quote one lately admitted where the disease came on about the fifth week. The patient was so thin and exhausted that she was at once put to bed. After three days, however, the cortical excitement was too much for the general exhaustion, so that the woman could not be kept in bed. I found her out in the garden, and asked the head nurse if she had not strict orders to keep the woman in bed. "Well," she said, "that is so; but we could not keep her in bed without a struggle. She was restless, stripping herself, getting into dirty habits, and knocking about the room, so I thought it better she should be in the garden taking a quiet walk or sitting about on the seats under the care of a special nurse." Needless to say I quite agreed she was right with regard to that case.

I had a very severe case of melancholia in a young woman who had been treated in bed with narcotics. (I do not know that she could have been treated in any other way at home.) On admission, being young and fairly strong, she was walked about practically all day, with a little rest in the middle of the day. At first I found that the effect was undoubtedly to diminish excitement, but at the end of ten days she was rapidly losing bodily weight. She had lost five pounds—half a pound each day. That to me was an indication that the exercise was being overdone and that another plan of treatment ought to be tried. I therefore attempted to obtain complete rest. For the first two days it was successful; after that the cortical excitement was such that we could not keep her in bed without a struggle—an illustration of a very common case of resistive active melancholia.

In what way can we induce muscular activity, blood circulation, and glandular action except by natural exercise or massage? I maintain that massage is an extremely artificial mode of exercise, and that, in a large number of cases, it is in accordance with my experience that the plan of putting a melancholic and weak patient to bed for massage at the beginning of the depression is an extremely hurtful proceeding. Over and over again I have known cases develop, and develop rapidly, into acute melancholia under such treatment, when immediately after being taken out into the fresh air and exercised in a change of scene,

the symptoms abated and the patients improved. This is one of the instances where our professional brethren have been led astray by the use of massage. They have sent a great many depressed patients into acute melancholia by the use of massage in the early stages of that condition. I am quite certain on that point, so far as I can be certain of anything.

Can we not get brain rest by muscular exercise? That is one of the most important questions. And is it not the most efficient way of getting brain rest? By putting the muscles into exercise do we not act by way of derivative from the excited cortex and thereby secure brain rest in a physiological fashion? I think that undoubtedly this is so, that it is absolutely physiological, and that we can apportion the amount of exercise to the needs of the individual case. What will cure certain cases of insomnia like a walking tour? I appeal to your own personal experience. Does not the improved oxygenation of the blood manifestly restore the normal working of the brain cortex in such cases? Do we not thereby correct the skin habit by the constant perspiration during the walking? and do we not find that in spite of the vigorous walking the patients will put on a certain amount of flesh—not perhaps a great deal, but still an appreciable amount? Their muscles, too, manifestly become harder and more natural. Does not, in short, the activity of the motor centres give rest to their neighbouring mental centres in the brain cortex? I maintain it does, and this is really the reason of the enormous benefit we get by the routine asylum treatment of keeping our patients steadily walking day by day, and twice or thrice a day, both in the majority of recent and certainly in the majority of old cases. I have no doubt we shall have vigorous defenders of the plan of putting patients to bed; but I most strongly object to the proceeding as a routine measure in any asylum, and maintain that it is a backward, unscientific, and in many cases a hurtful measure. By putting patients to bed you do not thereby get the full benefit of that change of scene and surroundings, of that new set of ideas that patients get when transferred from their homes to new circumstances. It strengthens their morbid notions; they are not taken out of themselves; it tends in certain maniacal cases to foster the bad habits we want to eradicate. We desire to make the coming of the patient to the asylum the occasion of a tremendous turnover in his mode of life, and way of looking at things. I do not think you get that when you put the

patient in bed instead of placing him in favourable circumstances in the admission ward, where he has plenty of attention from nurses. You must exercise on him from the very moment he comes into the asylum that influence of healthy mind on morbid mind which we are all anxious to obtain, and that, I aver, you do not get by the plan of putting all your patients in bed at once. While looking at our patients from medical and physiological standpoints, we must not forget that great principle of the mental treatment of the patients by the influence we can bring to bear upon them ourselves and by nurses, and by the general effect of the change of scene, which was perhaps over-estimated twenty or twenty-five years ago, now in some cases rather neglected, a neglect which, I think, will lead to a going backward in regard to many principles of treatment, so that in our asylums our patients will be less satisfactory and recover in fewer numbers.

I would summarize as follows the classes of cases in which confinement to bed for a short time might be allowed:—(1) The puerperal; (2) the muscularly feeble and the very neurasthenic; (3) the very old; (4) the paralyzed; (5) the obviously exhausted, until that exhaustion is diminished; (6) the cases of certain patients whose brains have got into an excessively sensitive and receptive condition, so that almost any impression from without produces a certain state of excitement. These are, perhaps, the most typical cases of all where you practically require to put your patients into a feather bed, and keep them there, excluding impressions, so far as possible, from all the senses. There are a few such cases certainly; I do not admit that there is a great number.

Lastly, let me say one word with regard to what, I imagine, my friend Dr. Tuke knows more about than most of us, but with regard to which I have taken a slightly different view from him. There are a few cases of insanity from over-exertion; there are far more from over-worry. Dr. Tuke maintains, and has published the fact, that he thinks in many of these cases of over-exertion there is a congestion of the brain cortex, and that that congestion is properly and rightly treated by rest; and he adduces certain recent histological facts as to the manifest changes which can now be demonstrated in the brain cells of an exhausted subject and of a subject that is not exhausted (in lower animals). He holds, therefore, that what is wanted

is to give rest so that the congestion may be diminished and that the cell may renourish itself and recover its old condition. I doubt, however, if this theory of the cause of insomnia and insanity is a correct explanation of the symptoms. The blood-vessels are the servants and not the masters of the cells. Get the cells in good working order and the blood-vessels will take care of themselves, is my rule in most cases. I am not prepared for a moment to deny that there are such cases as Dr. Tuke describes, but I do assert that the effects of that over-exertion would be better combatted by such derivative treatment as you get by vigorous walking and sitting in the sunshine. In many cases one of the difficulties of the treatment by rest is that you exclude the sun, the patient becomes etiolated; he is not subjected to healthy influences. Therefore I am not at all sure—although I speak in great deference to Dr. Tuke's opinion in this matter—that the over-exertion does not result simply from a certain amount of brain excitement, the cells in the cortex calling for more blood, and that the best plan of treating that excitement is to put the muscles to work, so taking the blood into the limbs instead of leaving it in the brain cortex. I do not think that the demonstration by Hodge, Mann, and others of the manifest difference between an exhausted brain cell and a brain cell that is not exhausted is anything to the point. I believe that you can get the brain cell better nourished by exertion than by rest in many cases.

DR. BATTY TUKE.

Mr. President, I am placed in somewhat of a difficulty, as I can hardly have been expected to anticipate fully the line Dr. Clouston would take up in defending exercise as a method of treatment; still, in the remarks I have prepared, I think I have anticipated a considerable number of his arguments, and these I now submit to you.

The statement of an opinion based on clinical observation is doubtless of value; but if it can be supported by deductions drawn from scientific data its value must be enhanced. As a matter of fact the conviction I presume to express that rest is of the utmost consequence as a method of treatment in certain forms of insanity grew out of the study of the sciences which form the institutes of medicine in their relation to morbid mental phenomena, and out of the

correlation of that class of symptoms with other forms of nervous disease. When the convictions which arose out of such study were applied to treatment they found support. In order to make my position clear, therefore, I must first state as succinctly as possible the scientific reasons for belief; and, secondly, the results which have been obtained when these convictions were applied to practice.

On the face of it the first section opens up the widest field of inquiry, but it shall be dealt with as concisely as possible, for it is unnecessary on the present occasion to consider in detail the results of recent anatomical and physiological observations which are patent to all. For my present purpose, however, it is necessary to summarize certain of the facts which have special bearing on the matter in hand.

The main fact we have to keep in view is that the cortical cell is the unit of psychological activity; and as it is affected by malign influences abnormal mental phenomena may be the result. Our knowledge of the cerebral nervous mechanism has been widely extended during the last few years. Although not complete, it is more than sufficient to warrant definite deductions.

I think every physiologist accepts as a postulate that mental action is a function of connections. This meeting need hardly be reminded of the results of the work of Golgi and Ramon y Cajal, which has done so much to corroborate, to extend, and, in certain instances, to correct the observations of previous observers. Suffice it to say that it brings into view the arrangement of these connections. Take for instance the course of sensory impressions. We know that they are conveyed by the fillet-fibres to the pyramids of the kinæsthetic area, and primarily to the molecular and sub-molecular plexuses, the loci of new impressions; and moreover, there is strong reason for believing that other sensory impressions are also conveyed upwards by thick terminal fibres unconnected directly with any cortical cell. We know of the anatomical differences between the axis cylinder process and the protoplasmic processes, the latter being constructed for the purpose of conduction towards the cell, the former for the purpose of conduction and of diffusion of stimuli away from the cell; and, further, that cell is placed in relation to cell by simple contact of branches. We can trace the descending path by the pyramidal track. Again, we know that systems of collaterals exist, by one of which

impressions are conveyed to neighbouring or remote areas in the same hemisphere; by another to the opposite hemisphere. And we know that as we ascend in the animal series the cells increase in number and character, and that increase of complexity of connection is demonstrable.

I have left out of consideration certain cells whose function is as yet obscure; but it is essential to add that in the olfactory bulb, retina, and cochlea the same plan or type of sensory structure obtains, and the afferent sensory fibre ends in the central nervous system in a free arborization in the cortex. Keeping thus before us the existence of systems of connections, we have surely a right to draw deductions as to the consequences of solutions of their continuity, in the same manner as we do in connection with those of the constituents of other organs.

The physiological position is best stated by Obersteiner, who says: "The grey matter is a field for the association of different sensory impulses. In it they are placed in communication with efferent paths along which they travel, either immediately or at some subsequent time; or, to speak more correctly, the efferent impulse is not the unchanged afferent impulse directed into a descending path, but the product of afferent impulses just received, combined with impulses liberated from their resting places in the tissue of the brain." The complex and highly specialized apparatus which subserves these functions is liable to the action of disease in like manner as all other bodily mechanisms; it is liable to the action of over-strain, traumatism, toxic agents, premature involution, and to the results of defective rudiments and growth. Each of these great groups of pathological agents may act independently, or they may act in combination. That they act in different manners on the brain structure is known to all of us. But there is one point of importance for my present purpose to keep in view, *i.e.*, that the action of certain malign influences on the cell is rapid. We know that changes in the cell due to physiological action are produced with great celerity, that a distinct difference in its constituents following on physiological and experimental stimulation has been demonstrated, and that exhaustion of constituents proportionate to the amount of stimulation has been rendered evident. On the table you will find specimens taken from the brain of a woman who died fourteen days after the first symptoms of insanity appeared in a condition of mania produced by an obscure toxic agent, non-alcoholic.

You will observe that a very large number of the cells have undergone granular and pigmentary degeneration. Other cases are on record in which, as a result of traumatism, the cells were found affected within twenty-five hours to such an extent as to interfere with their functional activity. Many other instances might be adduced, but these are sufficient to prove that the cell can be morbidly affected in a very short space of time. Let us consider for a moment what the consequences must be if even a proportion of the cells of an extensive area becomes so affected as to reduce or destroy their action. In the case of the cells of the kinæsthetic area the power of directing and transmitting stimuli becomes defective, and their nutritional function suffers—the protoplasmic processes, apical and lateral, undergo Wallerian degeneration, and the power of transmission must be in abeyance. The connection of cell with cell through the instrumentality of the great plexuses is impaired or destroyed, and thus the mechanism of association of afferent sensory impulses is thrown out of gear; the product of afferent impulses liberated from their resting place cannot be directed into a descending path, and the storage power of the cell is modified or abolished. One great result must be perversion of mental function.

Nor is morbid action confined to the nervous elements. All tissues are affected—vascular, lymphatic, and connective—implication of which reacts on the cell. But so far as insanity is concerned, disease of the cell is the primary condition. By its action the nervous arc is broken, and the “adjustment of inner to outer relations” is rendered impossible.

Setting aside for the moment the classes of cases whose mental symptoms may depend on degeneration of nervous elements, we turn to those whose insanity is the result of active morbid conditions produced by over-exercise of the cortex, brought about by constant stimulus. The first of these consists of those insane persons whose condition depends primarily on a morbid degree of hyperæmia of the cortex and of the pia. In a course of Morison Lectures, lately published, I endeavoured to demonstrate the *modus operandi* of hyperæmia, and to trace its rapidly produced consequences on the cell and the lymphatic system. Time will not permit of reiteration of the arguments produced. It may be said, however, that the views expressed have been criticized with great consideration

in your Journal, in which the opinion was given that they afford a fair working hypothesis. To my mind they go beyond this, for the results of a pathological and clinical observation of a considerable number of cases, and the evidence afforded by correlation of my own work with that of others goes to show that, whether the case is marked by mania, excited melancholia, or excited dementia, the symptoms are dependent on continuous hyperæmia, followed by the consequences which have been observed in every organ of the body similarly affected, which in their turn have produced rapid degradation of cell integrity. Every constituent of the brain becomes involved, and, besides abnormal mental action, trains of bodily symptoms ensue as a direct consequence. As I have said elsewhere, the patient is a sick man or woman suffering under severe cerebral disease, and his condition cannot be relieved till the original morbid influence (hyperæmia) is removed. The patient is a hospital case, and must be treated on hospital principles.

For the immediate purpose of the case we have to consider the effect of the brain condition on the general system. Its tone is lowered; the patient falls off in condition by reason of impairment of the brain function, which regulates general trophesis. These bodily symptoms are concurrent with the earliest indications of impending insanity. If we exercise a patient under these circumstances we are asking his system to undertake recuperative work which it is not in a condition to perform. We are working tissues whose powers of reintegration are weakened by reason of the disability of the nervous system to supply repair. Such a patient requires conservation of all the nervous energy of which he is still possessed, and the reduction of stimulus so far as it is possible to obtain it, in order to procure arrest of the progress of morbid conditions, each and all of which must tend to produce reduction of cell integrity and activity.

Keeping these main considerations before me, and especially the fact of the rapid disintegration of brain constituents under pathological conditions, I have for several years past put the principles which I hold are involved into practice as regards the treatment of incipient and early cases of idiopathic insanity, *i.e.*, the insanity produced by over-exertion of the brain through the action of what are usually termed moral causes. I give you the general results of the action of treatment under rest in the last forty cases in which it has been employed during the last two years. I could cite

previous cases, but prefer to found on those who have been submitted to the system in its completest form.

Of the forty, twenty-four were women and sixteen men, all under thirty years of age.

They may be divided into two clinical classes: first, those in whom only incipient symptoms had appeared—restlessness, irritability, changed *morale*, lowered bodily condition, etc., sufficient to be noticeable and alarming to relatives and friends, and to call for the intervention of the physician, but whose symptoms were not so advanced as to warrant certification. Twenty-eight belonged to this class, of whom twenty-five were treated at home. In four the symptoms had existed for one week; in seven for two weeks; in seven for three weeks; and in ten for four weeks. Twenty-five recovered, or were so distinctly convalescent as to be able to dispense with special nursing and care; five in three weeks, eleven in four weeks, and nine within six weeks. In three the symptoms were not arrested, running on, in one case, to acute mania, and in two to excited melancholia; but of these two eventually recovered and one is still under treatment, the prognosis not being hopeful. Of the twelve in whom definite insanity was present when they came under observation, four were maniacal, seven excitedly melancholic, and one excitedly demented. The insanity had existed in three for two weeks, in four for four weeks, and in five for six weeks. Three were treated at home, nine in hospital. Three recovered, or were distinctly convalescent in four weeks, two in five weeks, two in six weeks, one in ten weeks, two in fifteen weeks, one did not recover, and one died.

All these cases were treated in bed for at least three-fourths of the period during which each individual was under special treatment. Mild counter-irritation was maintained, chiefly by sinapisms applied to the nape of the neck and upper part of the thorax. A warm bath was given at night. Mild and carefully-graduated massage was employed in order to maintain muscular and cutaneous hyperæmia.

Exercise has been advocated on the ground that it is a (so to speak) derivative of blood from the encephalon. Such derivation can be obtained by careful shampooing without any call on the recuperative powers of the system. The action of digitalis was first tried in all cases; in those in which it failed antipyrin was administered in xv. gr. doses five or six times daily. In a few cases it gave no results, and in them paraldehyde or sulphonal was employed. Diet

was simple, of the ordinary kind and amount, and spread over five or six daily meals.

I submit that the general results are satisfactory, showing a percentage of over 90 per cent. over all.

I fully admit that all these cases were hopeful ones by reason of the short period during which disease had existed, and that in all probability a large proportion would have eventually recovered under conditions advocated last year at Dublin. But I think stress ought to be laid on the rapidity of cure effected. Every one will admit that it is of the utmost importance that morbid processes going on in such a delicate organ as the cortex should be arrested early, as their effects are rapidly accumulative, and, to say the least, must retard recovery, and render recurrence more probable. Sufficient time has not elapsed to test the liability to recurrence in the cases adduced; but it may be stated that in no instance has there been any indication of recurrence of symptoms, and that a large proportion of these patients are following their usual avocations, the small balance being convalescent.

Dr. RAYNER—We are much indebted to Dr. Clouston and Dr. Batty Tuke for having brought up a subject of treatment for our consideration. In questions of treatment, it seems to me, this Association should rank before all other Medical Societies, for we have the fullest control over our patients and the fullest opportunities for observation; and I believe that if we use these to the greatest possible extent we ought to be able to teach our medical brethren. In the question of rest I have always been very much interested, and it is undoubtedly of utmost and primary importance in regard to treatment. I understood Dr. Clouston to say, as I myself believe, rest is always relative so long as the waking state continues, so long as we are conscious, so long as the brain is in action, so long as we live and the muscles are in action. And with regard to mental action, of course, what is hard work to one man is rest to another. A man engaged in public affairs turns to classical translation as a positive rest and refreshment. With regard to individuals, again, what is at one time great exertion is at another time no exertion at all. So it does not appear to me that we can lay down any rule as to what constitutes rest. Mental rest, therefore, we must always try to obtain by diverting the mental action from the highest to the lowest functional part. It is rather by the direction of the attention that we get rest. If we secure sensory attention, the other areas of the brain are more or less at rest, and, so far, have a chance of recuperating. In muscular exertion, we have the best means of diverting the attention of the brain at the lowest expenditure of functional vigour. Of course, there can be no doubt that by over-exertion you may do harm, and everyone can cite cases in which over-rest has done harm. The question before us is when to employ rest, what is the reason for the good in the one case and the harm in the other, and what rule guides us in using the one or the other. I say that we can take no class of cases and say that it is to be treated by rest or by exercise. Every patient must be treated individually at the particular time. We should not adopt any routine course of treatment. I do not think that Dr. Batty Tuke

would adopt the routine of rest in every state and in every condition of nerve disorder. I have spoken of mental rest, but when muscular exertion is considered the question is when is a man to be kept in bed and when is he to be allowed to go about. The involuntary muscles of circulation and respiration are rested by placing the patient in bed, and it is especially the respiratory condition that indicates the necessity of rest. I believe that the effects of exertion on the circulation will guide us to the right conclusion. I have no doubt that we might get indications from the nervous area by the methods demonstrated by Dr. Rivers, but a more ready means of inquiry is at hand in the instrument for measuring the calibre of arteries. Again, it is not necessary that the patient should be always indoors, and that he should be in consequence blanched, even if bed is indicated; and, besides the rest in bed which may be of importance, there are the questions of the accompanying diet, and the employment of massage. A case lately came under my observation and was a striking instance of the effects of rest. It was that of a neurasthenic. He was put to bed and treated with massage, narcotics, and overfeeding. He had a pulse of very high tension and was as exalted as any case of general paralysis. By omitting the narcotics, and by reducing his food to milk, the patient became quiet and comfortable. I allude to this as showing the importance of the conditions associated with rest in bed. Dr. Batty Tuke takes up the pathological side of the question, and has spoken of the condition of the brain. If we were to accept his views we should have to conclude that every case should be treated with absolute rest in bed. But I think that he does not sufficiently take into consideration the reaction of the body on the brain, and that these pathological conditions are very much exaggerated, and their effects on function are very much controlled by that reaction. No doubt, as he himself points out in his "Morrison Lectures," the condition of the brain in both melancholia and mania is very similar, and the difference, I believe, is simply the result of this reaction. In melancholia you have not only depression of the nutrition, but you have also very little arterial reaction on the brain. In mania, on the other hand, there is increased circulatory activity, and, as a secondary consequence, increased hyperæmia even to exaltation of function. Then I do not think that he sufficiently allows for the fact that in diverting function, motor or sensory, you are probably promoting activity in one area of the brain and allowing the other parts (which have previously been in action) to rest; and that not only is the part which is comparatively at rest benefited by having less to do, but probably also in a reflex manner. With regard to indications for treatment, I may say that I have been guided by the condition of the circulation, especially in cases of epilepsy. In epileptic conditions I observed that patients who became maniacal after their attacks always manifested great irritability and excitability of circulation. They had also manifested, of course, great irritability and excitability of reflex action. The excitability of their pupils was always a good guide as to the danger of their developing an attack of excitement if they were allowed to get about, and as a rule, as the result of that observation, I always arranged that epileptics should be kept at rest after their attacks, and in that way avoided a very great deal of epileptic excitement.

Dr. BLANDFORD—It is a very great advantage in a discussion of this kind to have two papers read by two eminent observers. We have had the *audi alteram partem* put clearly before us. There is a great deal of truth in both of these papers, but I am inclined from my own experience to side rather with Dr. Clouston than with Dr. Batty Tuke. When called to a case of incipient insanity we find the person overwhelmed with ideas, most frequently melancholic ideas. No doubt there is a morbid condition of brain and brain cells; that I admit to the fullest. But how are we to get these morbid ideas out of the patient's head? Are we to do so by putting him in bed in an isolated position, and by having him nursed in solitude? I think that *distraction* is

what the patient wants. You have to get the morbid ideas out of his head by putting others in their place. I do not think that will be achieved by putting him in bed in an isolated room. I have seen this tried again and again; I have not tried it so much myself, but many of my friends are trying it and have tried it frequently. Dr. Playfair has largely introduced the Weir Mitchell treatment into London. He has, no doubt, benefited many patients who were fit subjects for that treatment, but I have again and again heard him state that he will not now undertake the Weir Mitchell treatment for mental cases because he has found it so often unsuccessful. I have seen several cases where it has been a most conspicuous failure. I recollect the case of a gentleman whom you might call a hypochondriacal or hysterical patient, who was put to bed, massaged, rubbed, fed on milk, and so on. In the course of three or four days he got into a state of high excitement, and, taking a poker, assaulted the lady of the house where he was. He was taken to a house in the country, exercised in the fresh air, and the acute symptoms were immediately removed. He went back to his old state. Distraction being the requisite, you want distraction from morbid to healthy ideas. When we are harassed by some worrying thought, and are perhaps unable to sleep, what do we do? We try to wrench our thoughts away from the troublesome subject and to fix them upon something else. If we are fortunate enough to be able to do that, we get sleep, and comparative freedom from our troubles; if not, our troubles pursue us; and it seems to me that walking in the fresh air (I do not lay stress upon violent or prolonged exercise), surrounded by objects of interest, even asylum objects, is more likely to distract the patient from his morbid thoughts than being shut up in a room in bed. I lately saw a young lady in a state of acute mania. She had been kept in bed, as far as that was possible, for some time. It was necessary to remove her to an asylum, where I saw her the next day. She was already in a much better condition. She was walking in the garden among the other patients, and remarked to me, "What an extraordinary amount of people there are here." Her mind was diverted and distracted from herself even by the sight of other patients. In that way we relieve the hyperemia of the part of the brain giving rise to these thoughts and induce other thoughts. For that reason I condemn the plan of putting patients to bed who can be up and about. I fully admit that there is a certain number of patients incapable of extended exercise who require rest in bed and the hospital nursing; but I think the majority are better out of bed than in it.

Dr. RIVERS—I think that this is one of the questions in which Kraepelin's method may be of some value. As a matter of fact Kraepelin and his school have investigated this condition to a certain extent. In the beginning of the present year a paper appeared which recorded the influence of bodily work and mental work respectively, as tested by Kraepelin's methods. The bodily work consisted of two hours' hard walking; the mental work was, I think, one hour's addition of figures. It was found that the two hours' physical work impaired mental capacity more than the one hour's mental work. That was one individual investigation the special aim of which was to throw light on the practice in German schools of sandwiching half an hour's gymnastics between two hours' mental work. The conclusion reached from these observations was that the German practice was a bad one. I think it is possible that the same kind of method might also give us some clue, some physiological knowledge, which might be of use in clinical practice, and thus add to the deductions which Dr. Tuke has drawn from anatomical observations.

Dr. COOKE—I am most fully in accord with the remarks which fell from Dr. Blandford to the effect that the real practical usefulness of exercise in the treatment of the majority of cases of insanity arises from the distraction that results; and I think the practical point that we have to bear in mind and try to work out is how we can, as asylum physicians, introduce the greatest amount of change into the exercise we give our patients. The mere monotonous walk-

ing round the airing courts is, I think, to be very much deprecated. In our institution we use exercise very largely. I am glad to say we have a farm of nearly 480 acres, and I have been very much struck with the greater advantage the male patients derive from their exercise, in which they have occupation and interest, over that of the female patients. For a long time I have been endeavouring to find means of infusing interest into the exercise of female patients. It is, however, a most difficult question, and I am sorry to say that the results hitherto obtained are not satisfactory. The members of our Association might with very great advantage bestow their attention on this point.

Dr. DRAPES—I think, sir, that the two views adopted by Dr. Clouston and Dr. Batty Tuke are not to be considered as opposing, but complementary, the one speaking from the clinical, and the other mainly from the pathological side. Most melancholiacs have undergone treatment by rest before coming under observation. How many melancholiacs stay in bed in the morning when they begin to suffer from depression, and end by staying in bed the entire day—even for weeks and months—perhaps in isolation before we see them? And the result is a miserable failure. The treatment of patients by rest, before coming under asylum care, has in nine cases out of ten been absolutely useless. It is therefore futile to continue treatment that has been inefficacious. Another point is that where the patient is in an exhausted condition Dr. Tuke also thinks it inadvisable to order exercise. Well, where can we find patients in a more exhausted condition than after a protracted fever? Yet we try as soon as the fever is gone to give him gentle exercise, gradually increasing it so as to draw upon his powers as he can undertake more protracted exercise. Therefore, if a patient comes to us exhausted, treatment by well-considered exercise is, I think, beneficial. Dr. Tuke seems to consider that hyperæmia obtains in most cases of insanity. Well, hyperæmia certainly exists in the case of an overworked student. He suffers from sleeplessness, which plainly indicates that his brain is hyperæmic and exhausted. Now we do not advise that patient to go to bed. We say to him, "You must change the sphere of activity in your brain, give your higher centres rest, and use your motor centres, give up your more refined occupation of mental work and go in for the more barbarous occupations of fishing and shooting." The discussion of this subject will, I hope, tend to clarify our ideas and to induce us to differentiate our cases more, so as to discover in what particular cases either remedy is applicable to the exclusion of the other.

Dr. YELLOWLEES—I heartily agree, sir, with what has been said as to the value of the important papers to which we have listened. I think that we are all agreed as to the value of rest and exercise in the treatment of abnormal mental conditions, and, further, that we will all agree that these means of treatment are to be used with reference to the individual patient. That is the first and supreme thing to say about these remedies or any other remedies. It is impossible to theorize apart from the individual case. We have all been using these remedies, I suppose, for many a year. There is no new discovery announced and no revolution proposed. The question is whether we are to test the necessity for rest or exercise by theoretical views as to the condition of the brain cells, or by the general physical condition of the patient under our care. Emphatically and unquestionably I prefer the latter course. Results have proved its wisdom beyond any doubt. I endorse every word that Dr. Blandford said. I have again and again had the same experience of seeing great mischief done to insane patients in the early stages by their being submitted to massage and seclusion, and I invariably protest against the procedure when opportunity offers. I agree that there are certain brain conditions which, in themselves, demand rest. There is a certain irritable, hypersensitive condition of brain which ought to be excluded from outward stimuli of any kind, a condition which closely resembles post-epileptic irritability; but, unquestionably, in the

great majority of cases I think that the distraction which even an asylum ward supplies is of the greatest value for a mind oppressed and haunted by its own morbid ideas. I must be allowed, sir, to say a word about Dr. Tuke's statistics, which were to me very remarkable. He took pains to tell us that his patients were "sick" people, were "hospital cases." I do not know that it was necessary to tell us that. All our patients are sick people; they are all hospital cases. I must say I did not understand that differentiation; I do not think it was needful. There was a fine scientific air about it, as if you must know all about a man's brain cells before you can treat him—an assumption with which I do not at all agree, for we often know very little about them. Now, sir, as to the statistics themselves. Dr. Tuke gave us the statistics of 40 cases of incipient insanity, half of whom recovered within three weeks and the rest within six weeks. Now I have the profoundest confidence in Dr. Tuke's diagnosis, but were these all really and unquestionably cases of insanity, and such cases as it is fair to tabulate and argue from? I cannot but think that many of those cases which recovered within three weeks were such as did not rank with insane patients. I do not know of any insane folk recovering so rapidly and so universally in consequence of the application of sinapisms and the administration of antipyrin. I should like to know more about these cases.

Dr. ANDERZEN—It is worth while asking whether some of the opinions put forward in the course of this discussion are reconcilable. But before doing so I should like to make some remarks founded on the study of nervous disease. In such nervous diseases as are met with in general hospitals—in cases of chorea, for instance, in which there is a certain exaggeration of bodily movement and certain mental phenomena, what is done? They are generally put to bed, well fed, chloral and other sedatives are given to procure sleep, and massage is ordered. In that way Dr. Bastian and others have obtained very good results. Again, in certain forms of hysteria similar modes of treatment have shown that very good effects can be obtained. Treatment by exercise not having been tried in these cases so far as I know, there are no statistics to quote on the other side. When we pass from them to the insane we are liable, I think, to draw an artificial and false distinction between the two classes, because, in the last-named, the pathological conditions of certain areas of the brain which we call psychical give rise to external manifestations, which are, therefore, psychical manifestations—manifestations in conduct; but the classes gradually shade into one another, and the difference between them is not great. Treatment ought to be founded upon our knowledge of the causation and other circumstances in the particular case, not on merely speculative supposition. In many cases of insanity the hereditary factor is marked, and under the slightest stress of circumstances the individual becomes maniacal or melancholic. Where the hereditary factor thus predominates, the central nervous system is so disorganized that neither sleep nor exercise nor anything else will do much good; but, on the other hand, where there is no hereditary factor, where the individual is a practically healthy person, but reduced to a condition of mania or melancholia by stress of circumstances, in such a case appropriate treatment will do much. It seems to me that the discussion should be limited to the comparative merits of rest and exercise in this particular class of cases; and, taking such a case, let us compare his condition with some other affection which might occur in the same organism. Let us suppose that his leg is broken; he is unable to walk, the functions of the leg are paralyzed, and he suffers pain. One would presume *a priori* rest would be obtained in the first instance, and that, when the acute stage had passed, massage, etc., would be gradually used to restore the limb to its original condition. That, I think, puts the apparent antagonism between Dr. Clouston and Dr. Tuke in a nutshell. They are dealing with a case at different stages. In the acute stage, where there is absolute breakdown, with painful ideas, intolerance of light, and desire for isolation, neither of the speakers would advocate vigorous measures. On the other hand, when the acute stage had

passed, then exercise would be advised in order to restore the normal physiological condition. What is the condition of the insane individual on which we can base treatment? There is insomnia and want of recuperation in sleep; he is in a more or less exhausted condition. The perversion of mental action and the predominance of painful ideas show that parts of the brain are exhausted, and that due proportion is not maintained. An individual in this exhausted condition requires rest in the first instance; and when the conditions of rest and careful dieting have brought the patient back to his normal state, the normal physiological condition of exercise should be resumed. One word with regard to the remarks which fell from the last speaker, who stated that pathological and physiological observations have practically nothing to do with treatment. It is astonishing that such a statement should have been made in a scientific society. If we cannot localize lesions, what are we treating? The whole nervous system is an unknown territory, and, if we cannot ascertain the lesion, we are not trying to treat, but are merely making stray shots in the dark in the hope of hitting the bull's-eye. What are the actual conditions revealed by the few post-mortems that have been made in this condition? Very often a great amount of hyperæmia has been found, but of much greater importance are the indications of physiological over-exertion which microscopical examination has shown. When the brain of a bee has been examined after a hard day's work, certain changes are found in the protoplasm of the cells. This is quite in accordance with what we have learnt regarding muscles and other organs. Physiologists have shown that the nerve cell can be built up, can break down, vacuolate, degenerate in a similar manner to many other structures of the body. In the minds of those who are paying special attention to the subject, there cannot be the slightest doubt that there are marked and distinct changes even within healthy limits, much more within pathological limits; and that these observations furnish some basis for the treatment that has been advocated—rest in acute stages of insanity and exercise after the acute stage has somewhat subsided.

Dr. UBUHART—I think, sir, that we ought to be very much gratified by having had such a display from two honoured veterans of the Association, who have embroidered their banners so skilfully and flourished them so manfully. At the same time I rejoice to think that the Association is not yet at the parting of the ways. I believe that the greater number of us will continue the middle course, which, in my opinion, is the safest. It seems to me that we have a good deal to thank the Commissioners for. Some years ago nobody could possibly be right unless he had a farm, and now, although we still retain our farms for purposes of exercise, nobody can possibly be right who has not a hospital for purposes of rest. Perhaps a good deal of the debate to-day has turned upon the hospital idea. I am one of those thankful to have a hospital, and I hope I treat my cases *secundum artem*; at any rate, I do claim to treat each case according to the symptoms as they arise, in view of all the other conditions which make for the disease, and without a thought of the statistical return of those "confined to bed for the day." As we progress we individualize. That is the hopeful tendency of modern asylum treatment. I think that we should record a very hearty vote of thanks to the gentlemen who have to-day given us abundant food for reflection.

Dr. SAVAGE—Although I did not hear the first paper, I cannot let this discussion pass without saying a few words. I, too, feel most strongly that the middle way is the best, not that one wishes to trim by any means. There are some cases in which you should be as dogmatic in enforcing rest as there are others in which exercise should be ordered. The first thing that strikes me as a fundamental error is the proposition that every case of mental disorder begins with hyperæmia of the brain. It is a statement that has no foundation, to the best of my belief. There is something before the hyperæmia. I am sure that the skilled histologist, like Dr. Andriezen, would not be content with saying

that there is hyperæmia at the beginning and end of the pathology of brain disorder. I am quite sure that the question of treatment by keeping patients in bed has been affected by what I used to experience at Bethlem, in common with many others. One of the drawbacks to properly treating patients in bed arose from the action of the Commissioners, who would declare that they had been through the whole hospital and had not found one patient in bed. Now, if praise is to be given for that, certain superintendents will seek for that praise. On the other hand, I quite agree with those who have said that confinement to bed is harmful in certain cases. One has seen massage do an enormous amount of harm. Many cases of mental unsoundness have been put to bed and massaged. An erotic young man or woman put to bed, over-fed, and over-stimulated will develop delusional ideas of the sexual type under what is to them this worst of all methods. The question of distraction is very important. I am quite sure that Dr. Blandford looks upon this as a sort of counter-irritant, so that, instead of the higher centres remaining active, they may have rest; while the lower are employed by such means as golf or shooting or fishing. But an enormous amount of harm is done by this word "distraction," in that some physicians think that every melancholiac will be benefited by being sent off for a course of picture galleries, theatres, and the like. Now I would rather see many a melancholiac kept unduly in bed than despatched unduly to picture galleries, to theatres, or even to church. My feeling most strongly is that there is no such thing as insanity, but there are insane people; and I am inclined to think that we may go very far back and learn something. I believe that the dream of Nebuchadnezzar was right, and to that belief I shall stick.

Dr. CONOLLY NORMAN—The tone of this debate, sir, is certainly a sign that philosophic thinking has not altogether gone out of fashion in this Association. Dr. Clouston has pointed out, in the course of his philosophic remarks, that mere arrest of function is not rest, and that mere activity is not exercise. I could not gain any distinct idea of what Dr. Batty Tuke meant by "rest"; but Dr. Clouston contends that muscular exercise is often the means of securing rest, and in that I fully concur. Though I have the most profound respect for pathology and the most enthusiastic hopes of what it will do for us in the future, I do not think that it has already thrown much light on this question. One speaker has referred to observations on animals. Well, my optics may be clouded by ignorance or prejudice, but I fail to see how the treatment of insane patients is affected by the fact that when a honey-bee goes out in the morning his nerve-cells are in one condition, and in another when he returns in the evening. The human brain is unquestionably endowed with an enormous range of functions which are altogether unrepresented in that of the honey-bee. Most of our treatment is directed to affections of these higher functions. We may say that we only treat diseases of the nerve-cells. That is all very well; but if we cannot find out, for instance, how it is that mental trouble produces the change in the nerve-cells, it is not for us to deny the fact. We are not even in a position to say what the change is; some time we may know. Meanwhile we have cases in which profound alterations of the function of certain nerve-cells have been produced not by exertions like those of the honey-bee, but by causes which we can only call moral. It has been suggested that hyperæmia is a constant pathological find in cases of insanity. But how is the hyperæmia produced? A man becomes insane; he dies; and his brain is found to be hyperæmic. Can we discover any connection whatever between his mental trouble and that lesion? We want the link; and just here, I fear, pathology is very weak, and will be so for a long time to come. But if hyperæmia is constantly present in cases of insanity, we must believe that it is in some way or other produced by so-called "moral causes," and, if so, are we to depend solely on physical means for its cure? I see no analogy, or only a very imperfect analogy, between the rest enjoined for a broken bone and that employed in the treatment of insanity. For the patient with the broken bone, "rest" means distinctly rest in bed, in which case you

certainly rest the injured part; but, in the case of an insane person, I fail to see that you necessarily rest the injured part by putting him in bed. I have listened in vain for any proof of that to-day. Again, with reference to mental activity, we have to consider intensity as well as extension. I am not quite sure that I use the words in their strictest sense, but I shall endeavour to explain what I mean. Like Dr. Drapes, most of the cases I see are melancholiacs. In these, from the physical side at least, we see very little sign of cerebral activity; nevertheless, there must be profound changes taking place in the patient's brain. He is very willing to lie in bed, sometimes too willing; yet, in spite of this, he wastes, and we must believe, if we revive his memories, after recovery, of the intense suffering he endured day after day and week after week, that intense activity is predominant. Now, would you attempt to cure him by keeping him in bed? It is a case of great extension of mental trouble; and surely there is also great intensity. The same question occurred to me from another point of view when Dr. Rivers was speaking. I desire to be very hopeful of the results of experimental psychology; but I do not know that we shall be able to say much about the changes going on in these cases of melancholia until we can test on our patients the effect of two hours, not of adding sums or of walking up and downstairs, but two hours of mental anguish. When that can be done we shall be in a position to talk more dogmatically on this matter.

Dr. G. M. ROBERTSON—We all agree that a certain amount of exertion is a right and proper thing in the majority of cases of insanity. In a few cases, however, we carry out the treatment of rest in bed. I intend to follow Dr. Conolly Norman's example and speak from the physiological and pathological point of view. I quite agree with him that the changes in the nerve-cells of the honey-bee after exertion have nothing whatever to do with treatment of insanity. From the theoretical point of view and from the analogy of other organs such changes were to be expected. I may remark, however, that Dr. Clouston showed in his graduation thesis that he had discovered a granular appearance of the nerve-cells in some cases, and a clear appearance in others. He asked the question whether this had not something to do with the functions they had been performing, so that he cannot be said to have neglected this aspect of the question. Apparently rest has been the aim of both Dr. Clouston and Dr. Tuke in the treatment of mental disease. Dr. Tuke maintains that by putting the patient to bed he is resting the mental areas, while Dr. Clouston contends that he secures the same object by exercising the patient. I think that a very important point has been overlooked. We have been speaking of the brain as if it were a homogeneous structure, whereas it is really a series of organs containing within itself a representation of every organ in the body. It is therefore perfect nonsense to speak of *resting* the brain; that could only be done by killing the person. Inside the brain, functions are going on corresponding to every function in every organ in every part of the body. You can only, therefore, rest a part of the brain. Dr. Tuke, by putting his patient to bed, is resting part of the brain—he is resting, perhaps, the motor areas; but that is not the part we want to rest, namely, the mental areas. By putting the patient to bed you give him the very best chance of exercising these areas. Two very intellectual men tell me that, whenever they have a very difficult subject on hand, they go to bed. They are then away from all distractions, and are able to give undivided attention to their mental work. To put to bed a patient who has morbid ideas does not remove these ideas, or give them a chance of removal. It rather favours their persistence. Our duty is to put the patients in the way of fresh and wholesome thought, so as to distract them from their morbid notions. We can go some way, at least, towards proving this from the physiological and psychological point of view. Dr. Rivers has related some very interesting experiments showing that after a great muscular exertion intellectual work was impaired. Now that apparently seems to militate against Dr. Clouston's

theory and method; but I maintain that it does not. It demonstrated this fact, that if you exercise the muscular areas the mental areas cannot do their work so efficiently. It proves what Dr. Clouston wishes to prove. We know that the nervous system can well perform only one function at a time. During muscular exercise mental exercise is at a minimum—a fact well known in daily life. The Japanese have deified one of their heroes because he was able to compose a stanza of poetry while holding out a brazier a thousand pounds in weight. They regarded it as a superhuman feat. I maintain, therefore, that Dr. Clouston is really attaining rest for his patient, while Dr. Tuke is actually giving the mental areas too much work. We all acknowledge that we cannot maintain a healthy body and a healthy mind unless we take a certain amount of physical exercise. If a patient suffers from mental disease, and we wish to induce healthy cerebral action, we must induce him to take exercise. But some patients are too weak. Well, that is so much to their disadvantage; they would be a great deal better if they could take exercise. Physical weakness prevents one method of curing the condition. Another note of great importance is that a patient suffering from acute mania is discharging his energy in an irregular and pathological manner. It is a great advantage for him if you can regulate his motor discharges and render them useful and purposive. From this pathological point of view all the evidence seems to support Dr. Clouston's mode of treatment.

Dr. NICOLSON—I wish to express my gratitude to Dr. Clouston and Dr. Tuke for having so kindly undertaken to introduce this discussion and for having so ably fulfilled that undertaking. One may feel disappointed to think that we have not, during all these years of work and experience, been able to set forth more definitely what would be generally accepted as the best line of treatment for general adoption. As regards the success, as well as the basis on which has been grounded the success, of their respective modes of treatment, one feels as if it would be best to blend both methods and to believe that a solution of the problem had been reached; but if that is impossible the differences, and the grounds for the differences, that lie between them must be thrashed out. During Dr. Clouston's remarks a case of my own occurred to me—that of a man whose maniacal condition manifested itself in the delusion that the asylum buildings were kept standing by his manual labour. For a number of weeks he laboured incessantly lest by the cessation of his work the whole place should fall to the ground. In that case exercise was the immediate result of delusion. Now, would that be a desirable case in which to insist on still more exercise, or would Dr. Clouston regard those labours as Nature's efforts towards a cure? With regard to the melancholic, on the other hand, there is this difficulty in my mind, that by insisting on a certain amount of exercise you inflict a certain amount of positive pain, and that mental pain is not without brain activity which, I think, is not of the nature of rest, and which, to some extent, must do damage if you insist on carrying it to any great length. The question of isolation has been made too much of in regard to the treatment of melancholia. Rest in bed under proper conditions is a very pleasant means of treatment. Dr. Tuke having had to leave, I may be allowed to act as his sponsor with regard to the use of the word "hospital." I was unable to see any necessity for the warmth thereby generated, and may therefore be allowed to give my definition of a hospital case in order to relieve anyone of any distress in the matter. I take a hospital case to be one of a more aggravated kind than is manifested in the early stages while the individual is able to remain at home. In that sense I do not see that the use of the word is to be at all reprehended. Dr. Tuke's "Morrison Lectures" were deeply interesting, and worked out in a clear, suggestive, and practically beneficial manner. Their lucidity in these intricate questions was most valuable to those who have not had the experience which is only to be gained by working at the subject from that side. We have had a brilliant coruscation of "the northern lights," and I conclude by expressing,

on behalf of the Association, our most grateful thanks for their excellent, suggestive, and practical discussion of the question.

Dr. CLOUSTON—I shall not venture to say anything more than that I am sure Dr. Tuke and myself are well satisfied with the results of the debate; and I would only add this one remark. I am very much disappointed that the officers of asylums who adopt a routine treatment of putting their patients to bed for a few days or weeks have not defended their practice during this discussion. I think that the practice goes by default, and probably will not be longer continued. With regard to the various scientific questions involved, I am certain that they have been thoroughly thrashed out, and that almost everything I was to have said in answer to Dr. Tuke has been better set forth by other speakers. It only remains for me to thank you, gentlemen, for your kind attention.

*The Pathology of Milkiness, Thickening, and Opacity of the Pia-arachnoid in the Insane.** By W. F. ROBERTSON, M.D., Pathologist, Royal Asylum, Edinburgh.

There is at the present time great need of more complete and definite knowledge as to the pathology of the very marked structural changes that so commonly affect the pia-arachnoid in the insane. The subject is one of much importance to all of us as medical psychologists, for not only is the condition in question one of the most conspicuous lesions associated with mental disease, but it implicates a structure of primary importance in the economy of the central nervous system. It is by way of vessels that course through this membrane that nutriment is conveyed to the brain cortex, and the waste products resulting from metabolism in the cerebral tissues are mainly conveyed away in the fluid that circulates in its lymph spaces. Therefore it is evident that these morbid changes may very seriously interfere with the functions both of nutrition and excretion in the brain.

The subject has quite recently been fully gone into in two papers of a series published in conjunction with Dr. James Middlemass in the "Edinburgh Medical Journal" (1), but I am now able to add a number of new points to the statements there made.

I shall not describe the various naked-eye appearances that the condition presents. With these you are all already perfectly familiar, as well as with the different forms of mental disease with which they are specially associated. As you also know, the change is not confined to the insane. It usually occurs in some degree in people dying after middle

* Read at the Annual Meeting of the Association, 1895, and illustrated by a microscopic demonstration.

age, but, even apart from conditions of senility, it is occasionally seen in patients who were not mentally affected. Beyond all question, however, it occurs far more frequently in the insane than in the mentally sound, and it is commonly developed in the former to a degree practically never seen in the latter, except occasionally in drunkards.

Before passing to the description of the microscopic changes it will be well to briefly state the various opinions that have been expressed as to the pathology of milkiness and thickening of the pia-arachnoid. Bayle (²), writing in the early part of the present century, regarded the condition as a chronic meningitis, which he believed must play the principal rôle in the etiology of insanity. Bevan Lewis (³) is of opinion that in its extreme degrees "we must infer an inflammatory agency." In its slighter manifestations, and especially in senile atrophy of the brain, he thinks it may occur apart from inflammatory action. In all cases he attributes much importance to the effect of frequent congestive conditions or chronic hyperæmia. Ziegler (⁴) describes two separate conditions, one affecting mainly "the arachnoid and sub-arachnoid tissues," and the other involving chiefly "the pia and underlying nerve tissue." The former he terms "chronic arachnitis or external leptomeningitis," and the latter "atrophic meningo-encephalitis." Though thus committing himself in his terminology to an inflammatory theory, he states that he doubts if the first form is always inflammatory, and that the second in its inception is mainly dependent upon degenerative changes. Batty Tuke and Woodhead (⁵) also practically adhere to the inflammatory theory of Bayle, though they attach considerable importance to "occasional pathological congestion superadded to the normal mechanical obstruction produced by the peculiar anatomical relations of the vessels to the longitudinal sinus." Dr. Batty Tuke, in his more recent work on "The Insanity of Over-exertion of the Brain" (⁶), further attributes the morbid change to "a deposit of waste and plastic exudates. As these accumulate and diffuse the membrane becomes thick, tough, and on section is found to consist of a mass of material which looks like an immense increase of the normal trabeculæ." The best account that we have of the microscopic changes is undoubtedly that of Ziegler. The condition that he terms "chronic arachnitis" is due, he says, to fibrous thickening, endothelial hyperplasia, and more rarely to cellular infiltration. In early cases of "atrophic meningo-

encephalitis," in which he thinks that the changes may be degenerative only, the white turbidity is due, he says, "to accumulation of small globules and granules of fat, fatty and broken-down cells, and occasional fat granule cells." In many cases from the first, and in all advanced cases, the most important change is the small-celled infiltration that pervades the pia mater, and, to a less degree, the subarachnoid tissues. Other authorities are pretty generally agreed in describing the microscopic changes as consisting in an infiltration of the tissues with round cells and an increase in the fibrous elements.

In the papers referred to Dr. Middlemass and I have been obliged to differ to some extent from these views, both as to the nature of the pathological process and the textural changes that occur. We are unable to see that there is any warrant for Ziegler's classification, and would in the meantime consider all the changes to be observed in typical cases as manifestations of one morbid process, making the reservation that in advanced general paralysis, and probably also in syphilitic insanity, there is superadded a distinct and more active process. To this subject I shall return after I have given a description of the textural changes that occur according to my own investigations. In order to render this description intelligible, however, it will be necessary to make some observations upon the normal structure of the tissues involved.

It is usually taught that there are two distinct membranes—an outer delicate, non-vascular layer of fibrous tissue which bridges the sulci without dipping into them, and an inner vascular membrane which closely invests the whole of the cerebral surface. Between these two layers there is said to be a considerable space (the "sub-arachnoid space") traversed by numerous trabeculæ, a spongy lymph-sac being thus formed which contains the cerebro-spinal fluid. Dr. Batty Tuke (?) has dissented from this commonly-received view of the constitution of the pia-arachnoid. He holds that it should be looked upon as only one membrane, of which the so-called arachnoid is merely the outer layer. If I understand him aright he bases this view upon the belief that over a convolution the two layers are intimately bound together, leaving no spaces containing cerebro-spinal fluid. He is otherwise in accord with the usual descriptions of the microscopic structure, except that he holds that the vessels are distributed between the two layers instead of in the

inner layer. Now, while I think that Dr. Batty Tuke's idea of the pia-arachnoid as one membrane is a step towards a more correct conception of its constitution, yet I venture to maintain that in certain other respects his view, like that generally taught, is a mistaken one. It can be demonstrated that his statement regarding the distribution of the vessels is only correct for the large arteries, and his contention that the two layers of the membrane are intimately bound together over the convolutions, leaving no so-called sub-arachnoid spaces, is also disproved by special methods of examination. By the employment of these methods it can be shown that the membrane has peculiarities of structure that have hitherto escaped notice, and a knowledge of which must, I think, lead to the adoption of a view of its constitution differing from either of those that are at present advocated. According to the present teaching there are three structures composing the pia-arachnoid,—an outer layer of dense fibrous tissue; an inner layer of a similar kind, but differing from it in being highly vascular; and an intervening trabecular tissue, which, according to Dr. Batty Tuke, is absent over the convolutions. I think that it can be shown that there is essentially only one structure throughout, and therefore only one membrane.

The minute anatomy of the pia-arachnoid seems to have been studied almost exclusively by means of transverse sections. These, however, fail to demonstrate the arrangement of the lymph spaces—a matter of the utmost importance. For the satisfactory examination either of the normal structure of the membrane or of the morbid changes that occur in it, it is necessary to use horizontal and oblique sections. Especially useful are superficial horizontal or surface sections, by means of which a high power view may be obtained of an extensive area of the free surface. This form of preparation introduces what I believe is a new and valuable histological method, of much wider application than the present, some of the results obtained by the employment of which are demonstrated before a medical society here to-day for the first time. The facts regarding the structure of the normal human pia-arachnoid that are revealed by the employment of these methods I shall as briefly as possible describe.

Taking first the membrane over a convolution, suitably stained, superficial horizontal sections show on the outer surface a single layer of flattened endothelial cells with large

oval nuclei. On the inner surface of the membrane in apposition with the cortical tissue it is generally taught that there is a layer of cells of the same character. Its existence, though questionable, may be provisionally accepted. Between these two endothelial layers there is a structure, the basis of which is delicate white fibrous tissue. This tissue is collected into bundles or trabeculæ of varying thickness and length. The arrangement that these have is that of a large number of inaccurately superimposed and partially united, slightly flattened networks, lying for the most part parallel to the cerebral surface. The meshes of these networks, which are quite microscopic in size, form freely communicating spaces, which contain cerebro-spinal fluid. On the surface of the trabeculæ lining every individual space there is a continuous layer of flattened endothelium. The spaces vary greatly in size. They are largest in the centre of the membrane, a circumstance that explains its seeming division into two separate layers. In the sulci some of the spaces are specially large, and about the base of the brain and along the upper surface of the corpus callosum there are some still larger cavities which form the arachnoid cisterns. Below the endothelium of the outer surface there is no distinct horizontal layer of compact fibrous tissue that can be properly regarded as a separate membrane. What is typically found is simply a layer of connective tissue of the same thickness as the subjacent trabeculæ, and formed by their arches. The same arrangement of trabeculæ and intervening lymph spaces is maintained to the inner surface immediately external to the cortical tissue. Thus the membrane has throughout the structure of a spongy lymph sac. Though most of the vessels lie in the deeper portions of the membrane, they may occur in any part of it. In almost every superficial horizontal section they may be seen immediately below the outer endothelial layer. The veins especially tend to lie near the outer surface. Thus the statement that the so-called arachnoid is a non-vascular structure is quite an erroneous one. The majority of the arterioles are large, being for the supply of the subjacent cerebral tissues. Capillaries occur chiefly in the deeper parts, but may occasionally be seen near the outer surface. They are, however, always remarkably few in number throughout the membrane. They are evidently little, if at all, required for its nutrition, which seems to be maintained by the cerebro-spinal fluid. Around the large vessels near the inner aspect the connective tissue

cells are more numerous, and the lymph spaces smaller and more elongated than elsewhere, so that the tissue seems to be of a denser structure. It is the modified appearance that these slight differences produce in transverse sections that has doubtless led to the belief that there is an inner layer of a distinct structural character. Horizontal sections, however, prove that the structure is essentially the same throughout.

I admit that in some, even horizontal preparations, it is difficult to see the lymph spaces in the external and internal denser layers of the membrane. But as a rule they are quite distinct, and when they are not their existence is attested by the presence of endothelial cells, the outlines of which can be seen in silver preparations. At most these relatively dense portions of the membrane are but loose areolar tissue in close proximity to quite evident lymph sinuses. They must therefore be freely permeable by the cerebro-spinal fluid, which is the important point, and one that is amply confirmed by pathological states in which such tissue may often be seen to be clogged with *débris* in common with the larger and easily recognized sinuses. There is a fact regarding the arterioles of the pia-arachnoid that, I think, helps us to understand the true constitution of the membrane. It is that they have no proper adventitial coat. Immediately outside of the muscular wall there is a single layer of endothelium, which is continued down to the capillaries as is pointed out by Klein. Obersteiner (⁸) believes that this layer forms the outer wall of a lymph sac, a point that must be regarded, I think, as doubtful. Beyond this endothelial layer lying upon the muscular coat, the vessels, with the exception of some of the very largest of them, have no special investment of longitudinally disposed fibrous tissue, such as is found in the vessels elsewhere. They are, as it were, naked vessels surrounded by trabeculæ and lymph spaces. The trabecular tissue, however, practically forms for them a common adventitia. From a consideration of these features of structure, Dr. Middlemass and I have advocated the view that the whole extra-vascular structure of the soft membranes may be looked upon as the conjoined and hypertrophied adventitial coats of the pial vessels, the lymphatic spaces of which have undergone a special development so as to form a spongy lymph sac. The main object of this special development is doubtless to give to the brain the protective advantages afforded by its envelopment in a thin water-cushion.

The same arrangement of trabeculæ and lymph spaces may be demonstrated in the layer of membrane that covers the arachnoid cisterns, and in the arachnoid of the spinal cord. These facts regarding the microscopic anatomy of the pia-arachnoid lead to the conclusion that it can only be correctly looked upon as consisting of one membrane. To meet the requirements of this view Dr. Middlemass and I have suggested the following modifications in the present terminology. "The term 'pia mater' in its usual acceptation is indefensible, but we would suggest that it may conveniently and without risk of confusion be applied to the whole membrane, including its vessels, synonymously with 'pia-arachnoid,' in which sense it is, indeed, frequently at present used. We would not dispense with the term 'arachnoid' as has been advocated by Dr. Batty Tuke. It seems to us a most useful and almost indispensable one. Its meaning, however, should be extended, so as to include all the trabecular tissue which stretches from the external to the internal endothelial layer. The word '*sub-arachnoid*' is anatomically inaccurate, and should therefore be disused, the terms 'arachnoid trabeculæ,' 'arachnoid spaces,' and 'arachnoid fluid' being employed instead."

I shall not detain you with a description of the peculiar dense fibrous tissue bands that may occasionally be observed, nor of the normal pigment cells and cell nests of the arachnoid. They are shown under the microscopes.

I come now to the description of the microscopic changes that occur in this structure when affected by the milky and opaque condition that is so common in the insane. These changes in typical cases consist briefly in a slow hyperplasia of the connective tissue, and of marked proliferative and degenerative changes in the endothelial cells lining the arachnoid spaces and in those of the outer surface. The fibrous tissue may also be affected by retrograde changes. The connective tissue overgrowth is in direct proportion to the degree of milkiness and thickening. It affects the whole membrane, but the outer and less vascular parts chiefly. The new fibres tend to be thicker and coarser in structure than normal. Opacities are due to an extreme degree of this overgrowth, resulting in more or less complete obliteration of the arachnoid spaces. The endothelial proliferation may be very marked, slight or entirely absent. Like the fibrous hyperplasia it is, when present, usually most pronounced in the outer portions of the membrane. In the great majority

of cases it is a well-developed condition, and its absence is quite exceptional. The proliferated cells frequently form dense aggregations in the arachnoid spaces. As observed in transverse sections they have been commonly mistaken for the small round cells of an inflammatory exudation. Their endothelial character, however, is, I maintain, beyond question. The nuclei, though often somewhat smaller, are otherwise morphologically identical with those of the normal endothelial cells of the trabeculæ and of the outer surface. This point is admitted by Ziegler for the earlier stages of the morbid process in a certain number of cases. In the more advanced stages, and in many cases from the first, he believes that there is also a small round-cell infiltration. As the result of my own observations I differ from the latter view. In many cases presenting an extreme degree of milkiness and opacity, I have found that the cellular elements preserve the endothelial type, and that areas of small round-cell infiltration, upon the vessel walls or elsewhere, very seldom occur. It is only in advanced general paralysis, in syphilitic insanity, and in the very rare and still obscure condition known as purulent infiltration of the pia-arachnoid, that such an aggregation of round cells is added to the other appearances. In several cases of early general paralysis I have found that leucocyte infiltration is absent, a fact that has important bearings upon the question of the nature of the disease. Even in some cases of advanced general paralysis such infiltration occurs only locally, and it may be to a very slight degree.

On the outer surface, in addition to the general proliferation of the endothelial cells, there are usually very numerous minute localized aggregations. They are most pronounced in senile insanity and in general paralysis. They constitute granulations of the arachnoid. These were first described in 1826 by Bayle (²), who speaks of them as "rounded, excessively delicate asperities." Their endothelial character was recognized by Meyer (⁹) in 1862. In transverse sections they appear as oval masses of cells extending about an equal distance above and below the level of the general surface.

It has been convenient to speak first of the proliferative changes that occur in the connective tissue and endothelial elements, but even more pronounced, and, I think, of even more important significance are the degenerative changes that are found, especially in the endothelial cells. These changes may frequently be observed to affect cells that have

not been undergoing active proliferation. A common degenerative process is one manifested by an infiltration of the cell-plate with small yellow granules, a condition that is frequently accompanied by a degree of vacuolation. These granules are slightly darkened, but not blackened by osmic acid, and are therefore not of a fatty nature. They are lighter in colour, larger and less numerous than the granules in the normal pigment cells, which in addition are only found sparsely scattered in the human subject, while every cell in a large area may be affected in the way described. Therefore, I conclude that this is a degenerative change in these cells, though at the same time it is one that may have a physiological basis in the normal pigment cells, just as in pigmentary degeneration of nerve cells the granules that replace the protoplasm are merely an increase in a normal element. The proliferated endothelial cells of the trabeculæ and of the outer surface may show a similar change, but their cell plates being very small it is less prominent. The proliferated cells of the trabeculæ are constantly being shed and carried away in the arachnoid fluid, coverglass preparations of which always show large numbers of them usually in a more or less shrivelled and disintegrated state. This simple breaking down into granular *débris* is probably the most common change that these proliferated endothelial cells undergo. A point of considerable importance is that osmic acid preparations, whether of sections or of coverglass specimens of the arachnoid fluid, prove that fatty changes do not occur to any great extent in this milky condition of the pia-arachnoid. The same opinion has already been expressed by Adler ⁽¹⁰⁾ though, as I have mentioned, an opposite statement is made by Ziegler. Another type of degeneration that occurs in these proliferated endothelial cells of the trabeculæ is one that may be provisionally termed hyaline. It is probably a change closely related, if not identical, with that which, in the endothelial cells of the outer surface, leads to the development of concentric bodies, of which I shall speak presently. Another, though somewhat rare retrograde change, is one that manifests itself in vacuolation and swelling up of the nucleus. It is worthy of mention here because on the opposite side of the sub-dural space, in the endothelial cells of the surface of the dura and of the dural perivascular canals, it is a common and important change. Extravasated red corpuscles and granular *débris*, resulting from their disintegration, are frequently to

be observed in the arachnoid spaces. Hæmatoidin granules and crystals often occur, especially in senile insanity, in association with miliary aneurisms of the pial vessels. These morbid elements, resulting from recent or old-standing hæmorrhage, are the chief causes of the smoky or rusty tint that the arachnoid occasionally presents in the fresh state. In many cases granular *débris* of various kinds is in great abundance in the arachnoid spaces. It is probably chiefly derived from disintegration of extravasated red and white blood corpuscles and degeneration of endothelial cells.

While all these degenerative endothelial changes already described can also be seen on the outer surface of the membrane, a very interesting further change can there be observed in the cells that have undergone the hyaline metamorphosis, of which I have spoken. It leads to the development of the concentric bodies that produce such striking appearances in many superficial horizontal sections of morbid pia-arachnoids and duras. These bodies were undoubtedly seen by Meyer in arachnoid granulations more than 30 years ago, but, as far as I have been able to ascertain, Obersteiner (*) is the only authority who has described them, though he does not do so fully. He calls them *corpora arenacea*, and believes that they are composed of carbonate and phosphate of lime. This is undoubtedly an error, as they are unaffected by dilute mineral acids. He makes no statement as to their origin.

I have studied these structures very carefully, both as they occur in the dura and in the arachnoid, and I have been able, as I have indicated, to trace their origin from endothelial cells. I shall confine myself here to a description of their development in the arachnoid, and shall not enter into the exceedingly difficult problems connected with their relationship to certain hyaline rods that are frequently found in association with them in superficial horizontal sections of the dura. They arise specially in the endothelial granulations already described. The early stages in their development are difficult to trace, owing to the fact that their marked affinity for certain stains is only assumed at a somewhat late period. As far as I have yet been able to trace the process, it is as follows:—The cell plate becomes first affected, assuming a homogeneous appearance and a slightly increased affinity for eosine in hæmatoxylin and eosine preparations. At this

stage the nucleus has an increased affinity for hæmatoxylin, but as the morbid change advances it gradually loses this affinity, becomes homogeneous and stains with eosine in the same way as the degenerated cell plate, with which it ultimately blends. A single homogeneous globule is thus developed from an endothelial cell. This may become a small concentric body, but more commonly, owing to the circumstance that several endothelial cells in a granulation are usually affected simultaneously, the hyaline globules, developed from several adjacent endothelial cells, coalesce into one large mass. This being apparently of a semi-fluid consistence, assumes a spherical form. Concentric rings appear subsequently, evidently owing to shrinkage. In many developmental forms there is an irregular central mass that stains more deeply with eosine than the peripheral portion. It may be that this central mass corresponds to the nuclei of the cells, but the point is doubtful. This deeper staining of the central portion is often maintained in the fully-developed concentric body. I have never observed any disintegrative changes in these structures. It is doubtful if they ever develop from the endothelial cells of the trabeculæ.

I shall not here fully describe the structure and development of the osteoid plates that are so common in the spinal arachnoid, though rare in that of the brain. I maintain that they are the result of a retrograde metamorphosis in arachnoid opacities. They arise by a peculiar change in the dense fibrous tissue of which these opacities are composed very similar to that which occurs in the intra-membranous development of bone. They may, therefore, probably be correctly termed osteoid. In my experience their infiltration with calcareous salts is rare. With few exceptions they are unaffected by the action of dilute mineral acids.

For the many details that I have omitted in this description of the morbid changes associated with milkiness and thickening of the pia-arachnoid, I must refer to the papers in the "*Edinburgh Medical Journal*" (1).

I come in conclusion to the consideration of the very important question of the nature of the morbid process at work in producing these changes. On this point I think I shall best attain the objects of conciseness and clearness by simply quoting the views already expressed by Dr. Middlemass and myself. "Excluding for the moment cases of advanced general paralysis and syphilitic insanity, we have

seen that in the typical form of the lesion the changes consist in proliferation, degeneration, and shedding of the endothelial cells, accumulation of granular *débris* in the arachnoid spaces, and hyperplasia of the connective tissues. We would emphasize the fact that even in advanced cases small round-cell infiltration is usually entirely absent. We have seen no instance in which it had occurred to any considerable degree, excepting, of course, the rare cases of purulent infiltration which we have already alluded to. But most observers, looking upon the cells as leucocytes, have regarded their aggregation, accompanied by connective tissue overgrowth, as proof that the morbid process is of an inflammatory nature. We question, however, if the microscopic changes we have described can be correctly regarded as evidence of chronic meningitis, and we are inclined rather to adopt another theory.

“ We have several times in previous papers argued for the view that the morbid changes which so commonly occur in the various envelopes of the brain in the insane are largely to be attributed to an abnormal trophic condition, in some way associated with the morbid energizing of the organ which they enclose, and it seems to us that the same influence may play a part in the production of this morbid change in the pia-arachnoid. The slight milkiness and localized opacities that occur in normal senility are especially, in all likelihood, merely trophic changes. But in insanity there is, we think, a still more important factor at work, and one the mode of operation of which can be expressed in much more definite terms. The arachnoid trabeculæ are practically non-vascular structures. Even in the deeper parts of the membrane, where the large vessels are most numerous, capillaries are few in number. The tissues must, therefore, it is evident, depend for their nourishment upon the arachnoid fluid which circulates in their spaces. This fluid, in addition to having origin from the choroid plexuses and the vessels of the pia-arachnoid, is derived from the lymph that flows through the cerebral lymphatics, which, after leaving the capillaries, supplies nourishment to the nerve-cells and fibres and connective tissue elements of the brain, and receives from them at the same time their waste products. Now in insanity these structures show profound morbid changes, and it is therefore evident that the waste products of their metabolism must be abnormal. There will thus be introduced into the arachnoid fluid substances

which it is easy to understand may seriously affect the nutrition of the arachnoid tissues. We, indeed, need nothing more to account for the histological changes we have described. These changes are frequently accompanied by what is generally regarded as a hypertrophy of the Pacchionian bodies, which it is generally admitted are excretory organs for the arachnoid fluid. Such a change in them would indicate an increased demand for the elimination of morbid products from the cerebral fluid, and therefore an abnormal condition of it. But the changes in the Pacchionian bodies in insanity have not been worked out, and it is possible that their enlarged condition is not altogether a true hypertrophy, but in part a morbid change, so that their excretory functions may really be diminished. This possibility is at least to be borne in mind as one which may constitute an additional cause of abnormality of the arachnoid fluid. We attach, however, greater importance to the introduction of morbid products from the subjacent brain. According to this view, which seems to us to be the most rational theory of the etiology of the milky and thickened pia-arachnoid of the insane, the endothelial proliferation and degeneration and the connective tissue overgrowth are due to abnormal, and perhaps in some degree irritative, qualities of the arachnoid fluid.

“Now, granting that this view is accepted, there are probably those who will stretch their definition of inflammation far enough to include within it such a process as this. It is, however, a different process from that which has been understood to occur by those who have looked upon the morbid appearances as the result of a chronic leptomeningitis, and if this name is applied to it there will be grave risk of conveying a false impression of its true nature. For our own part we think that it cannot correctly be spoken of as a chronic inflammation. It is a hyperplasia attended by marked degenerative changes. The fact that the deeper tissues are comparatively less affected by the morbid change than the rest of the membrane may perhaps be owing to the circumstance that the former are in part nourished by capillaries which supply them with a more healthy nutriment than that which is afforded by the arachnoid fluid. Whether this is the correct explanation or not, the fact is at least in direct opposition to the inflammatory theory.”

There being no sufficient warrant for calling the condition a chronic leptomeningitis, I think that in the meantime it

should be referred to merely by the naked-eye appearances that it presents. In those exceptional cases, which I have carefully defined, in which a small round-cell infiltration is added to the other morbid appearances, the existence of an inflammatory element is of course beyond question.

I shall not further detain you with a discussion of the question why the morbid changes are most marked over the convexity of the hemispheres. It has been fully gone into in the published papers.

There is just one other point to which I wish to refer. It is that on the opposite side of the subdural space—that is to say, in the tissues of the dura—I have found that there are also specially prone to occur in the insane morbid changes of the same kind as those I have been describing in the pia-arachnoid. By the use of superficial and deep horizontal sections it can be shown that similar proliferative and degenerative changes affect not only the endothelium of the inner surface of the dura, but also that of the peculiar perivascular canals. This lesion in the latter situation, with an associated weakening of the capillary walls, is, I maintain, the explanation of the proclivity of the insane to the formation of subdural membranes. The subject is a complicated and difficult one, and I shall not further pursue it here. The interest of the fact that I have mentioned, and the importance of the generalization that it involves, must be apparent to all of you.

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*On Thyroid Feeding, based upon the study of a second series of Sixty Cases.** By LEWIS C. BRUCE, M.D., Assistant Physician, Royal Asylum, Edinburgh.

In the "Journal of Mental Science," January, 1895, I published the results of thyroid feeding in thirty cases of insanity. Since then we have treated at least sixty cases at the Royal Edinburgh Asylum.

The majority of cases chosen for treatment were unfavourable, and all had received without apparent benefit the best dietetic and therapeutic treatment which the asylum could give prior to the administration of thyroid tabloids.

Notwithstanding these circumstances we have had several most gratifying results in the shape of recoveries, where patients threatened to pass into confirmed dementia, or had remained stuporose for long periods—in one case of two years' standing.

In view of the fact that the above quoted paper has been so recently published it is unnecessary to recapitulate the details therein noted.

The more important conclusions have been verified by further experience, and complications encountered have been similar in kind.

There is no longer any doubt in my mind that thyroid feeding produces a most beneficial effect in certain cases of insanity, but how this effect is produced is still largely a matter for conjecture.

In approaching this view of the subject the following questions present themselves:—

1. Is the action due to the febrile process induced by the thyroid and the subsequent reaction to the fever?
2. Is thyroid extract a direct brain stimulant?
3. Does the ingested thyroid supply some material to the body which the gland is supplying in deficient quantity?

The febrile disturbance induced by the thyroid administration is very variable in character. In the majority of cases the temperature rarely runs as high as 101° F., and in no case have I ever seen the temperature above 102° Fahrenheit without some complication. In connection with this, however, it is advisable to note that the average temperature of the chronic insane appears to be 97·4° instead of 98·4° as in healthy subjects.

* In the absence of Dr. L. C. Bruce his paper on "Thyroid Feeding" was read by Dr. Clouston at the Annual Meeting of the Medico-Psychological Association, 1895.

A typical thyroid temperature is as follows, with a dose of 60 grs. per day: The first day of treatment no reaction; on the evening of the second day the temperature rose to 99.8° ; third day, morning temperature 98.5° , evening 100° ; fourth day, morning temperature 99° , evening 100.2° ; fifth day, morning temperature 98.8° , evening 99.8° ; sixth day, morning temperature 98.2° , evening 99.6° . On the seventh day and three succeeding days of treatment the temperature never rose above normal. This record is quoted from one of the cases treated, and many of the other charts closely resemble it. From this it may be inferred that there appears to be a limit to the febrile producing power of the drug.

Simultaneously with the fever we have quickened pulse, moist flushed skin, general malaise, sometimes pains in the limbs, headaches, and a rapid loss of body weight. Many cases are, however, not typical. The temperature may only occasionally rise above normal, or show an irregular tracing, up one day and down the next. The physical symptoms of fever, however, quickened pulse, etc., are never absent in these cases, and they lose weight just as rapidly as the cases where a febrile temperature is well marked. So we have two well-defined classes, one with a definite febrile temperature, the other with low temperature, both suffering equally from symptoms of general poisoning. Looking at the recoveries in connection with the temperature charts no assistance is obtainable; as many recover in the one class as the other. Notwithstanding these facts I believe that whether the temperature rises or not we have practically obtained the effect of a fever, *i.e.*, the effect of a toxine circulating in the blood, by the use of thyroid.

During the actual administration of the drug, and period of fever and malaise, many cases show undeniable improvement, in some an actual recovery, in others a steady return or awakening of the mental faculties, which culminates in recovery during the period of reaction following treatment.

This period of reaction is generally well marked and has a beneficial effect not only on the patient, but on the physician—one sees again a chance of applying therapeutic and dietetic remedies with some chance of success, and the patient frequently gains considerable benefit from such treatment when the recuperative resources of the body are stimulated to unwonted activity in replacing the weight lost during the actual treatment. Such is briefly the actual

and visible result of thyroid feeding, and it has all the appearance of a condition induced by a toxine introduced into the blood through the medium of the mucous membrane of the stomach.

Is thyroid a direct brain stimulant? Every psychologist has noticed, and many have commented upon the improvement observable, even in demented cases, during some acute intercurrent disease. The patient becomes talkative, takes an interest in his surroundings, and there may be some amelioration of bad habits, etc. In many cases these symptoms are noted in an exaggerated manner in patients the subjects of thyroid feeding. A patient at present under treatment at Morningside has been an inmate for nine months. He appeared to be somewhat demented on admission, and has steadily become more confused and foolish since then. He was treated three months ago with large doses of cerebrine, with no effect. Three days after thyroid treatment was commenced, he became more lively in appearance, answered quickly when spoken to, and proved clearly that during his nine months' residence here his cortical cells had been receiving and retaining impressions from without. On the fourth day he was singing and obviously elated, and though he spoke fairly sensibly and denied several delusions expressed on admission, he was still very insane and in a state of mania. Thyroid in this case appeared to act as a cortical stimulant. On another occasion we had three cases of mania under treatment whose acute symptoms had been replaced for several months by those of secondary stupor or approaching dementia. They all during treatment again became maniacal. One passed from this induced mania into convalescence and recovery. The other two relapsed to their former condition. Here again the symptoms of cortical excitation were obvious and in each quite out of proportion to the febrile condition induced. I have seen at least a dozen cases with symptoms as acute as those quoted, and the impression they made on my mind was that thyroid is a direct brain stimulant which may prove advantageous treatment in cases whose higher cortical cells remain in an anergic condition after acute attacks of insanity.

Does the ingested thyroid supply some material to the body which the gland is supplying in deficient quantity?

The period of physiological activity of the thyroid gland is different in the two sexes. In males the thyroid attains

its full development at adolescence and then atrophies. During puberty and early adolescence in males the thyroid gland frequently becomes enlarged as if functional activity was then increased. In females the thyroid attains full development after menstruation is thoroughly established, and it appears to remain functionally active when any call is made on the bodily economy up to the period of the grand climacteric, when the gland gradually atrophies. In women the thyroid plays a special part in the metabolism of the sexual organs, and I have frequently noticed enlargement of the thyroid in puerperal, lactational, and climacteric cases, so it is probable that this enlargement corresponds to increased functional activity at these periods.

Whatever the cause, cases of puerperal and climacteric insanity have given very favourable results to thyroid treatment, and I mention this fact in connection with the preceding paragraphs as suggesting a more scientific use of the drug in therapeutics. Out of sixty cases the total number of male cases treated was twenty-five, whose ages ranged from 20 to 55 years. Seven of these recovered, four of whom were between 20 and 25 years of age; of the remaining three two were between 30 and 40 years, the third being 43 years of age. The total number of female cases treated was thirty-five, whose ages ranged from 20 to 65 years of age. Seventeen of these recovered, the recoveries being very equally distributed from the age of 20 to 50 years. Thirteen of these recovered females were either puerperal, lactational, or climacteric cases.

The results of treatment looked at in this way prove that the action of thyroid is complex.

1. It undoubtedly produces a mild feverish condition, the action and reaction to which is often of considerable benefit to the patient.

2. It is a direct cerebral stimulant.

3. That there is a strong probability that at some periods of life the administration of thyroid supplies some substance necessary to the bodily economy.

Discussion on Dr. Bruce's Paper.

In reply to Dr. Fletcher Beach, who asked whether the cases cited were cases of ordinary dementia or ordinary mania, Dr. CLOUSON stated (in the absence of Dr. Bruce) that they were cases (1) of melancholia in which improvement had been arrested; (2) of mania showing signs of dementia; (3) of stupor at an early stage; (4) of general paralysis; and (5) of dementia, even of forty years' standing. In fact they were at present going through a series of therapeutical experiments; and although they could not expect such

cases to recover they were watching the effect on the brain. One remarkable case was that of a patient, suffering from puerperal insanity, who had been two and a half years in the establishment, and had been looked upon as a case of dementia, but who was now as well, as vigorous, and as able to earn her own living as any of them.

Dr. BEACH stated that he was watching three cases of cretinism under treatment in which the temperature was abnormally low—as low as 97°—but went up as soon as the five-grain tabloids were given. When treatment ceased the old condition returned, so that it was necessary to continue the treatment indefinitely.

*Public Provision for Pauper Idiots and Imbeciles in England and Wales.** By G. E. SHUTTLEWORTH, B.A., M.D., Ancaster House, Richmond Hill, late Medical Superintendent, Royal Albert Asylum, Lancaster.

My apology for bringing forward this subject at the present time is that considerable interest with regard to it has recently been evidenced by correspondence and comments in the medical journals, as well as by inquiries set on foot by the Lunacy Commissioners and the Local Government Board. The former have published in their 49th Annual Report, just issued, a "Return showing the Number of Pauper Idiot, Imbecile, and Epileptic Children in the Asylums, etc., on 1st September, 1894,"† and a return of similar character as to such children in workhouses has been issued by the latter. The upshot of the whole matter is that, according to these returns, there are in lunatic asylums 525 children of this class (335 males, 190 females), and in workhouses 485 (281 males, 204 females). The latter number includes, however, 93 children returned as "epileptic only," so that of idiots and imbeciles in workhouses under 16 years of age there are but 392. Adding together those in lunatic asylums and in workhouses we find that a total of 917 youthful idiots and imbeciles are provided for by the Poor Law in these institutions. The Local Government Board return, however, gives us no information as to the large number of such children living with poor parents who receive on their behalf some parochial relief. In the Commissioners' return the children are classified as *idiots* and *imbeciles* respectively, 399 in the former, 126 in the latter class; and 154 are said to be in the opinion of the medical officers likely to be improved by

* Read at the Annual Meeting of the Medico-Psychological Association, 1895.

† 49th Report Commissioners in Lunacy, App. N., p. 390 *seq.* "Imbecile and Epileptic Children in Workhouses." Local Government Board Return, Feb., 1895.

special training. In the Local Government Board return the children are classified as "imbecile only," "epileptic only," and "both imbecile and epileptic;" and the number of children who, in the opinion of their medical officers, would be likely to be improved by special training is set down as 178. Consequently if we are guided solely by these returns we should be led to the conclusion that in England and Wales—excluding the Metropolitan district, for which separate arrangements exist—there are no more than 332 *improvable* pauper idiots and imbeciles under 16 years of age remaining to be provided for in addition to the 225 paupers already accommodated in voluntary institutions for the training of imbecile children. Indeed, deducting 52 now resident in the special idiot block of the Northampton County Asylum, there remain but 280, a number insufficient to fill a decent-sized special institution!

The above figures, as has been already stated, deal solely with the extra-Metropolitan area. Within the Metropolitan district, under the provision of what is known as the Gathorne-Hardy Act, special arrangements for the training and education of youthful imbeciles and idiots have been made since the year 1873. In that year about 100 children, previously mingled with the adult imbeciles at Leavesden Asylum, were separated, and formed the nucleus (at Hampstead) of what afterwards became the Metropolitan Asylum District Schools for Imbecile Children. The early estimate of the Managers was that a school building capable of providing for the training and education of from 300 to 400 children would be adequate to the needs of the Metropolis, and ultimately plans for a school at Darenth capable of accommodating 500 children were approved. On the 1st January, 1895, no less than 956 children were actually under care at that institution, which has had to be repeatedly enlarged.

Assuming that the prevalence of congenital mental defect is not greater in the Metropolitan than in the Provincial districts, and that the number of pauper idiots and imbeciles bears in each case a similar ratio to the pauper population generally, we may conclude that at least five times as much accommodation is required for provincial imbecile children as for those of the Metropolis.* There would, therefore,

* In 1894 the number of paupers in the County of London was 122,843; for the rest of England and Wales 648,377. In 1891 the general population of the County of London was 4,211,743, of the rest of the country 23,289,619. The census of 1891 gives no trustworthy information as to the number of juvenile idiots and imbeciles in the general population or in the several counties.

seem to be need of five pauper schools for imbeciles as large as Darenth, or (what would be better) of ten institutions, each for 500 patients, distributed in convenient provincial centres. The Metropolitan Schools for Imbeciles having now been in operation for twenty-two years, very much to the satisfaction not only of the Managers but of the ratepayers generally, there would appear to be no need of argument in favour of the example being extensively followed throughout the country. The local authorities possess at the present time, under Section 241 of the Lunacy Act, 1890, ample power to provide separate asylums for idiots, but this clause being permissive only, has not as yet been acted upon. The initial difficulty seems to be the arrangement of suitable districts by combination of local authorities for such a purpose. Assuming the ultimate demand for accommodation to be equivalent to that experienced in the Metropolitan area, viz., in the proportion of about 8 beds per 1,000 paupers, Lancaster is the only county requiring an institution for 500 and upwards to itself. With a pauper population of 78,947 (out of a general population of nearly 4,000,000) an asylum for from five to six hundred children would no doubt soon be filled, and the abstraction of this unwelcome element from the masses of lunatics congregated in the county asylums and workhouses would be a distinct relief to both classes of institutions. In that county the Royal Albert Asylum—a charitable foundation—has during the last quarter of a century demonstrated the utility of special training, and we find Boards of Guardians, who have been in the habit of visiting it, putting pressure upon the Asylums Board to establish a county institution for pauper imbecile children. The pauper population of the three Ridings of Yorkshire falls little short of that of Lancashire, and a Yorkshire institution for 500 children would probably not exceed the demand for accommodation. With regard to other counties, combined groupings would be necessary in order to provide a sufficient number of inmates to fill an institution for 500, a number which would have its advantages both as regards classification and economical management.

Some such comprehensive scheme would theoretically be the best, but as practical difficulties are apt to arise in the administrative arrangements of combined authorities, it may be well to suggest an alternative. Provision for various portions of England and Wales might be made, as has been done in the County of Northampton, by some of the more

enterprising County Councils establishing, in connection with their lunatic asylums, separate departments for idiots, large enough to receive also out-county patients. This would probably not be an unprofitable experiment; and if, as is perhaps likely, the ultimate result should be to lead to the establishment of larger combined institutions, the buildings would be available at a later date for ordinary asylum purposes.

A third plan has been proposed, viz., to make provision for pauper idiots in connection with the existing voluntary training institutions by arrangement with their managers. In the county of Lancaster it has indeed been suggested that the Royal Albert Asylum—which at present receives a limited number of paupers—should be subsidised by the county authorities and utilised for the training of improvable pauper idiots, those found unimprovable after a period of probation being relegated to the county asylums. The county would thus be saved the expense of providing the expensive educational equipment of a training institution. If a similar plan were adopted for the Home Counties in connection with Earlswood (which, though not receiving paupers, has space for at least 100 more patients than its funds permit it to maintain), and for the Eastern and Midland Counties in connection with the institutions at Colchester and Knowle, the pressing demands of these districts might be met in the same way as those of the Western Counties are by the training institution at Starcross, which, although a charitable foundation, throws open its doors to improvable pauper cases, duly paid for by Boards of Guardians. Such an arrangement might indeed tend to these institutions becoming, even more than they are now, *educational* establishments, leaving to the local authorities to provide the necessary custodial asylums for those incapable of education, and industrial homes for those who, having passed through training, still need supervision.

I was unaware, when collecting material for this paper, that the Lunacy Commissioners were about to publish the return already referred to, or I should not have troubled the Medical Superintendents of County and Borough Asylums with a personal inquiry as to the number of idiot and imbecile children under their charge. I take this opportunity of thanking my colleagues for their kind courtesy in filling up and returning my schedules; and it may be interesting to state that the latter, which included cases up to

20 years of age (because, in my experience, retarded intellects may benefit, especially by industrial training, up to that age), show an increase of nearly 40 per cent. upon the figures of the Commissioners, founded upon the statistics of those under 16 years of age. This probably points to one result of the neglected education of imbecile children being to compel the admission of a large number to the lunatic asylums between 16 and 20 years of age.

It is noteworthy that of the 525 children reported by the Commissioners, no less than 280 were epileptic and 340 of dirty habits. Of the 392 imbecile children in workhouses, 98 were epileptic, or 25 per cent. against 53 per cent. in the asylum list. Twenty-nine per cent. of the asylum cases and 36 per cent. of the workhouse cases (including those "epileptic only") are returned by the medical officers as likely to be improved by special training. It is evident that if comprehensive provision for all these cases should be undertaken by the counties, the arrangements need not be of an elaborate character. On this subject I quote with approval some judicious remarks from the report for 1892 of the Medical Superintendent of the Middlesex County Asylum. Says Dr. Gardiner Hill: "The permanent good results that have been achieved by existing establishments in the education of idiots, though considerable, are not encouraging enough for me to recommend that a *very costly and elaborate* system be attempted with the object of obtaining a high standard of education, and with the hope that the idiots may be made sufficiently self-reliant as to be able on their own resources to earn their living; but I do consider that buildings and an adequate staff, such as you propose, ought to be provided to give them an elementary education, to teach them to attend to their daily wants and to employ themselves usefully, so that they may have pleasure in feeling they have some share in the common objects of life." It is satisfactory to find that the County Council of Middlesex has determined to erect at Wandsworth, near their lunatic asylum, a detached building for 100 idiots of each sex; and this is another testimony in favour of the example of special training set by the Metropolitan district being followed in the counties.

There is no need at the present time to discuss the necessity of separating idiot children from the adult insane or imbecile inmates of lunatic asylums and workhouses, for that is universally acknowledged; and in their last Report

the Lunacy Commissioners allude to such association as an "undoubted evil." As Dr. Gardiner Hill remarks, "An ordinary County Asylum cannot be expected to answer the double purpose of a hospital for the treatment of mental disease and of an institution for the keeping and training of imbeciles." The principles applicable to the one class and the other indeed differ so widely that there is no doubt that an entirely separate administration would be most effective, and on this account the scheme most to be commended is that of county institutions for the training of idiots and imbeciles entirely separate from the county lunatic asylums. But failing this, the establishment of distinct departments for such children in connection with the county lunatic asylums is a step in the right direction, and such a plan works satisfactorily at Northampton, and is to be followed in the counties of Middlesex and Hampshire. Finally, the idea of thoroughly utilising the educational resources of existing voluntary institutions for the training not only of charitable cases, but also of improvable pauper imbecile children paid for by Boards of Guardians, appears to me one worthy of consideration, especially at the present time, when the education of mentally deficient as well as of other abnormal children seems likely to become a matter of national concern.

Dr. FLETCHER BRACH remarked that there was no doubt that provision for pauper idiots and imbeciles was absolutely necessary, for cases living outside the metropolitan area, and, therefore, ineligible for Darent, were constantly coming before him. A few asylums, such as Northampton, Essex, and Wandsworth, had erected or were erecting blocks for idiots and imbeciles, but these were as a drop in the ocean. There were a number of cases now in workhouses and lunatic asylums, both improper places for them, for whom accommodation is required. In those places no attempt at education and training is made, and these imbeciles have to be kept under observation for life. It has been proved by experiment that imbecile children can be taught in the institutions which now exist, not only scholastic information, but how to work at trades, such as shoemaking, tailoring, carpentering, etc. Either a county or group of counties should provide an institution in which these cases can be educated and trained, or blocks should be added to the existing county and borough asylums in which these children, kept apart from the insane patients, could be suitably trained.

*Some Remarks on the Forcible Feeding of Insane Patients.**

By A. R. TURNBULL, M.B. Edin., Medical Superintendent of the Fife and Kinross District Asylum.

In dealing with insane patients the question of forcible feeding comes up for consideration very frequently. It embraces various points of great interest and importance, on each of which much could be said; but in the present paper I wish to confine myself to some short remarks under the following heads:—(1) The Methods of Forcible Feeding; (2) Feeding by the Œsophageal Tube; (3) The Kind of Food used; and (4) A Reference to some Illustrative Cases.

(1.) *Methods of Forcible Feeding.*—Refusal of food may be due to mere stupidity, or to the restlessness and inattention of maniacal excitement; much more frequently it is seen in cases of melancholia, melancholic stupor, or delusional insanity. In the mildest forms a little persistence and tact will often overcome the difficulty without any actual force being needed. In more marked cases more active persuasion by argument or scolding, the moral effect of threatening to use force or of showing forcible feeding carried out on other patients, and the use of that moderate degree of force which is implied in the attendant or nurse holding the patient's head and gently pressing the spoon into his mouth will be tried, and will be successful in a number of instances. When these means have had a fair trial, and have failed in inducing the patient to take a sufficient amount of food, we have to consider forcible feeding proper, and the various ways in which it can be carried out. These may be arranged in two classes:—(1) The different forms or combinations of spoon, or feeding cup, or funnel, by which food is introduced through the mouth or nose, without the instrument passing further than, or even as far, as the pharynx; and (2) the tube, introduced through either the mouth or the nose, which passes beyond the pharynx and enters the stomach (œsophageal tube). In the former group the food becomes free in the pharynx, above the glottis, and must therefore be introduced intermittently to allow of intervals for breathing. In the pharynx, again, the act of swallowing is not entirely an involuntary reflex, but is to a certain extent under the control of the patient; and if he refuses to swallow

* Read at the Annual Meeting of the Medico-Psychological Association, 1895.

after the food has been poured into the pharynx, there may—and indeed must—be great embarrassment of breathing, with the risk of some particles being drawn into the larynx when an inspiration is at length made. Compression of one or both nostrils will often make the patient swallow in order to clear the mouth and pharynx for respiration; but the risk of some of the food entering the larynx during the patient's struggle is still not definitely eliminated. With the œsophageal tube, on the other hand, respiration can go on freely while it is in position, and the food can be introduced in a continuous or intermittent stream without any interference with the breathing. When the tube has been properly passed there is no possibility of the food entering the larynx, unless regurgitation from the stomach first takes place. The most serious danger in forcible feeding—the one which always looms most largely in the mind of the operator—is that some particles may enter the glottis and set up spasm, with risk of choking, or lead to subsequent lung complications. Hence I would say at once that when a patient resists so persistently as to require forcible feeding proper, it is a good rule always to use the œsophageal tube rather than any apparatus which introduces the food no further than the pharynx. If we watch a nurse trying to feed a resistive patient with the spoon, and see the spluttering of food from the mouth, the choking, the irritation which is often engendered in both patient and nurse by the struggle, and the risk of bruising or other injury, for which it is very hard to hold the nurse responsible, we will probably agree that in such cases the demonstration of force with the spoon should be *apparent* only, rather than *real*, and that if the patient does not very speedily become passive the nurse should not persist in her efforts, but should give place to the doctor with the œsophageal tube. With the *soft* rubber tubes now in use, both for oral and nasal feeding, there is practically no force employed after the mouth has been opened and the tube has reached the lower part of the pharynx. It is simply held there until it engages in the upper end of the œsophagus; its further passage onwards to the stomach is effected entirely by the natural reflex action of the œsophageal fibres; and there is thus exceedingly little risk of injury to the œsophagus or stomach, or to the parts in their neighbourhood. The old firm (or hard) form of mouth tube, with wooden lower end, enabled the operator at once to overcome any resistance in the mouth or pharynx,

and to push the tube onwards along the œsophagus. But this implied a certain amount of actual *force*, with a corresponding degree of risk of injury (both from the force and from the hardness of the tube) to the œsophagus or other parts, especially if the tube was not directed in the exact line of the alimentary channel. Any such risk is reduced to a minimum, or altogether eliminated, by using the soft rubber tube, with which no pushing force is given; and as it can be passed in all ordinary cases with as much certainty as the hard tube, though perhaps with less speed, I believe that it should always be employed in preference to the hard tube. I am, of course, assuming that there are no special circumstances in the case, such as the existence of stricture or malignant disease of the œsophagus, which require the usual procedure to be modified to meet them.

(2.) *Feeding by the Œsophageal Tube.*—In proceeding to use the tube the great point aimed at is to secure the patient in such a way as to effectually prevent any risk of injury to him if he struggles during the feeding. For this purpose we may use a special chair, with suitable fastenings or other means of keeping the patient perfectly steady. More commonly the patient is held directly by the attendants or nurses, after having been either laid flat on a mattress on the floor or placed in a sitting up position in bed. The details to be attended to for holding the patient safely in each of these positions are well known, and need not be repeated here. The supine position on the floor is said to give the greatest amount of control over the patient, and to have the advantage of less liability to regurgitation of the food. The sitting up position in bed is a nearer approach to the natural position in feeding, and therefore looks less formidable in practice; and if regurgitation does take place there is less risk of the food passing into the larynx than when the patient is lying flat. Probably the choice between the two plans will depend very much on what the operator has accustomed himself and his assistants to. I prefer and use the sitting up position in bed; and if, as may happen, the patient ceases to make any resistance to the feeding process, the transition to the sitting up position in an ordinary chair is more natural and easy. One must, of course, be exceedingly guarded about leaving a patient so far uncontrolled as is implied in letting him sit in an ordinary chair during the feeding; but it is not uncommon to find that patients, after seeing that they can always be overpowered in

the end, ultimately submit very quietly to the whole process. In the Fife Asylum we have at present three patients, all males, requiring the use of the tube, who are fed in this quiet way in an ordinary chair. One of them opens his mouth for the gag; the other two make a slight show of resistance to the introduction of the gag, but otherwise give no trouble. Possibly the example set by the first of the three may have had some influence in inducing the others to follow suit.

For œsophageal feeding either the nose tube or the mouth tube can be employed. The former has the advantage of avoiding the necessity of forcing the mouth open and using the gag, which often is the most difficult part of the whole feeding process, leading to much struggling, and to the risk of injury to the teeth, this last being by no means a small matter. Sometimes when the patient has prepared himself to keep his mouth firmly closed, he is surprised to find the tube introduced by the nose and passed into the stomach almost before he realizes what is being done. This is a very decided advantage, but I believe that all the other points are in favour of the mouth tube. From its small size the nasal tube is more likely to enter the glottis, or impinge in some way on the larynx; it is much more difficult for the operator to assure himself that the tube has really passed down the œsophagus towards the stomach; and the introduction of the food through it is necessarily rather slow. On the other hand, from its large size it is almost impossible for the mouth tube to enter the larynx without at once setting up the signs of its wrong position; if it is not swallowed, it is more likely to curve round in the pharynx and show itself again in the back of the throat or in the mouth; the peculiar feeling of its being grasped and drawn on by the muscular fibres of the œsophagus is soon recognized by the operator, and indicates to him that the tube has passed properly; the introduction of the food is more quickly effected; and it allows of a greater range of consistence in the food used—a point of great importance if the feeding has to be continued for some weeks or months. In one case, where the patient was powerful and very resistive, with a complete set of teeth, making the introduction of the gag impossible without a very serious struggle, I used the nose tube with success on one occasion; but on a second trial I found that the patient was able to divert its lower end into his mouth, and that the tube was being coiled up

in the mouth instead of passing on to the stomach. The operator has less control over the nose tube than over the mouth tube, and those patients with whom there is much difficulty in getting the mouth opened are often the very cases that are able to resist successfully the passage of the nasal tube. From these considerations it seems to me that in the great majority of cases the mouth tube will be found the more suitable and the more convenient for use, but when for any reason the employment of the mouth gag is undesirable, it may with advantage be replaced by the nose tube.

In passing the tube through the mouth, it may be necessary to depress the tongue by means of the finger, but after the tube has reached the lower part of the pharynx the pressure on the tongue should not be continued, as swallowing is more easily effected when the tongue is raised to the roof of the mouth, that being in fact the first movement in the process of ordinary deglutition. Generally the patient makes the swallowing movement very soon after the tube has reached the lower end of the pharynx, but if he does not do so, it may occasionally be helpful to pour a few drops of liquid into the tube. This runs out from the lower end of the tube into the pharynx, below the glottis, and trickling down into the œsophagus sets up the action of swallowing; but in resorting to this expedient, (which indeed is seldom necessary), care must be taken to pour in the liquid slowly, cautiously, and in very small amount, lest it should be forced back into the larynx.

When the tube has been passed, the simplest and best way of introducing the food is by gravitation. For this purpose the vessel containing the food is attached in any suitable way to the upper end of the tube, and raised to a convenient height, the food then running down into the stomach by its own weight. Or a funnel may be fixed on the upper end of the tube, and the food poured into it from a basin or jug. If we wish to avoid any splashing of the food from regurgitation through the tube, the funnel may be fitted with a cover, or we may use the bottle designed for this purpose by Dr. Yellowlees. So far as mere feeding is concerned, the old form of stomach pump is cumbrous, complicated, and difficult to keep clean, and its use gives no special advantage, unless for any reason it is necessary to introduce the food into the stomach very rapidly, and have the process of feeding completed as quickly as possible.

(3.) *Kind of Food used.*—When the feeding is occasional, or required only for a limited time, milk, custard, or beef-tea is generally used. If it needs to be kept up for a long period, the diet should be varied from time to time, and for this purpose eggs, pounded meat (chicken, beef, or mutton), pounded biscuit, gruel, sugar, vegetables, etc., may be used in various combinations, with wine or other stimulants. Tonic or other medicines can be mixed with the food, or administered separately through the tube, if desired. As is well known, ordinary beef-tea contains the extractive and stimulant elements, rather than the nutritive constituents of the meat; and the preparation of beef or mutton by pounding, for use in tube feeding in place of the tea, is a laborious and troublesome process when it has to be often repeated. An easy and useful combination is to have fresh beef-tea made in the ordinary way, and to add to it a suitable amount of the dry meat powders (such as Peptonoids) which contain the albuminoid constituents. I have tried this for one meal in the day, with milk or custard (made of milk, eggs, and sugar) for the other diets, and have found that the patients often keep up their weight satisfactorily upon it. The fatty constituents should not be removed from the beef-tea by skimming, as they help to counteract the constipating effect of the milk diet. It is often useful to wash out the stomach with Condy's fluid or other disinfectant before administering the food, particularly in the cases of melancholic stupor, in which gastro-intestinal torpidity and derangement is so frequently a prominent feature.

(4.) *Clinical Cases.*—I shall refer only very shortly to three cases under treatment in the Fife District Asylum, in which forcible feeding has been used for considerable periods.

(a.) G. S., admitted 29th June, 1880; age on admission, 39; height, 5ft. 5½in.; weight, 9st. 11lbs. He showed delusions of mixed suspicion and grandeur. After a period of apparent improvement, his delusions became more extravagant. In May, 1884, he refused food altogether; weight 9st. 13lbs. Though fed regularly twice a day with the œsophageal tube, he fell off rapidly to 8st. 4lbs. Three feedings (custards and beef-tea with eggs) were then given each day, and he was kept in bed for a time. On 1st July, 1884, his weight was 7st. 13lbs.; but from that date onwards his bodily condition was on the whole distinctly better, though he still showed considerable fluctuations in weight from

time to time. In the winter of 1884-85 one pound of pounded beef was given daily, with vegetables, and six ounces of sherry, in addition to custards; and in April, 1885, this was replaced by beef peptonoids given in freshly made beef-tea, as above mentioned. He has continued to require feeding up to the present time. Occasionally he asks for and eats fruit and sweetmeats, and he has taken biscuits, etc., from his relatives when they visit him, but he resolutely declines to take the ordinary daily food. When questioned about the reason of his conduct, he asserts that he is God and needs nothing to support him, or, patting his mouth with his hand and making the movement of swallowing, says that he has already got the food he wants in his own special way. During the last ten years his weight has sometimes fallen to about 8½st., but generally it has been over 9st. In the present year it has ranged from 10st. 2lbs. to 9st. 7lbs., the latter being his weight just now. His highest weight was 10st. 6lbs., noted in the summer of 1894. At that time he was much more active than usual, occupying himself in fishing, and spending the greatest part of the day in the open air, with evident advantage to his bodily health. At present he is less energetic, walking a good deal, and taking an active part in dancing and other amusements, but refusing to engage in any regular work. He is thin and rather pale, but otherwise in excellent bodily health. The tube has been used in his case over 12,000 times, and he seems likely to need it for some time to come.

(b.) J. H., admitted 19th March, 1888, age 43; height, 5ft. 7½in.; weight, 9st. 12lbs. He had previously been twice under care in the asylum, and in a previous attack had mutilated himself by chopping off his left forearm just below the elbow. On his last admission he was in a state of acute melancholia, with delusions (*e.g.*, that he was unfit to live) and strong suicidal tendency. On the night before he was sent to the asylum he had made a cut in his arm with the intention of bleeding himself to death. From time to time he refused food, and it was necessary to use forcible feeding several times in November, 1888, again in November, 1889, and continuously from June, 1890, to June, 1891. From the latter date he took food voluntarily until December, 1891, when he once more refused it, and he has been fed regularly from that time up to the present. The lowest weight recorded in his case was 9st. 6lbs. in 1892, but generally his weight has ranged from 10st. to 11st., and at

present is 10st. 2lbs. Unlike G. S., he is very moody and self-absorbed, seldom speaking unless first spoken to, and shows no interest in anything around him. If left to himself, he would sit passive all day, and he practically undertakes no exertion except in regular and compulsory walking exercise.

(c.) H. J., admitted 9th August, 1894, age 35; height, 5ft. 4½in.; weight, 11st. 2lbs. He is congenitally defective in mind, with much maniacal excitement. He never altogether refused food for any length of time, but took it in insufficient quantity. In November he lost weight rapidly, and suffered from boils and whitlow. The maniacal excitement still continued. In February, 1895, he was fed occasionally with the tube; afterwards he was fed twice daily, but he lost flesh until in April his weight was 8st. 11lbs. The tube feedings were, therefore, increased to three each day, in addition to the food taken voluntarily, and he now weighs 9st. 5lbs.

In these three cases prolonged feeding by the soft œsophageal (mouth) tube has produced no complication, and has been of great value in promoting health.

Discussion on Dr. Turnbull's Paper.

Dr. BRISCOE said that he had formerly a good deal of experience in artificial feeding, having had several cases of gastrostomy under his care. As the result of later asylum experience he disagreed with the practice of using the nasal tube. It was a most obnoxious proceeding, to which he did not think any one of them would personally submit. He referred to a case invariably rendered sick and uncomfortable by that procedure, and contended that the use of the œsophageal tube was, in the hands of a careful person, a very simple operation. As for the gag, he had found that nothing was better than the finger, or the ordinary dental gag. Of course he took care properly to protect the finger. It was necessary to have plenty of assistants, and the patient ought to be fed sitting up. The apparatus consisted of an india-rubber tube, a common funnel, and a jug. In his experience the only satisfactory method of forcible feeding was by means of the œsophageal tube. He entirely ignored the catheter; he would not allow it to be used on himself, and would not use it on a patient.

Dr. DRAPES said that he would much prefer to have a nasal tube used on himself than to have a large tube passed down his œsophagus. He had used the nasal tube much more than the other. One point the last speaker had ignored was the matter of resistance. If a preliminary struggle has to be got over, it exhausts both the patient and the operator, in which case the nasal tube would have a manifest advantage. As to the danger of the nasal tube entering the larynx, there was a point to be noted which was not much referred to in books, namely, that when the tube had just cleared the palate, by bending the patient's head on his chest, the tube was enabled to pass on easily to the stomach. Even if the tube did enter the larynx, that mere fact was not of much consequence, as the results of intubation showed; but they must of course be certain that had not occurred when they proceeded to pour in the food. The principles to be followed were extension and immobility, and the patient should be put on his back.

Dr. CLOUSTON expressed his surprise that Dr. Turnbull should have recommended the œsophageal in preference to the nasal tube. He himself had dis-

carded the old gum-elastic tube for the soft œsophageal tube, and found it more suitable, but there was sometimes extraordinary difficulty in opening the mouth. He thought those of them who had had large experience would be very sorry to use a gag in every case. After careful trial of the various methods he now used the nose tube, the long catheter-like tube, and since then his faith in it had never deviated. In only two cases at Morningside had there been difficulty—one in which the nasal aperture was contracted, another in which there was obstruction in getting the instrument down through the pharynx. An important practical point to be attended to was that, after the nose tube had been passed, a teaspoonful of water should be poured down before introducing the food, lest the tube had passed into the larynx. He had never seen a patient the worse for this. At the end of the feeding, in order to clear out the tube so that there should be no drop of fluid which might pass down to the larynx and so cause pneumonia, the same precaution should be adopted.

Dr. MACDONALD stated that during his fifteen years of asylum experience he had never used anything but the œsophageal tube in forcible feeding, and he did not intend to use anything else, having never once failed to pass it.

Dr. MERSON asked what means Dr. Clouston adopted for feeding the patient when he failed with the nasal tube. For his own part he never had the slightest difficulty and had never failed to pass the œsophageal tube. He thought that the natural way of feeding through the mouth should be followed if possible.

Dr. CLOUSTON said he always kept an œsophageal tube in case of emergency.

Dr. G. M. ROBERTSON had used the œsophageal tube as well as the nasal tube, and had been able to weigh their comparative merits. There were cases in which considerable difficulty was experienced in inserting the gag; sometimes the patient struggled so much and bit so hard that the jaw was injured; he had even known cases where the teeth had been driven into the cavity above the jaw. The nasal tube, he thought, should be employed to avoid such results. As a general rule, he used the œsophageal tube, which permitted of the administration of semi-solid material such as the nasal tube would not pass. It had been said that the passage of the nasal tube was unpleasant; he had passed it on himself and had not found it so, and he thought that there was less disturbance in the case of the nasal tube than of the œsophageal. It was a most dangerous thing to pass a catheter which only reached as far as the soft palate and let the custard drip over the larynx. A nasal tube, much longer and larger than the catheter, was what should be used, so that it might be able to reach half-way down to the stomach. It would sometimes be found impossible to introduce it by one nostril, while it passed readily by the other. Some patients, too, became exceedingly expert in putting the tongue at the back of the throat and pushing the tube forward. But even if the tube did pass into the larynx, it had simply to be drawn out again and passed the right way. Ordinarily, the œsophageal tube was the easier and quicker instrument to pass.

Dr. YELLOWLEES agreed with Dr. Turnbull's paper, and decidedly preferred feeding by the mouth for the reasons Dr. Turnbull had given. In certain cases feeding by the nose might be preferable, but there was no principle involved, and each person must use the method he found most satisfactory. He well remembered when Dr. Clouston condemned nose feeding as earnestly as he now approved it.

Dr. URQUHART said a good many of them had been through that discussion before, and they had come no nearer agreement than before. He did not rise to object to what Dr. Turnbull had said, but to ask whether they did not feed their patients forcibly too often? Prof. Meyer, of Göttingen, had abandoned the practice for a quarter of a century. A good many hundred patients had passed through his hands during that time, and his results were very striking.* He had a horror of feeding patients with the tube on account of unfortunate sequelæ, such as pneumonias, occurring after the operation, which was not so free from danger, he (Dr. Urquhart) thought, as some people seemed to suppose. He might, there-

* See "Journal of Mental Science," April, 1895, p. 276.

fore, be allowed to ask the question whether they could not do with less of forcible feeding in asylums? If they had to use it, a little fluid nourishment poured into the nose and allowed to drop over the palate (as Dr. Morel demonstrated not very long ago in this country) had sometimes a most excellent effect in inducing patients to take food voluntarily.

Dr. COOKE asked whether any member present had experience in feeding with the œsophageal tube passed down only one-third of the length of the œsophagus, and so allowing the involuntary fibres to do the rest of the work? A short time ago they had an accident at Worcester, the patient regurgitating a good deal of the food administered. Syncope had occurred, followed by acute œdema of the lungs, and death an hour and a half afterwards. He had asked the senior surgeon of the Worcester Infirmary to be present at the post-mortem examination, as he was strongly of opinion that the method was a very desirable one, and was informed by him that at the Worcester Infirmary they never fed in any other way than by passing the tube one-third down the œsophagus.

Dr. BRISCOE, in reply to this, said he never passed the tube further down the œsophagus than about seven or eight inches. Considering that the narrowest part of the gullet was at the upper end and the largest calibre at the lower, he did not think that they needed to pass the tube further than that. By the nasal process, if the patient had to be fed every three hours, half-an-hour was consumed, whereas he could feed a patient in five minutes with the ordinary tube.

Dr. CARLYLE JOHNSTONE said he had employed the gum elastic tube, the stomach-pump, the large œsophageal tube, and the nasal tube. The nasal tube seemed to him to be safer and simpler, and it involved less of a struggle in the process of feeding. He did not happen to find a nasal tube in the surgery when he went to the Melrose Asylum, and had fed with the œsophageal tube, when necessary, ever since. He had never failed either with the nasal or the œsophageal tube. The mere question of the particular instrument to be used was, however, very small in comparison with the question whether they should feed with any instrument. He had now comparatively few cases which really required feeding; but, besides that, he had, perhaps, grown a little more reluctant to feed than previously, and he did not think that any of his patients had been sufferers owing to that change of practice. At the same time, the tube ought to be used in certain cases of difficulty, for it was better to resort to the use of the tube, so that they might know that the patient was really being fed and to what amount.

Dr. HAYES NEWINGTON recalled a case in Morningside in which he had to feed an ill-nourished woman who had a tendency to subluxation of the jaw. Whenever her mouth was opened in the usual way this occurred, and the idea of feeding through the nose tube occurred to him. As a matter of experience, there were two points for consideration—first, the necessity for introducing the food readily, easily, and certainly, and second, the production of moral effect. No doubt the old-fashioned stomach pump or some modification of it was extremely useful, but the nose tube was preferable in the first instance. It was an alarming process for a patient with tender feelings to be suddenly surrounded and subjected to the use of the œsophageal tube. But in any case they should be sure the patient got all that was intended for him.

A MEMBER asked if any one present had adopted feeding per rectum as an alternative to feeding by the mouth. He had tried it in one or two cases with most salutary effect.

Dr. OUTERSON WOOD remarked that the drift of the discussion proved that what was suitable in one case might not be suitable in another. When they failed to feed by the mouth they had to resort to the nasal method, and *vice versa*.

Dr. SEYMOUR TUBE preferred the œsophageal to the nasal tube, especially if the feeding had to be continued for any lengthened period. In the first place the operation occupied less time, and in the second place a greater variety of diet could be given. Instead of feeding solely on milk, vegetables and other foods could be added; and that was of the greatest importance in preventing the patients from falling into a condition that was anything but healthy. The

question had been under discussion years ago, when his father pointed out the defects of the nasal tube.

Dr. A. S. NEWINGTON referred to the direct method of nasal feeding. He frequently fed by the nose and never used the tube, pouring the food from an ordinary feeding cup down one nostril while the other was kept closed. He had seen this done for the first time at Bethlem Hospital, when a clinical student, in the case of a patient who struggled so violently that they could not open his mouth without breaking his teeth. The result was that the patient soon ceased to resist.

Dr. GRAMSHAW, as a physician in general practice, approved the method recommended by the last speaker. It had been his lot to feed many patients in that way, and he found that the moral effect was much greater than when the tube was used.

Dr. SOUTAR said the discussion made one wonder that so much could be said against the different methods which they had individually long ago accepted as their routine practice. He considered that it was a matter of individual experience. He had formerly used the stomach pump and the œsophageal tube, now he employed only the nose tube, and it seemed to him that he had advanced from bad to better in that respect. He had again and again been assured by patients who had experienced both methods that they preferred the nose tube. It was the easier, the simpler, and the more comfortable. He did not think that they had any right to use any means of compelling, as the result of pain or discomfort, the patient to abandon his refusal of food. It was their business to continue the administration of the food in the way most comfortable to him, as well as most efficient. He believed, too, that they did not, as a rule, resort soon enough to forcible feeding. He did not at all agree with those who put off until, as the result of his refusal of food, the patient had become debilitated. Very often the patient would take sufficient to keep himself going, but not sufficient to effect recovery, and they ought, therefore, to treat by forcible feeding long before complete refusal. The dangers, in his opinion, were very much over-estimated. The precaution mentioned by Dr. Clouston of pouring a few drops of water down the tube before giving the food was always used at Barnwood House. On two occasions he had found its value. In one recent case the patient had an extraordinary power of regurgitating her food, and was actually dying of starvation although fed four times a day. A drachm and a half of paraldehyde was given three times a day to overcome this difficulty. The patient fell asleep in a few minutes and was then fed satisfactorily.

The PRESIDENT said that he had never fed patients in any other way than by the mouth, and had never any difficulty or any bad result. His experience of these cases was not extensive, and he was disposed to continue his present practice till he found reason for departing from it. It was satisfactory to know that, if one method failed, others were available. With regard to Dr. Urquhart's statement of Prof. Meyer's practice, it seemed inconceivable that during a long experience in a large asylum there should never be a case where feeding was necessary.

Dr. TURNBULL, in his reply, said that he would not prolong the discussion by referring to the various points which had been raised, but he must make an exception of the statement that any form of feeding was safe. Those members of the Association who were content with pouring food through the nose to the back of the pharynx of a resistive case seemed to him to be following a dangerous practice. He had seen serious results. He would further state that he had purposely limited his remarks to exclude the question as to how often they should resort to forcible feeding, but he might state his opinion that, considering the comparatively slight risk entailed, it should be oftener resorted to than is customary for the sake of the patient.

Criminal Responsibility in Relation to Insanity.—Discussion opened by H. MAUDSLEY, M.D. London.

Dr. MAUDSLEY opened a discussion on "Criminal Responsibility in relation to Insanity," in the Psychological Section of the Annual Meeting of the British Medical Association, held in London on 1st August, 1895. He said—I cannot help feeling that I am undertaking a task which is likely to be somewhat barren, for there is little to be said that has not been said over and over again, and will, I fear, have to be said over and over again; for, notwithstanding that the legal test has been condemned by eminent judges and that it has no foundation in science, it still flourishes in full vigour.

Now I take it that there are few, if any, medical men having a practical knowledge of the insane who would assent to the proposition, understood in its natural sense, that an insane person is responsible for what he feels and does when he knows the nature of the act and that it is a wrong act. The saddest cases, perhaps, of mental disease we have to do with are notoriously those in which a person is tormented with a strong and horrible impulse to do, perhaps does, what he knows and loathes as wrong; the driving impulse in him is so strange and contrary to his true nature and desires, so repugnant and yet so compulsive, that in former times no other explanation of it was deemed possible than positive possession by the devil or some other evil spirit. As I have said of this test elsewhere, it is founded on a very simple basis—that a man in convulsions is a strong man, and that he is culpable if, being conscious of them, he does not stop them. Consciousness of, is deemed to be the same thing as power to, control the impulses of a disordered mind; a will incapable of being influenced by knowledge of legal sanction the same thing as a will capable of being so influenced. The theory would have demanded in former times of a person "possessed of the devil" that, possessed himself, he should possess himself all the same, and master the devil in him or be responsible for the devil's doings. A rather unequal contest to put upon the man: the man against the devil with the devil in possession of the citadel of the man's being! Put the word "disease" in place of the word "devil," and you have the exact situation of the modern madman in relation to the legal test of responsibility.

The test has its foundations, however, but they rest on wrong observation and on bad psychology. The observation from which they are derived is self-observation by sane minds, whence it results that a sane standard or measure of feeling and action has been made the measure of sane feeling and action. Could anything be more absurd? Surely the right observation should be the observation of abnormal mental states, observation of self in dreams, in hypnotism, and allied abnormal mental states; their mental disintegration furnishing the true standard of comparison for the vagaries of insane thought and feeling. I venture to think that no one who has reflected sincerely on his own mental states in dreams, remembering how strangely he feels and thinks in them and how entirely he loses possession of himself, can really believe that an insane person is always responsible for what he feels and does in the waking nightmare which madness sometimes is.

Again: the psychology of the test is fundamentally at fault. It assumes, or, at any rate, its defenders assume sometimes, that reason, not feeling, is the motive force of human action—that is to say, for example, a man falls in love from reason, and that, being in love, he embraces from reason, and that, after fit embraces, he proceeds further in the business from reason. Is not that a singular absurdity? The driving impulse, the propelling force, by which men are moved to act comes from feeling, not from reason. And so it is that a disordered feeling is capable of actuating disordered conduct without consent of reason, perhaps against all reason. The psychology which finds the motive force of action in reason, is very much like a science which should find the active propelling force of a steamboat not in the engine-room, but in the captain's orders or in the steersman's arm.

It will be contended, however, and properly, that reason, though it does not supply the actual motive force, is still capable of controlling and directing. No doubt within measure. Reason and feeling should be wedded into fit harmony; they constitute the two elements of a voluntary act, and cannot therefore do without one another, reason without feeling being impotent to act, feeling without reason being tyrannical in act. It is not true, however, to go on to say that reason can always control the desire when it knows its good or bad quality, when it can, in fact, appreciate the right or wrong of it. Nevertheless though experience teaches

us that, legal theory will have it otherwise. It maintains that when that reason does not control mad impulses it is not really sound reason, does not *know* then what it seems to know and *thinks* it knows. The person had not actually the untainted consciousness of right and wrong in the particular case on the particular occasion which he seemed to have. His reason was affected without his knowing it. To save a favourite theory we are asked to give what is called a large and liberal interpretation to the word "know," to make it mean what on the face of it it does not mean—to say, as the late Sir James Stephen maintained, that if a man cannot control his conduct he does not really *know* what he is about, in the proper sense of the word. Well, so far as this somewhat subtle interpretation acts to prevent an insane person from being punished for what not he, but his madness, has done, it is worthy of all praise; but when it operates, as it may operate, to cause an insane person to be punished for what his madness does, it is not so praiseworthy. The fact is, it is too metaphysical for daily use, even if it were true. No person, however acute, can dive into the depths of another person's mind and find out, what he does not know himself, how far his consciousness of right and wrong is vitiated on a particular occasion; and it is not in the least likely that a common jury will be able or even attempt to make any such fine metaphysical discrimination; they will understand the test in broad and ready fashion to mean that he knew what he was about, and that therefore he ought to be punished.

Why, then, maintain a test which is so hard to understand, so easy to misunderstand, so false in science and so uncertain in application, so often interpreted by different judges in different ways, so seldom, I was almost going to say, interpreted twice in the same way by the same judge? Why bias wrongly the minds of the jury by a prejudgment of facts all of which ought to be left impartially to them? Such prejudgment is, in fact, nothing better than prejudice, and to so prejudice them is to prejudice the jury.

Moreover, it is of very doubtful legality. For what right in law has the judge to lay down a particular test of disabling mental disease? Is not that a usurpation on his part, an abuse of law? Are not all the symptoms of mental disease and all the tests of its existence and its degree in a particular case, properly facts for the jury? If so, then this ex-

press interposition of a special test is an interference with the province of the jury and likely to prejudice a fair trial. What the judge does by imposing this special discriminative test is practically to instruct the jury, and to instruct them wrongly on matters of fact, and he does that without submitting himself as a witness to cross-examination. A particular test of disabling insanity is no more a matter of law than the test of a particular poison ; it is rightly a matter to be proved in evidence like all other relevant facts.

So far, then, from being a help to the jury this judicial dictum tends to confound and mislead them. Were the court sincerely minded to give help it might do so in a simpler and more obvious way than by laying down a difficult and dubious test of disabling mental disease. It might take means to instruct the jury fully and truly concerning the particular form of mental disease in question, the nature of it, the bearings of it, and its damaging effects upon the mind. And it might do this in two ways—either by providing them with impartial and competent scientific evidence called by the Court itself, or by appointing a competent medical authority to act as assessor to assess the value of the conflicting scientific evidence given.

What an absurdity it would seem had not custom made it seem natural (as it makes everything seem natural) to expect a judge and jury, ignorant, say, of the very terms of a science, chemical or electrical, to be so adequately instructed during the course of the trial by what they hear then as to be able to give a satisfactory decision on a complex question of chemical or electrical science. If it be a question of navigation (when two vessels, say, have come into collision), about which every jurymen who has been in a boat might be expected to know something, the services of a skilled assessor are called in, but when it is a question of complex science of which the jury know absolutely nothing, then it is left to the intuition of ignorance to give understanding. Of the judicial test of responsibility in particular, and legal procedure generally, we may say they are very ill-fitted to find out the truth and well fitted not to find it out.

For this condemnation of the present system we may claim, I think, the assent not of medical men only, but of the common-sense and conscience of the community, which, after all, is in a sort of tacit rebellion against it. For when a person whose insanity is suspected is condemned to death,

what happens after his trial? Why, that the competent medical skill is then called in to give the competent and impartial help which ought to have been given at the time of the trial, and, in fact, to undo quietly in private what has been done with all the pomp and parade of justice wrongly in public. Nay, more. I notice from time to time nowadays that an insane person accused of crime is not put on his trial at all, but that someone in authority has or usurps the right to have him medically examined and sent to an asylum. Thus you see an Englishman is deprived of his most blessed privilege, the right of being tried by a jury when he is charged with crime. On mere medical evidence, on the evidence of a set of doctors, he is shut up for life, because of an offence for which he can never get himself tried.

So much, then, by way of criticism and from the medical standpoint. Now, let us try to look at the matter from the other side—from the legal standpoint.

Lawyers think, of course, that medical men are too ready to discover insanity when crime has been done, and to claim irresponsibility for everybody who suffers from any sort or kind of insanity—in fact, to make crime insanity. Not entirely without excuse. They judge by what they see in courts of justice; and what they see, unfortunately, is this, that there is no case, however weak and indefensible, that does not for some reason or other find medical support. They put down, therefore, to unsound theory what is really unsound medical evidence, evidence obtained by hook or crook under the present system of procedure, and which any competent medical authority would in many instances instantly reject as worthless. They hear the opinion of him who presses forward to give the evidence; they do not hear the opinions of those who, having been urgently asked, have refused to give that evidence. Naturally, therefore, they conclude one of two things: either there is no such thing as exact medical science, and, therefore, it may be disregarded, or that there is no such thing as exact medical honesty; and the result is that scientific evidence, which ought to be decisive in cases of the kind, is, I am afraid, the most discredited of any kind of evidence given in courts of justice.

Another circumstance which justifies in some measure the legal criticism is this—the common medical habit of discussing the question of responsibility in relation to insanity in the abstract, as if insanity were something definite and constant, something which is altogether or not at all, and

which, being there, ought to annul responsibility. One might just as well, I think, discuss whether bodily disease in the abstract ought to prevent a man from walking five miles a day. The truth is, of course, that there is no such definite entity as insanity, that there are really as many insanities of mind as there are modes and degrees of its derangements. It is, in fact, with insanity in the concrete, in the particular, not with an abstraction, that we have properly to do; and just as one bodily disease ought and another ought not to prevent a man from walking, or doing one thing when he may do another, so one kind of insanity ought to abolish a responsibility which another does not. The right question is, of course, as to the disabling effect of the particular form and degree of insanity in the particular case in the particular circumstances.

As to this disabling effect, this is not the proper occasion to discuss the degrees of disabling moral and intellectual damage done by the various forms of mental disorder, some of which, after all, are not so much states of actual disease as bad habits of thinking and feeling grown into mental deformities. What I venture to make here is a protest against the assumption that insanity in the abstract, meaning thereby all forms and degrees of insanity, ought off-hand to be deemed irresponsible.

And I take, or make, the occasion to utter another protest—a protest against what I venture to consider the lamentable extravagances into which some disciples of the latest school of criminology have been betrayed. I should be loath to say a word to disparage or discredit the scientific method of studying insanity—I was one of the first to advocate it—or to disparage for a moment the good work that has been done in that direction; but of unripe observations and sensational theories I hope it is not too much to say that although they make the vulgar stare, they make the judicious grieve. Science on the platform is very apt to run into demoralization; the performers are under strong temptation to play to the gallery and so to burlesque science.

To say that there is a criminal nature which is degenerate is one thing, a true thing; but to go on to say that all criminals are degenerate and bear on them the stigmata of degeneracy is another and, I believe, quite false thing. I do not see for myself why crime should necessarily be degeneracy. I can conceive a murderer being a nobler animal than a saint of the Pecksniffian sort. The murderer on a big enough scale,

big enough to despise the fools whom he uses and sacrifices for his ambitious ends—what is he? Why, he is a hero. Criminals there are certainly of defective bodily and mental structural formation, beings who, if not protected against themselves, must do wrong. That we all admit. There are criminals, again, who are more or less insane in the statutory sense, and who, therefore, are explained and excused by their insanities. But there are criminals also who, I venture to think, in other circumstances might have been as great saints as, in the changes and chances of things, they became great criminals. For assuredly the external factors and circumstances count for much in the causation of crime. Time and chance happen to all men, and no criminal, to my mind, is really explicable except by a full and exact appreciation of his circumstances and nature and of their mutual interaction. For my part I sometimes wonder whether the same enthusiasts would have found the stigmata of degeneracy in Saul, the fiery persecutor of the early Christians, and found them gone when, transformed from iniquity to holiness, he became Paul, the great Apostle of the Gentiles.

Has not the theory of degeneracy been somewhat abused of late? As used by Morel the term had scientific meaning and value; but of late much has been done to rob it of all definite meaning by stretching it out to cover all sorts and degrees of deviation from an ideal standard of feeling and thinking; deviations, in fact, which range from mere morbid habits of thought and feeling down to the worst idiocy, and some of which are no more signs of morbid degeneracy than are long noses or short noses, long legs or short legs.

It seems to me that the conflict between law and medicine, which has been going on so long, might end soon if words and theories were swept clean aside and both parties were to look the facts sincerely and squarely in the face. Let the lawyers—why should they not?—renounce unreservedly their discredited test of disabling mental disease, and submit all the facts in a particular case to the jury to decide upon. Medical men also, on their side, should discard the notion, so far as it is entertained, of insanity in the abstract, and leave off talking as if it were something definite and constant which annulled all responsibility. To place before the court as plainly as possible all the facts of the particular form of mental derangement in the particular

case, to explain what these facts mean according to the best scientific information, and how far and in what way they damage the mental functions, then to leave the matter for the court to decide—that, it seems to me, is the proper medical function. For the question of legal responsibility is, of course, a legal, not a medical question. As witnesses we have nothing whatever to do with the rights or wrongs of the law, though we may, of course, criticize it properly as citizens. The business of every society is to protect itself, and it has the might, which for it is always the right, to make what laws and inflict what punishments it likes for its own protection. Naturally each society will think its punishments and laws most right, the laws of other societies less right, if not ridiculous often; but be the enacted law right or wrong, the individual, in whatever social medium he is placed, must obey it or suffer the penalties of disobedience; for he lives for the society, not the society for him, and, living for it, he must die for it, even though he be insane, if it think fit.

What, then, for us is the conclusion of the whole matter? So far back as I remember we have been criticizing the legal criterion of responsibility, condemning it by formal resolutions, petitioning for commissions of inquiry into it, and demanding more or less clamorously its abandonment; and we are still voices crying in the wilderness that must go on crying. However, we have made some advance; we are not quite where we were. We have seen it condemned repeatedly by the best, justified only by the worst, judges; and we have had an interpretation of it by the late distinguished judge, Sir James Stephen, which, if it does not radically change its meaning, makes it include practically all that we ask for. If this test really does include, as he says, not only (1) knowledge of the nature of the act, and (2) knowledge that it is a wrong act, but (3) power of control to do or not to do it, then I can only say that it is a pity that all the judges do not understand it so; a pity, too, perhaps, that Sir James Stephen did not take steps to have his construction of it tested, as he might well have done in a way suggested by himself, namely, by directing the jury according to it in a particular case and then stating a case for the Court of Crown Cases Reserved. He would thus have obtained the opinion of his brother judges as to his construction of the test. Perhaps, knowing their conservative minds, he feared to shock them, and preferred to allow the

doctrine to infiltrate gradually, as we hope it may. One may suspect, too, that he himself, though direct and thorough enough in his thought about other things, was still in legal matters in love with the good old habitual way of the English mind—namely, to keep up names after the meanings have been taken out of them, or, perhaps, a new and entirely opposite meaning put into them; to accept the gradual dissolution of the substance of a belief so long as the label on it is left intact.

Dr. NICOLSON being called upon, said—I think, sir, that the Psychological Section of the British Medical Association is to be congratulated on having drawn our learned friend from his privacy to hold the balance between the one side and the other with that unflinching breadth of view and that precision of expression in which no one, judge or doctor, can rank with Dr. Maudsley. He has put the whole matter in a nutshell. He has told us that we must not place too much reliance upon the abstract, that we cannot be too careful in dealing with the individual case, that we have to take into consideration not only the mental condition of the criminal, but the actuating motive and the influences of his surroundings. It is a most wholesome thing, I am sure, after our experiences elsewhere last week, when we seemed to be approaching a certain amount of warmth, to have listened to this sobering address. We shall now be able to take up this subject with due consideration for the opposite side. I am bound to say that Dr. Maudsley has left very little room for argumentative discussion, because we must feel that what he has said we are bound to accept—it is so fraught with common-sense and judicial thought. There are individual portions which we individually might prefer to see amended by the introduction of methods other than those which he suggests. The first that occurs to me is in connection with the difficulty of deciding the question of insanity before trial or at the time of trial. Thus, for instance, if you ask a man beforehand how he committed the act alleged, so as to get from him his very inner soul on the matter, you rob him of the right of every Englishman, sane or insane—the right to plead “Not guilty.” That is a very essential point. I think Dr. Blandford will recollect a case in which, had such a course been followed, extreme injustice would have been done—the case of a man who having escaped from an asylum was assaulted by an individual whom he killed. It was an undoubted case of a madman shooting another person in self-defence. If there had been a commission of inquiry into that man’s condition before the trial, of necessity his mouth must have been shut, and he would have been condemned as a *criminal lunatic* when he really was an ordinary lunatic. By having his case represented in court he was able to secure a verdict of “Not guilty,” which is an extremely important point for the individual himself and for his relations, as well as a matter of justice. The actual occurrence of such a case must, to my mind, cast doubt upon the propriety of condemning, or, at least, of certifying a man to be insane before he has had the opportunity of pleading “Not guilty.” Therefore, what very often appears to be the most desirable course, on further consideration is absolutely negated. That is an instance of the individual case, as against the general question, which we are bound to keep before us before proclaiming that we have found a solution of the difficulty. In such cases as I have instanced there is the evidence of the man himself, which we may or may not get before the trial, but which, after the trial, and, let us say, condemnation, we are able to get—the full and minute history of the circumstances; there is also all we are able to get as corroborative of what the man may have told us—for instance, the testimony of his wife, which cannot be had in court. To authorize the court to call in as witness the wife of a man being tried for murder—for it is chiefly murder cases that attract our grave atten-

tion—either in support of his guilt or his innocence, or in support of his insanity or sanity, would be the introduction of a terrible complication for those trying to arrive at a proper finding. Those two points are enough to emphasize the injustice of compelling each case to be finally decided in court in regard to sanity or insanity, and to show that there is a good deal to be said against what appears to be extremely plausible. We may be unable to approve the insufficient and inadequate questions that are put to the jury; but we have still the difficulty of finding anything adequate to replace them. We must meet the law; we must meet the common opinion, and we have to be careful not to arrogate too much to ourselves while there is more difference between ourselves than there is between us and the lawyers. We are scarcely in a position to say "This is all wrong" until we can offer to put it right. We have also to remember that it is only in cases where reasonable doubt exists that the judges insist upon the legal test; never in cases of women. I think that by maintaining a calm demeanour we preserve our own dignity, and are the better able to carry out that process which is already far advanced—the education of the judges into the acceptance of the medical view.

Dr. MERRICK—I am afraid, sir, we are losing ourselves in generalities, and would beg to focus the discussion to a definite point. I gather that the dissatisfaction expressed is with the terms of the law, the actual wording of the law. Now, with regard to the terms of the law, it has been said that it is possible to drive a coach and six through any Act of Parliament. Certainly through the terms of this law, as contained in the answers of the judges to the questions put by the House of Lords, it is easy to drive a regiment of cavalry. These answers are as full of blunders of grammar and blunders of logic as any composition could be. At the same time I am not prepared to suggest anything better; and for that I will give my reason. We have not, I think, to regard the wording of the law. That is a matter which really does not concern us at all. What we have to regard is its practical effect. If we are to go to the legislative body and demand an alteration of the law, upon what grounds can we possibly make such a demand? What shall we be asked? We shall undoubtedly be asked this question—If the law is as bad as you say, what instances of injustice having been done under it have you to show us? If the law works badly, if it is an injustice, we shall be told, You have good ground for demanding an alteration in it; if you cannot show any instances of injustice which have actually arisen under it, then there is no reason for such an application. Well, sir, this is a matter into which, during the past year, I, in common with other members of a committee appointed by a sister society, have entered very carefully, and I find myself in the position of Saul among the prophets. I entered upon the question with a strong preconceived prejudice against the law, and against its administration; I am not ashamed to say so. I have been brought up in medical circles, and medical circles are steeped in prejudice against this law. We went back to the facts of many years, and the upshot of our investigations was that we failed to find that any such injustice had been done to insane offenders as would form the ground of any hopeful application for any alteration in the law. Imperfect as the wording of the law is, we have to look to its practical effect, and the practical effect is that justice is done. We are not a court for the revision of the drafting of the law; all that we can do is to suggest alterations in its general sense. It has been said by Dr. Maudsley—I think I am quoting his very words—that what should be desired is that all the facts should be impartially submitted to the jury, and that the jury should be told what the facts mean. Now, sir, I maintain that is actually what is done under the present system. The facts are submitted to the jury in the most impartial way, and the jury have ample opportunity of knowing what these facts mean. I have here reports of cases which have occurred during the past week at the present assizes; and since it is said that doctors have their mouths closed and are not allowed to give the evidence they think right, I will read one or two short extracts to show what immense latitude is, as a matter of fact, allowed to the medical witness in the witness-box. In one case of murder, tried at the Yorkshire Summer Assizes, July 24th, a medical expert gave this

evidence in the box:—"I have had a large experience of lunatics; I have examined the prisoner, and have arrived at the conclusion that he has a very strong neurotic family history. By neurotic I mean a person in whose family history there have been one or more cases of insanity, epilepsy, St. Vitus's dance, or hysteria. The prisoner, in my opinion, is a typical neurotic, judging not only from his hair, his eyebrows, the shape of his ears, the twitching of his hands, but particularly from the shape of his teeth and his hard palate. The prisoner gave me a particular account of what happened. He told me he had a very severe headache during the week before the murder." When evidence of that description, sir, can be given in the witness-box on behalf of a prisoner, I do not think it can be said that judges are unwilling to admit any evidence whatever which could possibly be considered as favourable to the prisoner's insanity. [Dr. MAUDSLEY: "That judge was not."] Quite so. Very well, sir, I take that criticism; and I agree, if any case can be brought forward in which a prisoner was condemned owing to the exclusion of medical evidence at his trial I am willing to reconsider my position. With regard to placing the facts before the jury I maintain that, as a rule, the medical witness is allowed to express his opinion in the widest possible way, that he is never, or scarcely ever, stopped. There is one case, I know, in which both Dr. Weatherly and myself were concerned, in which the medical witnesses were very strictly tied down to the actual terms of the law as given in the answers to the judges. But in that case the prisoner was acquitted; and, under these circumstances, I again say that the ground for an alteration in the law falls away from beneath our feet. If we can show prisoners who have been improperly convicted owing to the exclusion of medical evidence, then we have a strong case; but I must confess I have failed to find such cases. On the contrary, I quote to you another case which happened last week, in which the medical witness was allowed to say: "From observations of him during the time he has been in prison, I do not think that at the time he was alleged to have killed his wife the prisoner was able when committing that crime to distinguish that he was doing a wrongful act." Now, that is the very question in the very terms that has to be put to the jury. The jury is to determine whether at the time that he committed the act, and with reference to that particular act itself, he knew right from wrong; and when a medical witness is not allowed to state his opinion it is on the ground that he must not be asked the question which is to be put to the jury. But here, and in many another case, the medical witness has been allowed to answer that very question in the very terms in which it is put to the jury. Under these circumstances I do not think it can be said that the medical witness has his mouth shut. Another point put by Dr. Maudsley is that doctors of an inferior stamp, gentlemen who do not carry authority, push themselves into these cases and place themselves in a very prominent position, and that doctors whom we should all respect refuse to give evidence. I think that Dr. Maudsley, as a representative of the profession, had better left that unsaid, for it does not reflect credit upon us that the men whose great authority might make the difference between life and death to a prisoner refuse to give evidence, and leave that task to gentlemen whose opinions do not represent those of the profession. If there is such a beam as that in our own eyes how can we see clearly to pluck out the mote from the eyes of the judges?

Dr. WEATHERLY—I have listened, sir, with the greatest pleasure to Dr. Maudsley's able address. He is not satisfied with the present condition of the law as Dr. Nicolson, Dr. Orange, and Dr. Mercier are. [Dr. Nicolson demurred to this interpretation of his position.] I do maintain with Dr. Maudsley that the present legal test should be absolutely swept away; but I do not suggest that no legal test should be enforced. I think that each individual case should stand on its own merits, that the evidence given in the court should be evidence to bring out every scientific fact with regard to the individual case, and more especially that it should be conclusively proved not only that the man is a lunatic, but that the crime is the outcome of his lunacy. What I maintain is not that *certain* judges do not give enough latitude to medical men, but that they do not *all* give that latitude. Why should we be content with that? As Dr. Maudsley wrote many years ago, it amounts simply to the tossing up of a shilling as to which judge the unfortunate prisoner is to be tried before. We have heard to-day that

justice is done to the prisoner. According to Dr. Nicolson, justice is done in the condemned cell. If justice is done to the criminal in the condemned cell, then an injustice has been done to him in the court of law. It is ridiculous to say that it is justice to sentence him to death, because someone is going to look into his case and give evidence *not on oath*—someone who, before judges, would only have been able to give testimony that would send the man to death. I do not consider that a proper mode of doing justice. I have read the "Journal of Mental Science," and noted that Dr. Hack Tuke repeatedly insisted on the first importance of the examination of prisoners by a competent medical man as soon as possible after the crime is committed. Dr. Nicolson tells us that is radically wrong—that he should be examined after he is condemned to death. [Dr. Nicolson again demurred.] That is what I understood, sir. There are many cases where a man is insane, and his insanity can be clearly proved at the time of the criminal act, but where, having been kept in prison for a time under regular dietary and so on, all symptoms of insanity will have vanished. Dr. Mercier has asked us to bring forward cases where injustice has been done. Surely Dr. Savage will recollect such cases. The men were not hung, but were condemned to death, although ultimately reprieved. Dr. Mercier has spoken about medical men refusing to give evidence. I understood Dr. Maudsley to say that leading men had refused in certain cases to give evidence because they knew that the evidence could not be in favour of, but against the prisoner. One word in conclusion. All that we all want is that justice should be done to the insane criminal. I think that can only be done by all the judges allowing all the scientific facts to be brought before the jury. I am not disposed to believe that it would be right to have an assessor. I do not think that would be allowed in England. It would relegate to an assessor the duty of a jury. We have also talked too much about capital crime to the exclusion of the numerous lunatics sentenced to short terms of imprisonment who come out only to repeat their criminal acts. This most important point has been emphasised by the latest prison reports, and deserves our attention.

Dr. NORMAN KERR—It seems to me, sir, that certain members of the medical profession have forgotten that judges have something to say for themselves. I think that the province of medical men is simply to give evidence, and it is for the judges and jury to see that it is properly considered. This is illustrated by the history of one form of insanity, delirium tremens. In 1867 Lord Deas, a Scottish judge, seemed to have been the first to recognize that there was disease underlying this condition. A landed proprietor was accused of murder, and Lord Deas allowed a reduction of the charge from murder to culpable homicide, an example which has since been followed in increasing proportion in Scotland and elsewhere. Amongst other cases in which a person was executed for a murder committed during delirium tremens, was one tried before Mr. Justice Manisty in 1878. That was the beginning of medical testimony with regard to this charge. If we come down a little later we observe an advancing recognition of the proved results of modern medical research. And only last week Mr. Justice Hawkins advanced a step further in connection with the case of Regina *v.* Adams, in which a farmer was tried for murder whilst suffering from delirium tremens. Mr. Justice Hawkins is reported to have said: "He looked upon drunkenness as no excuse for crime when that crime consisted of an unlawful act; but if a man by his frequent and constant indulgence in drinking caused such injury to his brain as to create disease within his brain—it may be that the disease was not permanent and recovered from time to time, as, for instance, in a case of delirium tremens—if during the period during which delirium tremens existed a man did an act which otherwise would be a criminal act, but by reason of the temporary delirium tremens he did not know or was prevented from knowing the nature and character of the act which he did—if it was a wrong act—in that case his labouring under a defective reason or disease of the mind, called delirium tremens, would exempt him from the criminal consequences of his act; just as in the same way as with an ordinary insane person from the visitation of God or pure accident the law applies to the man who is suffering from delirium tremens, precisely in the same way as a man who is permanently insane." The issue was that the man was acquitted of

the crime on the ground of insanity, and has been sentenced to be detained during her Majesty's pleasure. What was first used as a plea for reduction is now used as a plea for acquittal. If we have judges who do this in the case of temporary insanity, have we not the greatest hope that there will by-and-by be such a further evolution in the judicial mind that no person will be convicted where he is proved to be suffering under any form of insanity. We, therefore, instead of bearing too hard upon legal administrators, who were in a position of great difficulty and had not yet received a unanimous or even preponderating opinion of the medical profession, ought to believe that in the future, as in the past, there will be the most thorough recognition of all forms of medical evidence on the subject of insanity.

Dr. SAVAGE—With others I feel, sir, that I must congratulate Dr. Maudsley on the paper he has read to us. Of course I praise it because I agree with him. I wonder that more has not been said on the scientific side—for instance, on the very important question that there is a difference between the motors of mind. Dr. Maudsley has pointed out how frequently an act follows a feeling and has no real relationship to will, the power of control being lost; and he has referred to love as the outcome rather of feeling than of reason. All of us, especially those practising among the insane, recognize the power of feeling and the powerlessness of reason. Man is not altogether a reasonable animal; in fact, there are grounds for thinking he is rather a non-reasonable animal; and one feels that the attempt to gauge his responsibility by taking reason into account rather than feeling is wrong. One danger is that we, not being satisfied with the definition that has been submitted by the law, may be induced to produce another definition; but I think that if we get rid of the dogma that consciousness of right or wrong is the test of responsibility, we shall not be weak enough to substitute any other. I was very much struck with what Dr. Orange said to me the other day. "I do not believe," he said, "in criminal insanity." It was an astonishing statement. "I believe," he said, "in the criminal insane." That is practically what we are coming to—that every individual is not to be tested by a standard of insanity or criminality, but by the conditions which have led up to it. Most emphatically do I agree with Dr. Maudsley when he speaks of the harm that may be done by believing too much in this new science of criminology. One believes that a man is a potential criminal just as he is a potential saint. There are certain individuals who are degenerate, but it is not enough to say that a man is degenerate to prove that he is irresponsible. We want to do away with the present test. We are a rather conceited profession; we believe we know the truth, and that people should bow down and accept our dogmas. The public have only a partial belief in doctors; they believe in themselves, and therefore I am afraid that the idea of having medical assessors who would, in effect, assume the functions of a jury, would not fall in with the common-sense of the English nation. We have got to do with insanity and criminality and a jury; and I believe what Dr. Maudsley has said, that we want to be able to prove up to the hilt what we know. I entirely agree with Dr. Weatherly that it is unfortunate that judges differ from one another so materially that, whereas one will allow you to say definitely "Having examined A. B., I have come to the conclusion that he is of unsound mind," another summarily stops you. "That is not for you to judge," he will say; "you have only to give facts." What we maintain is that the medical witness ought to be permitted to state the evidence clearly; that during the trial all the points indicating insanity and all the probable points in favour of the insanity of the prisoner should be brought out then; that the whole case should be tried and decided then, and not left to the consideration of a Home Secretary whether anything more can be done. In fact, we feel that, after all, we have to bring before the court the evidences of insanity, and that we must let the jury decide whether the insanity was sufficiently related to the crime to render the man irresponsible. And I cannot go as far as Dr. Norman Kerr, who appears to me to say that every person who can be proved at any time to have had any kind of insanity, and having any kind of insanity to have done a criminal act, is, in consequence of having had the stigma of mental unsoundness in any degree upon him at the time when he committed the act, to be therefore irre-

sponsible. [Dr. NORMAN KERR: "No, only during the time of his temporary insanity."] Well, but even that I cannot accept, nor will the British public consent under all conditions to relieve a man from the responsibility for a criminal act.

Dr. CLOUSTON—Mr. Chairman, Dr. Mercier asks for a single instance of injustice done under the present condition of the law. There is not only one instance, but so many that they cover half the number of people who have been solemnly condemned to death in this country. We find, as a matter of fact—and I quote it on the authority of Dr. Nicolson—that about one-half of all the criminals who have been tried and condemned have been found on medical evidence to be insane and relegated to Broadmoor Asylum. I say this is the most gross injustice, because in every one of these instances the evidence of insanity existed and was not submitted to the jury. I remind the meeting that there are five different courses adopted under the present system. The first is that, before the trial, the gaol surgeon, seeing a *prima facie* case of insanity, reports to the criminal authorities, and the man is then and there certified by two medical men to be insane and sent, not to Broadmoor, but to the ordinary county asylum. I do not know, sir, what happens in England, but, as is extremely common in Scotland, I constantly receive murderers from the Edinburgh gaol as ordinary lunatics, and for whom I do not profess any special responsibility whatever. This, I think, is an eminently common-sense course in cases of acute mania or melancholia; and the reason for this procedure is that the criminal authorities recognize that the man cannot be properly treated for his disease in gaol, so they send him to Morningside. The second course is that, before the trial, the question as to whether the prisoner is able to instruct counsel is decided. In England this is placed before a jury; in Scotland the judge decides it. Medical evidence is brought forward. In Scotland, and now also in England, I understand, the Crown sends for one or two medical men who know something of insanity. They examine the case and are told by the Crown, "We simply want the facts; we don't want prejudice; we don't want to hang the man or to let him off." Evidence as to the man's sanity or insanity is therefore given, and I fail to understand the great importance which some attach to the set form of words to be put before the jury. There is no set form of words. Was the man insane? Was the man responsible when he did the crime? But we are subject to cross-examination. Our facts are placed before the judge or jury, and are taken for what they are worth. The third is the course so much in question, where the man is tried; and whether there is or is not a *prima facie* case; it often happens that no evidence is really brought before the jury as to the prisoner's mental condition. In other cases the evidence is conflicting, and—a most important point—in the ordinary course no special pains up till recently was taken by the court to secure such medical evidence as would have weight and authority, and would be absolutely impartial. This is the point that seems to require remedy. And in connection with that I cannot help referring to the fact that nowadays our gaol surgeons are required to know something about mental diseases and their treatment. I believe, sir, that if our gaol surgeons had been, and were now, fully instructed in this matter, half the scandals which have arisen would never have taken place. And with regard to the evidence to be given I may say that I do not agree with those who say that the employment of assessors will scarcely work in this country. They are regarded with some suspicion, and they are undoubtedly free from cross-examination, except quietly by the judge—the public do not feel that they have been subjected to that process which we call cross-examination. But what, sir, can be the objection, not only before the trial but during the trial, for the court, if there is any case made out for insanity at all, to appoint two medical men to examine the case—even after the trial has begun (I have seen it done), and let these men be put in the witness-box to give their evidence and be cross-examined. They come with a certain air of impartiality; it is known they are not employed for either side, but are there simply to explain the facts. The fourth procedure brings forward a question which I am surprised has not been alluded to. Is it a light thing, Mr. Chairman, to have the verdict of her Majesty's pleasure passed on anybody, and to have to go to Broadmoor under

the kindly and judicious care of Dr. Nicolson for the whole term of one's natural life? [Dr. Nicolson denied this statement, and stated that six or eight were discharged from Broadmoor every year.] Prisoners will beg for imprisonment in preference to Broadmoor or Perth. I think "Her Majesty's pleasure" verdict is one that has been far too rigid in the past. It should not mean Broadmoor or Perth alone, but a county prison, the prisoner to be afterwards restored to his liberty and work in the community. There was lately the case of a boy who set fire to a public school. My position and that of my colleague, Sir Henry Littlejohn, was this, that the lad was practically an imbecile; there was postponed development of his controlling faculties; and that there was every reason to suppose that, by education and developing, he would become an ordinary responsible member of society in a year or two. There was a consultation between the counsel for the prisoner and those for the Crown before the trial. One thing impressed me. Everybody said, "Don't make him out to be insane or irresponsible. Let us plead guilty and trust to the mercy of the judge." But then much depends upon the particular judge. And that is really the question. We should not have the personal equation coming into the calculation at all, it should be eliminated as far as possible; we should not have to trust to chance. The lad, however, pleaded guilty, and Sir Henry Littlejohn and I were called into the witness-box and allowed to give evidence of the lad's mental condition in modification of sentence. This is a most illogical proceeding, but is it not the common-sense proceeding, and would it not in any case meet the circumstances? The public was satisfied with the result, and that, after all, is what we have to meet. The fifth case is the worst of all; but, unfortunately, we cannot object to it. It relates to the prerogative of mercy. The man is sentenced to be hung, and then an irresponsible medical man is sent down to examine him and report, the case resting with the Crown. With regard to these matters I would sum up by saying, Let us claim that responsible medical men should be selected by the court to make a report subject to cross-examination during the trial. With regard to alcohol, sir, there is a very curious fact. If a man drinks for a fortnight and delirium tremens ensue, during which attack he commits a crime, he is found not guilty; but if he gets drunk and does the deed while in that condition, he is condemned. This seems unreasonable. I am quite certain that, in attempting to discuss the general question, we should simply say badly what Dr. Maudsley has said supremely well. The only point in which I differed with him was in his somewhat disparaging dealing with the modern science of criminology. I admit that criminologists have made an extraordinary number of mistakes, and that a great many of them are extremely foolish persons, but I think we should most carefully guard against throwing cold water on this new study, which will result in very great benefit to the public.

Dr. SHUTTLEWORTH—I wish to call attention to the responsibility of those suffering from imperfect development of the brain and mind; and more especially of those parts of the brain which are inhibitory in respect of moral conduct. A considerable amount of prominence has lately been given to this subject by the occurrence, not only of the case cited by Dr. Clouston, and the case of a well-connected youth in London, but also of crimes of a sexual character which, no doubt, are to a certain extent connected with imperfect moral control, really of an organic character, dependent, I mean, upon imperfect development of the brain. The difficulty with these cases very often is that it is only a partial arrest of development. Intellectually these cases are sometimes very fairly advanced. The cases of moral imbecility one is called in to advise upon, are most difficult. There are the cases, for instance, of children whose education goes on to a considerable extent, and who are able perhaps to take part in the curriculum of a public school; but they steal and lie and even set their school on fire. If these cases come into court the result is most uncertain. This fact very much impressed me in connection with an experience I had when Medical Superintendent at Lancaster, when one of the patients, an imbecile youth, being habitually waked up at night by another patient pulling the bedclothes off him, got up and knocked his tormentor down on the floor with such violence that the skull being thin gave

way. The case was ultimately tried by Mr. Justice Stephen, who, with his usual acumen, simply called upon me to state whether the boy was able to understand the nature of the criminal proceedings which would follow such an act. He did not ask me whether he understood the nature of the act. I was able to say that he was perfectly unable to understand the proceedings necessary for his defence in a criminal trial. He merely bound him over to appear when he should be in such a state of mind as to be able to go on with the trial, and the patient was committed to the care and responsibility of his father. I quite agree that in some cases of moral responsibility so-called it is rather a dangerous doctrine to say that such cases should entirely escape from punishment. I think myself that "knowledge"—quoting now from Mr. Justice Stephen (Vol. ii., Chap. XIX., p. 155)—"has its degrees like everything else, and implies something more real and more connected with conduct than the half knowledge retained in dreams. This last observation is specially important in connection with the behaviour of idiots and persons more or less tainted with idiocy. Such persons will often know right from wrong in a certain sense, that is to say, they will know that particular kinds of conduct are usually blamed, and will be punished if detected, but at the same time they may be quite unable to appreciate their importance, their consequences, and the reasons why they are condemned, the suffering which they inflict and the alarm which they cause." So far as I have seen with regard to the special class of imbeciles coming before the courts of justice, although the procedure is bad the results are not so bad as might be expected, because the judges are ready to receive evidence of arrested mental development and also to take into account the environment, which often make the difference between criminality and irresponsibility.

Dr. YELLOWLEES—Why is it, sir, that we see so repeatedly this unjust and anomalous thing—a man publicly condemned to death and afterwards acquitted on private investigation? I believe the real reason to be this, that both juries and lawyers are still under the conviction, which Dr. Maudsley so properly condemned, that there is a hard and fast line between sanity and insanity, and that a man must be either quite mad and quite irresponsible, or quite sane and answerable to law in all things. In reality insanity, like all other diseases, *varies greatly in degree*, and I believe that only in recognizing this do we get the true solution of the difficulty. I am very thankful that it has already been to a considerable extent recognized in Scotland. First of all, it has been often recognized by the Crown consenting to receive a plea of manslaughter instead of murder, leaving it to the judge to modify the penalty as he thinks fit. It has been recognized by the verdict of juries recommending the man to mercy on account of his mental condition, although they could not acquit him. It has been recognized, too, in the verdict of the judge. It has been recognized in a yet more important manner in the case of Laurie. After his trial and condemnation the verdict was reviewed by the Crown. There was no question about the committal of the deed. The plea of insanity was never raised at the trial. But after investigation by the Crown and report subsequent to the man's condemnation the result was, not acquittal on the ground of insanity, but a commutation of sentence to penal servitude. That is to say the man was condemned, held guilty and punished, but not punished to the same extent as a perfectly sane criminal would have been. I believe very strongly that only by recognizing this great fact that insanity is a thing of degree, and that partial insanity should imply only partial responsibility and partial guilt, only thus is any practical solution of this matter possible. Some one will say, how can we measure human responsibility? Well, we cannot. But, after all, what is human justice but a rough attempt to do this, and to assign the penalty which each case demands? Only omniscience can judge perfectly, but I believe that practical and right results will ensue on a recognition of this central truth.

Dr. USSHER (Australia)—It may interest the members of this section to hear that in Australia it is no uncommon thing for a prisoner to call through his counsel for the appointment of a board to examine him before trial for a capital

offence. In the case of Colston, who murdered a man and his wife subsequent to a debauch, prisoner applied for this. The Treasury were against it, but his trial was held over for four months, during which period he was under observation. Three examined for the Crown and three for the prisoner. I was for the Crown and favoured his trial as a murderer against the supposition that he was insane. He was ultimately hanged. In another case, owing to the evidence that was being given by two gentlemen, a magistrate suspended the sittings for four hours, during which he called to his aid two specialists to examine the prisoner before he would go on with the case. In the end the prisoner was acquitted.

Dr. OSCAR WOODS—I am puzzled by certain statements made to-day. What is the practical effect of the present law? Dr. Mercier asked. I do not wish to say it is bad, but, at all events, it is uncertain. I venture to say that in nine-tenths of the cases mentioned by Dr. Nicolson, and which he has been asked to examine after trial, there was a miscarriage of justice. Evidence was brought forward then which ought to have been led at the trial. If in England and Ireland there were a universal adoption of the Scottish procedure, and all the judges acted similarly, I do not think there would be much reason for complaint; but, while the criminal has to run the chance of being tried by one or two judges who will not allow the medical man to give his evidence fully and who will not lay it before the jury leaving them free to judge what deductions should be made from it, I think it is unfair. Dr. Mercier is anxious to have cases cited. He will recollect that last year I instanced a man, tried for murder, in whose case the judge would only allow the question to be put exactly as it was decided in the M'Naghten case—"Did the man know the difference between right and wrong?"—and he would allow no other evidence to be given. When the jury showed extreme disinclination to find the verdict he three times recalled them, read the law, and said they had no other course than to acknowledge the man insane and that he could not be hanged. Dr. Mercier, at that time, stood up and said it was another instance showing the necessity for an alteration of the law, and yet he is evidently now convinced that there is no such necessity.

Dr. DOUGLAS—The important question to be considered, Dr. Mercier says, is whether or not the law should be altered, and I put it rather in the form of a query than of giving an opinion on my own part, hoping that Dr. Mandstley or someone else will help us to come to a conclusion. Dr. Mercier said the law as passed by Act of Parliament is a bad law, it is not in conformity with medical science and medical opinion of to-day, but practically as administered it is a good law and injustice is not done. During Dr. Mercier's absence from the room, however, Dr. Clouston and others have shown conclusively, it seems to me, that the law has greatly miscarried in regard to justice and is not so good in its administration as Dr. Mercier would lead us to believe. Then, sir, law, like everything else, is subject to a process of evolution. It may be—and I will admit, at least for the sake of argument, that when this law was framed it was to a great extent in conformity with medical opinion and medical science. But, sir, it is no longer denied that it is no longer in conformity with the medical opinion and the medical science of to-day, that as the Act of Parliament stands it is unjust and causes injustice to be done. If, in the process of evolution, the judge-made law has come almost abreast in the hands of some judges, at least, of the medical opinion of to-day, surely the time may have arrived when we may bring the law according to Act of Parliament into conformity with that opinion; because such is the process, I take it, by which laws have been altered and brought into conformity with public opinion and with the latest advances of science.

Dr. RAYNER—The meeting, I think, is generally agreed that at least in fifty per cent. of the trials of insane persons for murder injustice is done (no, no, and hear, hear). At all events in a large proportion injustice is done in this way—that a man is condemned unjustly although he escapes hanging afterwards. That is the point of injustice I refer to, and I think the judge is responsible for that injustice. The question is how to amend that. We cannot eliminate the personal equation from our judges, and we cannot get rid of their prejudices—which, I think, are much more important, as has been sug-

gested; but I think we can bring pressure to bear on them which would soon cause the amendment of their prejudices to some extent; for if in every case of this kind where a prisoner was unjustly condemned and afterwards let off the attention of the Home Secretary was drawn to it in Parliament, and the reasons inquired for, the judges would very soon take care that miscarriages of justice did not occur in that way in their courts, and would soon adopt the practice of calling in assessors.

Dr. MAUDSLEY in reply said—It is not necessary, sir, that I should do more than make a very few observations, attempt anything direct in the way of reply, for from the general trend of the discussion I gather that we are pretty well agreed. Practically all we wish is that in each particular case all the facts should be placed clearly and plainly before the court and it receive the best scientific assistance in dealing with them. We wish that these facts should be submitted without prejudice to the jury; and what I argue—and I gather that the great majority of those present here agree with me in arguing—is that while the “right and wrong” test is put before the jury, these facts are not clearly placed before them; that, in fact, they are prejudged—prejudged, as I said, exactly as if a particular test of poison were imposed on the jury in trying a case of poisoning. Then we are met with the statement that some of the judges give immense latitude, and we have had reports from newspapers in which individual judges have done that. Mr. Justice Hawkins has been mentioned as a severe judge who has given that kind of latitude. Now Mr. Justice Hawkins happens, I think, to be one of those judges who have expressed in strong terms their condemnation of the “right and wrong” theory. In that he ranks with the late Lord Justice Coleridge and with Lord Blackburn, so that we must not draw too large an inference from the particular feeling of Mr. Justice Hawkins. If all the judges agree with him we shall have nothing to say. But his opinion is nothing to the point so long as there are any judges who tie us and themselves down to this rigid and exclusive test. That is what we object to and wish to have done away with. When that is done away with there is really nothing to argue, but as long as there are judges who continue to use the old formula injustice will be done; for it is an injustice to go through the solemn parade of justice and sentence a man to death and then, after private inquiry, declare him irresponsible and send him to Broadmoor. What happens with regard to the judges in my experience is this, that when a judge has been on the bench for a considerable number of years he is converted and abandons the “right and wrong” theory, but when a new judge is appointed he puts it forth in its extremest terms. It is not till he has been on the bench for some time that his mind becomes enlarged and instructed by experience and he does what we wish them all to do—abandon the discredited test and place the facts before the jury.

The Insanity of Love, a Study of Ariosto. By H. KORNFIELD, M.D., Corresponding Member of the Medico-Psychological Association.

“Set me as a seal upon thine heart, as a seal upon thine arm: for love is strong as death; jealousy is cruel as the grave: the coals thereof are coals of fire, which hath a most vehement flame. Many waters cannot quench love, neither can the floods drown it; if a man would give all the substance of his house for love, it would utterly be contemned.”

Although it is true that the mind and the body are in intimate connection, and although every mental action is accompanied by some physical process, yet I have always held that the soul is not localized in the brain—that human soul with functions superadded to thinking and remember-

ing. I have already put forward my theory regarding this question,* and now seek to prove it by a special study of *Love*.

I shall approach this study by reference to a description of this passion by one of the greatest of poets. One is surprised to note an apparent omission in psychological treatises—the omission of adequate mention of what Ariosto has written on *Love*. The works of Shakespeare have been submitted to exhaustive psychological analysis, and it is fitting that genius should be honoured as the highest kind of teaching. Great as the progress of the human race has been, however, the average man of to-day is as far removed from the highest intellect of his time as from the genius who lived thousands of years before him. Their immortal works are not merely of historical interest to posterity, and from this point of view the Bible will ever be the standard of what is right, good, beautiful, and noble.

The *Orlando Furioso* is well worthy of psychological analysis. To understand the insanity of the hero it may be necessary to recapitulate the principal events described. It is well known that the *Furioso* is the continuation by Ariosto of the *Orlando Innamorata* by Bojardo, and that both works are an illogical mixture of Paganism and Christianity—illustrated to this day by the pictures on the walls of the Vatican. They are reminiscent of the mythologies of Greece, Italy, and Persia. The sword, physical strength, and physical beauty form the mainspring of the action. Books are reckoned mysterious, enduing the owner with a sort of demoniacal power. Thus we read of the golden spear of Diana, the arrows of Cupid, harpies, and monsters, and can well understand the question asked by Cardinal Ippolito d'Este, to whom Ariosto dedicated his work, "Messer Lodovico, where hast thou found record of so much foolery?" A deeper sense, however, must be sought in these mythological tales than is apparent on the surface. We can recognize in the witchcraft of Circe the power of uncleanly life, in the influence of Nausicaa the higher power of elevating thought. Beyond all the foolery contemned by the Cardinal there is the sweet song, there are the noble heroes whose conduct induces a certain sympathy in the reader.

* "On Natural and Abnormal Death," by Samuelo. Berlin, 1877. See also "Hamlet," "Paralyse du Irren;" and Ap., "Handbuch d. Ger. Med.," 1884.

In Bojardo's poem Angelica, daughter of the King of Cathay, appears at Paris at the Court of Charlemagne, and seeks by enchantments to bring shame on the nobles there assembled. Angelica is forced to return to Cathay, and Orlando, desperately in love with the enchantress, is saved by her when in deadly peril. By potent elixirs Angelica is made to love Rinaldo, and Rinaldo to hate Angelica. Orlando is imbued with a passion for Angelica, and does mighty deeds for her, never having shown such hardihood before love had inflamed his heart. Bojardo leaves his heroine in the power of Charlemagne, to be given as a prize to the most valiant of his warriors.

Ariosto takes up the tale at the point where Angelica, foreseeing that the Saracens will conquer the Christians, flies from Charlemagne, and Orlando goes in quest of her, a prey to regret that he did not seize her by force instead of being ruled by the Emperor. He must love her, although he knows that this love will make him miserable. He sees the best and follows the worst.* He feels the fire of love and the chill of jealousy.

We now enter on the description of the insanity of Orlando. Full of fears regarding her fate, haunted by thoughts of suicide (Cant. vii., St. 71), the feeling that Angelica is in extreme danger overcomes him suddenly in the night. He rises from his bed in a kind of clairvoyant state, and hastens to her rescue without taking leave of the Emperor. The ungrateful Angelica is not yet to be won; indeed, she is united for life to a Saracen (Medor), and returns from the forest where she had met him to her native Cathay. Orlando, ever thinking of his love, happens to pass through this forest, and suddenly finds by signs that she is lost to him for ever—that she is sincerely in love with the unknown Medor and has joined him. The character of Orlando is depicted in the most graceful terms—he is refined, learned, wise, of great strength, but wholly blinded by love of Angelica. For her, an infidel, he deserts his Emperor, combats giants and monsters, is at enmity with his nearest friends, ever pardoning and forgetting her amours with others. She is a saint in his eyes, even in the most compromising circumstances. He trembles with excitement at the thought of her good name being endangered or when tortured by jealousy. But he is full of hope that she will crown his love by consent, and the shock of seeing

* Lib. I., Cant. ii., Stanza 29.

in the forest the words "Angelica—Medor" on every stone and tree strikes him suddenly and powerfully. He tries to explain away the inscriptions, but, in the midst of his endeavours, he reads certain erotic stanzas written by Medor in reference to his union with Angelica. He reads them three, four, six times, feeling his heart compressed as if by cold hands. Stupified, tearless, hoping that he is the victim of an artful lie, he tries to find rest in bed in the house of a neighbouring shepherd. The walls, the doors are covered with these amatory writings, and the shepherd, attempting consolation, gives Orlando the story of the loves of Angelica and Medor, showing him a ring formerly given by him to the faithless fair. This is the "stroke which severs the head and neck," and tears flow with lamentations and groanings. Restless and excited he rushes to the forest and remains lonely and miserable. The earth is his couch, he is without food. Tears cease to flow, they were the vital fluid escaping by the eyes, taking away pain and life together. "I am not he who shows my face; Orlando is dead, killed by the faithlessness of the most ungrateful of ladies." Wandering in the forest he finds the well where Angelica and Medor had met, and, inflamed by the sight, he destroys every stone and tree. He fills up the well and does not cease until he falls exhausted on the ground, breathless and streaming with sweat. With eyes fixed on heaven, silent and fasting, he remains on the ground sleepless for three nights. The pain increases and madness declares itself on the fourth day.

It will be observed that Ariosto interposes between the psychical shock and the manifestations of insanity, an intermediate stage during which mental and bodily sufferings combine to destroy the mind of Orlando. It is remarkably consonant with modern observations that his malady should proceed from melancholy to stupor, and so to insanity. And, likewise, the form of the disease in its early stages is quite properly described as of the nature of raving; later it takes on the aspect of weakness, with total oblivion of the former self and neglect of the necessities of life—in short, Orlando is reduced to the condition of a beast. We need not follow in detail the relation of his insane conduct. It will be sufficient to indicate that he begins by divesting himself of his famous armour, strips off his clothes, tears up great trees with superhuman force, kills all who attempt to resist him, catches wild animals and feeds upon their flesh,

skin, and hair, rides horses to death, and so on. At last, having swam from Gibraltar, he arrives in Africa, and his further adventures are told with humorous exaggeration.

Finally, Ariosto, in describing the recovery of Orlando, indulges in a satirical vein. Astolph, on his hippogriff, brings back from the moon a phial containing the senses of Orlando in a fine evaporating liquor. This much in deference to the popular belief in the influence of the moon; but the treatment of the lunatic is remarkably well told. He was finally overcome by a great force of people, restrained, and made to inhale the contents of the phial after seven immersions in the sea. He was shown that his will and power were not beyond ordinary means of control, and it may be that Ariosto made reference to the biblical account of the creation of man in the description of inhalation of subtle spirit.

Ariosto shows that love is the very opposite of hatred of life, that it is the best and highest of human feelings. The essential point of his teaching is contained in the question which he leaves to his readers to answer: "What is more expressive of madness than the undoing of self to ruin others?" No one has better sung the madness engendered by love than Ariosto, but there are other lines in praise of love which can never be surpassed, and which I have set in the fore-front of this essay, dedicated to the memory of my mother.

CLINICAL NOTES AND CASES.

*A Case of Ecchymosis associated with Insane Excitement.**

By W. R. DAWSON, M.D., Assistant Superintendent, Farnham House Asylum; late Assistant Physician, Royal Asylum, Edinburgh.

The pathology of cutaneous and subcutaneous hæmorrhage, apart from that of traumatic origin, is still, it must be admitted, far from clear. It has been shown, however, that almost all such hæmorrhages, from whatever cause, are primarily situated in the deepest layer of the cutis or most superficial of the subcutaneous tissue, and are due to actual rupture of vessels.† Diapedesis, although it may assist, is

* Read at the Annual Meeting of the Medico-Psychological Association, 1895. A paper on the same subject was read before the Medical Section of the Royal Academy of Medicine in Ireland, February 22nd, 1895.

† Unna, "Histopathol. d. Hautkrankheiten," 1894, p. 48, *et seq.*

but seldom the sole factor in the production of such hæmorrhages, and when it is so, the effusions are small, of slow growth, and situated in the papillæ or epithelium.

The rupture is found, according to Unna, in the thin-walled vessels of the cutis just at the point where the coats are about to become greatly strengthened as the vessels enter the loose subcutaneous tissue, and his deduction is that any cause (such as distension of the cutaneous vessels at a time when the cutis cannot expand) which would force the thin-walled segment of the vessel to extend beyond the shelter of the firm connective-tissue layer would be liable to produce rupture. This accounts satisfactorily enough for traumatic ecchymoses. On the other hand, there is evidence, although by no means quite conclusive, to show that the ecchymoses in purpuric disease, and perhaps also those which occur in the course of some zymotic diseases, such as enteric fever, are due to emboli containing specific bacteria.

But there still remain a considerable number of cases which do not fall into the categories of traumatism or specific disease, and of these some of the most interesting are the cases where the hæmorrhage occurs in the course of disease of the nervous system. Now, Unna altogether denies* that hæmorrhage can be due to changes in the blood itself, and he also, on *à priori* grounds, rejects the influence of disease of the vessel-walls, though in the face of the fact that ecchymoses are not uncommon in hæmic diseases, such as leucæmia, and in diseases associated with vascular change, such as nephritis, this contention can hardly be accepted without qualification. Apart from specific embolism and hæmophilia, the only other cause of hæmorrhage into the skin is, according to this authority, active and passive congestion, not alone, but in combination with each other or with vasomotor paralysis, and it is in this way—*i.e.*, by the occurrence of venous spasm simultaneously with arterial distension—that, he suggests, ecchymosis of nervous origin may be explained.

If, however, congestion could alone suffice to produce ecchymosis, one does not see why the latter is so uncommon. That it is uncommon would seem to indicate that a third factor is needed, *viz.*, some impairment of the walls of the vessels—even though this may be no more than a lowered vitality perhaps incapable of detection by the microscope—or less probably some altered condition of the blood itself.

* *Op. cit.*

It is when we turn to consider ecchymosis in nervous disease that the necessity for some such degenerative process to explain the phenomena becomes clear. Apart from insanity, there are three chief disorders in which hæmorrhage into the skin may occur—viz., epilepsy, hysteria, and locomotor ataxy. In the first named the hæmorrhages (which seem to be in most instances very small, and are possibly formed merely by diapedesis) must be due to the congestion of the fit, aided perhaps by the tightening of the skin due to muscular contraction, as vascular disease is excluded by the fact that they have occurred in young healthy persons, with a first attack.* Hysteric ecchymosis is not so easy to explain; but so far as it is not a mere diapedesis, it may perhaps be ascribed to change in the vessels due to the altered condition of the blood so frequently present, the immediate cause being either the congestion of a hysterical fit or a localized vasomotor paralysis. The whole subject is, however, mixed up with much imposture.

The hæmorrhage which occurs in tabes ("tabetic purpura") is, however, of a quite distinct type. It appears to come on in some cases without obvious cause, and may be very extensive, both facts pointing to vascular degeneration. Thus only in the case of epilepsy—probably the extremest possible form of mechanical congestion—can the hæmorrhages be certainly ascribed to this cause alone, and they are then, as we have said, usually small.

But it is in insanity that one would expect the clearest evidence of degeneration and the greatest frequency of ecchymosis, and consequently, it seems strange that so few cases of ecchymosis have been described. Dr. Savage † has published a case of symmetrical purpuric eruption on the legs of a general paralytic, and also (with Dr. Percy Smith) ‡ one of acute mania, speedily reaching a fatal termination, in which there were many ecchymoses, as well as hæmaturia and a hæmorrhagic subdural membrane. In both cases, especially the former, vascular degeneration seems indicated; but in the latter case there was also, of course, the cutaneous congestion due to excitement and muscular violence.

Non-traumatic symmetrical hæmorrhage of the face in an old dement has been described by M. Klippel §; and I have

* Crossmann, "Med. Times and Gaz.," 1876, ii., p. 723.

† "Journ. of Ment. Sci.," Jan., 1886, p. 507.

‡ *Ibid.*, p. 501.

§ "Lancet," 1885, ii., p. 815. (Abstract of article in "Ann. Médico-Chirurg." No. 8.)

recently seen a case where purpuric spots and extensive ecchymosis appeared on the legs of an old and feeble demented man, accompanying considerable œdema and some thrombosis of superficial veins.

The late Dr. Hack Tuke, in an article in the "Dictionary of Psychological Medicine," mentions cases of Dr. Bucknill's and of Mr. Green's, but does not give many particulars, and seems inclined to attribute them to scorbutic conditions. That scurvy may occur in a lunatic or neurotic patient is, of course, true, but this will certainly not account for all the cases. I have not alluded to hæmatoma auris as a form of subcutaneous hæmorrhage, and it is possible that a certain number of cases may really be so, though recent investigations* have increased the probability of the view that this lesion is in most instances primarily due to degeneration of the auricular cartilage. One fact of importance for our purpose has been brought out in the investigations alluded to, as well as in others, viz., the frequency of disease in the vessels of the insane, whether or not such as is capable of causing rupture. Of the ease with which *traumatic* effusions of blood into and beneath the skin can be produced in the insane, there can be no question.

The following case seems to throw light on some of the points which have been indicated, and for this reason, as well as on account of its rarity, has been thought worthy of publication:—

CASE.—A married woman, fifty years of age, stout and florid, and of a rather fair complexion, was admitted to the Royal Edinburgh Asylum in August, 1890, suffering from delusional melancholia. Her mother had suffered from epilepsy, and all the children of one of her sisters died in convulsions. She herself had led a hard-working steady life, but was excitable, and, though of a kindly disposition, was inclined to be solitary and unsocial. She had made several long sea voyages, but there is no record of her having ever suffered from malarial disease. The climacteric was late, and some endometritis, with uterine displacement, gave rise to pain and discomfort in connection with the uterus; but the immediate cause of her illness was an attack of influenza, about five months before admission—in fact she is one of the patients mentioned in Dr. Elkins' paper on that disease†. She first became emotional and querulous, was sleepless, and took causeless ill-will against persons, which gradually deepened to

* See paper by Drs. Middlemass and Robertson, "Edinb. Med. Jour.," Dec., 1894, p. 512.

† "Influenza as a Cause of Insanity," "Edinb. Hosp. Rep.," Vol. i., (Case 8, p. 315).

extreme delusions of suspicion and persecution. She had violent fits of crying, and sometimes struck her daughters, and finally became so noisy and destructive that she had to be sent from home.

On admission she was very miserable, crying loudly and volubly bemoaning her fate, and full of suspicious delusions, whilst at the same time conscious of her illness. In addition to the uterine sensations mentioned, she complained of giddiness, and weight on the top of her head; the heart's action was feeble, and the pulse weak and rapid (100), but the temperature was not raised, and no further abnormality could be detected.

After a transient improvement, lasting for some months, the patient relapsed and became noisy and unmanageable, and subsided into the condition in which she has remained more or less ever since, in fair physical health and very stout, but delusional and suspicious, and subject at intervals (mostly of ten days to a month) to attacks of violent angry excitement, during which she is very noisy and abusive, and has occasionally to be secluded. The excitement may last for one or several days, and is usually followed by headache, giddiness, pain in the chest, and sometimes palpitation, compelling the patient to remain in bed for a day or so, after which she is for a time quiet and comparatively good-humoured, but gradually works up to another similar explosion, a premonitory symptom of the coming storm being the production of voluminous letters, closely written and crossed. During these attacks the temperature has never been found above normal.

On several occasions during the first two years of her illness there appeared after such fits of excitement patches of erythema, symmetrical in distribution, and situated mostly on the arms, but also on the breast. They were perhaps merely local accentuations of a slighter general erythema also present. None were noted during the two following years, but this would not necessarily exclude their occurrence, as the patient was so very irritable that it was not advisable to interfere with her in the way of examination more than necessary. However, in the end of April, 1894, an attack of excitement having just passed off, an eruption of small purpuric spots was observed on the chest and back of shoulders, and immediately afterwards larger extravasations on one shoulder, both wrists, and just above the right knee, appearances which the delusional suspicion of the patient promptly fixed on as evidence of poisoning. Iron was administered, and there was no return of excitement or ecchymosis until the beginning of June. During the first half of that month there were repeated fits of excitement—four in all—and fresh ecchymoses kept appearing on the arms and elsewhere, the most notable being a large black patch, in the centre of which, under a pale spot, was a small hard lump. Round this patch, which appeared on June 2nd, and was situated on the right wrist, a slighter discoloration extended, covering the back of the wrist and hand. All the spots appeared like ordinary bruises, and varied in size from that just described to that of a threepenny

piece or less. On this occasion also some blood was evacuated by the mouth, but its source was not ascertained.

On June 26th the patient received an accidental contusion in the left iliac region, which caused some blackness and pain, but was not much complained of at the time. After the next fit of excitement, however, which occurred a week later, and was very violent, the discoloration assumed an intense purple-brown tint, and extended all over the lower left region of the abdomen and down into the groin. There was also much stinging pain in this region, which lasted after the discoloration had disappeared. In addition to this several spots appeared on the legs and one on the right forearm. Iron was again administered for a time, but the patient soon refused to take it, asserting that it was given to produce the spots. Lemons were also given with much the same result. Slighter excitement about July 24th was followed by the appearance of spots in the centre of the chest, and on the shoulders and thighs, and another fit early in August by a spot about an inch square in the right palm, extending to the back of the hand, a patch on the inner side of the right thigh, and a number of purpuric spots, with soreness, about the lower part of both calves and ankles. After an attack on August 13th a spot, which only lasted two or three days, appeared on the extreme tip of the tongue, and the gums were sore and looked a little spongy. This and the hæmorrhage from the mouth in June are the only instances of implication of the mucous membranes. At the end of August, again, excitement was followed by spots on the left hand, arm, calf, and breast. A fainting fit also occurred at this time, and the patient was confined to bed for a day with giddiness and "flapping of the heart." A large ecchymosis over the back of the left elbow and a small one in the middle of the forearm in front were noticed after another attack in the middle of September.

For the remaining facts I am indebted to Dr. Middlemass. A very violent outbreak took place about the end of September, and on the following day a number of ecchymoses were observed, one on the right upper arm being especially dark and well marked. After this no further outburst seems to have occurred for several months, and the patient was able to take part in the Christmas festivities. On the morning of February 5th she quite suddenly broke out into a fit of excitement, and a few hours later some slight ecchymoses were noticed, but there is a doubt whether these could have appeared after the attack. After this, very marked improvement took place in the patient's condition, and has persisted to some extent ever since. There have been occasional fits of excitement and eruptions of hæmorrhagic spots (the last on July 17th), but the former have been less frequent and less severe, and the latter much less marked. In fact she has so far improved as even to suggest the chance of her ultimate recovery.

Thus every attack of excitement since April, 1894, has been followed by, or at least associated with, an eruption of spots of ecchymosis, and no such spots appeared in the

intervals. The *exact* time of their appearance could not always be ascertained, as information regarding them had to be awaited from the patient herself. The outbursts, which sometimes showed a rough fortnightly and at other times a monthly periodicity, but were occasionally quite irregular in their recurrence, followed in a general way the type above mentioned. The spots varied greatly in number, size, and position, as may be gathered from the preceding account. They rather favoured the extremities and never appeared on the face; and on only two occasions, as before observed, were mucous membranes involved. Sometimes there was decided symmetry, but most often not. The larger spots had exactly the appearance of bruises, both when fresh and as they faded, being at first of the bluish colour characteristic of hæmorrhages into the deeper strata of the cutis—*i.e.*, in the typical position of those due to rupture of vessels. In the case of the large hæmorrhage of semi-traumatic origin, however, the brownish colour indicated that the blood had reached a more superficial plane. The temperature, whenever taken, was found to be normal. The heart's action was rather feeble. No abnormality has been found in the urine. I only obtained a sample of the blood on one occasion, and had to examine it under such disadvantages that nothing could be made of it, except that there appeared to be a large number of microcytes. The patient's irritability rendered such investigations practically impossible.

In seeking to elucidate the causes of these curious phenomena, a number of facts must be kept in mind. We may safely exclude all thought of a bacterial origin for the hæmorrhages; the low temperature and normal urine, together with the invariable connection with the outbursts of excitement, effectually negative such a theory, so that we have to fall back on congestion, vascular disease, and, possibly, altered conditions of the blood. Probably all three were effective. Thus, the patient was of a fair, florid complexion, a type especially liable to cutaneous hyperæmia; she was at a time of life when flushings are common, and she suffered from attacks of excitement of a somewhat hysterical character, such as are known to cause dilatation of the cutaneous arteries. At the same time the heart was weak, and the shouting would further tend to retard the vœnus return. We have, then, the combination of active and passive hyperæmia, which, according to Unna, may suffice to produce rupture, and which in this case did give rise to erythema, as has been related. Actual ruptures did

not take place for four years from the commencement of the disease, and since then have invariably accompanied excitement, which facts compel us to assume the existence of some gradual vascular degenerative process. This assumption is further borne out by the facts that the patient was suffering from a form of insanity—melancholia—in which disease of the circulatory system is stated to be common,* and that where there certainly was some actual unsoundness of the blood-vessels, as the result of traumatism, the tendency to hæmorrhage was enormously increased. Regarding the nature of the degeneration it would, of course, be idle to speculate in the absence of histological evidence, but it would seem that it must have been of no irrecoverable degree, the ecchymoses having been so much less marked of late. Lastly, Dr. Macphail states † that periodic attacks of maniacal excitement cause temporary deterioration of the blood, the number of red corpuscles and quantity of hæmoglobin being both reduced, while the number of microcytes is increased during the attack. The latter condition, at all events, appeared to be present in this case, so that hæmic deterioration may also have played a part, whether by producing a temporary further lowering of the vitality of the vessel-walls, or by change in the consistence and coagulability of the blood. That the principal causes were cutaneous congestion acting on degenerated vessels seems to me most probable, and I believe the majority of such cases are capable of being similarly explained, without the necessity of having recourse to that *refugium peccatorum*, direct trophic nervous influence.

In conclusion I have to thank Dr. Clouston for permission to use this case, and various past and present members of the Morningside staff for sundry details regarding it.

Severe Maniacal Excitement following the Administration of Salicylate of Soda. By G. B. ROBINSON, M.B., Assistant Medical Officer Northumberland County Asylum.

F. K., aged 40 years, single, a female patient in this institution for a period extending over 18 months, labouring under delusional insanity. Has always been a simple, quiet, inoffensive woman, calling for no special treatment. She is said to have had rheumatic fever when aged 18 years. There is a mitral systolic murmur audible at the apex of the heart.

* Dr. C. F. Beadles, "Journ. of Ment. Sci.," Vol. xli., p. 33.

† "Dict. of Psychol. Med.," Art. "Blood."

In April of the present year she had an attack of sub-acute rheumatism, located in her wrist joints principally. Salicylate of soda was administered in 20-grain doses every four hours; six doses were given in all. The drug was then withheld on account of the exceptional mental and physical state into which the patient had passed.

She became restless and incoherently talkative, could not be kept in bed, and finally passed into a most excited and delirious condition, when she was placed in a single room. In this room she indulged in most disgusting and immoral expressions, quite foreign to her whole mode of life here and previous to her admission, as far as can be gathered from her relatives. Certainly whilst in the asylum her life and conversation have been an outward expression of her belief in "a mission from God" and of "love, pure and undefiled."

Coincident with this obscene raving, the patient was tearing strong nightdresses with her hands and teeth, rolling and tossing about among the mattresses on the floor of her room. The constant attention of two nurses was required, their skill being taxed to the utmost, and, in spite of these precautions, the patient sustained considerable bruising over her head, body, and limbs by reason of the violent inco-ordinate and purposeless muscular activity which supervened, and resembled intense choreiform movement.

The inordinate and extensive superficial ecchymosis may, perhaps, be accounted for by the predisposition to hæmorrhage which has been observed in some of these cases, as recorded by Dr. Shaw in "Guy's Hospital Reports," and also mentioned by Hilton Fagge.

The patient's pulse could not be counted, the heart's action being so extremely rapid; the skin was sweating freely, the last thermometric record of temperature obtainable being 102.4° F., whilst the previous temperature had been uniformly about 101° F.

The redness and swelling about the affected joints disappeared, and this, combined with the violence and freedom of joint movement, led one to think there was coincident subsidence of pain.

Some 36 hours after withdrawal of the salicylate of soda she was lying quietly in bed greatly improved, having slowly passed from extreme maniacal excitement, through restlessness, into quietude. Her pulse could be counted with certainty (130 per minute), was soft and irregular. The bedclothes, which previously had been quite useless, were now not disturbed; the patient appeared much depressed and exhausted mentally and physically. She stated that she had no pains in her joints, and examination showed no signs of the inflammatory affection persisting. Treatment during the stage of delirium and exhaustion consisted of the administration of whisky, milk, and eggs.

Later, with the return of the synovitis she was placed on alkaline remedies, viz., bicarbonate of potassium and iodide of potassium. Her temperature ranged between 99° and 101.5° F., and after a week or ten days of rest and quietude the temperature slowly came down to

normal, ease was experienced by the patient, and she recovered without further relapse; and has remained in that mental and physical state in which she has been since her admission, viz., one of weak-minded amiability and resignation.

This case is interesting, inasmuch as salicylate of soda is a drug universally employed for the treatment of a very common and widespread disease; and, fortunately, cases with cerebral symptoms of such a pronounced and dangerous degree are exceptionally rare.

I have searched the "British Medical Journal" of the last ten years, and although the early cerebral symptoms of buzzing in the ears, headache, and deafness are noted in the very few cases reported, I failed to find any record of cerebral symptoms of such severity as those in the present case. That the symptoms were not those of hyperpyrexia is clear from the presence of restlessness and delirium before the highest temperature (102.4°) was recorded, which is not that of hyperpyrexia.

It has been said that salicylate of soda, if carefully administered, has seldom or never produced serious results. A discussion on this drug, held at the Royal Medical and Chirurgical Society of London in 1890, elicited the experience of London physicians, and it is interesting to note the diversity of opinion on the subject of delirium, following the administration of salicylate of soda in a moderate dosage of 20 grains every two or three hours. In one direction it was thought that "delirium was by no means an uncommon complication," whilst in other directions "delirium had rarely been seen."

This discussion followed three months after the experimental research as to the general comparative action of natural and artificial salicylic acids and their salts of sodium, by Charteris and MacLennan, the result of which investigation was that the toxic properties were attributed to the impurities of the phenol employed in the synthetic preparation of the artificial acid, which in rabbits produced death by convulsions, whilst in man restlessness, confusion, and delirium were noted as toxic symptoms.

In my case the artificial acid was used, as is the common practice.

The occurrence of insanity, rheumatism, and choreiform excitement, with cardiac irregularity and rapidity in the same patient, suggests a tempting hypothetical relation; but I have failed to ascertain definite hereditary predis-

position to any of these diseases, or mutation in character of hereditary diathesis, with the exception of the statement that the mother was a very fretful, anxious, and indulgent woman, more especially toward the childhood and adolescence of the patient.

It is difficult to incline to the belief that the state of insanity could produce any special predisposing tendency to the great nervous and muscular excitement of this case, as the drug is commonly used here in numerous and similar cases without any bad symptoms. As a case in point, may be mentioned that of a woman labouring under the same class of mental disease, viz., delusional insanity, with a very similar and synchronous attack of rheumatism, where the same dose and quality of salicylate was being taken with the same frequency, but without the slightest effect as regards cerebral symptoms, although the woman is of a much more unstable, irritable, and impulsive nervous temperament, and of the two women would have been, in one's estimation and expectation, the more liable to an outburst of maniacal excitement under such circumstances.

OCCASIONAL NOTES OF THE QUARTER.

The Annual Meeting.

The fifty-fourth Annual Meeting, held in London, has fully justified the prolongation so successfully inaugurated at Dublin last year. The number of subjects dealt with has been greater than at any meeting antecedent to this extension, whilst the merit and interest of the communications made are testified by the extent and keenness of the discussions.

The demonstrations, by Dr. Rivers on experimental psychology, and by Dr. W. F. Robertson, of his very beautiful microscopic preparations, excited general interest.

The splintering of lances between two such doughty champions as Drs. Clouston and Batty Tuke was also awaited with interested expectation, which the tilt fully justified. We hope to see many similar carefully prepared disputations on vexed questions, and expect an answer to Dr. Clouston's concluding challenge.

The Presidential Address, as was to be anticipated, bore the impress of the independent thought, and wide observa-

tion, which distinguish Dr. Nicolson, and will probably serve as a wholesome check to those who have been rapidly reducing the study of criminology to an object *pour rire*. The discussion on the Address showed how fully the President was in touch with the views of British medical opinion in this respect.

The presentation to our late Treasurer, Dr. Paul, was a very pleasant feature of the meeting. The very handsome silver bowl, with the accompanying illuminated vellum, we trust, may long serve to remind Dr. Paul of the esteem in which he is held by the Association and of the appreciation of his valuable services as Treasurer during the long period of thirty-three years.

The loss which the Association has sustained by the death of our late Editor, Dr. Hack Tuke, must have impressed itself on every member present, and will long be felt on these occasions, on which his genial personality exercised a widefelt influence. We trust that the memorial which is being raised, may lastingly perpetuate our affectionate regard for him at our annual gatherings, and so "keep green his memory."

The excursion to Broadmoor on Saturday drew a large number of members, who were genially received and most hospitably entertained by the President. The visit was of great interest to many members, who thus obtained an opportunity of renewing their acquaintance with cases whom they had previously known and of personally seeing or conversing with patients whose cases had long been familiar. The excursion was most successfully planned and was thoroughly enjoyed.

The visit to Virginia Water on Monday was also well attended. The architectural and decorative aspects of modern hospitals for the insane are here to be seen in their fullest development, and it must have been of interest to many to see the structural adaptations which have been made since the opening of the institution. Here too the visitors were most hospitably entertained, and the afternoon drive through Windsor Park added greatly to the enjoyment of the day.

The Association dinner of the present year was unusually well attended and was remarkable for the number of distinguished visitors, prominent amongst whom was the Speaker of the House of Commons. The success of the evening was largely due to the exertions of the President, who spared no effort to make the occasion one that should help to extend the position and influence of the Association.

British Medical Association.

The Psychological Section of the British Medical Association gave the strongest evidence that the preceding meeting of our Association had not exhausted the literary powers or interest of our specialty. The attendance at the sittings was large, and bore a favourable contrast in this respect to many other sections. This is not surprising when the subjects of the papers and the reputation of their authors are considered.

The Presidential Address, Dr. Maudsley on Responsibility, and Dr. Gowers on Epilepsy could not fail to be attractive; the less prominent papers were also of great interest and value. There was, too, an unusual number of communications of the kind which tend to bring the specialty into more close relation with the profession in general; this, indeed, should always constitute the main object of the sectional meetings of our specialty.

Gratuities.

The question of obtaining gratuities to the families of employés who have lost their lives in the service of an asylum for the insane, was raised at the Annual Meeting. This subject needs prompt consideration and action on the part of the Association, since such cases are evidently by no means rare.

The principle of the liability of the employer in similar circumstances is now recognized in law, and there should be very little difficulty in obtaining legal recognition of the claims of asylum officers under such conditions.

The recognition of the justice of such claims by asylum authorities, by the granting of liberal gratuities to the widows of attendants whose husbands had died from injuries

received in the execution of their duty, is proved by the examples quoted in the discussion.*

The Parliamentary Committee will probably consider this subject at an early date.

The Inquiry at the Holloway Sanatorium.

The report on the inquiry held at St. Ann's Heath, Virginia Water, by W. C. Gully, Esq., M.P., with Dr. Savage as medical assessor, has at length been received. Great delay has taken place between the date of this report and its publication, and it is not surprising that anxiety has been shown in medical and other papers in consequence. As the mouthpiece of that branch of the profession which is chiefly interested in the treatment of the insane we take the first opportunity of expressing our opinion on the report and on the circumstances which gave rise to the inquiry.

The report now officially published bears a marked contrast to the violent articles in "Truth," is temperate in its tone, and, as might have been expected, judicial in its judgment. It does not in any way ignore the fact, which was patent, that owing to several circumstances the management of the hospital as regards this case was not efficient. In brief, it points out that a patient was kept unduly long in restraint, that such use of restraint was excessive, and that it was not properly supervised.

The whole of this was admitted by the medical superintendent, and was explained as being due to the serious undermanning which had resulted from the influenzal epidemic; the second medical officer, who was practically the only one in charge at the time of the mishap, being in very bad health and quite unfit to perform his duties, much less the duties of himself and of others.

The inquiry concludes that the body of governors were anxious to conduct the establishment on humane and liberal principles, and that Dr. Philipps, as medical superintendent, wishes to carry out their views. It is reported that the duties of the superintendent are too many, and that either he ought to have more help or should do less of the administrative work.

* Since the above was written the sad occurrence at Cane Hill Asylum, by which an attendant, in bravely fulfilling his duty, lost his life at the hands of a patient, has emphasized the importance and urgency of this question.

We are inclined to think that there is ever a danger in these large hospitals in allowing the chief medical officer to attempt too much of any kind of work. The success of these institutions has depended on the energy of one man, but the most energetic of men cannot have the energy or the time to attend to everything, and if he has not abundance of assistance in the multifarious duties of his exacting post disaster must come.

The accident occurred, the public mind was inflamed by letters to the papers, and now the time has come for learning the lesson it teaches.

The deficiency of the medical staff is the point of most importance. In an institution of this kind there should be no risk, under any circumstances, of the medical supervision being defective. If the superintendent's whole time and energies are taken up with lay matters, his deputy should be a physician of standing and experience, with an ample subordinate staff equal to all possible emergencies: and to this end the status of the junior officers must be raised, as they must be prepared to accept grave responsibilities.

At Virginia Water, with its large income from profits, there can be no excuse on the ground of economy, at least, for neglecting to provide this primary essential of a hospital.

Architectural, decorative, and other adjuncts of such an institution are quite insufficient when unaccompanied by the individual attention which can alone make them of proper or full use in treatment.

The danger of mechanical restraint is specially emphasized in this case, for the fatal result might have occurred even if the patient had been under proper supervision. The case is, however, probably unique in modern British asylums, in which, with rare exceptions, mechanical restraint is used only for surgical reasons, not frequently passing beyond the control of the hands or of the body during forcible feeding.

This Journal has for so many years insisted on the dangers and disadvantages of mechanical restraint that it is superfluous to reiterate our views on this occasion, except to dissociate the Association as a body from any return to methods so liable to misuse and so liable to foster neglect, even if it could be proved that they are in a very limited number of cases beneficial.

Whilst in every case unreservedly condemning the abuse of mechanical restraint, and blaming the defective supervision in this case, we cannot withhold an expression of sympathy for the medical officers of the hospital who were

abused in the lay press in such unmeasured terms, without being able to defend themselves. Such exaggerated invective defeats its object by begetting such sympathy; at the same time it is a source of evil in fostering in the public mind the old prejudice against asylums, and so in many indirect ways hampering the treatment of the insane.

The abuse of the Lunacy Commission has been also most unjust and undeserved. The Commission has been blamed by "Truth" for not exerting powers which it does not possess; its authority over the hospitals for the insane being practically limited to criticism or the making of representations and recommendations. Indeed the Report of the Commissioner's inquiry appears to us to be much more severe than that resulting from the special inquiry, while the new regulations issued by them in regard to the use of restraint make the recurrence of such an incident almost impossible in the future.

The report on the use of mechanical restraint in the Lunacy Commissioners' Blue Book is sufficient evidence of the exceptional character of the treatment in Weir's case, and we have no reason to doubt that such will not occur again in the Holloway Sanatorium. There is little danger, therefore, that a single regrettable error in one institution will be accepted as an example of the treatment in asylums in general, or even of the treatment in that institution under ordinary conditions, since the public is now too well educated in discounting the exaggerative exigencies of sensational journalism.

Modified Responsibility.

We observe with interest the growth in judicial favour of the doctrine of modified responsibility in mental disease. Two interesting cases in which it has been applied were "Reg. v. Warboys" (Central Criminal Court, June 21st, 1895) and "Reg. v. Collins" (London County Sessions, April 29th, 1895). In the first case Warboys, a labourer in Peckham, was charged with having murdered his wife. The fact was admitted, and the only question really in issue was whether the circumstances that the prisoner had suffered great provocation, and that his mind had been affected by a sun-stroke received in India, reduced his offence from murder to manslaughter, and entitled him to a mitigation of punishment. The jury decided the first point in the prisoner's favour by convicting him of manslaughter only, and the

Judge (Mr. Justice Wright) let him off with five years' penal servitude. In the second case to which we have referred, the defendant Collins, a dentist, was indicted for stealing at his club. The plea set up was not insanity, but a series of nervous headaches aggravated by influenza, and the death of a near relative. Medical evidence was called, and it was urged that though the accused was not insane his mind was to some extent affected, and sufficiently so to negative any presumption of felonious intent., The jury brought in a verdict of "Not guilty." These are two satisfactory instances of the growth of a judicial practice which, if it become general, will tend to prevent not only unjust convictions and punishments, but equally unjust acquittals attributable to the determination of juries to achieve "a great right" by doing "a little wrong."

The Plea of Insanity.

It is worthy of notice that just as inquisitions *de lunatico inquirendo* are steadily receding before the advance in public and judicial favour of the summary powers of management and administration created by Section 116 of the Lunacy Act, 1890, so the question whether a prisoner is fit to take his trial is coming more and more to be determined by the Home Secretary on the advice of his experts, under the wide powers of the Criminal Lunatics Act, 1884, without waiting for arraignment. This was the course taken by Mr. Asquith both in the Bethnal Green murder case ("Reg. v. Matthews") and in the case of Covington, who threatened to murder Cardinal Vaughan, and it is a humane and a wise one. On the other hand it has to be kept in view that this summary procedure deprives a prisoner of his right to have the fact of his sanity tried by a jury. There are, however, ample safeguards both in the Criminal Lunatics Acts and in the pressure of public opinion against any abuse in the exercise of the summary powers with which the Secretary of State is invested.

A Monstrous Suggestion.

We have been favoured with the report of a Committee of the Medico-Legal Society of New York on "Amendment of the Law of Commitment of the Insane." The report is of such an extraordinary character that we have looked (and,

as we expected, have looked in vain) for the name of any distinguished practical alienist among the members of the Committee. The report is such as might, perhaps, be expected from a Committee so constituted. It recommends that no order for the commitment of a lunatic—reception order, as we should style it—shall be made until after a *trial by jury*, at which the lunatic *must be present* unless the judge otherwise directs, and *must be represented by counsel*. Apart from the grotesque absurdity of the proposals from a practical point of view, the iniquity of placing a man upon his trial with all the forms of criminal procedure because he is unfortunate enough to be the subject of a distressing malady, is so gross that it is difficult to discuss the proposal with any patience. As if it were not misfortune enough for a man to be afflicted with insanity, he must be subjected to intolerable insults and enormous expense before he can even be placed under treatment, and these preliminaries are carefully arranged in such a way as to aggravate his malady and minimize his chances of recovery. There is an alternative suggestion that the jury shall, if the judge so directs, be called a commission, and consist of “three competent persons, one a lawyer, one layman, and one a competent alienist,” but the whole recommendation is too preposterous to deserve serious consideration.

The New Rules of the English Commissioners.

On the 26th of June last, the English Commissioners issued a set of new Rules, superseding the Rules of the 29th March, 1890, which were the first made under the Act of that year. It is natural that a set of Rules made to carry out the provisions of an entirely new Act should have been at first more or less tentative in character, and should require modification when experience had brought to light defects in their working.

The modifications introduced by the new Rules are not of great importance, and it is creditable to the draughtsmen of the original Rules that so few should have been found necessary. The chief additions are as follows:—

A post-mortem book in a form prescribed is added to the statutory books required to be kept in every institution for lunatics.

A case book for voluntary boarders is added to the

statutory books required to be kept in every hospital and licensed house receiving voluntary boarders.

A separate medical journal may be kept for each sex.

Notice of the admission, discharge, and death of voluntary boarders is to be sent to the Commissioners as in the case of certified patients.

Assistant medical officers are for the first time officially recognized. It is provided that the entries in the medical journal, case books, and post-mortem book may be made by assistant medical officers under the supervision and control of the medical officer. These entries may be initialled instead of being signed in full as heretofore.

A copy of the statement of facts contained in the medical certificates is to be inserted in the case book, and all special circumstances affecting the patient, including seclusion and mechanical restraint, and all accidents and injuries must be at once recorded.

The same rules apply to the case book for voluntary boarders.

Records of the medicines prescribed need no longer be inserted.

A return of mechanical restraint is to be made to the Commissioners every quarter, whether such restraint has been used or no.

Notice of the transfer of a patient from the private or the criminal to the pauper class, and *vice versa*, is to be sent to the Commissioners.

The time of sending notices of removal, discharge, escape, recapture, etc., is reduced from three to two clear days.

The notice of death to the Coroner is assimilated to the notice to be given to the Commissioners and others, and a new form is provided.

Continuation orders of patients whose reception orders are dated on or after February 1, 1890, are to be included in one list. All others are to be made separately.

Notice of every change in the medical staff of institutions for lunatics is to be sent to the Commissioners.

The forms of the register of patients and of the register of removals, discharges, and deaths are modified by the addition of a column in each—in the former for dates of continuation orders, in the latter for information whether a post-mortem examination was made or not.

In the annual returns of pauper lunatics in asylums the males and females are to be in separate lists.

PART II.—REVIEWS.

The Colonization of the Insane in connection with the Open-Door System: Its Historical Development and the Mode in which it is carried out at Alt Scherbitz Manor. By Dr. ALBRECHT PAETZ, Director of the Provincial Institution for the Insane, "Alt Scherbitz Manor," and of the Asylum for Imbeciles, "Imperial Foundation of William and Augusta." Berlin: Springer. 1893. La. 8vo., 242 pp.

This interesting work would have received earlier notice but that we hoped to be in a position to review an English rendering of it. We know that more than one English authority has conceived it to be of sufficient importance to deserve translation. Difficulties seem to have arisen such as are not uncommon in dealing with foreign treatises written with too much detail to be sure of profitable reception in the English market. American publishers appear to be more enterprising in such matters than their brethren on this side, and we hope before long to see an American version. Meanwhile we desire briefly to introduce the book to our readers. We say briefly because within the limits of a review it is impossible to do much more than indicate the value of a work which sets forth in abstract an entire history of the management of the insane in asylums, a synopsis of the modern principles of asylum treatment and asylum construction, and a most detailed description of a large modern asylum.

The first chapter treats of the development of asylum construction and management from the earliest times. The author shows how asylums were at first constructed on the model of fortresses and convents; then on the lines of barracks (a development of which is the detestable old corridor system); and, finally, how the attempt is now being made to build asylums with a view to the object for which they are designed, namely, as special hospitals. With the growth of the block system as applied to general hospitals, its special applicability to asylums became evident, and, although it had its strenuous opponents up to a very recent date, it is now absolutely alone in the estimation of the public as the one method of asylum construction allowable in new buildings. A development of the block or pavilion

system is further effected by the division of the institution into a considerable number of detached pavilions, each situated in the midst of its own "park" or garden. On these lines the asylum of Alt Scherbitz Manor has been constructed. The development is not merely an architectural growth such as the change from the rounded to the pointed arch or the like, but is claimed by Dr. Paetz and its other supporters as being an essential vital development of the principles of non-restraint. The veteran Baron Mundy, one of the earliest and most earnest advocates of the freer methods of dealing with the insane, has said: "Alt Scherbitz Manor forms the shibboleth of the entire question of reform in the treatment of the insane." It may be said to be the object of the work before us to prove this thesis.

The terms "colony" and "colonization" are used on the Continent, particularly in Germany, in a somewhat confusing manner. To begin with, we are told that *Colonia* meant originally, not a "colony" in the English sense, but an agricultural settlement, *colonus* signifying an agriculturist. Following out this significance, the term "colony" was applied to Gheel, where a large number of the insane were scattered amidst a rural population and employed chiefly in tillage. However, the term "colony" has also been applied to those asylums which are constructed in the country with a view to the large employment of the patients in farming or even to farmsteads with accommodation for patients built at some distance from the parent asylum. To this form of asylum Dr. Paetz refers when he speaks of colonization. For places like Gheel, where the essential condition is that the lunatic lives in the homes of the people, the term "domestic settlement" is probably preferable.

The general history of the colonization of the insane, that is, of their employment chiefly in agricultural labour in asylums ever becoming less and less prison-like and constantly approximating more closely to the conditions of ordinary life, occupies the beginning of the second chapter. It is a great story of prejudices slowly overcome, of continuous efforts gradually making themselves felt, in spite of difficulties that seemed insuperable. Dr. Paetz everywhere assumes that the systematic employment of the insane is the necessary complement of non-restraint. This will not be new to English readers. We will all recall the able statement quoted in Dr. Hack Tuke's "History of the Insane" from the 23rd Report of the Scottish Commissioners, a

statement founded, as is well known, on actual experience of the working of Woodilee and other asylums.

As long ago as 1803, Reil pressed the claims of labour as a means of treatment of the insane, and with a humanity and sagacity often wanting even yet in some who lay down rules in this matter, said that the work must be adapted to patients' individual powers and must be of a nature having some interest. After the lapse of three-quarters of a century this wise saying seems not to have been forgotten when the Government of Saxony acquired the property of Alt Scherbitz for the reasons that it was a very good property, the land fertile, and the means of occupation varied. The principle was "that the best that could be gotten was only just good enough." It is held to be essential that patients shall not be employed digging holes and filling them up again or wheeling barrows of stones backwards and forwards from one heap to another. Varied fertility is, therefore, indispensable. Paetz mentions the experiences of Bandorf at the great Colonial Asylum of Gabersee in support of his views on this point, and quotes this neat epigram of Köppe's: "Sand runs like water through the Danaids' sieve, but the labour of the Danaids was counted as a punishment."

The advantages which the agricultural colonies offer in this respect are variety of employment, greater freedom for those patients who can benefit by it, and a more perfect classification. Variety is very essential. "Let us be under no delusion," says Erlenmayer, "but plainly state the truth; that to many patients the monotony of institution life serves to cripple the intelligence and depress the spirits, so that reaction in either sphere becomes ever weaker and finally fades away altogether."

It is also true that while the restraints of an asylum are necessary for some patients, they are unnecessary for many, and to the latter they often serve as a source of irritation and even deterioration.

Without doubt the colonial asylum, with its small wards thoroughly separated, affords facilities for classification which contribute vastly to the cultivation of individual care. It is truly pointed out that the huge wards, especially those used for chronic patients, in the closed asylums render individual treatment impossible and prevent the patients from being usefully employed. Attendants in these huge assemblies lose sight of all patients save the worst, and the

best, so that the unfortunate mean, who are always the great majority, and who are those for whose rescue and improvement most can be done, are left to struggle unassisted against the "tendency to dementia."

The so-called "open-door"* system is fully adopted. That the spirit and not merely the letter is followed is clear from this passage: "The beneficial effect of work is often lost, nay perverted to its opposite . . . when the patient on the completion of his task returns behind the walls and bars of the closed asylum. This injurious influence is indeed greatly increased where . . . the attendant who ought to serve as leader in the work, and constantly to encourage and stimulate the patient by good example, merely stands idly looking on in a uniform recalling that of the prison warder, with his pipe in his mouth and his hands in his trousers pockets, and occasionally issues the word of command."

A history is given of the development of the "colonial" system up to the year 1875, and of the defects in the earlier attempts at this system.

The remainder of the chapter describes the working of the colonial system in its fully-developed form. In a property favourably situated for agriculture a group of buildings is constructed to serve as the central asylum, built in accordance with the most modern architectural and medical requirements, and intended for the reception of such patients as need, whether from mental condition or bodily illness, close supervision (permanent or temporary), isolation or special medical treatment.

Not directly connected with the central institution, but in convenient contiguity to it, are grouped the buildings which constitute the colony proper. These consist of whatever farm buildings, workmen's houses, etc., may already exist on the property, together with the addition of a number of plain dwelling houses on the open-door plan for the use of groups of patients who, after the requisite period of observation in the central institution, are found suitable for residence in the comparatively free "colonial" conditions.

A good deal of this is not new to the English reader. The central institution to receive all new cases, all the sick, and all requiring special mental care, is becoming familiar

* We gladly notice that the author not only distinguishes that *Offen-Thür*, not *Offen-Thor*, is the translation of this word, but also that he uses the word "non-restraint" instead of that singular piece of pigeon-English "no restraint," by which the system of Conolly is generally designated on the continent

to us through the Scottish "hospital." Though the "hospital" has not hitherto occupied the space nor received the attention elsewhere which have been given to it in Scotland, yet its value and importance are now everywhere recognized, and no asylum will be constructed in the future in which it will not be the most important part.

Although many recently-constructed palatial public asylums in this country show airing courts, and even airing courts surrounded by buildings, yet the idea of an asylum without airing courts is no new thing.

Neither is there anything unfamiliar to us in the large employment of patients on the farm and elsewhere. Dr. Paetz quotes the statistics of Woodilee, given years ago by Dr. Rutherford, as showing how much can be done in this direction.

Nor are we unacquainted with the open-door system, though we know of no better argument in its favour than Meyer's words quoted by Paetz, "I am compelled ever again to return to this point, that the watchfulness and vigilance of those to whom is intrusted the care and treatment of the insane is the best if not the only safeguard. As men are constituted, this living safeguard is only weakened by the intervention of mechanical guards."

Elsewhere also has been tried the method of planting out patients in farmsteads and detached houses.

Many years ago the Devon County Asylum led the way in this respect, under the superintendentship of Sir John Bucknill.

It is said that every discovery passes through three stages; first people laugh at it, then they say it is contrary to religion, then they say they knew it long ago and that it is not new at all. Has Alt Scherbitz already reached the third stage? Scarcely yet. The feature which will strike the average English observer in Alt Scherbitz is that there is no asylum there, or that the asylum exists only as a theoretical entity. No building of those which are grouped together under this name contains more than about forty patients. Even the central institution consists of ten pavilions, five for men, and five for women (it must be borne in mind, however, that Alt Scherbitz receives patients of various social classes).

This division of the institution into a large number of entirely separate houses is, no doubt, the distinctive feature

of Alt Scherbitz. It is claimed for this arrangement that it materially contributes to do away with the prison-like appearance of the old closed-in asylum; nay, that it removes even that look and air of a public institution which is an unhappy feature not hitherto got rid of otherwise. "Covered connecting passages certainly afford the advantage of protecting the physicians and officials from unfavourable weather, but they give the institution that air of confinement which an asylum should not have, and are, therefore, to be avoided as well on this account as because of the unnecessary burden which they add to the cost of erection. The advantage to the officers above referred to must necessarily yield to these considerations, since the physician or other official attached to the asylum has no special claim to this privilege more than his colleague in the outer world. Accordingly connecting passages of this kind have been already dispensed with in a number of institutions—Marburg, Alt Scherbitz, Dalldorf, Neustadt, Gabersee, Rybnik, Landsberg, Emmendingen, Lauenberg, the Clinical Asylum of Halle University, the new wards at Eichberg, etc., and no reason has been found to regret their absence."

The general adoption of this mode of construction in the new German asylum buildings, either by constructing additions on the entirely detached plan or by building new asylums on the Alt Scherbitz model, demonstrates the absolute feasibility of the method, both architecturally and as a working method of dealing with patients. That it has grown in popularity since the erection of Alt Scherbitz in 1876 is also evident. The success which has distinguished that institution has been confirmed at Gabersee, near Munich, an asylum built on the same lines. In the Voigtland, the newest of German asylums is now being erected on lines which may be said to be identical generally with those of Alt Scherbitz. The admirers of this system, who are growing rapidly in numbers, confidently affirm that the asylum of the future will consist of groups of entirely detached houses which will present the freedom and the homeliness so often spoken of and so unattainable in the colossal institutions of the past. The same hope is expressed by the advocates of this system in America. Where the entirely detached system has been tried in that country it meets with the same approval as in Germany, and in curious confirmation of Dr. Paetz's remarks, it is to be noted that at least one American State adopted this mode of construction

because it was cheaper than the old method, and claim that in practice they have found an asylum worked on these lines less costly than the older institutions. The asylums of Kankakee, Willard, and Toledo (Ohio) are well known to most English readers. The two former, as well as Gabersee and Alt Scherbitz, are described by the late Dr. Hack Tuke in the 37th vol. of this Journal, where also a ground plan of Alt Scherbitz is given. The new asylum at Untergoltzsch, above referred to, is described in a recent number of the "Jahrbücher der Psychiatrie."

The third chapter of the work before us gives a full description of Alt Scherbitz Manor, the property, the buildings, the details of structure, etc. The limits of a review are necessarily too brief to enable us to enter upon these at any length sufficient to be instructive. Much useful information may be obtained from Dr. Hack Tuke's paper, above referred to. Many details will, of course, be disputable from an English point of view, and it ought to be an essential feature of every scheme that claims freedom of treatment as its end to allow of a great latitude in detail as to the means by which this is to be obtained, but we venture to commend to all who are interested in asylum construction a careful study of Dr. Paetz's able and conscientious work.

Atlas of the Human Brain and the Course of the Nerve Fibres.

By Dr. EDWARD FLATAU, with a preface by Prof. MENDEL.
Translated (from the German) by W. NATHAN, M.D., and JOHN H. CARSLAW, M.D. Berlin: 1894. S. Karger.
Glasgow: 1894. F. Bauermeister. Super Royal 4to.
Price 16s.

This atlas consists of three parts—a series of photographs of the human brain, natural size; a diagrammatic plate showing the course of the fibres in the minute anatomy of the brain and spinal cord; and an explanatory text to elucidate the meaning of the different diagrams.

The photographs are eleven in number, and comprise views of the base of the brain; the upper surface (as seen from above); two horizontal sections, one showing the ventricles, the other through the internal capsule; a horizontal section sloping upwards and forwards, showing peduncles, pons, medulla, floor of fourth ventricle, corp. quadrigemina, optic thalamus, and nucleus caudatus; two

vertical, *i.e.*, frontal sections, one in front of and one behind the optic chiasma; the median aspect of the left hemisphere, cerebellum, pons, and medulla; two sagittal sections, one through the whole hemisphere showing the optic thalamus, corona radiata, with the cerebellum, pons, and medulla, and the other more external through the lenticular nucleus; the outer surface of the left hemisphere, with the pons and medulla.

The photographs have been made by rinsing the fresh brain or its section in water and fixing it on to a plate with cement, and taking a photograph from above with an exposure of five to ten minutes for brain sections and twenty to thirty minutes for uneven surfaces. The reproduction has been by a photogravure method, and it gives a very clear and faithful representation of the parts shown. The names of the different parts are indicated by numbers which refer to a separate table for each plate, and we are very glad to note that the names are given in their Latin form.

The minute anatomy of the fibres of the brain and spinal cord is described in twenty-four pages of letterpress and is illustrated by a double quarto page of thirteen diagrams.

After a short description of the "neuron," a sketch of the columns of the spinal cord as well as of the three different kinds of cells is given, and the motor cells, the column fibre cells, and Golgi's cells are shown in different colours, in a diagram of the transverse section of the cord.

The projection fibres of the cerebrum are then described under the headings of motor tracts, including the paths of the motor cranial nerves; sensory and reflex paths, including the paths of the sensory cranial nerves, and the projection fibres of the basal ganglia.

Of the above the sensory fibres about which there has been much difficulty are very clearly described, and the latest views of Kölliker, Golgi, Bechterew, Edinger, Ramon y Cajal, and others are given. The division into a direct sensory tract by the posterior columns and an indirect tract by the antero-lateral ground fibres and by Gowers' tract is explained, the direct fibres decussating in the superior pyramidal decussation and the indirect probably in the anterior commissure of the cord.

The paths of the sensory cranial nerves, the trigeminus, the optic, olfactory, and acoustic are given, and this section finishes with the relation of the different fibres in the internal capsule to those of the crura cerebri, and the

arrangement of the projection fibres of the basal ganglia and their connections with different parts of the cortex and with the pons.

The projection fibres of the cerebellum, the superior, middle, and inferior, peduncles are briefly described, as also the possible course taken by motor impulses from the cerebellum, the most probable being that by the superior peduncle to the cortex and thence down the motor tract.

Of this part of the work, dealing with the course of the fibres in the central nervous system, the last section is given up to the association fibres, which are described as (1) commissural fibres, and (2) association fibres, in the narrower sense of the word. In the latter are mentioned the fasciculus longitudinalis superior and inferior, the fasciculus uncinatus, the cingulum and the fasciculus verticalis of Wernicke.

The text is illustrated by thirteen diagrams giving the sensory tracts, topography of transverse section of the spinal cord, transverse section of the spinal cord (Lenhossek) showing cells of the grey matter and collaterals of the columns, sensory tract (see below), motor tracts and short reflex arc, pyramidal cell of the cortex with the motor cell of the anterior horn, course of the fibres through the cerebral peduncle and internal capsule, the association fibres of the cerebral (central) ganglia, projection fibres of the cerebellum, course of the optic nerve fibres, connections of the oculo-motorius nucleus, the long reflex arc, course of the auditory fibres.

The diagrams showing the sensory tracts and the motor tracts are very ingeniously contrived; the right hemisphere as seen from the median side is depicted as being cut horizontally through the basal ganglia, and the upper part of the hemisphere scooped away, leaving the cortex of the outer surface in the form of a shell into which the sensory and motor fibres are traced from the internal capsule, while the continuations downwards of these fibres are traced along the spinal cord to the anterior and posterior spinal roots. The space in the posterior limb of the internal capsule allotted to the motor and sensory fibres is usually given as motor in the anterior two-thirds and sensory in the posterior third, but in these diagrams the relations have been reversed, and the same remark holds for the internal capsule in Fig. viii. The diagrams for the projection fibres of the cerebellum and for the auditory fibres are very good, but the

diagram for the ocular motor nerves does not show very well the dependence between the nucleus for the sixth nerve and that for the internal rectus of the opposite side, and it is not clearly put in the text.

There is one slight matter which we think would add very much to the utility of the work and that is a key to the diagrams; for instance Fig. i. is described as "Sensory tracts," and Fig. iv. as "Sensory tract," but to know what is the difference between the two one has to read carefully through the section on sensory and reflex paths, and not until six pages are read through can one find that Fig. vi. represents the arrangement by which it is possible that the short column fibres may form sensory conducting paths. The diagrams are very clearly drawn and the fibres are printed in different colours and numbered, and if a table of reference was printed on a page opposite to the diagrams, it would add to their use. The atlas will prove of value to those who wish to keep up with the advances resulting from recent investigations in the finer anatomy of the nervous system, while the photographs of the brain will be of much use to those who are unable to consult the exhaustive atlas of Dalton; and the moderate price of the present work will bring it within the reach of all.

Lunacy Regulation (Ireland) Acts and Orders, with Forms and the County Court Act and Rules. Second Edition, containing a synopsis of the law as to establishments for the reception and care of the insane. By J. M. COLLES, LL.D., Registrar in Lunacy. Dublin: Magee, n.d. Sm. 8vo., 234 pp.

This manual claims to be merely "an index or digest," "necessarily limited in scope." Those, however, who have to deal with the laws relating to Irish lunatics have cause, like good Miss Dalmahoy, to be "gey thankfu' for sma' maircies." The lunacy laws of Ireland badly need rearrangement and unification, which have never hitherto been attempted, nor are likely to be for generations to come. In the meanwhile no one, before Dr. Colles, has even tried to give any account of the various Acts dealing with lunatics in Ireland. A bare enumeration of these statutes is not to be found in separate form, nor indeed at all unless in some abstruse legal treatise, not easily accessible

save to lawyers. This is a somewhat singular circumstance considering how closely the management of certain classes of lunatics has been associated with the executive government of the country. That the officers engaged in carrying out the law should not have been required to be familiar with its provisions is probably due to defects in the laws whereby many provisions soon became obsolete, while others were inoperative from the very date of their enactment.

Dr. Colles tells us that his experience "seems to show that a general knowledge of the law on the subject might, with advantage to asylum administration, be rendered more easily accessible by those practically interested in such administration." In this modest object our author has certainly succeeded.

The larger portion of the book, more than 160 pages, is taken up with the Lunacy Regulation Act (an Act to amend the law relating to Commissions of Lunacy, and the management of the estates of lunatics, and to provide for the visiting and protection of the property of lunatics in Ireland, etc.), and with the County Court Jurisdiction Lunacy Acts (whereby the powers of the Chancellor are relegated to the County Court Judge when the corpus of the lunatic's property does not exceed £700, or his income from interest £50 per annum), and the forms, modes of procedure and regulations under those statutes. This part of the work is chiefly of interest to lawyers. It seems most carefully done and thoroughly abreast of the times in reference to cases, etc.

In Ireland there are no salaried Chancery Visitors as in England. The medical and legal visitors are appointed by the Lord Chancellor, and are paid a fee for each visit. Each private patient must be visited four times a year, each Chancery patient in an asylum at least once a year. Under a general order the Registrar in Lunacy is required to visit each district asylum once a year and each private asylum twice.

Under an excellent order (June, 1892) provision is made by which female Chancery patients, whose relatives are unable to see them with sufficient frequency, are visited once a month by lady visitors appointed by the Lord Chancellor. This kindly regulation is one of the many proofs of the personal interest which the Chancery office now takes in those under its care.

Appendix C contains an abstract of the Acts with reference to establishments for the reception and care of the

insane. It is prefaced thus : "The Lunacy Code of Ireland has to be traced through a series of enactments, passed from time to time as occasion required, during a period of nearly a century. It might be expected that a system produced thus piecemeal would leave much to be desired ; but while it must be admitted that the accommodation now provided for the insane is in some respects deficient, it must be added that the most patent defects are such as could be dealt with under existing statutory powers, without further appeal to the Legislature." The first of these sentences seems to be of a studied moderation, and this gives a greater gravity to the serious statement in the second. Whose duty is it to deal with these defects, and why are they not dealt with ?

In several respects the regulation of the district asylums (asylums for one or more counties) in Ireland is very unlike that of the English or Scottish public asylums. None of the patients are *paupers*. They are not admitted through the poor law machinery, nor are they supported from the poor rates. The asylums are maintained from the county cess.

The place of English and Scottish Asylum Committees is taken by bodies called Boards of Governors. These are appointed by the Lord Lieutenant of Ireland, though of late years the nomination of Governors by the county grand juries and similar fiscal bodies has been permitted.

The powers of the Governors are very limited. The Lord Lieutenant in Council appears to determine the staff of district asylums, appoint salaries, and define duties (*abstract of Act, 30 and 31 Vic., c. 118*) ; while a body of eight members, called the Commissioners or Board of General Control and Correspondence, appointed by the Lord Lieutenant under an earlier statute, seems to hold the grounds and buildings of all the Irish asylums vested absolutely in it. This Board of Control appears to have the power (subject only to the Lord Lieutenant in Council) of buying and leasing land for asylum purposes, and of erecting asylums thereon (*abstract of Acts 1 and 2 George IV., c. 33, and 6 George IV., c. 54*).

Dr. Colles does not comment upon these singular provisions, which must, we fear, have the effect of depriving the local bodies of all interest in their institutions in which they have so little power. Elsewhere we have heard an explanation for this curious condition of affairs, drawn from the fact that as the Treasury grants a capitation rate in aid, the Government claims authority as a *quid pro quo*, but this, of course, cannot be the real reason, inasmuch as the Acts

date long before the first granting of the Treasury rate in aid, inasmuch as the rate in aid is given in Scotland and England where the local committees are allowed to manage their own affairs, and, finally, inasmuch as the rate in aid is only given to assist maintenance, whereas the money which is expended by the Board of Control and Correspondence is eventually levied off the counties on a compulsory presentment (6 George IV., c. 54). It is true that the Government in the first instance lends the money which the Board of Control spends, but every penny is paid back with interest by the counties constituting the district.

The recent publication of a work on lunacy law, under the joint authorship of a physician and two lawyers, leads us to hope that the old feud between the professions is about to cease. The generous tribute to medicine contained in the words of Dr. Colles points the same way:—"The great reforms of the last half century, be it said—reforms which have converted the condition of the 'idiot or lunatic' from that of a caged wild beast to that of a hospital patient needing more than ordinary comfort and attention,—originated from within. It is not to interference or pressure on the part of the State that they owe their inception, but to the labour and devotion of medical specialists, themselves engaged in the practical management of asylums. Nevertheless, asylum administration cannot fail to benefit from increased interest and more accurate information on the part of the public; and an enlightened public opinion, strengthening the hands of those immediately responsible, can do much to speed the work of making asylum management in general keep pace with the forward movement."

The book has excellent indices, which add much to its value. It is undated, but references to cases which occurred at the end of last year sufficiently denote that this edition appeared early in 1895.

Commitment, Detention, Care, and Treatment of the Insane, being a Report of the Fourth Section of the International Congress of Charities, Correction, and Philanthropy, at Chicago. June, 1893. Edited by G. ALDER BLUMER, M.D., and A. R. RICHARDSON, M.D.

Several papers were read *in absentia* of the writers.

Dr. Clouston leads the way with a characteristic paper on "Lunacy Administration in Scotland," in which he describes the beneficial work done by the Scottish Lunacy Board. If

the paper had been written in the potential mood, and the various points of progress had been set forth as the goal which administration should aim to reach, a reader would be inclined to look upon it as Utopian, but facts are facts, and there can be no doubt that the record of them as accomplished is most honourable. It cannot be claimed that all the progress made in Scotland is specially due to the Scottish Lunacy Act or to the Scottish methods, for that would be unduly depreciating progress made in other parts of the kingdom. Nevertheless, we must heave a sigh over the fact that in England the work of the Lunacy Commissioners is so extensive as to deprive the Board of that personality—whether for impressing or receiving ideas—which is the key-stone of success in Scotland. It is noteworthy that Dr. Clouston reckons that the placing of seven per cent. of the insane in poorhouse wards and 20 per cent. in private families has saved about £700,000, the cost of asylum buildings which would otherwise have been necessary.

Dr. Morel, of Ghent, contributes a paper on the "Treatment of Degenerative Psychoses." He takes as a starting point Koch's "Psychopathic Depreciation," and follows Koch largely in the systematizing of this somewhat vague denomination. The subject having been set out, Dr. Morel turns to the treatment or rather the combatting of the condition. Naturally, education is the mainstay—education intellectual, technical, and, above all, moral—the teaching of a possible "degenerate" to govern and repose confidence in himself. But Dr. Morel by no means stops here. He insists on hygiene, exercise bodily and mental, and, where necessary for somatic conditions, drug treatment. There is nothing absolutely new to alienists in the paper, as, indeed, is admitted, but there is much food for reflection, especially for non-specialist medical men.

As a practical suggestion, Dr. Morel asks: "Why should Governments not undertake the creation of special institutions for weak-minded children? The creation of a law forfeiting parental control on account of incapacity or unworthiness would soon fill up and multiply such institutions." The latter idea is beset with difficulties indeed, but as a principle it is far and away superior to the present system in this country of removing a child from parental control only when it has been under the care of the policeman.

Two papers deal with various aspects of the position of

asylum nursing staffs, in each of which broad and sensible views are expressed.

To take the first by Dr. C. Burr, of the Eastern Michigan Asylum. He surveys the benefits produced by the institution of a careful training system, such as has been provided at a later date by our own Association. Since Dr. Cowles, of the McLean Hospital, started in this direction in 1882, 19 American asylums have followed, and now possess "systematically organized and thoroughly equipped training schools for attendants." Dr. Burr has no doubt whatever that the results have promoted the recovery of patients in the following ways:—

(1.) The adaptability and resources of the attendant have been increased. We give two of his examples, concerning exercise and rest. The good but automatic and uninstructed attendant will follow out the directions of the doctor without fail, but without observation of the results, unless, of course, the results are too obvious to be passed over. The trained attendant will not be content to follow the letter, but will also observe the spirit of the direction. He will make the exercise brisk or deliberate to suit his patient, will vary it and so forth, and will report one way or the other sooner than his untrained colleague. So too with rest. Posture and mental occupation and other matters will be studied by the instructed nurse.

(2.) The more general dissemination of correct information regarding the nature and treatment of mental disease. Among other matters, Dr. Burr conceives that cases are sometimes unnecessarily sent to asylums because of failure to properly estimate their nature or because of inability on the part of the friends to supply the proper aids to recovery. These defects may sometimes be remedied by a trained attendant under competent medical advice.

(3.) The importance of general nursing in the management of the insane is emphasized. He quotes Dr. Cowles: "There is another important reason for giving a nurse as broad a training as possible; the danger and evil of all asylum work is routine practice—limitation to one line of observation—to the neglect of bodily diseases in general."

(4.) The probability that training schools have been productive of good by lengthening the service of attendants. Dr. Burr produces a table of figures, which, however, do not seem to be conclusive, though, as he admits, the point is difficult to demonstrate. Of 652 who have passed in the

asylums quoted, 313 remain in the institution where they obtained their certificates, 23 are in other institutions, and 90 have taken to private nursing.

The second paper is by Dr. Campbell Clark, of the Bothwell Asylum. His object is to point out certain reforms which are required beyond the now accomplished institution of training. He rightly says that, whereas in the old days *physique* was the chief desideratum, now moral worth, intelligence, education, and training are paramount. He considers, however, that there are defects—as touching the nursing staff—in quantity, quality, and organization. Quantity is the chief of these, for if there were more attendants there would be more respite for each individual, and thus the quality of that individual's work would be enhanced, while there would be more scope for organization of work. He would like to see patients more grouped, each attendant having a group and a note-book, and the groups to be shifted from one attendant to another every three months. There is much sense in this latter idea. Then, as touching nursing work, the defects which chiefly impress themselves on him are the elephantine size of the asylums and wards, militating against quiet corners, which are so much required by quiet patients, and so on. Again, there is a lack of "personally conducted" co-operation of asylum officers. This is much due to clerical work and red-tapeism, which saps the energies of the medical staff, and takes up time that should be spent in the wards. Yet, again, there is the monotonous grind from week to week which can only be cured by finding and working out changes in the daily life of the wards—more domesticity, tea-parties, more fusion with the outside world, and so forth.

He has two desiderata to push. First, a Mental Nursing Association, with its own weekly newspaper, managed by representatives of all classes of asylum service, which must not be a mere Trades Union. Secondly, he wants a provident or pensions scheme. He says that the days of pensions as they exist in the English or Scottish Royal Asylums have gone by. We beg to differ with him as regards the English Asylums, for, with certain unhappy exceptions, there seems to be no diminution of intention to give pensions on the part of County Councils. On the contrary, there is evidence of a growing wish to provide them not on uncertain lines, but on the lines of just such a scheme as he advocates. He also says: "Heaven (in other words asylum managers)

may be expected to help those who help themselves, dollar for dollar put by for a rainy day." Certainly Scottish District Asylums have a very serious grievance in the fact that the Scottish Acts afford them no prospect whatever of provision for old age or incapacity, and yet it cannot be averred that the salaries paid are proportioned to this want. They are, indeed, no better than in other asylums.

Two papers, coming from different parts of the world, deal with statistics of insanity.

The first, by Mr. W. J. Corbet, M.P., is, as far as we remember, very similar to the contribution which he made to the *Fortnightly Review* a short time back. Mr. Corbet is very much exercised by his inability to get the "English official mind" to look at the "increase of insanity" from his point of view. No one—at least, no one who has to pay rates—doubts for a moment that more patients have to be kept, but whether the increase is more than proportionate, allowance being made for temporary disturbances of ratio, or whether the increase is due to accumulation or to more frequent occurrence of the disease is, indeed, a complex question, and cannot be settled off-hand. The English Commissioners, who should know a thing or two, prefer to remain in a state of negative dubiety, and have the advantage of being backed up by such statisticians as Mr. Noel Humphreys and Dr. Hack Tuke.* Mr. Corbet takes note of the "solicitude shown by the Commissioners to account for and minimize the embarrassing 'apparent' increase." Why should Mr. Corbet be solicitous to prove the exact contrary? The Blue Book for 1894 affords ground for belief that the English Commissioners are quite likely to have been correct in refusing to rush to the alarming belief that insanity as a disease attacks more people than formerly. In Ireland the Inspectors allow Mr. Corbet to score, but Ireland is not to be taken as a sample of the whole of the United Kingdom, especially since Dr. Drapes has attacked the problem.

Dr. Chisholm Ross gives some useful statistics of insanity in New South Wales. Here there seems to be no increase on the whole. Indeed, Dr. Ross claims a slight decrease, though we cannot make the detailed figures harmonize with the statement. It appears to us that the ratio in 1891 was identical with that of 1881, something just under three *per mille*. Australians proper suffer less than imported people,

* The declaration of the Scottish Commissioners is fresh in mind. The cautious and judicial tone of their utterances should make objectors pause.

and male Australians more than female, though the proportion of the latter is gradually levelling up. Chinese suffer but little. The Aboriginal insane amount to rather less than 1 per 1,000. This small proportion is due to the comparative absence of "civilizing agents," as well as to an amiable habit, indulged in till recent years, of disposing of demonstrative maniacs by their friends in a summary manner. All importations from the United Kingdom suffer in a ratio double to that obtaining in their respective homes. Curiously enough the Irish insane are 13·67 per 1,000 as against 3·46 at home! We were told lately over here that the Irish at home suffered from insanity more than England because the hale and hearty went abroad, leaving the weakly ones at home. France, Germany, and other countries send also a more insane lot to New South Wales, chiefly, Dr. Ross thinks, because waifs and strays find admittance while the ports of other Australian colonies are to a large extent closed against them. This paper should be noted and read by all who take an interest in lunacy figures.

In a short paper Dr. Emil Honsberg, of Helsingfors, traces the history of the care of the insane in Finland. The ratio in 1880 was 1 insane in 470 sane; in 1891 it was 1 in 375. The system adopted in other northern countries is found here—receiving asylums in the country towns having about 20 places each, with larger central institutions.

Dr. Stephen Smith, of New York, in his paper directed towards placing the insane on a medical rather than a legal basis, sketches out a plan far too revolutionary for us, and we should think for the United States. He proposes that every qualified legal man shall be a "medical examiner" (in lunacy?); that the certificate of this examiner shall hold good for ten days, and shall be sent by him to the superintendent of the selected asylum; that the superintendent shall forthwith send a medical officer and attendant, the medical officer to hold an examination, with power to subpoena and administer oaths, and if he verifies the certificate the patient is to be removed at once; that on the patient's arrival one of the physicians of the asylum shall again verify the certificate, which if verified is valid till recovery. When we find in a subsequent paragraph that the gentleman who is to visit and administer oaths is to be a recent graduate we are a little doubtful; when, further, we find that at every asylum hereafter erected at least one acre of land is to be provided for each patient, we are more than doubtful of the acceptance of Dr. Smith's scheme. Dr.

Smith reproduces a number of definitions of insanity, both legal and medical. That which is used by the State of Wyoming should be certainly accorded publicity. "A person shall be considered to be of sound mind who is neither an idiot nor lunatic, nor afflicted with insanity, and who hath arrived at the age of fourteen years, or before that age if such person know the distinction between good and evil." A school in Wyoming must be a queer institution.

Dr. Victor Parant reviews the irresponsibility of the insane in France. He will have none of "partial responsibility," though he would not have a man who is not perfectly normal, whose mental and moral faculties have not been able, on account of the vices of his organism, to reach their full expansion, as severely punished as one who is normally constituted and well balanced. To meet such cases the French law supplies a simple method, that of extenuating circumstances. In England we have not reached that point yet, at least, not avowedly. Dr. Parant thinks that without altering the spirit of the French law, which is excellent, it might be completed and formulated in the following dogma: "There can be no crime or misdemeanour when the accused was in a condition of mental disease at the time of the act, when he was compelled by a force which he could not resist, or when his *will was destroyed* by his morbid condition."

Dr. Regis presents a case of insanity consecutive to ovarosalpingectomy. The chief point of interest is that, following the analogy of thyroid treatment, he injected $\frac{1}{4}$ c.c. doses of ovarian extract from a sow, 10 per cent. strength. The doses were subsequently increased to $1\frac{1}{4}$ c.c. Dr. Regis considers that some improvement has shown itself, but as the case is still *sub judice* he cannot speak positively.

Mr. W. J. Corbet, M.P., sent a paper on "Private Asylums." We regret that a communication of this nature was ever admitted into the agenda or the discussion or the report of the meeting. It is a disfigurement, and detracts from the really scientific character of the work of the section. In order to estimate the value of the paper it is sufficient to state that while Mr. Corbet carefully prints every word uttered against private asylums by Lord Shaftesbury when before the Select Committee of 1859, he suppresses the fact that, when giving evidence before a similar body in 1877, Lord Shaftesbury stated categorically that as far as regards the evidence he gave in 1859 he would not give it now (1877). Lord Shaftesbury further stated that he was against all private asylums being done away with. The evidence of

others is garbled in the same manner. As shown in the report of the discussion on the paper, the following is the only remark made thereon. Dr. Gorton, of Providence, said: "I believe I may safely say that its criticisms have no application in this country. Our institutions here, though, perhaps, managed for private gain, to some extent are as open to the inspection of public officials as those of the State, and are pretty generally presided over by men of long and careful training, of high professional attainments, and of the strictest personal honour." We venture to direct the attention of our readers to this high standard! The physicians of our private asylums have not yet, at any rate, been damned by such very faint praise.

Dr. Hack Tuke gave the Congress a short *résumé* of the good work done at York Retreat. Dr. Clarke, of Ontario, recounts the progress made in Canada since Dr. Hack Tuke brushed up the asylums there so severely. He complains that Canada is behind the times in the matter of criminal responsibility, and states that several men, even recently, have been executed who had well-marked brain disease.

Dr. Peterson calls for the establishment of colonies for epileptics in New York, and gives particulars of several that are in existence in America.

Dr. Blumer concluded the meeting with a general review of the "Commitment, Detention, Care, and Treatment of the Insane," in which we find a broad and thoughtful reflection of the opinions and aspirations which are prevalent in this country.

He animadverts severely on the jury law of commitment which takes the place of medical examination and certification in several States. In Illinois the average number of persons annually declared insane is 1,500, and the cost of each commitment is about 20 dollars. The number of jurymen summoned in the 22 years during which the system has existed is estimated at 234,000, and the cost 700,000 dollars!

In New York State by order each patient is allowed to write to some relative or friend once in two weeks, or oftener if necessary, in the discretion of the superintendent. If the patient can't write the superintendent must find someone else to do it for him, and the asylum has to find the stamps if the friends can't afford them.

A short summary of proceedings closes the Report, which is well edited and well got up in the Utica State Hospital Press, under the direction of Dr. Alder Blumer.

Rapport et Mémoires sur l'Éducation des Enfants normaux et anormaux. Par E. SEGUIN. *Préface par* BOURNEVILLE, *Médecin de la Section des Enfants de Bicêtre.* (8vo., pp. 380, figs. 5, Francs 5.0). Paris, 1895. Aux bureaux du Progrès Médical.

This is a translation into French of Séguin's well-known book on the education of normal and abnormal children, and forms the third volume of the "Bibliothèque d'Éducation Spéciale." From the preface we find that Bourneville's idea of publishing the book was to bring before the Directors and teachers of the primary normal schools, and the superior normal school, the methods of teaching set forth in this volume, in the hope that the success which has attended the use of this system in the education of idiots and deaf-mutes might induce the teachers of normal schools to adopt it when teaching ordinary children. The preface contains the certificate of Esquirol and Guersant as to the great success which has attended Séguin's teaching of a child who was almost dumb and nearly an idiot, and testifying that he is capable of giving his system a desirable extension. The preface also contains an account of his death in 1880 at New York, and the speeches made at his funeral by Drs. Brockett, Wilbur, Brown, and Marion Sims.

The book is a report on the section of teaching at the International Exhibition of Vienna, and is divided into four parts. The first treats of the education of the child during his first years in the cradle and nursery; in the Salles d'Asile, or school, where the children of the poor from three to six or seven years of age acquire easily common knowledge; the Jardins des Enfants, where the rich children are taught on the kindergarten system; and in the infants' physiological school. Finally, the author shows that the education of the special senses should go on side by side with that of the muscular system, and demonstrates the important part which toys and lessons on objects play in physiological education. In the second part an account is given of the instruction which is imparted to deaf-mutes on the continent, in England, and America, and the history of the Abbé de l'Épée, who at the age of 60 years opened in 1770 his school for the deaf and dumb, is related. In the third part the schools for idiots in Germany, Belgium, Holland, France, England, and America are described, and the methods employed for instructing these children are

fully explained. The last part deals with popular education, the way in which it is carried on in ordinary schools of various countries, and the way in which the author would have it given. In his opinion all education should proceed on physiological lines, and special stress is laid on the education of the senses. The book closes with two memoirs: one on the psycho-physiological education of an idiot hand, the other on the psycho-physiological education of an idiot eye, both illustrating the system of education which the author was the first to put into practice and publish to the world. The book is one which all teachers, and those who are interested in education will no doubt find useful in their work.

The Treatment and Education of Mentally Feeble Children.

By FLETCHER BEACH, M.B., F.R.C.P. London: J. and A. Churchill. 1895. Pp. 32. Price 1s. 6d.

Dr. Fletcher Beach was the first Medical Superintendent of the Metropolitan Asylum for Idiots at Darenth, and gave to that institution its form and organization. Besides accomplishing this difficult task Dr. Beach managed to find leisure to avail himself of the great opportunities afforded for clinical and pathological study, and made many valuable contributions to the literature of his special subjects.

The little treatise under review comprises some of the results of his twenty years' experience. He begins by a sketch of the general appearance and character of the feeble-minded. His description of cretinoid idiocy is the best we have ever read, and it should be kept in mind that Dr. Beach was one of the first to differentiate this form, which has now been found amenable to treatment by thyroid juice.

After a few remarks on hygiene and dietetics, the author gives the results of his experience in treating the special diseases of the feeble-minded. He finds that "the fermentative variety of diarrhoea is best treated by small doses of carbolic acid. When the diarrhoea is obstinate, milk should be cut off entirely, and strong solutions of pearl barley be given instead. Epilepsy, a frequent complication in these children, is remedied to a great extent by giving bromide of sodium, to which may be added small quantities of borax with good results."

We are pleased to learn that Dr. Beach agrees with us in excluding meat from the dietary of children suffering from

epileptic fits, but when he allows eggs, bacon, fish and fowl with no apparent restrictions as to quantity, the non-stimulant character of the diet seems well-nigh neutralized.

Dr. Bourneville is quoted to show that craniectomy cannot be expected to be of help in ordinary cases of microcephaly. In eighty-two cases in which this operation was performed the results obtained were slight, doubtful, or *nil*.

Dr. Beach then considers the different apparatus for teaching imbecile children. These may be useful to the teacher who attempts the instruction of such pupils, though we never observed much success in that way. As Dr. Beach himself observes, "Home instruction as a rule is of little use. The poor have no appliances in their home for it," and the rich cannot or will not, while their better gifted brothers and sisters leave the soft and indolent imbeciles out of their sports, and depress them if they do not tease them."

Altogether Dr. Beach manages to convey in this pamphlet much information in the space which he allows himself.

The Female Offender. By Prof. LOMBROSO and W. FERRERO. With an Introduction by W. DOUGLAS MORRISON. London: Fisher Unwin. 1895. Pp. 313.

This volume is the first of a criminology series under the editorship of Mr. Douglas Morrison, who is admirably fitted for this task. The appearance of such a series in England seems to indicate a growing interest in the scientific study of the problems of criminality. These problems are mostly of so special a character that they can only be adequately discussed in a special series, and for many years several such series have existed in France and Italy. It is probable that at present the English series will be largely recruited by the help of translations, and it is satisfactory to learn that it is proposed to include Ferri's great work on criminal sociology.

It was no doubt right and inevitable that a work by Lombroso should receive the honour of appearing first in the Criminology Series, and "*La Donna Delinquente*" is a book of the greatest value and interest. Yet it is possible that a more judicious choice might have been made. The manifold difficulties of translating Lombroso can only be appreciated by those who from time to time have been called upon to decide whether or not he shall be translated. The

fact is, that to read Lombroso intelligently and profitably requires a very high level of knowledge and intelligence in the reader. Lombroso's mind is saturated with facts, and at the same time is perpetually sprouting into bold and suggestive theory. He is always throwing out both facts and theories, rapidly, brilliantly, almost recklessly. And the style corresponds, quick, concise, *staccato*, not always easy to follow. Lombroso never stops to explain or to emphasize, and while he is prompt in throwing out new suggestions, he is equally ready to modify or withdraw them. Such a method undoubtedly tends both to mislead the ignorant and to irritate the precise. It is certainly not suited for scientific sucklings, and the majority of criminologists in England are still scientific sucklings. One is tempted, therefore, to wish that, even at the risk of some apparent injustice to the great Italian criminologist, Mr. Morrison had boldly dispensed with great names, and inaugurated his series with a really simple, comprehensive, and practical book, as, for instance, Dr. Kurella's "Naturgeschichte des Verbrechers," which is lucid and attractive, and at the same time somewhat too technical to be published (in England at least) elsewhere than in a criminology series.

It remains to remark on the manner in which, having decided on "La Donna Delinquente," Mr. Morrison has dealt with the book, which need not be reviewed here since attention was called to it in the Journal on its original appearance. Mr. Morrison has grasped his nettle with much vigour. "La Donna Delinquente, la Prostituta e la Donna Normale," becomes, in the prim language of the English police, "The Female Offender." Then, at a single slash, a good half of the original is cut away, and that, perhaps, the most interesting half, *i.e.*, the portion dealing with the normal woman and with the evolution of criminality and prostitution in the zoological world and among savages and primitive civilizations. There remain the anthropometry, pathology, psychology, and physiology of the criminal woman and prostitute. But serious cuts have been made even here, and three whole chapters—dealing with the sexual aspects of criminality in women and with confirmed and occasional prostitutes—are omitted. Further, sections and paragraphs are omitted from time to time, and even sentences are invaded to save the sensitive modesty of the student of criminology. Thus—to take a trifling but

characteristic example—the translator makes Lombroso refer to the prevalence of “a virile quantity of hair” among prostitutes; this is meaningless, but in the original it is clearly stated that we are dealing with the extension of the pubic hair. It is evident that a systematic but hopeless attempt has been made to remould the book in such a way as to conciliate both the Philistine, who is shocked by new ideas, and the prude, who is shocked by the scientific treatment of sexual matters. Mr. Morrison has anchored himself, as firmly as he has been able, to the statistical and anthropometrical Lombroso. These editorial operations call for two criticisms. In the first place, in bringing up the anthropometry to the front, it was necessary to remember that in England even medical readers are still in the most elementary stage of anthropological knowledge, and much that is clear to the Italian is unintelligible to the English reader; simple explanatory notes would have been helpful to the majority of readers, and the editor can scarcely plead that his respect for the original stood in the way of such annotation. In the second place, both the nature and extent of the omissions are surprising. The obvious reasons for establishing a criminology series are the special nature of the problems to be discussed, and also the undesirability of discussing these before a general audience. But many of the subjects here tabooed could to-day be discussed even in a general scientific series. Here is a highly elaborate discussion of feminine criminality which makes no allusion even to menstruation! If such restrictions are to be maintained was it worth while to set up a special criminology series? It is difficult to imagine the class of readers for whose mental digestion the highly technical details here given are fitted, and the discussion of the correlated normal and abnormal sexual phenomena unfitted.

It must be added that the anonymous translator's work has throughout been most carefully and intelligently executed. Such mistakes and misprints as occur are seldom serious. An index should, however, have been appended. The publishers have done their best to produce the volume in a solid and useful shape.

It has seemed worth while to criticize the editorial treatment of “*La Donna Delinquente*” because in a series it is always possible, as it is not always in life, to profit by one's errors, and because we trust that the Criminology Series will have a long and prosperous career.

H. E.

The Pathology of Insanity: The Means and Methods of Study.
By W. J. COLLINS, M.D.

This paper,* read before the Abernethian Society in November last, is not only of intrinsic interest, but of importance as expressing the views, which probably mainly guided the London County Council, in its decisions in regard to the special arrangements for the study of pathology in connection with the asylums under the control of that body.

Dr. Collins acted as Chairman of the Sub-Committee appointed to consider the appointment of a pathologist, and the report of that Committee, printed in 1893, may be considered, therefore, in connection with this paper. This Committee, in addition to special inquiries addressed to the superintendents of its own asylums, obtained from the British representatives in foreign countries, information in regard to pathology in foreign asylums; but might have secured much valuable and precise information without going so far afield. The general tenor of the results is vague, but from it may be gathered that while in most countries there is considerable provision for the study of pathology, the cry is almost universal for increased means of practising it. The inquiries, therefore, have the result of proving the existence of a world-wide recognition of the need for extended investigations. In regard to the scope of these investigations, Dr. Collins takes a broad and enlightened view, recognizing that pathology is not mere post-mortem making with microscopy, but must include the historical, geographical, racial, social, and hereditary aspects of disease, and that the successful pathologist must be well acquainted with physiology, psychology, and its allied subjects. With such views accepted by the governing body, the pathologist of the London County Council asylums should not feel himself trammelled in regard to the scope of his researches, and it is to be hoped that the means placed at his disposal will be commensurate with his liberty of action.

The pathologist and the pathological laboratory are to be attached to the Claybury Asylum, and this is probably better than a central laboratory, apart from any asylum. Nevertheless, it would seem that the other asylums will

* "St. Bartholomew's Hospital Journal," Feb., 1895.

be at a disadvantage in not being in that close clinical touch with the pathologist which has been found so important at Wakefield and elsewhere. No scheme, however, can be expected to be complete from the outset, and the disadvantages which will probably be found to result from the isolation may be met later on by the appointment of junior pathologists at the other asylums, or otherwise. Without encouragement of this kind it may be feared that from various reasons the isolated asylums may not be able to share fully in the advantages of the new departure. Interest in pathological work might be fostered by every new officer appointed to the asylums, studying for a certain period in the pathological laboratory after appointment, or by making such a course, the necessary preliminary to appointment. A main duty of the pathologist-in-chief will be to train junior pathologists and to foster or direct their work.

Dr. Mott, who has been appointed to the post, is well qualified not only to inaugurate original research, but to carry out these objects. In fact, we may hope that if satisfactorily supported he will establish a school of neuropathology worthy of this vast metropolis.

Dr. Collins does not take an exaggerated view of the immediate advantages likely to accrue in the treatment of insanity, but it is certainly reasonable to expect, that researches conducted on the broad principles enunciated will lead to a much more emphatic demonstration of the causes of insanity. In this way much may be done to advance the still more important social aspect of the question, viz., the prevention of mental disease. The evolution of the new laboratory will be followed with the greatest interest and sympathy by all engaged in the care and treatment of the insane. Its establishment is a source of great satisfaction as an evidence of the recognition by so important a body as the London County Council of the duties dependent on the care of the vast amount of human suffering accumulated in its asylums.

PART III.—PSYCHOLOGICAL RETROSPECT.

Epilepsy.

The study of epilepsy is apparently about to receive an impetus. No one can doubt from numerous observations, and on the authority of Hughlings Jackson, that some epileptiform accessions in organic cerebral affections must be regarded as irritation symptoms of definite cortical areas in the psycho-motor zone. Jacksonian epilepsy we have learnt presupposes that an area of the motor cortical zone is stimulated by some demonstrable lesion—that the muscular contractions of a seizure may be limited to one extremity, or when affecting one side of the body may systematically implicate groups of muscles in a measure corresponding with the localization of successive cortical areas—the commencing excitation of one centre being carried on to its neighbour; also that the path of this cortical stimulation must proceed from the brain along the pyramidal tracts. But von Monakow (*Experimentelle und pathologische anatomische Untersuchungen*, Arch. f. Psych., Bd. xxvii., Hft. 2, s. 409) instances a case of unilateral epileptiform seizures, evidently of Jacksonian type, in which, however, not only had the cortical motor centres lost all inceptive function, but the transmissive function of the pyramidal tracts of the affected side was also in abeyance. The case he describes was one of cerebral hemiatrophy, with complete destruction of the pyramidal bundles of one side. Winkler (*Ned. Tijds. v. Geneesk.*, No. 7, 1895) instances a similar case and expresses his belief (without, however, venturing on an explanation) in the possibility of its occurrence. How these phenomena can under such circumstances be substantiated is a problem which if elucidated will go far to threaten the basis of our knowledge of cortical motor functions—but the elucidation is required.

The surgical treatment of epilepsy is directed either peripherally (as in the removal of some distant irritating cause) or centrally. The former we have to deal with in cases of reflex epilepsy, and though we still are enveloped in doubt as to the nature of the affection, and though results of operative interference are frequently unsatisfactory, the adoption of some remediable surgical procedure should never be neglected in suitable cases. In the latter the operation may be limited to the cranial coverings, or extended to the skull as craniectomy either by trephining or by temporary osteosection, or to the incision or extirpation of the dura or to excision of a portion of the cortex itself. The last-named operation, which appears to be the most radical of all, has, up till recently, when adopted in cases where no coarse demonstrable pathological change existed, not been attended with permanent or satisfactory results. In the non-cortical operations

the results, such as they are, must be regarded as due to indirect causes only, *e.g.*, by improvement of the circulation through diminution of pressure, etc. A more round-about way of inducing this circulatory change was the adoption of ligation of the vertebrae, extirpation of the superior cervical ganglion, etc., but these need not seriously be considered. Eulenberg (*Berl. Klin. Wochenschrift*, 1895, No. 15) has published a case of epilepsy in which cortical excision was adopted, the resultant effect of which (a seven months cessation of fits) is the best thus far recorded. The case was one of idiopathic epilepsy, commencing at the age of 11, which, though with occasional remissions, had latterly induced certain psychic and physical deterioration. The attacks invariably began in the right arm, spread over the right half of the face and the right leg, and culminated in general tonic spasm. There being some hypersensitiveness of the brachial plexus, the nerves supplying the upper extremity were first of all stretched. As this gave no favourable result Eulenberg extirpated the left cortical arm centre. On the evening of the day of operation the patient could still move the arm, but on the following morning there was paresis of the right hand, right forearm and right angle of mouth, which after an existence of ten days all vanished again. Sensory and vasomotor thermic disturbances persisted for some longer time in the right upper extremity. The healing of the cranial wound was delayed by extensive bone-necrosis. The attacks, as noted above, remained in abeyance for seven months, then recurred and were ushered in by tonic contraction of the right angle of mouth, so that the pre-existing epileptogenetic irritation-cause appears to have shifted to the face centre—but this was possibly due to cicatricial irritation. As deductions from this case and from two others, in one of which trephining alone, and in the other an incision into the dura was made, Eulenberg discusses at length the indications for the cranio-cerebral surgical treatment of epilepsy. The general drift of his conclusions is that such interference is warrantable whenever indications (*e.g.*, traumatic cause, a probable epileptogenetic area or a circumscribed zone of cortical implication) point thereto. Without binding himself to any hard-and-fast rules, however, he deems it desirable to individualise and carefully study each case before deciding as to operative measures.

Mingazzini (*Rivista Sperimentale di Freniatria*, Dec., 1894) has recently carefully noted certain phenomena of epilepsy, which though previously described by Bonneville, Briçon and other writers, have not been so generally recognized. He classifies these phenomena into two groups, "fenomeni circumcursivi" and "fenomeni rotatori." The former includes a description of one or more circular movements by the epileptic which may occur either as a motor aura (the patient describing involuntarily by walking one or more larger or smaller circles, the attack ensuing directly after) or as the sole motor manifestation of the seizure (there being no convulsive exhibition, but merely a sudden or gradual onset of stupor from which the

patient speedily recovers). While the duration of this "circle stage" when developed as an aura is very variable (3 to 30 mins.), its period when it takes the place of a fit is never more than one or two minutes. The direction of the circle in different attacks in the same patient is not always the same, and the loss of consciousness is not always to the same degree. While some patients during their circumambulation avoid obstacles put in their way, others would stumble over them, and at times certain automatic acts were performed, *e.g.*, the collection of objects from the floor, etc. As "fenomeni rotatori" Mingazzini describes rotatory movements in the long axis of the body. These, too, may either be premonitory of the convulsive stage, as an aura, or take the place of a fit altogether. Here also there may be noted in one individual a variation of these purposeless motor acts, the rotation being sometimes from right to left, at others in the opposite direction. In those cases in which the rotations were auræ, other auræ (sensory) were in nearly every instance noted. Noteworthy, too, is it that in two cases where the aura was unilateral (paræsthesiæ of an extremity and visual hallucinations of one side) the rotation took place in a direction away from the side on which the sensory aura occurred. All these varied manifestations appeared more or less constantly in each case observed, and Mingazzini regards them as due to an unilateral cerebellar ischæmia, and he especially dismisses from consideration any permanent pathological change (*e.g.*, sclerosis or atrophy) from the fact that in one and the same patient in different attacks the circular movement or rotation may occur in either direction.

The Treatment of Mental Affections by Bacteria Products.

That some psychoses show amelioration under the influence of intercurrent febrile disorders (*e.g.*, typhus, malaria, recurrent fever, or the acute exanthemata) is an old and well established dictum. From a review of two hundred cases of this description collected and studied by Wagner von Jauregg (*Wiener Med. Wochenschr.*, Feb. 28, 1895), it appears that cure or improvement will most probably ensue when the subject is not too far advanced in years and when the mental affection has not existed for too long a period, though cases of old standing insanity have been recorded in which recovery ensued under these conditions. This curative action of febrile disorders on insanity stands on a level with the therapeutic action of other affections on certain diseases, notably those of nervous type, *e.g.*, the effect of malaria on epilepsy, of small-pox on optic nerve atrophy (Mauthner), of typhus on progressive muscular atrophy, etc., and further to elucidate the matter we must bear in mind that various infective disorders (*e.g.*, influenza) are capable of inducing organic changes in the nerve-elements, changes which may be readjusted by a regenerative process in these elements. By this de- and re-generation the elements may, it can easily be surmised, be so favourably modified that the physical malady which expressed itself in a

psychosis becomes nullified. The effect of an induced infection on insanity has shown itself in a few isolated instances, the results being, however, imperfect and insufficiently uniform for deduction. It would be interesting to know the issue of a general successful vaccination of all the inmates of a large asylum, whether any cases could be shown to have improved mentally, for the objections to be urged against a series of experiments with bacteria products (*i.e.*, the chemical bacterial derivatives) are sufficiently evident. Wagner von Jauregg, however, has boldly experimented with the chemical bacteria product known as tuberculin, a preparation he employs owing to its easy procurability and its known effect on the human organism. For treatment with tuberculin those cases were selected in which an unfavourable prognosis was being established owing to their long duration and the inception of characteristic signs of mental degeneration. In its application there naturally had to be considered the possibility of the antecedent presence of tubercular infection and the individual predisposition thereto, which it is well known is of great variability. The initial dose was 1 mgr. In the non-tuberculous subjects habituation to the medicament soon ensued, so that an increase of dosage early became necessary. He estimated future dosage by the intensity of the febrile reaction. Any further habituation to the chemical product necessitated the employment of the bacterial product in extract form, a reason why other important proofs with other bacteria cultures, *e.g.*, of bacillus pyocyanus, etc., had to be suspended. The results obtained by this method appear according to Wagner von Jauregg to be most encouraging. Improvement is said to ensue in some cases most speedily, but in the greater number, to obtain a fairly satisfactory result, a prolonged treatment is necessary. Three cases have been reported as having been wholly cured by this means, while some have improved to such a degree that ultimate restoration to mental health might be reasonably anticipated. In the three cases reported cured the insanity had existed for three years in one and for two in each of the others. With the mental there was a corresponding physical improvement, and no ill effects appear to have followed the treatment.

Maladie des Tics Convulsifs.

Dr. Ed. Remouchamps (Ned. Tijdschr. v. Geneesk, No. 12, 1895, p. 539) relates a case of convulsive tic, one interesting feature of which was the development from purely motor symptoms of sub-acute mania. Earlier writers on this subject (Gilles de la Tourette, Frylinck, etc.) make no mention of psychic disturbances, and others more recently (Buringh Boekhoudt and Van der Weyde) have noted the presence of imperative ideas which are said frequently to occur in these subjects, but that apart from this they betray no mental abnormalities, except after a long continuance of the original affection. Guinon (Rev. de Méd., 1886, p. 51) and Oppenheim (Berl.

Klin. Wochenschr., 1889, No. 25) have recorded the occasional occurrence of imperative ideas, and Séglas (Bull. de la Soc. de Méd. Ment. de Belgique, 1887) and Stembo (Berl. Klin. Wochenschr., 1891, No. 28) have noted various intellectual disturbances. The case here detailed presented certain abnormal features. The motor attack first showed itself at a comparatively late age (54). There were no antecedent evidences of involuntary movement (tics vulgaires), and its onset, occurring at the menopause, was sudden, and not, as is usually the case, of gradual growth. The progressive development was rapid, and after a comparatively short duration (two years) led on to psychic disturbance. Hysterical symptoms (globus, bulimia, abdominal and diaphragmatic clonic contractions) accompanied the earlier tic symptoms. The maniacal symptoms rapidly vanished under asylum treatment, and after two months the patient was discharged, with a marked improvement, too, in the symptoms of her primary neurosis. Buringh Boekhoudt and Van der Weyde in endeavouring to explain the phenomena of this malady observe that, taking into consideration the rapidity of succession of movements and vowel sounds, these must in a measure be rendered unconsciously. They are of opinion that some alteration must exist in those inhibitory tracts the office of which is to control and modify verbal and motor representations in their transmission to motor initiatory centres. As children learn to speak by imitation, they assume that the disposition to convert speech (or motor) idea into speech (or motor) action is an innate one, and that thus "every person is a born echolaliac." This leads one to the idea that convulsive tic and its correlated disorder latab, may be the evidence of a developmental reversion, the affections being closely allied to the microkinetic movements of infants. It must be noted that in certain cases the idea (of phonation or movement) must exist for a definite period in the field of consciousness, as the patients have a premonition of what they are about to say or do. The instance quoted by Frylinck from Guinon of the ballet-dancer who never was subject to involuntary grimacing coram publico, but who on retiring immediately commenced violent facial contortions, proves that for a time these movements can be supervised and controlled without intentional will effort. As every cerebral performance of whatever nature acts as a stimulant to its repetition, we can understand how these movements may become reflex, and thus ensue in rapid succession outside the limit of conscious feeling. It is not, however, all movements or sounds that are reflections of recently-observed movements or sounds, but also from earlier cerebral acceptations of such can they arise, probably as the result of some unknown cortical irritation. The development of such irritation or its intensification may then lead to disturbances of the psychic centres.

Hysteria.

H. Higuier (Wiener. Klin. Wochenschr., 1895, Nos. 1, 2, 3, 5) relates two cases of interest, one of hysteria simulating tabes dorsalis,

and another of locomotor ataxy complicated with hysteria. The diagnosis of an involuntary simulation of tabes dorsalis is not so difficult. To establish the existence of actual locomotor ataxy we must endeavour to demonstrate the presence of "tabetic stigmata," especially the loss of pupillary reflex action to light, the optic disc atrophy, Charcot's joint implication (which, though frequently absent, must be included among the earlier symptoms of the affection), and lastly the absence of patellar reflex. The accessory tabetic symptoms are in this relation of less value. When a combination of hysteria with tabes is suspected, however, the recognition becomes more difficult. The hysterical stigmata may cloud the tabetic, and the presence of various anæsthesiæ—hemianæsthesia, pharyngeal anæsthesia, concentric contraction of the visual field, deep epigastric anæsthesia, etc.—may make us overlook the presence of the organic affection. The contraction of the visual field in hysteria is mainly concentric; in tabes it is mostly irregular. The dyschromatopsia of hysteria is wholly unlike that of tabes. The ophthalmoplegia externa of tabes is limited generally to one muscle; in hysteria it embraces associated groups of muscles, is as a rule hardly observable, and is induced by contraction of antagonistic groups, etc. By this careful observation it has been possible to demonstrate in one case symptoms of tabetic implication of one eye and hysteric affection of the other.

Higuier's first case—that of hysteria simulating tabes—was of a young girl aged 15, with slowly progressive symptoms of inability to walk or stand, of loss of patellar tendon reflex, of ataxic gait, neuralgic pains in the legs and along the course of the sacral nerves, girdle pain, loss of sensation and delayed pain perception and vesical and rectal retention. Subacute polyneuritis could be excluded owing to the absence of all true paralytic symptoms, of muscular pains, and of diminution in muscular content, of cutaneous hyperæsthesia, and of pain-punctæ in the tract of nerves, while the usual ætiological factors, too, were lacking. Some of the symptoms pointed to a doubtful tabetic diagnosis, but the absence of an ætiological factor, the age of the patient, the relatively acute progress of the case, the variations in the affection on the one hand, while standing and walking, and the ataxy on the other hand while reclining (in other words the abasic-astasic symptoms of motor disturbance), and other signs (bilateral ovaralgia, concentric limitation of the visual field, and the fact that the patient had in earlier life suffered from similar symptoms), pointed directly to hysteria. The ultimate issue of the case—the rapid disappearance of all symptoms except the ovaralgia, intercostal pain, and the knee-jerk signs—confirmed the diagnosis. In the second case, where hysteria was combined with actual tabes, the patient, a man aged 47, had, fifteen years before, acquired syphilis, and evinced undoubted signs of locomotor ataxy. After he had been treated by the Charcot-Mochutkowski method (prolonged suspension)—a proceeding which appeared to make a great mental impression on him—he expressed a feeling of progressive decline in health, and after

about seven days there ensued involuntary unconscious uncontrollable movements in the lower extremities, sometimes limited to a desired movement and becoming after a while a tonic contracture. Motor irritation symptoms in tabes usually take the form of involuntary, sometimes wholly unconscious, mostly athetiform movements of the hands, or as more rapid passing muscular contractions, both on intentional movement or quite spontaneously. Many explanations have been sought for these movements in tabes—they have been looked upon as reflex phenomena induced by lightning pains, or as the early sign of a degeneration of the lateral columns of the cord, or as evidence of neuritis, or as the expression of a "static ataxy," *i.e.*, as the result of an inco-ordinate working of the muscular tonus with consequent loss of balance. In all cases where tabes displays motor symptoms one must keep in view the possibility of some conjoint motile affection, *e.g.*, chorea, myoclonus, *maladie des tics*, or hysteria. In the case under consideration, as a careful review of the symptoms during its progress and a strict inquiry into the history indicated (the advent of various phobæ, imperative ideas and imperative movements, the previous presence of all these symptoms, their disappearance and subsequent return after a mental shock, *viz.*, the suspension treatment, on which after an incubative stage—Charcot's "meditation-stage"—there supervened these nervous phenomena), the diagnosis of a rare form of hysteria was made to be coexistent with the tabetic affection.

The Centre of Phonation in the Brain.

This is a question which has engaged the attention of experimentalists during the past twelve years. The only positive result arrived at so far has been that in certain animals a circumscribed area at the base of the præfrontal gyrus may be found, which by electric stimulation will cause a closure of the glottis by complete symmetrical adduction of both vocal cords. This effect is obtainable irrespective of the focus stimulated, whether right or left, and regardless of previous extirpation of the opposite corresponding focus. This, then, is a condition wholly different from that which pertains in the cortical centres for facial and other movements, and, as proved by Semon and Horsley, when both centres are extirpated, or even when both cerebral hemispheres are removed, there never ensues any vocal cord paralysis. In animals thus treated the glottis aperture is not at all changed in shape, and the laryngeal functions appear to be fully maintained. The so-called phonation centre cannot thus rank with other motor cortical centres. One investigator, Masini, is said to have discovered a cortex centre which on irritation caused adduction of the opposite vocal cord only—but his result has not been verified by prior observers (Krause, Horsley, Semon, and others) or by later experimenters who have worked to obtain his results (Onodi, Klemperer). The absence of clinical evidence of vocal cord paralysis due to cortical lesion corresponds, too, with the failure artificially to induce unilateral focal action. Klemperer has recently (*Archiv. f. Laryng., B. ii., H. 3*)

corroborated and extended the earlier researches of Krause, Semon, and Horsley. He has not only extirpated the centres to find that the operation had no effect whatever on the mobility of the vocal cords, but even after induced infection of the centres by the injection of typhus bacilli cultures (evoking thus an acute septic irritation) he has found that there was no implication of function whatever. Quite recently, at the last annual meeting of the British Medical Association, Risien Russell contributed a paper in which he demonstrates the actual existence of centres for ab- and adduction of the cords, though he, too, had not been able to produce isolated movements of the opposite vocal cord by stimulation of the corresponding areas in the opposite hemisphere.

Prisons-Asiles in Holland.

The report of a committee appointed at the general meeting of the Dutch Medical Association (July, 1893) to consider the question of the desirability of establishing separate institutions for insane criminals and the criminal insane in Holland, was issued on April 29th last (*Ned. Tijdschr. v. Geneesk.*, May 18th, 1895). The committee was called upon to consider in addition whether sufficiently satisfactory measures were at present being adopted in Holland to check by the supervision and treatment of young mentally unstable subjects their disposition towards the development of an insane criminal habit. The report deals, however, only with the first question, the committee on investigation finding it of sufficient scope fully to occupy a prolonged period of inquiry. A set of questions drawn up by this committee was sent to each asylum superintendent in the country, and with the view of a statistical computation of the probable number of criminals of unsound mind and of insane likely to develop criminal propensities, they inquired—1. As to the actual number of insane in each institution on a certain day (May 1st, 1894). 2. As to the possibility of obtaining a trustworthy previous life-history of each patient. 3. As to the number out of these who (*a*) have prior to their confinement in the asylum been convicted of any criminal offence; (*b*) have subsequent to judicial sentence been confined in each asylum; (*c*) have developed insanity while undergoing imprisonment, and have then been removed to the asylum. 4. As to the number of patients in each asylum who, on account of uncontrollable dangerous proclivities or other propensities, would be considered by reason of the baneful effect of their association with others insane to be fit subjects for transference to a "prison-asile" if such existed. 5. As to the patients considered in sec. 4; (*a*) how many of these have been placed in the asylum with such proclivities? (*b*) how many have developed such proclivities during their confinement? 6. As to the propriety of drafting such patients (secs. 4 and 5) into "prisons-asiles." The committee also made a request to the Minister of Justice for leave to visit certain prisons, State reformatories, and State penitentiaries to investigate the mental condition of the inmates, and such leave with

certain reservations was readily given. Though some disappointment was experienced as to the statistical outcome of these inquiries the committee's investigation yielded some fruitful results. Space does not permit of a detailed account of these, but the conclusions arrived at, summarized under the following five headings, may be of interest:—1. That the mental status of all criminals should be more fully investigated, preferably by a commission which could advise as to the removal of all mentally afflicted prisoners to suitable asylums for harmful or dangerous insane. 2. That near to some large asylum, preferably the State Criminal Asylum at Medemblik, an institution should be erected for harmful and dangerous insane, to which other asylums might draft their patients of this class, and to which at the same time inmates of prisons requiring medical supervision on mental grounds could be sent. 3 and 4. That the supervision on discharge of all insane who have undergone trial, wherever they may have been confined, and of dangerous or harmful insane who may have been under treatment in a special institution such as above recommended, should be strictly exercised by the introduction of "casiers judiciaires." 5. That an "observation station" for inquiry into the mental condition of all persons undergoing prosecution whose mental soundness may be in question, should also be attached to such special institution, and that the establishment of similar stations in connection with other asylums should be encouraged as far as possible. A copy of this report was sent to the Ministers of Justice and Internal Affairs.

PART IV.—NOTES AND NEWS.

MEDICO-PSYCHOLOGICAL ASSOCIATION OF GREAT BRITAIN AND IRELAND.

FIFTY-FOURTH ANNUAL MEETING.

The Annual Meeting of the Medico-Psychological Association of Great Britain and Ireland was held on July 25th and 26th in the Rooms of the Association, 11, Chandos Street, London. In the morning, at 9.30, a Council Meeting was held, followed at 11 o'clock by the General Meeting for the transaction of the business of the Association. The outgoing President, Dr. Conolly Norman, occupied the chair. Among those present were—Drs. W. Orange, J. G. Soutar, W. F. Farquharson, J. Merson, D. Bower, T. S. Clouston, J. G. M. Finch, Jas. Chambers, F. S. Gramshaw, J. F. G. Pietersen, Bonville Fox, E. Swain, W. F. Robertson, W. R. Dawson, H. H. Newington, G. E. Shuttleworth, H. Rayner, A. R. Urquhart, O. Jepson, D. Nicolson, D. Yellowlees, T. Drapes, E. W. White, R. Percy Smith, E. M. Cooke, L. A. Weatherly, H. Stilwell, H. C. Farquharson, J. P. Richards, T. S. Tuke, J. G. McDowall, J. Mills, S. R. Philipps, H. C. MacBryan, J. S. Grubb, H. Corner, H. J. Macevoy, P. W. MacDonald, H. G. Hill, W. J. Mickle, F. Schofield, J. H. Paul, B. Pierce, W. S. Kay, W. H. R. Rivers, E. H. Ezard, G. F. Blandford, D. Brodie, F. C. Gayton, G. H. Savage, E. East, A. H. Stocker, C. T. Street, D. Mackintosh, Robert Jones, F. H. Walmsley, S. A. K. Strahan, W. G. Ellis, C. Mercier, H. E. Blandford, Oscar Woods, W. L. Andriezen, A. C. Suffern, T. Outterson Wood, J. F. Briscoe, Fletcher Beach, T. B. Hyslop, J. Rutherford, G. M. Robertson, C. S. Morrison, A. S. L. Newington, H. Hicks.

The minutes of the last meeting, which had been printed and circulated, were held as read, and were approved.

THE LATE DR. HACK TUKE.

The PRESIDENT then said—Before we proceed to the business on the agenda paper you must allow me, gentlemen, to say a few words on a subject which must be very prominently before the minds of all our associates this day. Since our last Annual Meeting we have sustained a loss which is well-nigh irreparable, the loss of our dear old friend Dr. Hack Tuke. The position which Dr. Hack Tuke held in this Association may be said to have been unique. I am not prepared to say that he was our oldest member, but certainly he was generally accepted as the father of the Association. His distinguished services as a physician I need not again dwell upon; they are familiar to our profession and our speciality. We know well that he maintained through a long, active and busy life in the noblest manner the traditions of his family, which have given the name of Tuke world-wide repute for the profoundest benevolence and humanity. To many, I may say to all of us, he was known personally as a friend, and we esteemed him as highly as a friend as we honoured him as a physician. The limpid purity and integrity of his character, his absolute truthfulness, his gentleness and kindly desire to serve and help all to whom he could be of use are well known to everyone of us. Many, of whom I am not ashamed to say I am one, have been under obligations to him of a very important character, and many entertained for him an affection which was, I may say, filial. The Secretary and other officers, including myself, have received numerous testimonies of the esteem in which Dr. Hack Tuke was held and the regret which his death has occasioned all the world over. Letters of condolence have been received from the Academy of St. Petersburg, from the Société de Médecine Mentale, of Belgium; from Dr. Morel, of Ghent; Professor Benedikt, of Vienna; Dr. Semelaigne, of Paris; and many others.

The following are among the letters referred to:—

[TRANS.]

Illenau, Baden, March 8, 1895.

DEAR SIR AND COLLEAGUE.—I am deeply moved by the news which has just reached me of the demise of our eminent friend Dr. Hack Tuke. In him one of the most distinguished representatives of our art has gone from among us—the famous editor-in-chief of the "Journal of Mental Science"—the figure endowed with the unresting energy of youth, ever in the front of the fight for our science as well as for the elevation and improvement of our asylums—the comprehensive and truly philo-ophic spirit—the great humane physician—the high-minded and lovable man. With pride and satisfaction I can say that I was one of his friends, and also that he has always been a warm friend to our institution of Illenau. Animated by these feelings, permit me to express my most deeply felt sympathy with you as President and with your respected colleagues of the Médico-Psychological Association, of which Association I also have the great honour to be a member.

May the memory of Hack Tuke remain sacred to me and all who had the opportunity of knowing that illustrious man. Receive, dear sir and colleague, the assurance of my friendly regard and esteem.

Yours faithfully,
H. SCHÜLE.

Conolly Norman, F.R.C.P.I.,
President Médico-Psychological Association of
Great Britain and Ireland, Dublin.

Vienna, I., Franziskaner Platz 5, March 15, 1895.

MY DEAR PRESIDENT,—I desire you to accept for yourself and the Médico-Psychological Association the expression of my profoundest sympathy in the loss you have sustained in the death of Dr. Hack Tuke. When I heard the sad news of the death of our dear friend, I recalled the pleasant days I spent in his company at your house in Dublin last year and looked with poignant regret at the photographic group in which he and I appear with your family.

His society was always a very great attraction to me when I came to England to enjoy the "convivium scientificum vobiscum." I regarded him as a type of a learned British gentleman—mild and temperate in his sentiments—strong and just in his convictions—always open to new evidence and new ideas—equable and serene in temper and habits. As a thinker he gave to the mind what belongs to the mind, and to the body what belongs to the body. His memory will live as a connecting bond between us as long as any contemporary members of the Association survive.

Receive again the warm expression of my condolence, and communicate the same to the Council of the Association.

I am, faithfully yours,
BENEDIKT,
Socius.

Dr. Conolly Norman, Dublin.

Hospice Guislain, Ghent, March 7, 1895.

DEAR DR. CONOLLY NORMAN, When I heard of the death of our dear friend Dr. Hack Tuke I sent a telegram to his widow in these words:—

"The Medico-Psychological Association of Belgium, and particularly its President, shares very acutely the grief not only of the United Kingdom, but of the whole learned world at the loss which science has sustained in the death of Dr. Hack Tuke, and offers profound condolence to the family of the departed.

"MOREL,
"President."

I now beg that you will be my interpreter to all our common friends, the members of the Medico-Psychological Association of Great Britain and Ireland, in expressing to them my deep sorrow for the death of their distinguished associate. Dr. Hack Tuke was one of my closest friends. It is now just twenty years since I first knew and corresponded with him. I shall never forget all his kindnesses to me. His life formed a link between our Belgian Association and your British one. It is my hope that that link will remain unbroken.

With renewed expressions of sympathy and with kindest regards,

I am, yours very faithfully,
JULES MOREL,
President de la Société de Médecine Mentale de Belgique.

Dr. Conolly Norman,
President Medico-Psychological Association of
Great Britain and Ireland, Dublin.

In another letter to the same correspondent Dr. Morel said: "I would have esteemed it a *duty* to be present at the funeral of your and my near friend, but I learned that his family desired that it should be private."

Dr. René Semelaigne, Secrétaire des Séances de la Société Médico-Psychologique de Paris, telegraphed to the President expressing the deep emotion which he felt at the news of Dr. Hack Tuke's death, offering his condolences to the Association, and requesting Dr. Conolly Norman to represent the Société Médico-Psychologique at the funeral, which Dr. Semelaigne himself could not attend through illness.

Dr. Bresler, Freiburg in Silesia, also wrote as follows:—

If I do myself the honour of approaching the Medico-Psychological Association it is with the object of expressing my sincere sympathy with the members in the loss which it has suffered by the death of Dr. Hack Tuke. His importance in the scientific world has long been recognised among his colleagues in Germany, and those excellent traits of character which won for him the respect of his countrymen commanded our constant admiration. I had the advantage of obtaining insight into a part of the sphere of his activity, and acquired some idea of his indefatigable work which enabled me to recognize its value.

ELECTION OF OFFICERS AND COUNCIL.

The meeting then proceeded to the election of office-bearers. Drs. Macdowal Shuttlesworth, Percy Smith, and Drapes having been named scrutineers,

Dr. MORRISON said that he had a proposal to make, to the effect that "it is expedient and right, and will contribute to the greater efficiency and interests and progress of a large number of members of the Association, that one of the editors or sub-editors should be an assistant medical officer." Such an appointment—the selection being made with due regard to special qualifications—would arouse in many members a much greater interest in the affairs of the Association than they had hitherto taken. He wished to know whether his proposal should be submitted before or after the voting on the published names.

The PRESIDENT said he had considerable difficulty in answering the question. It was clear that the design of the Council in placing the paper in the hands of members was that there should be a limited number of editors. It had at first appeared to him that it was in the power of any member to add a name to the list, either by substitution or otherwise. He now perceived that the result of that would be that, if four names were added, there would be eight editors, and he did not see how that would work. Nothing remained, therefore, except that he should take the sense of the meeting as to whether they should confine themselves to four editors or increase that number. He would ask any member, therefore, who wished to move an addition to the list to do so. If that were not done they could only vote for the names on the list, or for others in substitution.

Dr. YELLOWLEES submitted that discussion on the matter was not regular. The whole purpose of the voting paper was that they should be able to give their votes by ballot and silently. The object was to avoid personal discussion. He believed that four editors were too many. The Council having thought otherwise, however, he did not think they could discuss the matter apart from the names printed.

All they could do was to delete certain names and substitute others as they might desire. Invidious personal discussion should be avoided.

No motion having been submitted, the voting proceeded on the list as printed.

Dr. SHUTTLEWORTH, for the scrutineers, intimated that two voting papers were invalid, and that the gentlemen proposed by the Council had been elected by a very large majority, as follows:—

<i>President-Elect</i>	W. J. MICKLE, M.D.
<i>Treasurer</i>	H. HAYES NEWINGTON, M.R.C.P.E.
<i>General Secretary</i>	FLETCHER BRACH, M.B.
<i>Registrar</i>	J. B. SPENCE, M.D.
<i>Editors</i>	H. RAYNER, M.D.
	A. R. URQUHART, M.D.
	CONOLLY NORMAN, F.R.C.P.I.
	E. GOODALL, M.D.
<i>Auditors</i>	E. W. WHITE, M.B.
	T. OUTTERSON WOOD, M.D.
<i>Divisional Secretary for Scotland</i>	A. R. TURNBULL, M.B.
<i>Divisional Secretary for Ireland</i>	OSCAR WOODS, M.D.
<i>Divisional Secretary for South Western Division</i>	P. W. MACDONALD, M.D.

Members of Council:

E. M. COOKE, M.B.	W. S. KAY, M.D.
J. RUTHERFORD, M.D.	D. BOWER, M.D.
R. J. LEGGE, M.D.	E. D. O'NEILL, L.R.C.P.I.

In reply to the TREASURER, the HON. GENERAL SECRETARY stated that he had received about a dozen voting papers from members who were not present, and these he had handed to the scrutineers.

Dr. RAYNER thanked the Association for the honour and trust imposed upon him by his election to the editorial staff. If he felt that he was undertaking the duties so splendidly performed for so many years by their late friend, Dr. Hack Tuke, he would indeed shrink from the task; but he was assured that the gentlemen with whom he was associated were quite equal to the duties, so that any help he could render them might be almost superfluous.

ELECTION OF MEMBERS.

The name of Dr. Ferrier was then submitted for election as an honorary member, and that of Dr. Emil Wilhelm Lindell, Gothenburg, Sweden, for election as a corresponding member, both having been duly nominated according to the Rules.

Dr. MERCIER wished to know which Dr. Ferrier it was proposed to elect (The SECRETARY: Dr. David Ferrier), and asked whether it would not be reasonable to have a statement in support of the proposal in each individual case; and that, at least, the nominee should be identifiable.

Dr. URQUHART suggested that the nomination papers be read.

Dr. FOX asked whether there was no rule providing that the names of the proposers and seconders be circulated amongst the members. It seemed to him that there ought to be such a rule.

The PRESIDENT said that he could not find any such rule. Personally, he thought the names of candidates for election should be printed on the notice paper in full, with those of their proposers and supporters.

Dr. MERCIER begged to point out that, according to the rules, "The election of honorary members shall be conducted in the same manner as that of ordinary members, with one exception;" and that, with regard to the election of ordinary members, "the proposers of a candidate shall send to the General Secretary a proposal in writing, setting forth the full Christian name and surname of the candidate, with address, qualifications, and appointments, if any." It was very desirable, he thought, when a gentleman was proposed for the honorary membership that some reasons should be given—some account of the work he had done and the qualifications he possessed—for conferring the honour upon him. Of course, if it was Dr. David Ferrier that was proposed, they knew his qualifications suffi-

ciently well; but there was another name down as to which not so much was known, and it was very desirable that members should not vote in the dark, but should know why gentlemen were brought forward to receive these, the only honours the Association had to bestow.

The **TREASURER** said that, having nominated Dr. Lindell, he was prepared to be responsible for him as far as he could. He had the honour of receiving Dr. Lindell when he lately visited this country, and he was satisfied that there were few men better qualified to do honour to the Association.

Dr. **YELLOWLEES** declared himself able, from personal observation, to endorse all that the Treasurer had said.

The **GENERAL SECRETARY** pointed out that the Association could not help electing Dr. Lindell, as, when his name was brought forward last November, Dr. Hack Tuke was instructed to write to him informing him that he could not be elected as an ordinary member, but that he would be nominated as a corresponding member at the annual meeting.

The **PRESIDENT** also begged to add his testimony to the eminent fitness of Dr. Lindell for election. He had endorsed his election paper last year when he was proposed as an ordinary member. For that, however, it appeared Dr. Lindell was ineligible.

Dr. **URQUHART** thought that it was just on such occasions they most missed their late friend Dr. Hack Tuke. When the name of any gentleman was submitted for election as an Honorary or Corresponding Member, he always undertook the responsibility of detailing the reasons for the proposal. It seemed to him that the rule as to the election of Honorary Members might be read in a more extended sense than it had hitherto obtained. It provided that "they shall be recommended by six members of the Association," and that "one month before the Annual Meeting the General Secretary shall forward their names to every member." Now they might very well hold "their names" to refer not only to the names of the candidates proposed, but also to the names of the nominating members of the Association. He did not think that Dr. Mercier was altogether in earnest about the case of Dr. Ferrier, whom they claimed almost as one of themselves, so that it was perfectly needless for anyone there to say a single word about his qualifications. As to Dr. Lindell, he was known to many present as holding an important appointment in one of the principal asylums of Sweden, where he is in such repute as to have been commissioned by the Government to inspect and report upon the provisions for the insane of this country. He thought it only remained for the General Secretary to read to the meeting the names of the candidates and those of the members who had proposed them.

Dr. **CLOUSTON** begged to support the suggestion that it be an instruction to the General Secretary for the future to print the names of the candidates proposed and those of their proposers and supporters in the case of Corresponding and Honorary Members, as well as of Ordinary Members.

The **PRESIDENT** then read the list of candidates for Ordinary, Honorary, and Corresponding Membership, together with the names of their proposers and seconders. On a vote being taken all were unanimously elected. Those elected Ordinary Members were:—

Frederick William Eurich, M.B., C.M.Edin., Pathologist, County Asylum, Whittingham, Preston.

Frederick Eastes, M.D.Dur., M.R.C.P., Honorary Medical Officer, Victoria Hospital, Folkestone; 4, London Street, Folkestone.

ANNUAL REPORT OF THE AUDITORS.

We beg to report that we have examined all items of income and expenditure, for the half-year ending December 31st, 1894, and checked all vouchers and counterfoils. The system of accounts has been altered and extended of late whereby the means of inspection by the Auditors have been to a corresponding degree facilitated. The financial state of the Association is satisfactory, but since the work is extending in various directions, we would urge the necessity of full inquiry into each demand upon its funds, in order that judicious economy may be observed.

28th May, 1895.

HENRY RAYNER, }
ERNEST W. WHITE, } Auditors.

TREASURER'S REPORT.

In presenting his report for the half-year, to December 31, 1894, the **TREASURER** stated that copies thereof and of the Report of the Auditors had been sent to every member. He would therefore content himself with laying on the table the original, signed by himself, Dr. Henry Rayner, and Dr. Ernest White, and countersigned by the Chartered Accountant appointed to aid the Auditors. He would be happy to answer any questions with reference to the report. He thought it best, however, first to read to the meeting a statement of the condition of the Gaskell Fund, which would appear in the October number of the Journal. At the end of last year the accumulations of unexpended dividends—dividends received, but not paid away in the shape of prizes—amounted to no less than £105 Os. 6d. Having in the spring reported to the Council these accumulations, he had by its direction caused the £105 Os. 6d. to be invested in the names of two Trustees (Dr. Savage and Dr. Rayner) in a deposit account at the Association's bankers, where it produced a small amount of interest.

Dr. **CLOUSTON** moved the adoption of the report. In doing so, as he had done before, he took the liberty of holding up a warning finger with regard to the expenditure of the Association. It was especially necessary to do so at that time when the editorial staff had been increased, and their individual responsibility diminished. One of the results of that, he thought, would be a tendency to increased expenditure on the Journal, not that he thought that might be a bad thing; but it was very easy to authorize expenditure, and very difficult to check it. There was only one unsatisfactory statement in the accounts. Looking at the income side it would be seen that they had derived, on account of fees for the Certificate in Psychological Medicine and the Certificate for Proficiency in Nursing, the sum of £76 14s. That was really not part of the ordinary income of the Association. It might possibly cease, and he would have been better pleased if the Association had conducted its affairs so as to have shown a surplus to the extent of £76 14s. on the ordinary income. As it was, were that amount deducted from the amount of income there would be on the year's accounts a balance of £6 14s. on the wrong side. They were all greatly indebted to the zeal of the Treasurer, and he did not think that Dr. Newington would misunderstand his remarks on the question of economy.

The **TREASURER** referred Dr. Clouston to the second item on the other side of the account, by which it appeared that the expense of examination almost exactly balanced the income from fees.

Dr. **NICOLSON** seconded the adoption of the report. They were exceedingly fortunate in having Dr. Newington as treasurer, and it was for them to give him their heartiest support in the arduous and often thankless duties he had to perform.

Dr. **BONVILLE FOX**, without any desire to cavil at anything in the report, asked what "furniture" had been provided.

The **TREASURER** stated that £17 4s. 7d. had been expended in the purchase of office furniture for the committee-room used by the Council, and of book-shelves for the library, which had now become a considerable possession. He should say that in strict accounting the amount expended on furniture ought to be put to an inventory account, and be thus added to the capital; but he took the opinion of Mr. Woodington and the Council as to whether it would not be better, considering the smallness of the amount, to write it off as one of the items of current expenditure. That proposal having been adopted by the Council, it had been so treated.

Dr. **RAYNER** drew attention to the warning contained in the Auditors' report, and to their intimation of the alteration in the system of accounting. It would be seen that the expenditure under various heads was stated in such a way as to be more clearly and definitely ascertainable than hitherto. The expenditure on and the receipts from the Journal, the accounts in connection with the examinations, and the local accounts were also properly stated, so that they would be able in future to check any particular extravagance with great ease.

Dr. **PERRY SMITH** asked now the £105 surplus dividends of the Gaskell Fund were to be treated. Was that sum to be added to the capital of the Gaskell Fund?

* The Medico-Psychological Association. *

REVENUE ACCOUNT.

	£ s. d.	£ s. d.	Cr. £ s. d.
Dr.			
To Journal, Printing, Publishing, Engraving, Advertising and Postage	236 17 1		
" Examinations, Association Prizes, and Clerical Assistance to Registrar	75 4 7		
" Petty Disbursements, Stationery, Postages, &c.	31 6 0		
" Annual, General and Divisional Meetings	31 16 7		
" Rent of Premises at 11, Chandos Street	10 0 0		
" Furniture Purchase	17 4 7		
Balance	402 8 10		
Income.			
By Dividends		£141 18 0	
" Sales—Journal		18 0 0	
" " Handbook		—	159 18 0
" Fees, Certificate of Psychological Medicine		£63 0 0	
" " Certificate of Proficiency		13 14 0	
" " in Nursing... ..		—	76 14 0
" Subscriptions		—	282 11 6
	<u>£473 4 10</u>		<u>473 4 10</u>

BALANCE SHEET.

	£ s. d.	£ s. d.	£ s. d.
Liabilities.			
Journal Account, balance of	24 19 6		
Examinations Account, balance of	29 16 4		
Petty Disbursements Account, balance of	20 15 1		
Meetings Account, balance of	6 12 11		
Rent Account, balance of	10 0 0		
Subscriptions in advance	19 19 0		
Gaskell Fund Account, Dividends	105 0 6		
Balance:—	217 3 4		
Balance 1st July, 1894	478 7 6		
Increase in value of £306 Consols	10 14 2		
Balance of Revenue Account	70 16 0		
	<u>£777 1 0</u>		
Assets.			
Lloyd's Bank:—Bankers		£ 270 19 10	
Consols (£306) value at date		816 14 2	
Fees Account... ..		29 9 0	
Sales—Journal		£141 18 0	
Handbook		18 0 0	
		<u>159 18 0</u>	<u>777 1 0</u>

Examined and found correct, HENRY RAYNER, } Auditors
ERNEST W. WHITE, }

E. HAYES NEWINGTON, Treasurer.

May 28th, 1895.

E. WOODINGTON, P.C.A.

The **TREASURER** said it might have remained in the general balance or it might be placed, as it now was, on deposit, or it might be invested and added to the capital of the fund, or finally it might in the discretion of the Council be applied as extra prizes in any year.

Dr. **RAYNER** asked whether the Gaskell Fund was invested in Goschens, as they might in that case have to meet a depreciation in the yearly income.

The **TREASURER** replied that it was so invested. It might be a question whether a little increase of revenue could not be got by putting the capital into more lucrative investments.

Dr. **RAYNER** explained that he had put the question in case there might be a lessening of the annual income, and asked whether, in view of that possibility, they should not add the sum in question to the capital, and thereby guard themselves against the annual revenue falling below the annual expenditure.

The **TREASURER** undertook to obtain advice on the matter.

The Treasurer's report was thereupon unanimously adopted.

GIFT TO THE LIBRARY.

The **PRESIDENT** said that the representatives of the late Dr. Hack Tuke had kindly presented the Association with a valuable collection of books from his library, and he therefore proposed "that the warm thanks of the Medico-Psychological Association of Great Britain and Ireland be conveyed to the family of the late Dr. Hack Tuke for the very handsome gift of books for the library." The proposition would meet, he was sure, with the unanimous support of the Association.

Dr. **CLOUSTON** supported the proposal of the President. He was sure that it would meet with the approval of all the Associates. He could not sit down without adding his very grateful concurrence with the remarks of the President at the beginning of the meeting with regard to the position and character of the late Dr. Hack Tuke. As a very old member of the Association, and as having been associated with Dr. Tuke as co-editor of the Journal, he could not express how deeply he felt his loss. The great moral of Dr. Tuke's life was that character and industry and conscientiousness stand out and mark a really great man, independently altogether of intellectual position, which, in his case, was also very considerable.

The proposal was seconded by Dr. **PERCY SMITH**, and was adopted by the meeting.

THE PRIZES OF THE ASSOCIATION.

The **PRESIDENT** announced that with reference to the Bronze Medal of the Association the Council, on the recommendation of the examiners, had decided to make no award this year. The Gaskell Prize and Medal had been awarded to Dr. G. W. F. Macnaughton, to whom he had much pleasure in handing it. Dr. Macnaughton then came forward, and was congratulated by the President.

REPORT OF REGISTRATION COMMITTEE.

The **TREASURER** submitted the report of the Registration Committee, over which he had been called to preside in the absence of the Chairman. The report was as follows:—

The subcommittee appointed by the Council to superintend the carrying out of the Registration of the Association begs to report that the matter is now complete, subject to eight members signing the Memorandum of Association. It further reports that the solicitor who has carried the matter through states that his professional charges, together with the out-of-pocket expenses, will be limited to the sum of fifty pounds, which was authorized by the Association to be spent for the purpose.

H. HAYES NEWINGTON,
Presiding Chairman.

Dr. **RAYNER** moved the adoption of the report. He thought it right to remind the Association that by adopting that report they were meeting a strong wish of their old friend Dr. Tuke.

Dr. **OUTTERSON WOOD** seconded, and the report was adopted.

PARLIAMENTARY COMMITTEE.—GRATUITIES AND PENSIONS.

The report of the Parliamentary Committee was then submitted by the **TREASURER** :—

The Parliamentary Committee begs to report that it held a meeting on July 24th, and considered the two matters referred to it by the Council.

a. The South-Western Division forwarded to the Council the following resolution adopted by it at a meeting held on April 4th, 1895 :—

“That it is desirable that steps be taken to obtain for the Visiting Committees of Asylums and Hospitals for the Insane power to grant gratuities to the widows or orphans of officials who may die after long service, or be fatally injured in the discharge of their duties.”

Your Committee is prepared to accept the resolution, and to take care that on the first opportunity this proposition, as modified by such further suggestions as may seem to be desirable, shall be brought before the Legislature.

b. The Scottish Division made a representation in the subject of the following resolution. After consideration the Parliamentary Committee resolved—“That it is of opinion that a sum not exceeding ten guineas should be contributed from the funds of the Association to assist in obtaining an actuarial report upon the various schemes suggested for providing pensions for the officers and servants of Scotch District and Parochial Asylums.”

The Parliamentary Committee accordingly submits this resolution to the Annual Meeting, with a recommendation that the Treasurer be authorized to pay this sum, or such part of it as may be necessary, on the production of accounts submitted by any properly-constituted Committee appointed to deal with the question.

H. HAYES NEWINGTON,
Presiding Chairman.

There were no doubt, the **TREASURER** said, members of the South-Western and Scottish Divisions present and desirous of advancing the views laid down in their resolutions. He would point out, however, that if the request of the Scottish Division were adopted it would be necessary for the meeting to directly authorize the expenditure of funds to the amount of ten guineas.

Dr. **NICOLSON** said he did not know whether it was necessary for him to say anything more on the matter on the part of the South-Western Division than was embodied in their resolution. The Parliamentary Committee had supported it in their report, and he was sure that the propriety of consideration for the widows and families of attendants and servants of asylums, more especially of attendants who had been invalidated or killed in the course of duty, was one that all would fully endorse. The difficulty was how to set about making the weight of the recommendations of the Association felt in proper quarters. That was considered at the meeting of the South-Western Division at Bristol. The same opinion had been expressed time after time for many years. They wished now to see it put into some practical form in the hope that the desired benefit might result. The attendants at Broadmoor had no provision for their widows granted by the State in the event of ordinary retirement, but in the event of death ensuing from injuries met with in the execution of duty, the Treasury was always willing to make compensation, and had prepared a scale according to which the circum-

[We append a copy of the Certificate of Incorporation of the Medico-Psychological Association of Great Britain and Ireland :—

“I hereby certify that the Medico-Psychological Association of Great Britain and Ireland (the word ‘ Limited ’ being omitted by license of the Board of Trade) is this day Incorporated under the Companies Acts, 1862 to 1890, and that the Company is Limited.

“Given under my hand this thirtieth day of July, One Thousand Eight Hundred and Ninety-Five.

“**ERNEST CLEAVE,**

“Assistant Registrar of Joint Stock Companies.”

The Memorandum and Articles were signed by Drs. **Nicolson**, **Rayner**, **Hayes Newington**, **Conolly Norman**, **Yellowlees**, **Clouston**, **Blanford**, and **Fletcher Beach**, and were witnessed by **Mr. Wigan**, Solicitor.—Ed.]

stances of each case might be considered and the amount granted. He begged to move the adoption of the report.

Dr. MACDONALD seconded. He thought that it would interest the meeting to know what had happened in the South-Western District. He was asked to send a copy of the resolution to every public asylum and hospital in the district, and he was pleased to be able to inform the Association of the success which had attended that step. The Committee of the Hereford City Asylum unanimously adopted the resolution, and two Members of Parliament to whom the resolution was sent had replied with promises to give it support. The Committee of the Gloucestershire County Asylum had recommended that the scale be that of the Police Act. The Committee of the Somerset County Asylum had taken power to deal with the matter, as also that of his own county, all which clearly proved, he thought, that when the matter was fairly brought before those interested they would do what they could to repair the omission in the Act of Parliament.

Dr. T. W. McDOWALL asked how such a pension could be made lawful? No doubt they would get resolutions passed by various Committees of Visitors to the effect that they were willing to do so-and-so, but he believed in the case of a person being injured or killed the relatives could not be lawfully paid any money from the county funds.

The TREASURER said that an alteration in the Lunacy Laws would some day be necessary, and that the Parliamentary Committee had made a note to deal with this question among others when opportunity offered. It was true that there was at present no legal power of granting such a gratuity. In that way a direct fraud was, in a sense, perpetrated on the relatives of an officer dying or being killed in harness. Every man going into asylum service entered it with the hope of an annuity. If he were killed all that vested interest was thrown on one side. The proposal was put forward to remedy that state of things.

Dr. MACDONALD said that it was really not a difficulty imposed by Act of Parliament, but by the orders of the Local Government Board. They wished to get the sanction of the Local Government Board so that the auditors would pass these gratuities when Asylum Committees grant them. It might be mentioned that within the last three months the head attendant of the Derby County Asylum, having met his death in the course of service, £200 was awarded to his widow, a grant which was confirmed by the County Council with the sanction of the Local Government Board. If they could do that he did not see why the same procedure might not be adopted in every similar case.

Dr. WHITE stated that a gratuity had been lately given to the widow of an engineer in the City of London Asylum who had lost his life in the discharge of his duties.

Dr. URQUHART remarked that action had been taken by only one Division of the Association in regard to this matter, and it had been reported by the Secretary of that Division that the committees of certain asylums had considered the question and responded favourably. Would it not be well, he asked, that the whole of the Asylum Committees in England and Wales should be similarly communicated with?

Dr. BATTY TUKE asked whether the Committee had taken into consideration the chances of a Bill being introduced by which it would be proposed that all cases of sudden death should be provided for by a fund to be regulated by Government? He understood that compensation would be given whether the fault lay with the unfortunate person or not.

The TREASURER replied that the Committee did take that into consideration, but it believed damage to an official was not an accident for which any Employers' Liability Act could make his employers liable. When the matter was previously before the Association it was stated that no Accident Insurance Company would insure any asylum employes. A sharp line was drawn, he thought, between a mere accident in the ordinary course of life and what some were pleased to call an accident, such as a murderous assault, in theirs. He thought it a pity that Dr. Macdonald's information had not been put before the Parliamentary Committee, which had received merely a bald resolution. Had they but known there was the door open to walk round the Act by application to the Local Government Board

they would probably have reported in other terms. He took that opportunity of emphasizing the fact that Committees met at considerable trouble to themselves, and not very often in the year, and those who set Committees in motion ought to take every care that the whole case was put before them. Perhaps he was speaking a little out of order, but he wished to mention that last spring at Worcester a most important matter, dealt with in the latter end of the report they were considering—a matter from Scotland—was put before the Parliamentary Committee. The Committee met in the biggest chamber in Worcester, the sederunt consisting of two, one the Irish President, the other the English Treasurer, to look after a Scottish matter of which they knew nothing, and concerning which they had no material to go upon.

The PRESIDENT then put the question of the adoption of the report, whereupon Dr. YELLOWLEES asked if that would involve the expenditure of £10. The Treasurer had expressly said it would not.

The PRESIDENT replied that it did appear to him to involve the expenditure of "a sum not exceeding ten guineas" for the purpose of assisting in obtaining an actuarial report. Money spent in actuarial reports was very often well spent, as the Association was thereby safeguarded from unnecessary expenditure.

Dr. YELLOWLEES said that was so; but he wished a definite ruling, as the President's statement was in an opposite sense to what the Treasurer had said. The latter had told them that if they adopted this report it would be necessary for the Association formally to sanction that expenditure. He understood the Treasurer to use these words quite explicitly.

The PRESIDENT said he had not been able to attend the Parliamentary Committee meeting, and was therefore not so familiar with the report as he ought to be. On re-reading it, however, he thought the interpretation of Dr. Yellowlees was the correct one. In the conclusion of the report it was stated "The Parliamentary Committee accordingly submits this resolution to the Annual Meeting with the recommendation that the Treasurer be authorized to pay this sum, that is, a sum not exceeding ten guineas or part of it, as may be necessary, on the production of accounts submitted at a properly constituted Committee appointed to deal with the question." It appeared to him, therefore, that it was in the mind of the Parliamentary Committee in adopting that report that it would be necessary to receive a special authorization from the Annual Meeting for the expenditure of the money.

Dr. URQUHART moved "That the money be paid as indicated in the report of the Parliamentary Committee," and briefly stated the reason why the money had been asked for. The District and Parochial Asylums of Scotland occupied a unique position among the asylums of the United Kingdom with regard to pensions. These institutions had been omitted from the clauses relative to pensions in the Lunacy Acts of Scotland; and in spite of two very strenuous attempts on the part of all the physicians engaged in lunacy practice in Scotland two Governments refused to enter in Bills then pending any clause about pensions, so that there was no explicit power or authority on the part of the Committees of these asylums to grant any pension or any gratuity whatever. As years went on, in spite of the assistance of the General Board of Lunacy and of the favourable reception the proposal obtained from the Marquis of Lothian, nothing had been done. The employes of these asylums, being placed in this peculiar position, had therefore to help themselves. Something had been achieved by Dr. Campbell Clarke by a system of bonuses. A Committee of the Scottish Division had been appointed to consider the question. They found that they could give no adequate report without authoritative advice. They therefore asked the Association to vote a small sum of money so that they might investigate and report on the various schemes now in existence. For instance, there was the Post Office scheme, under which by yearly payments a deferred annuity could be got. There was also a well-known scheme, instituted in London by Mr. Burdett, the Nurses' Pension Fund, which ought, by reason of £40,000 having been subscribed, to be very much more favourable than the Post Office can offer. The choice between these two—the Post Office and the Royal National Pension Fund for Nurses

—was not one which any ordinary person could adjudicate upon, but one which required the attention of an actuary of skill and experience. If the fund which Mr. Burdett had done so much for were recommended, by a special agreement the Committees of each District Asylum could pay in so much a year and each official in the asylum could pay in so much a year, and at the termination of service a pension would be secured, or, in the event of the marriage of a nurse, she could get a sum down to the extent of her payments, so that the money would not be lost to her, and the Committee in certain cases would retain their interest in the money they had contributed. The difficulty, therefore, was strictly local, affecting only a certain set of asylums in Scotland. The question was whether some plan could not be agreed upon for the provision of pensions for the officials in these asylums from their own savings, augmented by grants by the Committees. He moved that the money be paid.

Dr. YELLOWLEES seconded. They should have had that explanation before. It was exactly what he wanted. He was entirely satisfied with the steps that had been taken, although he did not think the ten guineas would go very far, and hoped that the matter would be extended to the widows and orphans of servants.

The report was then unanimously adopted, and the expenditure authorized.

APPOINTMENT OF EXAMINERS.

It was announced that in accordance with the regulations of the Association the following gentlemen had been appointed Examiners by the Council:—For England: Dr. Kay and Dr. Ernest White. For Scotland: Dr. Batty Tuke and Dr. Carlyle Johnstone. For Ireland: Dr. Finegan and Dr. Oscar Woods.

Dr. CLOUSTON suggested that the Secretary should print the names in the Journal. They had not appeared last October, and it was difficult to find out who the examiners were.

Dr. URQUHART referred Dr. Clouston to page 692 of the Journal for October, 1894.

Dr. CLOUSTON explained that what he wished was that the names of the examiners should be stated in the lists of the Association printed annually.

Dr. OUTRESON WOOD suggested that the names of gentlemen who had acted as Presidents of the Association since 1854 should be printed each year in the October number. That was customary in other societies. If they did not take action now they might lose the opportunity of obtaining a correct list of former Presidents. There had been some difficulty in carrying the matter back beyond 1854. He had written to Sir John Bucknill, who had expressed, in a most interesting letter, a strong opinion that they should secure an accurate account of the early history of the Association.

On the suggestion of Dr. URQUHART these points were remitted to the Council.

REPORT OF COMMITTEE ON CRIMINAL RESPONSIBILITY.

Dr. MERCIER submitted the report of the Committee on Criminal Responsibility. He remarked that the Committee had devoted a great deal of time and attention to the matter; but, owing to unavoidable circumstances, they had not been very successful in obtaining full attendances at the meetings. Dr. Mercier concluded by moving that the report be received and adopted, which was seconded by Dr. RAYNER.

Dr. WEATHERLY—I beg to move that this report be not adopted. As one of the members of this Association who moved for the appointment of this Committee, I think that the members of the Association should thoroughly understand what the Committee has done, and what, I maintain, it has done wrongly. It was appointed to investigate the subject of Criminal Responsibility, to report to the next Annual Meeting. The word "annual" was struck out, and "at the next meeting" substituted. Up till the present, however, no report had been made by it. In the meantime a Committee had also been appointed by the Psychological Section of the British Medical Association at Bristol; but unfortunately it was discovered, when the Council of that Association met, that the Section had no power to appoint a Committee. Consequently the only Committee which sat was that of the Medico-Psychological Association. At our first or second meeting a memorandum, which Mr. Ernest Hart had privately drawn up for the consideration of the Lord Chancellor, was received by the Committee for

consideration and report. (It having been asked whether it was right to discuss a private memorandum, Dr. Weatherly said he was not going to discuss it). We found it, he said, of such length that we appointed a sub-committee to look into it and see what answer we should give to Mr. Ernest Hart. In the meantime, we had another meeting, at which, I maintain, the Committee of the Medico-Psychological Association practically ended, because a resolution was proposed by myself and seconded by Dr. Savage, and unanimously adopted. I call on Dr. Mercier to inform the Association what that resolution was. It was to the effect that we considered the law wrong, and we made a suggestion that certain questions should be left to the jury: (1) Did the person commit the crime of which he was accused? (2) Was he of sound or unsound mind at the time the crime was committed? The next meeting, held apparently to receive the report of the sub-committee concerning the answer to be given to Mr. Ernest Hart, I was unable to attend, owing to severe illness. It consisted of three members, Dr. Mercier, Dr. Orange, and Dr. Conolly Norman. I understand that Dr. Norman, who had not been present at the previous meeting, did not know that a resolution had been passed condemning the law. The three decided that another sub-committee, consisting of Dr. Mercier and Dr. Orange, should be appointed to report at this present meeting. With regard to Dr. Orange we all know his opinion, that the law is in a satisfactory condition. With regard to Dr. Mercier, he is the man who told us at Bristol he had gone into the question thoroughly, that he had practical skill in it. (Dr. Mercier disclaimed this statement.) Well, he had certainly said he had gone into the matter very thoroughly, and had spoken strongly against the present law. Dr. Savage, if I recollect aright, expressed strong dissatisfaction with the present state of matters. Our Committee had done their work. They had passed a resolution to the effect that the law was wrong; they had made certain suggestions; but now comes this other sub-committee to tell us that everything is right and that perfect justice is done to the insane prisoner; and we are asked to adopt this report in the face of two facts which cannot be disputed. Firstly, that the Association has for years been declaring that the law in relation to criminal responsibility of the insane is unjust, and has also on more than two specific occasions agitated for reform. Secondly, that the judges themselves have openly stated that the law is not in a satisfactory condition and needs revision. Did not the late Lord Chief Justice Coleridge say that great injustice might be done under the present law, and has not Mr. Justice Hawkins admitted that not only he, but his brother judges believed the law required alteration. Can we therefore for one moment agree with this report which we have just heard read? Can we allow it to go forth to the world that the Association is now suddenly satisfied that all is right and nothing wrong in relation to this law as it now exists. I beg to move that the report be not adopted.

Dr. URQUHART—It is very difficult, Mr. President, to discuss this elaborate report on hearsay, and I think it would be possible to print and distribute it to-morrow morning if that course seems desirable. He moved that they delay consideration of the report.

Dr. YELLOWLEES seconded this motion, as he thought that in a matter of such importance, where different views evidently prevailed, the report ought to be in their hands, and that they should adjourn the discussion to another day.

Dr. WEATHERLY asked that Dr. Mercier should read the resolutions adopted by the Committee to which he had referred.

Dr. YELLOWLEES did not think that was a matter of any consequence at that time. A Committee could not be bound by what it did one day if it chose to do a totally different thing another day.

The PRESIDENT agreed with this view, and pointed out that the adoption of the report had been moved and seconded; that it had been moved, but not seconded, that the report be not adopted; while a third motion had been moved and seconded that consideration of the report be deferred pending its being printed and distributed among the members.

Dr. WEATHERLY withdrew his motion in favour of the last, as he was perfectly satisfied that when the members read the report they would agree with him and turn it out.

Dr. ORANGE thought that it would be advisable to have the report printed. It was their great misfortune, by a cause for which they all deeply sympathized with him, that they did not have Dr. Weatherly at all their meetings. So far as he knew, of all the members appointed on the Committee, Dr. Weatherly was the only one who differed from its finding.

Dr. WOODS said he would have had great pleasure in attending the meeting on the previous day had he received notice of it. He was slow, indeed, after the great trouble taken in preparing the report, to immediately reject it, but at present he was altogether in sympathy with Dr. Weatherly. Before passing any resolution committing them to the statement that the law was perfect, which last year they had said was all wrong, they should have the report before them.

The PRESIDENT put the motion to the meeting "that the consideration of the report of the Criminal Responsibility Committee be deferred pending the printing and distribution of that report among the members." He had purposely left the date open upon which the report should be considered. It was very desirable that there should be unanimity, and there was evidently no chance of that without full discussion. He was entirely in the Association's hands, but his feeling was that it should be deferred for at least a quarter, that it should not take precedence of the papers on the agenda paper for to-morrow.

Dr. WEATHERLY maintained that it ought to have had a place on the agenda paper. Every member of the Association ought to have a copy of the report for discussion at the next General Meeting. It was important the matter should not be decided in a moment.

Dr. SWAIN asked what objection there could be to the report being printed in the Journal.

Dr. YELLOWLEES deprecated the printing and distributing of the report to every member of the Association, especially in the Journal. He did not think that any report ought to be so dealt with until approved. In his opinion there would never be a better opportunity for discussing it than during the present meeting.

Dr. NICOLSON thought it would do the report of the Committee larger justice if discussion were postponed to a General Meeting. It was utterly impossible to have it printed for the members to go carefully into its merits and to have it thoroughly discussed during that meeting. He believed that the Committee if they had thought the discussion would not be taken that day would have made a very short report recommending that no steps be taken, or else would have extended their observations so as to give chapter and verse for their conclusions. Apart from that it would be a great injustice to the gentlemen who had prepared papers for that meeting to ask them to stand aside for a question which had not been specially announced for discussion. He agreed that the report should be printed and placed in the hands of every member, but he objected to its going into the Journal, a publication circulating beyond the radius of their membership. If their members chose to make improper use of the printed report, that would be a matter for regret, but every facility must be given for the thorough discussion which was requisite before any expression of opinion on the part of the Association could have its due weight. The mention of his name with regard to the resolution agreed to at the Bristol Meeting compelled him to offer some explanation of that proposal. He made that motion because their information was then not very complete. The original proposal was that certain members should be appointed to personally lay before the Lord Chancellor what were believed to be the grievances inflicted by the law. He thought that course was scarcely consistent with the dignity of the Association; and, in order to meet what he believed to be the unanimous feeling of the members, he proposed that the time had arrived for the reconsideration of the questions put to the jury by the judge. That was the gist of his intention, and that was submitted to the Committee. If in the course of their investigations the Committee had to take up contentions and personal questions more antagonistic to the working and administration of the criminal law it was because they felt these questions were inseparable. It would be premature to print the report in the Journal. They ought to keep the report within the Association till they had an opportunity of discussing it.

The PRESIDENT thought it would be unfortunate if they were to print it in the Journal, as for a great length of time it would be liable to constant reference on

the part of some who might take a hostile view of it, and who might quote it as representing the opinion of the Association.

Dr. BONVILLE FOX proposed that the consideration of the report be postponed till the next meeting in London, which would be held in November. This was one of the most important questions, if not the most important, placed before them for a long time. So far as reflecting on the state of the law, and so far as their influence in regulating that law was likely to be asked for, he for one must protest against being asked to give an opinion, unimportant as his might be, on an elaborate report which he had not had time to study.

Dr. YELLOWLEES thought that if the discussion were to be deferred at all it should be for a longer period, till they would have a large and influential meeting. If they considered how much smaller the attendance would be in November than they had present, he was quite sure that they would recognize how unwise it would be to discuss the report then. He would suggest that the report should be sent to the branches of the Association for their opinions upon it, and defer the discussion till the next Annual Meeting.

Dr. MACDONALD supported this suggestion.

Dr. ORANGE said that the members of the Committee would not object to postponement. They had not gone beyond the last statement of the report—that the Committee were unable to make any recommendation. They had felt that they were obliged to report to that meeting; but that the subject, being large and difficult, was probably not thrashed out. The postponement, so far as he knew, would not be productive of any inconvenience or harm.

Dr. URQUHART, as the proposer of the original motion for delay, understood that the amendment which would now be put from the chair was, "That this report be printed, marked confidential, and sent to every member of the Association, and specially to the Divisional Secretaries to bring before the next meetings of Divisions, and that the discussion of this report be placed on the agenda paper of the next Annual Meeting."

The PRESIDENT accepted that wording of the resolution as embodying the views of the Association, and put it from the chair, when it was unanimously adopted.

Dr. OSCAR WOODS suggested that the resolution should be printed at the head of the report to prevent any misunderstanding.

Dr. NICOLSON asked whether it might not be helpful to readers if the Committee were allowed to append, as foot-notes or otherwise, certain explanatory matter referring to cases on which they had formed their opinion.

Dr. WEATHERLY protested against any alteration in the report.

Dr. MERCIER declined the office Dr. Nicolson sought to throw upon the Committee. Already they had spent the most strenuous labour on a wearisome task. Weeks and months had been occupied concentrating the enormous mass of information accumulated in the report, and he really could not undertake to spend more time on it.

The PRESIDENT said it appeared from what had fallen from the Secretary of the Committee that Dr. Nicolson's proposal could not be adopted. He would take it upon himself to instruct the General Secretary and the Secretary of the Committee on Criminal Responsibility to print the report as it stood, subject to the instructions of the Association.

APPOINTMENT OF COMMITTEES.

The Parliamentary Committee and the Educational Committee were then re-appointed; that on Criminal Responsibility held to continue in existence till the report had been discussed and dealt with.

VOTES OF THANKS.

A vote of thanks to the officers of the Association and members of Council was acknowledged by the President and by the General Secretary, and the meeting then adjourned.

THE AFTERNOON SITTING.

In opening the afternoon sitting the PRESIDENT said: One duty remains to be performed, gentlemen, of those belonging to the office of President, an office which I have filled, very unworthily, I am afraid, for the last year—an Irish year, consisting of thirteen months. The duty to which I refer is perhaps the most

pleasing of the many pleasing duties expected of me during that year; it is the duty of resigning my chair to my very worthy successor, a man so much better known to most of you, and so much better fitted to fill the presidential office. I therefore call upon Dr. Nicolson to take the presidential chair. In doing so I desire to present him with the emblem of office. I hope he shall not have often occasion to use it. In every association a wand of office of this kind is needed; and it struck me very forcibly a few months ago, when we met very pleasantly in one of the western asylums, that we did not possess the bâton which the President requires to keep order. When called on to preside at the meeting in Worcester County Asylum I asked Dr. Cooke to provide me with one. He hurriedly left the room and presently appeared with a small wooden hammer, obviously very hastily formed from the leg of an asylum chair. Fearing that the repetition of such an occurrence might lead to the indignation of the County Council, I obtained the little ivory hammer which I now present to our President.

Dr. NICOLSON—Gentlemen, in accepting this valedictory hammer from our good friend, I must say that I do not support him in what he says as to the desirability of his leaving the chair, or the opportuneness of my taking his place here. I am sure that in the year of office during which Dr. Conolly Norman has occupied the chair the best traditions of the Association have been fully sustained. I have to thank you, gentlemen, for calling me to this high and prominent place amongst you. It is with a feeling of the greatest possible responsibility that I enter upon it, although in accepting it I do so in the full knowledge that I shall have the support, not only of the Council, but of all the members individually, in endeavouring to make my year of office not altogether unfruitful. That remains very largely, if not entirely, with yourselves. You can raise questions, you can work, and you can read papers. Of your capacity for raising questions we have had good evidence to-day; and I am quite sure that during the coming year questions of far-reaching importance will be brought before us. If we do not raise questions we can arrive at no conclusions. Gentlemen, I thank you very heartily for your kindness in placing me in this chair, and I ask you for your aid to help me to carry out the duties of the position as I myself would like them to be carried out, and as I believe you will expect them to be fulfilled. My first duty is to ask you to allow me to convey to Dr. Conolly Norman, the retiring President, an expression of our most grateful thanks to him for his conduct in the chair during the past year. He deserves all the consideration and kindness we can heap upon him. I therefore ask you to accord him a most hearty and cordial vote of thanks. (Cheers.)

PRESENTATION TO DR. PAUL.

The PRESIDENT—My next duty (a most pleasurable one) is to ask you to allow me to present to our dear old friend Dr. Paul a slight testimony of the great regard which the Association has for him, and our sense of the long and honourable period during which he held the office of treasurer of the Association. Dr. Paul in his personal recollections goes a long way beyond anyone in this room. He has been an earnest and silent worker in our specialty, and, if he has not been forward in introducing his own name or in blowing his own trumpet, those of us who know him know what a good work he has done during many years of a trying life of responsibility and social duty which he has so well and so worthily done. All the members of the Association know well—at least, so far as they came to the surface—the many acts of consideration and kindness which Dr. Paul has extended to it. In his capacity of treasurer, when money did not come in as it might, he kept before us the hopeful and bright view, and was never slow to put his hand into his own pocket on behalf not only of the Association, but of individuals. He is a man full of sympathy and full of that kindness of heart which never gives an opportunity for raising an angry word; and we regard him as a type of man which many of us might well take as an example. I therefore, without wishing to say a word in his presence more than would be becoming under the circumstances, ask you to allow me to read the inscription on this memorial:—

“Presented, together with a silver bowl, to John H. Paul, Esquire, M.D., F.R.C.P.E. and M.R.C.P.Lond., by Members of the Medico-Psychological Association of Great Britain and Ireland, as a token of esteem and regard, and in grateful

acknowledgment of the unvarying courtesy, ability, and zeal with which he discharged the duties of Treasurer of the Association for a period of 31 years."

Dr. PAUL, who was enthusiastically received, said—Mr. President and gentlemen, I assure you I rise under great difficulties, being quite overwhelmed by the very kind remarks that have been made by my old friend and so cordially responded to by you all. It has been for a long period of my life a great pleasure to serve the Association in any way I could for its good. I hope as long as I still am spared I may yet be able, perhaps, in some little way to do something to forward its welfare. I congratulate the Association heartily upon the position it has now reached, which is very important, very different from what it was when I first knew it. We have gone on from small beginnings to be a large and liberal society. I am sorry I am not able to express my thoughts as I should like. However, I can say that I accept with gratitude this splendid bowl and magnificent address, which I really do not deserve. It will be a great pleasure to my family to receive this token at my hands from you; I hope they will cherish it for many years to come, and that it may become an heirloom to be handed down for generations. I feel most grateful to you. I assure you it is one of the proudest moments of my life. I beg to return my thanks to the President and to you all for the cordial and almost affectionate manner you have extended towards me.

The PRESIDENT then delivered his address, and, on the following day, the scientific transactions of the Association were resumed, as indicated in Part I. of this number of the Journal.

THE ANNUAL DINNER.

On Friday evening, July 26th, the annual dinner of the Medico-Psychological Association of Great Britain and Ireland took place in the Whitehall Rooms, Hotel Metropole, London, David Nicolson, Esq., M.D., President, in the chair.—The loyal toasts having been duly honoured, the President proposed "The Navy, Army, and Auxiliary Forces," to which Major Macbean (in the absence of Sir Frederick Middleton) and Dr. Paul (ex-Treasurer) responded.—To the toast of "The Legal Administration," proposed by Dr. Yellowlees, of Glasgow, Sir John Bridge first replied, followed by Kenelm Digby, Esq., and Dr. Needham.—In proposing the toast of "The Medico-Psychological Association," the Right Hon. the Speaker of the House of Commons expressed regret that the task should have been committed to the hands of one who until recently had been unfamiliar with the objects of the Association, its work and aspirations. He had spent his life in a profession which had often been accused of regarding questions of insanity from quite an opposite direction to that from which it was regarded by the medical profession. When questions of crime and lincacy both arose in a case, the habit of the lawyer was, perhaps, first to consider that a breach of the law had been committed and to throw the burthen entirely upon the person charged of showing that he was an irresponsible person; whereas the natural tendency of a doctor, who knew the state of the patient and saw that there were some symptoms of eccentricity or other signs of mental disease about him, would rather be to stand up for the patient and throw the burthen of proving responsibility upon those who were seeking to convict him. But in the course of the last century, thanks to the exertions of gentlemen like those present, enormous steps had been taken in the right—that was in the humane—direction in the treatment of criminal lunatics. Improvement in the treatment and the condition of lunatics was an object towards which much had been done, and for which a good deal might yet be done.—In responding to the toast, the President said it was a great comfort to them that the Association was able to make such a good show of creditable and satisfactory achievements. And with regard to the future, he was glad to say they had had during their meetings illustration of the capacity of the rising members of their speciality for taking up the work that had been handed to them. The work they had done was most creditable and encouraging.—To the toast of "Kindred Societies," proposed by Dr. Savage, reply was made by Dr. Blandford; Dr.

Clouston, of Edinburgh, proposed "The Guests," which was acknowledged by Dr. Purcell; while "The Health of the President" was drunk on the proposition of his predecessor in office, Dr. Conolly Norman.—The Reception Committee had their successful efforts to promote the comfort and convenience of the members appreciatively acknowledged, reply being made by Dr. Hayes Newington; after which the ex-President acknowledged the toast of his health, proposed by Dr. Swain.

EDUCATIONAL COMMITTEE.

NEW REGULATIONS FOR THE NURSING CERTIFICATE.

At a recent meeting of this Committee, some important additions were made to the Regulations for the admission of candidates to the Examination for the Nursing Certificate. The new regulations are as follows:—

1. "Any person who possesses a certificate of competence in nursing from a hospital or infirmary connected with a medical school and having a system of training nurses, may be admitted to the examination for the Nursing Certificate of this Association after a residence of one year in an asylum; *provided* that such candidate conform to all the regulations for admission to such examination, save only in the matter of length of residence in an asylum."

2. "In cases of an exceptional character, in which a person who has had a large experience of nursing the insane, but has been unable through no fault of his or her own to comply precisely with the regulations governing the admission of candidates to the examination for the Nursing Certificate, application may be made to the Registrar to lay the circumstances of any such case before the Council, which may in its discretion order that such candidate be admitted to the examination; *provided* that every such application be accompanied by a recommendation from a member of the Association, and by evidence that the applicant has had experience of nursing in an asylum."

The intention of the first of these regulations is obvious. The second was framed to meet those cases of worthy and efficient attendants who have had experience of nursing in institutions for the insane, but who had left such institutions and taken to private nursing before the scheme of training drawn up by the Association was instituted. It would also enable attendants to present themselves for examination who are unable to comply in all respects with the regulations, owing to the fact that the authorities of the asylum in which they are employed do not offer them the opportunity of so doing.

GASKELL PRIZE.

Among other matters considered by the Educational Committee, was the dearth of candidates for the Gaskell Prize. It is a matter of regret that in several years there has been no candidate for this valuable and highly honourable distinction. Feeling sure that there are many assistant medical officers of sufficient ability and industry to compete for this prize, the Committee have come to the conclusion that available candidates are deterred by the comprehensive and undetailed character of the syllabus. A new syllabus will, therefore, be issued indicating more precisely the subjects in which candidates will be examined. The standard of the examination will not be lowered, but intending candidates will have a clearer definition of the field of knowledge that they will be required to cultivate.

POSSIBLE ADDITIONAL PRIZES.

The non-awarding of the Gaskell Prize upon several occasions has left a fund in the hands of the Trustees which may, under the terms of the Trust, be applied to the granting of additional prizes. If this were done, the assistant medical officers of our asylums would certainly have no lack of inducement to apply themselves to that scientific study of the subject of their specialty which they are sometimes accused of neglecting.

BRITISH MEDICAL ASSOCIATION.

The sixty-third Annual Meeting was held in London, July 30th to August 2nd, 1895, and was one of the most successful which has as yet assembled.

The section for psychology was well attended and of the highest interest. President, W. John Mickle, M.D.; Vice-Presidents, J. T. McDowall, M.D., H. Rayner, M.D., T. Claye Shaw, M.D., D. Nicolson, M.D., G. H. Savage, M.D., L. A. Weatherly, M.D.; Hon. Secretaries, J. Chambers, M.D., J. Taylor, M.D., T. Seymour Tuke, M.B.

We have much pleasure in referring our readers to the pages of the Journal for record of part of the scientific work done.

RECENT MEDICO-LEGAL CASES.

ABSTRACTED BY C. MERCIER, M.B.

[The Editors will be obliged by Members of the Association sending them the fullest reports of all the cases in which they may be concerned, or which come to their knowledge, especially what may be contained in the law reports of local newspapers.]

Reg v. Smith.—"The Barnsley Child Murder."

Prisoner went to the house of a neighbour and borrowed a cobbler's knife, returned home, took his daughter (aged 3) on to his knee and cut her throat. Very shortly after the murder prisoner said to a neighbour, "I have done it, I have killed my daughter Laura." When placed in the dock the prisoner seemed dazed, and when asked to plead, mumbled out some words which could not be understood. At the suggestion of the prosecution a plea of not guilty was entered. Counsel for the *prosecution* (Mr. Wallace, Q.C.), after stating the facts of the case, added that it was his duty to place before the jury facts which, he thought, would lead them to the conclusion that at the time the prisoner was not responsible for his actions.

Dr. Kay, Superintendent of Wadsley Asylum, gave evidence that the prisoner's father had committed suicide, and repeated statements tending to prove insanity that had been made to him by the wife of the prisoner: "The hereditary predisposition to insanity, the injury to the head, and the fact that he had been confined in an asylum shortly before the murder, went to prove that he was insane at the time he committed the act. Witness felt perfectly satisfied that at the time of the occurrence he was not responsible for his actions, and he was insane at the present time."

The Judge—Do you think he would know the difference between right and wrong?—Yes, if he were asked the question.

Do you think he was capable of understanding the nature and quality of the act?—No, my lord.

On what ground do you say that?—I think he was thoroughly under the influence of the idea of killing the child, and his mind was so disordered that he did not know what he was doing.

Do you think he understood that using the knife on the child's throat would deprive it of life?—Yes.

Was he capable of deliberation?—I think not.

Was he capable of controlling the impulse?—No, I think that some physical restraint might have brought him to.

Do you think anything short of that would have done it?—No, I do not.

Dr. Clark, Medical Officer of Wakefield Prison, said that at the time of the occurrence the prisoner might have been able to distinguish right from wrong in the abstract, but he could not restrain himself, and was not able to understand the nature and quality of the act he committed.

The Judge is reported to have said that the only question for the jury was whether at the time he committed the act the prisoner was sane.

The jury found the prisoner guilty, but insane.—West Riding Assizes, Leeds, Dec. 13th, 1894 (Mr. Justice Collins).—"Sheffield and Rotherham Independent," Dec. 14th.

There was clear evidence that the prisoner knew the "nature and quality" of the act.

Reg. v. Hallsay.

Prisoner was indicted for committing an act of indecency.

Mr. Gill, for the defence, desired the issue to be tried "whether the defendant was of sound mind and fit to plead to the indictment."

Mr. Thos. Bond stated that in his opinion the prisoner's mind was unsound. He was quite irresponsible and unfit to plead to the indictment. Dr. Savage and Dr. Blandford gave evidence to the same effect.

The jury found that the defendant was insane and unfit to plead to the indictment.—Central Criminal Court, Jan. 7th, 1895, before the Recorder (Sir C. Hall).—"Times," Jan. 8th, 1895.

It will be noticed that the question put to and answered by the medical witnesses was the same question in the same terms as that put to the jury.

Reg. v. Blues or Boase.

Prisoner was charged with having neglected to supply food to her child, in consequence of which it died. Prisoner pleaded "that at the time the crime was said to have been committed she was of unsound mind or insane, and still continues to be of unsound mind or insane, and that she is further unable to give instructions for her defence, and not a fit subject for trial."

Dr. Templeman, Police Surgeon, Dundee, was of opinion that the prisoner was probably of unsound mind. She was quite unable to appreciate the nature of the crime of which she was charged.

Dr. J. W. Miller was of opinion that she was of unsound mind. He did not think she was in a state to give her counsel instructions.

Lord McLaren found that the prisoner was not in a condition of mind to plead.—Session of the High Court of Justiciary, Dundee, March 26th, 1895.—"Dundee Advertiser," March 27th.

The issue is more complicated than the English practice. The freedom of opinion given to expert witnesses is the same.

Reg. v. Weston.—"The Basford Murder."

Prisoner, a lace-hand, set. 51, was charged with the murder of his wife, with attempting to murder Fanny Greensmith, and with throwing sulphuric acid over Sarah Attenborough.

The wife had had on various occasions to seek refuge in neighbours' houses from her husband's violence. On the night before the murder they quarrelled when they went to bed. At six the next morning the quarrel was renewed, and went on more or less till eleven, when the prisoner killed his wife by strangling her. At half-past twelve prisoner walked up to Mrs. Attenborough, his next-door neighbour, who was entering her own back door on her return from a visit, and threw sulphuric acid over her. He then drew a large carving knife from his pocket and attacked her, but she shut the door in his face. He then went to the house of Fanny Greensmith, the daughter of Mrs. Attenborough, and finding her in bed with her two days' old baby, tried to stab her. Hearing a noise he desisted and closed the bedroom door. He then tried to strangle the woman, but hearing someone come into the house he left the room and the house, using threats to the new-comer. On being taken into custody he gave a very clear account of what he had done, and it was found that he had on his person practically all the valuables he was able to carry away, including three watches, £7 in money, and his bank-book. He said that the husband of Mrs. Attenborough was the cause of all the trouble between himself and his wife.

Dr. H. O. Taylor, surgeon to the prison, said that he believed that the prisoner was of unsound mind. The insanity took the form of a mania of

persecution. From his observations of the prisoner during the time he had been in prison he did not think that at the time prisoner was alleged to have killed his wife he was able when committing that crime to distinguish that he was doing a wrongful act.

Dr. Powell, Superintendent of the Nottingham Borough Asylum, agreed with Dr. Taylor. He thought the prisoner was a man of unsound mind.

At this point the Judge put it to the jury whether they wished to hear any more evidence. The question was whether at the time of the act the prisoner's mind was in such a state that he was responsible for his actions. The law said that if a man was insane and of unsound mind, that if he was so subject to delusions that he did not appear to discriminate between right and wrong, and that when he was under those delusions he thought people he came across were going to injure him—in that state of mind the law did not call the act an offence.

The jury said they would like some more evidence of the state of the prisoner's mind prior to the act. The Judge pointed out that Dr. Taylor had said that if he had known prior to the commission of the deed that the man was suffering from the unsoundness of mind called "a mania of persecution," he would have said at once that the man ought not to be at large.

Relatives of the prisoner were then called, who proved the existence of insanity in a brother and a cousin of the prisoner, and that the prisoner had suffered from delusions for many years.

The jury found the prisoner guilty, but insane.—Nottingham Assizes, July 18th, 1895 (Mr. Baron Pollock.)—Nottinghamshire "Weekly Express," July 19th.

There was clear evidence that the prisoner was aware of the "nature and quality" of the acts; that they were premeditated; and that he had taken some precautions against discovery and some measures for escape.

The medical witnesses were allowed to answer the same questions as those put to the jury.

The Judge was more easily satisfied than the jury of the prisoner's irresponsibility.

Reg. v. Hudson.—"The Roper Moor Murder."

Prisoner, a furniture dealer, set. 23, sold his furniture and went into lodgings at a distance with his wife and child; bought a spade; dug a grave on Roper Moor three days after; took his wife and child, with whom he had lived on most affectionate terms, "more like a couple of lovers than man and wife," to the grave; cut his wife's throat, and shot her in the temple with a toy pistol; killed the baby also, and buried them both in the grave. He hid the spade in the heather; gave false reasons for his wife's disappearance, and advertised within three days of the murder for another wife.

After the main facts had been proved, prosecuting counsel (Mr. Waddy, Q.C.) said he had just learnt that the defence proposed to raise the question of the prisoner's state of mind. Prisoner had been medically examined, but he had not intended to call the doctors. He would now call them, so that the defence might cross-examine them.

Dr. J. T. Hingston, Superintendent of the North Riding Asylum—I have examined this man on two occasions, and think he is of sound mind. I do not see in this crime the slightest trace of insanity. There is no sign of epilepsy. There is not the slightest shadow of insanity about the prisoner.

Dr. C. N. Hitchcock, Superintendent of the York Lunatic Hospital—I have had an interview with the prisoner. There is nothing from which I can come to the conclusion that he is of unsound mind.

Dr. Tempest Anderson, Sheriff of York, Consulting Physician to the York Lunatic Hospital—I have examined the prisoner. I have not seen any symptoms of insanity about him.

Witnesses for the defence then proved that the prisoner had suffered at times from severe pain in the head.

Dr. Bevan Lewis, Superintendent of the West Riding Asylum—I have not

examined the prisoner, but from facts gleaned from a consultation with one of the doctors who examined him, and from the history of the case, it is possible that there was some suggestion of minor epilepsy. I have no reason, however, to suppose the man is insane. The circumstances connected with the purchase of the spade and the digging of the hole lead me to believe that the prisoner is subject to morbid ideas. It is consistent with the theory of epilepsy that morbid ideas should be recurrent.

Do you think he was morbid when he took out the carving-knife?—I do.

And morbid when he committed the murder, if he did it?—Yea.

Henry N. Ogleby, Medical Officer of York Union—I have examined prisoner, and arrived at the opinion that he is strongly neurotic. By neurotic I mean a person in whose family history there has been one or more cases of insanity, epilepsy, St. Vitus' dance, or hysteria. Prisoner, in my mind, is a typical neurotic, judging not only from his hair, eyebrows, the shape of his ears, the twitching of his hands, but particularly from the shape of his teeth and hard palate. Prisoner gave me an account of what happened. As to what he could have heard at the inquest or read in the newspapers he had a very good knowledge of the facts, but as to what had been done to himself, which he could not have learnt from the newspapers, he appeared very confused. Prisoner told me that he had a very severe headache during the week before the murder.

Cross-examined—Prisoner is a victim of sudden impulse. An impulse might suddenly seize him, and it might linger in his brain for some days. My opinion is that on the Wednesday prisoner was suddenly seized with an insane impulse to murder his wife.

The Judge said that the jury had to consider whether at the time the prisoner committed the crime he was responsible for what he did. The law was perfectly clear. A man who had taken the life of a fellow creature could not be acquitted on the ground of insanity unless it was shown to the satisfaction of the jury that he did not know the nature of the act he had committed, or that he did not know it was wrong. In the present case there was not a particle of evidence to substantiate that plea. As to the state of his health there was no reliable evidence to warrant the jury in coming to the conclusion that the prisoner was insane.

The jury found a verdict of guilty, and the convict was subsequently executed.—Yorkshire Summer Assizes, York, July 23, 1895 (Mr. Justice Mathew).—"Leeds Mercury," July 24.

This case is remarkable for the wide latitude allowed to the medical witnesses for the defence. It may be added that in spite of the statement of the Judge that "there was not a particle of evidence," "no reliable evidence" to support the plea of insanity, the prisoner was examined after sentence by independent experts. It will be noticed that as soon as the prosecution was aware that the plea of insanity would be raised, the experts who had examined the prisoner on the part of the Crown were placed in the box for cross-examination by the defence.

Reg. v. Warboys.—"The Peckham Murder."

Prisoner, a labourer, murdered his wife. The fact was admitted, but it was urged that he had suffered great provocation, and that his mind had been affected by a sunstroke. The jury found him guilty of manslaughter only, and the Judge sentenced him to five years' penal servitude.—Central Criminal Court, June 21, 1895 (Mr. Justice Wright).—"Standard," June 22.

The "Standard" refers in the following terms to the case:—"The doctrine that mental weakness—falling short of that degree of insanity which the law recognizes as a complete exculpation from the responsibility for a crime—may be both a partial exculpation and a circumstance which may properly be considered in mitigation of punishment is, to all intents and purposes, one of modern growth. . . . There can be no doubt that the application of this doctrine with still greater freedom than hitherto is desirable. It rests on an absolute basis of scientific fact. It is supported by a mass of judicial authority

. . . and it encourages juries to do their duty by convicting offenders who deserve punishment, but not the punishment which perfectly sane criminals ought to receive."

It is extremely satisfactory to find not only that a judge will adopt this doctrine, but that a great journal of the authority and influence of the "Standard" supports and favours it. There is no doubt that, in the past, harm has been done and medical opinion has been discredited by the advocacy of the plea of insanity, involving the plea of total irresponsibility, in inappropriate cases—in cases, that is to say, in which some mental weakness or disorder was present, but in insufficient amount to wholly exonerate the convict from responsibility. We commend this doctrine of partial responsibility, which had a warm and distinguished advocate in Dr. Yellowlees at the recent meeting of the British Medical Association, to the earnest attention of medical experts. No only is it more scientific and more in accordance with the just merits of many cases than the plea of total irresponsibility, but it has a far greater chance of success in the Courts.

Reg. v. Coffin.

The prisoner, a dentist, was indicted for stealing from the pockets of overcoats at his club. The plea in defence was not insanity, but a series of nervous headaches, aggravated by influenza and by the death of a near relative. It was urged that though the prisoner was not insane, his mind was to some extent affected, and sufficiently so to negative any presumption of felonious intent. The jury acquitted the prisoner.—County of London Sessions, April 29, 1895 (Mr. Bempas, Q.C.).—"Times," April 30.

This case is remarkable for the complete acquittal of the prisoner in spite of the facts not being disputed, and of the plea of insanity not being raised.

Captain Leroux, of the barque *St. Joseph*, was recently tried before the Marine Commercial Court at Cherbourg, charged with having abandoned his ship. The Court found that he was at least temporarily irresponsible for his actions, but suspended him for two years, and sentenced him to two months' imprisonment. Captain Leroux was seized with a fit in Court, and on the restoration of consciousness was found to have right hemiplegia.

THE CLINICAL RESEARCH ASSOCIATION, LIMITED.

This Association was originated in the autumn of 1894 for the purpose of assisting medical practitioners "in the investigation of the causes, progress, and results of morbid processes, whenever help to this end may be gained by accurate reports on the results of microscopical, chemical, or bacteriological examinations." The Association is a Limited Liability Company, controlled by doctors, the majority of whom are medical men in actual practice. The work of research is carried on by experts having no direct pecuniary interest in the Association, otherwise than as salaried officials. With regard to the provision of funds for carrying on the work, members are not at present asked to pay an annual subscription, and this course will be followed until the end of 1895. Thereafter, whatever course is followed in respect of mode of payment, all medical men who have joined before that date will be considered as original subscribers, and will be exempt from further subscription, should any such be found desirable. These facts are taken from the "Handbook" of the Association (obtainable from the Secretary, Mr. C. H. Wells, 1, Southwark Street, London Bridge, S.E.), to which reference may be made for full details as to the scope of the work undertaken, methods of transmission of specimens, scale of charges, etc. Urine, sputum, water, diphtheritic membrane, and morbid tissues generally, are examined. Results are communicated by telegram, if desired, and we can state from personal experience that the

work is executed with promptitude. As to its efficiency, the names of the gentlemen undertaking the actual research work is sufficient guarantee.

The Association, which already has a long list of subscribers, has proved of great service to private practitioners, and in some instances also to medical men connected with asylums for the insane. In the latter direction, however, there is still, in our opinion, a considerable sphere of usefulness open to it. Even in such of our asylums which may be said to be well equipped in respect of laboratories, we apprehend that certain researches (*e.g.*, bacteriological, analytical) would scarcely be undertaken with full confidence. *A fortiori*, the Association should prove of considerable service to all such institutions as are unprovided with the necessary facilities.

Although nerve-tissues are not the only tissues of interest to asylum workers, around them our chief interest naturally centres; and we therefore are concerned to ascertain in what respect and how far the Association is prepared to meet our special needs. In the "Handbook" it is very properly pointed out that portions of brain and spinal cord sent up for examination should be placed in a chrome solution. On inquiry we learn that in certain cases in which tissues have been sent up from asylums a proper examination has been rendered impossible by faulty preliminary treatment. The Association is in a position at the present time to conduct the examination of nerve-tissues after the methods commonly followed, and, we are able to add, is prepared to make the necessary arrangements for examination according to the special methods now available, in proportion to the demands which may be made upon it by workers in neurology.

We commend the Clinical Research Association to the notice of asylum physicians, and would refer for details to the "Handbook" already mentioned.

NOTE ON A HEAVY BRAIN.

In the "Lancet" for July 20th, 1895, Dr. Cowie Grant reports a case of epilepsy which came to an autopsy, and in which the brain was found of unusual weight. The patient was a male, *æt.* 43. There was a history of epilepsy of seven years' duration. Prior to this he had been a very intelligent man, and fairly strong, though he occasionally suffered from headaches. He now and then drank heavily. On admission to the asylum he was in a state of epileptic dementia. He died in the *status epilepticus*. The necropsy disclosed the following:—Circumference of head above eyebrows, 25½ in. Skull bones of normal thickness. Dura thickened throughout, adherent to skull at several points. Falx cerebri ossified for a considerable part of its extent. Pia-arachnoid milky, and "as thick and tough as an ordinary dura mater, while its vessels were varicose and tortuous." Adherent at several parts, chiefly in the frontal region. Cleared of all membranes and freed from all fluid, the brain weighed 67 ozs. Gyri appeared normal. No pathological changes, whether macro- or microscopical, were found in the brain. There was "an enlargement" of both choroid plexus of the lateral ventricles, and a partial ossification of the left one. It may be added that the pia-arachnoid itself weighed 4 ozs.

HOLLOWAY SANATORIUM.

Report of Mr. Gully, Q.C., assisted by Dr. George H. Savages.

After reporting upon the whole circumstances in connection with the death of Mr. Thomas Weir, the document concludes as follows:—

"Two questions arise as to Weir's treatment.

1. Was the dry pack proper treatment?
2. Was it administered with proper care and precautions?

As to 1. I am advised by Dr. Savage that dry pack administered for a short time, say two to four hours, and with proper supervision and precautions, is a useful remedy in cases of mania both as a curative and as a restraining process, and subject to these conditions he thinks Weir's case was a proper one for its application. But he is of opinion that such restraint continued from Wednesday to Sunday in such a severe and trying apparatus, and with such short intervals of freedom, was dangerous and excessive even if all proper precautions were taken.

As to 2. In Weir's case almost every ordinary and proper precaution seems to have been neglected. As before stated, Dr. Little, at about 11 a.m. on the Wednesday, ordered him into the dry pack, apparently with the intention of trying the effect of an exceptionally long continuous restraint. A patient so restrained ought to be continuously watched by an attendant sitting with him and told off for that purpose, and Dr. Philipps stated that in every case of dry pack in the Sanatorium previous to the 26th September and since the 30th September, 1894, this had been the invariable practice, whether the period of confinement had been long or short. Directions should have been given for the administration of extra food whilst the patient was under this prolonged restraint and in a state of mania, and provision should have been made for the administration of stimulants in case symptoms of exhaustion should occur. The patient should have been visited frequently, and carefully watched by a medical officer, who should sleep at the Retreat. It would also be very desirable that such medical officer should be present on each occasion when the patient was put into the pack. In the above view of what would be proper precautions Dr. Savage agrees, and indeed his opinion was substantially confirmed by that of Dr. Philipps.

In point of fact no attendant was told off to sit with the patient and watch him either by night or by day, the ordinary attendant or night watchman in the Retreat merely looking at him through a slit in the wall every half-hour, occasionally going into the room to look at him if he thought necessary. No special directions were given to the attendant by the medical officer as to food, exercise, watching, stimulants, or any other matter. When he was re-taken on the Wednesday night, after being four hours on the roof, naked, on a cold night, he was again put forthwith into the pack by the attendants, and no report of this serious and dangerous incident seems to have reached the ears of a medical officer until Dr. Little came his usual rounds in the forenoon of Thursday.

The 6th of the hospital rules for senior assistant medical officers runs as follows:—

“6. The senior assistant medical officers must visit every gallery and every patient at least twice a day, beginning their visits at 9.5 a.m. and 5 p.m. . . . At 10 p.m. they must see the night attendants, and also all patients *requiring special care*, and give such instructions as may be necessary. They must occasionally also make night visits to the galleries.”

It was admitted that this was a case requiring special care and frequent visits, yet the patient remained unvisited by any medical man from 11 a.m. on Wednesday till about the same time on Thursday.

He was again seen by Dr. Little once on Friday morning, and once on Saturday morning, and Dr. Philipps saw him just before he left Virginia Water by train at 8.30 a.m. on Saturday, only returning after Weir's death.

Weir was not visited by any doctor on the afternoon, evening, or night of any one of the days during which he was under restraint.

It was stated by Dr. Philipps that if extra food had been given to Weir, it would have diminished the tendency to exhaustion and collapse, and that if a properly instructed attendant had sat watching him (as should have been the case), he might very likely, by the prompt use of stimulants and the immediate summoning of a doctor, have saved the patient's life. No food was supplied to

him beyond what he had taken before he was put in the dry pack, and no stimulants were available. The night attendant stated that a bottle of whisky was supposed to be kept in a cupboard for use on sudden emergencies, but it had been empty for some time.

Weir's case was at the time of this restraint the most acute in the hospital, and was being treated by a course of restraint more severe than had ever been administered in the hospital to any other patient. It required more continuous attendance and medical observation than that of any other inmate. It is therefore impossible to avoid the conclusions that at the time in question not only was there an insufficient medical staff, but there was also a total absence of that systematic watchfulness, discipline, and supervision which are absolutely necessary in a great hospital for the insane, and that these deficiencies largely contributed to cause the death of Thomas Weir. . . .

Both Dr. Savage and myself concur generally with the five suggestions made by the Lunacy Commissioners in their Special Report and set out in the Appendix hereto. . . .

I have, etc.,
(Signed) W. C. GULLY.

The Right Hon. H. H. Asquith, M.P.,
Secretary of State for the Home Department.

APPENDIX.

Extract from published Report of the Lunacy Commissioners, dated 28th October, 1894.

As the result of our inquiry we have to report to the Board:—

1. That in our opinion the use of the dry pack in the form seen by us practically at the Holloway Sanatorium, ought not to be permitted in the treatment of insane patients. Even in the hands of discreet and humane persons it is an unnecessarily severe form of restraint, and when not under most careful supervision and control is liable to impose upon the patient severe suffering, and even dangerous results.

It renders him incapable of movement, and any indiscreet tightening of the straps may lead to dangerous interference with the respiratory and circulating functions.

The older form of packing, which simply consisted in the envelopment of the patient in sheets and blankets, was comparatively harmless, although needing the control of judicious employment and careful supervision. The leather straps have added a serious danger to a form of restraint which was already not unattended by it.

2. That mechanical restraint should not be employed in any institution for the insane except upon the direct authority and direction in each case of the medical superintendent or, in his absence, of the deputy superintendent.

3. That whenever complete mechanical restraint is used in any case the patient should not only be placed under continuous observation, both by night and day, by skilled attendants, and be visited at short intervals by members of the medical staff, but that frequent opportunities should be afforded to the patient of attending to the calls of nature and changing a position which from continuance may cause severe suffering.

4. That the appliances for mechanical restraint should be kept in charge of some member of the medical staff, and that their first application at least should be made under his personal superintendence as a means of medical treatment.

5. That the subsequent imposition of restraint in any case should invariably be effected in the presence of the head attendant, and that he should immediately report to the medical superintendent or his deputy both its use and any struggle with a patient which may take place at such time or upon any other occasion. It being also the duty of the charge attendants to inform the head attendant immediately of such occurrences.

Correspondence.

ON THE NON-SPECIFIC NATURE OF "GENERAL PARALYSIS OF THE INSANE."

SIRS,—I have read with much interest Dr. Farrar's article on "General Paralysis" ("Journal of Mental Science," July 1895). His conclusion, that "general paralysis" is in no sense a specific disease, is identical with that at which I arrived after some years' study of a very large number of cases in the Portsmouth Borough Asylum, where, after spending much time and labour in trying to arrange them as I may say in duly labelled pigeon-holes, I began to see that "it was all a striving, and a striving, and an ending in nothing."

In an article which appeared in the "Lancet," 16th March, 1889, I drew attention to the fact that the dogma that "general paralysis" is an anomalous and inevitably progressive and fatal disease is so little in accordance with modern views of general pathology, that the burden of proof rests on those who propound it. But neither by the bedside nor in the post-mortem room has such proof ever been satisfactorily produced.

The cerebral cortex, like other tissues, can only respond in one way, by whatever means it may be irritated; whether the disorder last for hours, days or months, whether it subside, remain at a standstill, or extend to lower levels, and finally to centres of vitality, there is probably no essential difference in the process. The result depends as elsewhere on intensity and persistence of irritation, power of tissue to resist and recover (determined by such factors as age, inheritance, previous mode of life, etc.), and on anatomical conditions. In the case of "general paralysis" it seems to me that the usual steady progress to a fatal termination can be readily accounted for by such considerations, without any need to invoke, even on theoretical grounds, a "specific" process, and that no line can or ought to be drawn between a temporary disturbance of function from intoxication (alcoholic or otherwise), acute mania, and "general paralysis," or between the last and other more chronic disorders of the central nervous system.

I have for some time been acquainted with a gentleman, formerly an officer in the army, who during the last ten years has had four attacks (each one worse than the preceding) in which he becomes in his conduct, hallucinations, and delusions of exaltation, a perfect example of early general paralysis, with slight physical signs as well. These are followed by some emotional depression, but in the intervals (except that he is, as he has been all his life, somewhat self-opinionated and wasteful, it is impossible to detect anything wrong. But because this has been going on for ten years, and he is so far neither dead nor demented, I am told that his disorder has nothing to do with "general paralysis." Surely Procrustes has left many descendants!

It is not so many years ago that a similar theory was maintained in regard to "puerperal fever." I remember being solemnly assured by a practitioner who was educated in the thirties that "no woman ever recovers from puerperal fever. If she recovers, she never had puerperal fever." The circular reasoning of which this is a beautiful example is not so uncommon as might be supposed. *That* controversy is now of hardly more than historic interest, and many authorities are of opinion that it is time for the term "puerperal fever" to be dropped altogether, as tending to produce a wrong impression in the minds of students and nurses. I venture to think and hope that a corresponding change will ultimately take place in the orthodox view of "general paralysis of the insane."

Yours, &c.,

J. D. E. MORTIMER, M.B., F.R.C.S.

To the Editors of "THE JOURNAL OF MENTAL SCIENCE."

SIRS,—A recent number of "Truth" quoted an opinion as having been given verbally to the Editor by a specialist in insanity who had written a book on Asylum Management.

As I am the author of the only book published with this title, the opinion in question has naturally been attributed to me. Will you allow me to state that I am not the specialist referred to, that I did not give the opinion, and that I am not personally acquainted with anyone on the staff of "Truth?"

Yours, &c.,

CHAS. MERCER.

REST AND EXERCISE.

Dr. Batty Tuke sums up his conclusions in regard to the treatment he advocates in certain cases of nervous and mental disease as follows:—"My belief is that the success of treatment by rest (which, it may be freely submitted, is founded on Weir Mitchell's system, with, however, considerable modification) has depended, first, on the opportunity given by rest for the storing up of energy, and for the slight call made on the system for the restoration of waste; second, on stimulus from without having been reduced to a minimum; and, thirdly, on the action of therapeutic agents having been assisted by rest. It appears to me that the sum of these conditions has conduced to reduction of the primary morbid action, to procuring rest to the cell and arrest of the degradation of its processes, and, where such morbid processes have occurred to any extent, to restoration of constituents and reconstruction of the nervous arc.

"I only referred to early idiopathic cases in addressing the members of the Medico-Psychological Association. I may say, however, that I have applied the same system, with certain therapeutic modifications, to many other forms of insanity with satisfactory results—as regards percentage of recoveries and rapidity of cure. Time did not serve to go into further particulars, and, for the purposes of that discussion, it was unnecessary, for I am willing to take my stand on the particular class of case then adduced."

EXAMINATION FOR THE CERTIFICATE IN PSYCHOLOGICAL MEDICINE.

The following candidates were successful at the examination held on the 18th July, 1895:—

ENGLAND.

Examined at Bethlem Hospital, London: Henry E. Blandford, George W. F. Macnaughtan, James Ferdinand Rudall.

SCOTLAND.

Examined at the Royal Asylum, Edinburgh: David Orr, David James Graham, Walter H. Cox, William James Penfold, Alexander Henry Edwards, Thomas Yeates, Thomas Grainger.

Examined at the Royal Asylum, Aberdeen: Richard A. Coles, C. A. Barclay Laing, James F. Philip.

IRELAND.

Examined at St. Patrick's Hospital, Dublin: Henry Marcus Eustace.

The following were the written questions:—

1. Describe an attack of *petit mal*, and point out the dangers to which patients suffering from this malady are subject.
2. Describe Alcoholic Insanity, and mention how it resembles and differs from General Paralysis.

3. Discuss the prognosis and treatment of Adolescent Mania.
4. Discuss Sepsis in its relation to the production of morbid mental symptoms. Note especially its relations to Insanity occurring during the puerperal period.
5. What are the chief points you would observe in the examination of a supposed insane person? What facts would justify you in signing or refusing to sign a certificate of Insanity?
6. Describe a case of Hæmatoma Auris, its cause and termination.

The next examination will be held in December, 1895. Due notice of the date will be given in the "Lancet" and the "British Medical Journal."

WINNER OF THE GASKELL PRIZE.

George W. F. Macnaughton, M.D., C.M.Edin.

The following were the written questions:—

1. Trace the course of the processes of the pyramidal cells of the cortex cerebri. Mention the pathological changes to which these cells are subject, and describe fully one such change.
2. State any evidence you are acquainted with which would lead you to believe any form of insanity or its symptoms are due to a toxic or bacterial poison. Do you know any evidence that tends to show that the secretions of insane persons are toxic in their nature?
3. Describe the morbid changes found in the peripheral nerves in General Paralysis.
4. State the chief anatomical facts elucidated by the researches of Golgi and Ramon y Cajal, bearing especially on the distribution of the lateral, apical, and axis-cylinder processes.
5. What disease may be mistaken for Acute Delirious Mania? Describe treatment and post-mortem appearances in a case of the latter.
6. What diseased conditions have been described as occurring in the brains of Epileptics, having special reference to the cells of the cortex and large ganglionic cells of motor tract? State the influence the former cells are supposed to exercise over the latter.

EXAMINATION FOR THE CERTIFICATE OF PROFICIENCY.

The following candidates passed the May examination for the nursing certificate in addition to those whose names were published in the July number of the Journal:—

District Asylum, Limerick.—*Males:* Edmund Barry, James Condon, Michael Flynn, Patrick Kelly, Patrick Kirby, Thomas Murnane, James Maloney, George Magee. *Females:* Margaret McNamara, Bridget McMahon, Kate O'Farrell, Ellen O'Donnell, Elizabeth Sheehan, Hannah Toomey.

Grahamstown Asylum, Cape Colony.—*Males:* Samuel Swailes, Robert Walters. *Females:* Elizabeth Kate Evans, Mary Jane Madden.

The next examination will be held on Monday, the 4th day of November, 1895, and candidates are earnestly requested to send in their schedules, duly filled up, to the Registrar of the Association, not later than Monday, the 7th day

of October, 1895, as that will be the last day upon which, under the rules, applications for examination can be received.

For further particulars respecting the various examinations of the Association apply to the Registrar, Dr. Spence, Burntwood Asylum, near Lichfield.

Appointment.

SHAW, HAROLD, B.A., M.B.Camb., D.P.H., has been appointed Medical Superintendent of the new County Asylum of the Isle of Wight.

DATES OF NEXT MEETINGS OF THE ASSOCIATION.

The next General Meeting will be held on Thursday, November 21st, at the Rooms, 11, Chandos Street, Cavendish Square, W. Further particulars will be given in the circular issued before the meeting.

The Autumn Meeting of the South-Western Division will be held at Worsfold House, Exeter, on Tuesday, October 15th.

The Autumn Meeting of the Scottish Division will be held in Edinburgh on the second Thursday of November.

The next Meeting of the Irish Division will be held on Wednesday, 23rd October, 1895, at the Limerick Asylum.

ERRATA.

Plates facing p. 482, for *April Number*, 1895, read *January Number*, 1895.

Page 593, for * after *Insanity*, read †.

Page 662, line 30, for *Insanity* read *Criminality*.

INDEX TO VOL. XLI.

PART I.

- Acute mania in a case of pelvic cellulitis, 491
Act 30 and 31 Vic., c. 118, interpretation of recognition clause, 496
Africa, insanity among the natives of South, 71
After-care Association, 556
Agitated melancholia in women, 548
Alcoholic neuritis, spinal lesions in, 532
Alcoholism not a cause of insanity, 328
Alleged increase of insanity, 498, 713
America, psychology in, 158
Annual meeting of the M. P. Association, 688
Aphasia with epilepsy, 307
Appointments, 186, 376, 566, 762
Asylum, Dutch, a visit to, 218, 732
 " nurses, training of, 146, 147, 711
 " reports, 141, 350
 " prisons in Holland, 732
Asylums, private, " Westminster Review " on, 186, 715
Ataxic insanity, 486
Atrophy and sclerosis of the cerebellum, 409
Attendants, training of, 146, 147, 711
Aural disease and insanity, 200
Auto-intoxication as a cause of insanity, 155
- Bacteria products, treatment of mental affections by, 726
Bacteriocidal and toxic action of blood of insane, 359
Barnsley child murder case, 751
Basford murder case, 752
Beadles, Dr. C., lesions of arterial system in the insane, 32
Beer, substitute for, 393
Berlin, lunacy administration in, 1, 202
Blachford, Dr. J. V., ataxic insanity, 486
Blind, dreams of, 148
Blood, toxic action of, in insanity, 359
Blues or Boase, medico-legal case, 752
Boarding-out, 206

- Bodily disease and mental disorders, 232
 Bond, Dr. H. C., atrophy and sclerosis of cerebellum, 409
 Brain stimulation by thyroid extract, 636
 " circulation in epilepsy, 533
 " heavy, note on a, 756
 " in relation to psychic phenomena, 523
 " centre of phonation, 730
 Breaking strain of ribs of insane, 254
 Bristowe, Dr. H. C., general paralysis and renal disease, 245, 422
 British Medical Association, 175, 690, 751
 Bruce, Dr. L. C., thyroid feeding in insanity, 50, 169, 636
 Bucknill, Sir John, 555
 Bullen, Dr. St. J., reflex and toxic causes of insanity and epilepsy, 187
 " " " effect upon mental disorders of bodily disease, 232

 Calmeil, Louis Florentin, death of, 557
 Campbell, Dr. A. W., breaking strain of ribs, 254
 Caserio, 364
 Catalepsy, 82
 Centre of phonation in brain, 730
 Cerebellum, atrophy and sclerosis of, 409
 Cerebral hemiatrophy, 420
 " sclerosis, 357, 409
 Certificates, nursing, 560
 Chaalin on cerebral sclerosis, 357
 Children, weak-minded, institutions for, 710
 " mentally feeble, 718
 " education of, 717
 Circulation in the brain during epilepsy, 533
 Clinical and pathological relations of general paralysis, 460
 " Research Association, 755
 Clouston, Dr., rest and exercise, 599
 Coffin, medico-legal case, 755
 Collective investigation in mental disease, 449, 493
 Colonisation of the insane, 697
 Commissioners in Lunacy, new rules, 695
 " " " reports, 100, 113, 498
 " " " on Holloway Sanatorium, 758
 Commitment, detention, care, and treatment of insane, 709
 Convulsive tic, 727
 Cooke, Dr. E. M., the Worcester Asylum, 387
 Correspondence, Dr. Charles Mercier, 559, 760
 " a University graduate, 183
 " Dr. J. D. E. Mortimer, 759
 Cortex fibres in idiocy, 149

- Cowan, Dr. J. J., cerebral hemiatrophy, 420
 Cowen, Dr. T. P., intestinal affections in insane, 295
 Cranium, percussion of, 361
 Cretinism, treated by thyroid extract, 280
 Crime, criminals, and criminal lunatics, 567
 Criminal anthropology, 118, 364, 367
 " Lunacy Law, 322
 " lunatics, 78, 751
 " insanity among, 539
 " responsibility of insane, 176
 " " " " report of Committee, 746
 " " " in relation to insanity, 657
 " types, 522
 Criminology, 719
 Curious case of microcephaly, 149
 Current opinions on medico-psychological questions in Germany, 78

 Dawson, Dr. W. R., ecchymosis associated with insane excitement, 678
 Degenerative lesions of arterial system, 82
 " psychoses, 710
 Dental disease and insanity, 201
 Dietary, 393
 Dominant ideas, 536
 Drapes, Dr., morbid sensory phenomena, 290
 Dreams, imagination in, 340
 " of the blind, 148
 Drunkards, habitual, 80
 Dry and wet packs, 95
 Dunn, Dr. E. L., general paralysis in a girl, 482
 Dutch asylum, visit to a, 218

 Ecchymosis with insane excitement, 678
 Education of imbeciles and idiots, 538
 " of mentally feeble children, 717, 718
 Ellis, Dr. H., retrospect of normal psychology, 157
 " " " " criminal anthropology, 364
 Elmira reformatory, 365
 Emotions, psychology of, 159
 English retrospect, 141, 350
 Epilepsy, 724
 " nocturnal, 151
 " circulation in the brain during, 533
 " reflex and toxic causes of, 187
 " with aphasia, 307
 " with heavy brain, 758

- Epileptic colony, 89
 Errata, 762
 Examination for certificate in psychological medicine, 760
 " " " of proficiency, 761
 Experimental psychology, 133, 591
- Fair play, 495
 Farrar, Dr. R., general paralysis, 460
 Feeding, forcible, of insane, 646
 Feeling and thought, 344
 Finegan, Dr., tuberculous disease, 228
 Fire at the Oxford Asylum, 555
 ,, precautions against, 392
 Folie à deux, 360
 Food, refusal of, 276
 Foreign bodies in the vagina, 489
 French retrospect, 357
- Gaskell prize winner, 761
- General paralysis, sulphates in urine, 14
 " " causation, 108
 " " increase of, 116, 143
 " " spastic and tabetic types, 222
 " " and renal disease, 245, 423
 " " clinical and pathological relations, 460
 " " in a girl aged nine, 482
 " " non-specific nature of, 759
- Genital disorders in insanity, 201
 German psychological laboratories, 157
 " retrospect, 148, 361, 531
 Germany, medico-psychological questions in, 78, 274
 Goodall, Dr. E., mental disorders and bodily disease, 232
 Granular ependyma, 32
 Gratuities, 545, 690, 741
 Greenlees, Dr., insanity in South Africa, 71
- Hæmatoporphyria from sulphonals, 165
 Hallucinations among the sane, 162
 " of a deaf paranoiac, 536
 " unilateral, 535
- Hallsay, medico-legal case, 752
 Hart, Mr. Ernest, on hypnotism, 184
 Hay, Dr. F., epilepsy with aphasia, 307
 Head, injury of, curious effects, 290
 ,, osseous deformities of, 521

Heating asylum by steam, advantages of, 391
 Heredity, 136
 Holland, prisons-asiles in, 731
 Holloway sanatorium, dry pack at, 95
 " " the inquiry at, 691
 " " report of Mr. Gully, Q.C., and Dr. G. H. Savage, 756
 " " " Lunacy Commissioners, 758
 Hypnotism, Ernest Hart on, 184
 Hysteria, 728
 Hysterical somnolence, 534

Ideas, dominant, 536

Idiocy, cortex fibres in, 149

Idiots, difficulties of dealing with, 143

" weakness of heart in, 150

" education of, 538

" public provision for, 640

Impressions of a visit to a Dutch asylum, 218

Increase of insanity, 101, 115, 324, 498, 713

Inquiry at the Holloway sanatorium, 691, 756

Insane and the law, 512

" care of, in private dwellings, 1, 202

" degenerative lesions of arterial system in the, 32

" general treatment of the, 81

" forcible feeding of, 646

" excitement with ecchymosis, 678

" colonization of, 697

" commitment, care, and treatment of, 709

Insanity, effect of thyroid feeding in, 50

" among natives of South Africa, 71

" increase of, 101, 115, 324, 498, 713

" autointoxication as a cause, 155

" prevention of, 175

" reflex and toxic agencies as cause of, 187

" of over-exertion of brain, 331

" puerperal, 359

" among criminals, 368

" or sanity, legal and medical views, 433

" ataxic, 486

" wasting of nerve fibres in, 532

" among criminals, 539

" of love, 674

" plea of, 694

" from fracture of skull, 174

" treatment by bacteria products, 726

- Intestinal affections in the insane, 295**
Ireland, report of inspectors of lunatics, 324
 „ Dr. W., German retrospect, 148, 361, 531
Irish asylums, tuberculous disease in, 228
- Judicial lunacy orders, 92**
- Kornfeld, Dr. H., the insanity of love, a study on Ariosto, 674**
Kraepelin's researches, 594
- Latab, 537, 727**
Law and the insane, 512
Lectures to attendants, 142
Legal views of insanity, 433
Love, insanity of, 674
Lunatics, dangerous, legal decision, 496
Lunacy administration in Berlin and Scotland, 1, 202
 „ orders, judicial, 92
 „ Commissioners' reports, 100, 113, 324, 758
 „ forms treated as sorcery, 152
 „ certificates, terminal days, 319
 „ law, criminal, 322
 „ law for medical men, 339
- Macleod, Dr. M. D., visit to a Dutch asylum, 218**
Maladie des tic convulsifs, 727
Maniacal excitement from salicylate of sodium, 685
Maudsley, Dr. H., criminal responsibility in relation to insanity, 657
Medical examiners, 714
 „ views of insanity, 434
Medico-legal cases, 176, 751
Medico-Psychological Association—
 General meeting Nov. 15th, 1894, in London, 164
 Election of members, 164
 Presentation to library, 164
 Committee on criminal responsibility, 164
 Meeting of Scotch division at Edinburgh, 8th Nov., 165
 Hæmatoporphyriuria following administration of sulphonal, 165
 Thyroid feeding, 169
 Representation on council, 172
 Meeting of Irish division at Cork, Oct. 25th, 173
 Additional meetings, 173
 Treatment of tuberculous diseases, 174
 Insanity from fracture of skull, 174
 General meeting 21st February, at Worcester, 369

- Meeting of South Western division at Bath. Dec. 13th, 1894, 369
 „ „ Scotch division, 14th March, in Glasgow, 370
 Case of general paralysis, 371
 The late Dr. Hack Tuke, 371
 Pensions committee, 371
 Place of meeting and collective investigation, 372
 Nomination for council, 373
 General meeting in London, May 16th, 540
 Dr. Hack Tuke, 540
 Meeting of the South Western division, Bristol, 4th April, 542
 Vote of condolence to Mrs. Tuke, 542
 Representation on the council, 543
 Question of gratuities, 545
 Meeting of the Irish division, Dublin, 23rd May, 547
 Agitated melancholia in women, 548
 Lunatics in workhouses, 555
 Presidential address, 567
 Annual meeting, 638
 Examination for certificates, 375
 Fifty-fourth annual meeting, London, 25th July, 732
 The late Dr. Hack Tuke, 733
 Election of officers and council, 734
 „ „ members, discussion, 735
 Treasurer's report, 736
 Gift to the library, 740
 Report of registration committee, 740
 Parliamentary committee, grants and pensions, 741
 Appointment of examiners, 744
 Report of committee of criminal responsibility, 744
 Presentation to Dr. Paul, 748
 Dinner, speeches at, 749
 Educational committee, 750
 New regulation for nursing certificate, 750
 Gaakell prize, 750
 Medico-Psychological questions in Germany, 78, 274
 Melancholia, recovery from, 86
 „ the intellectual status in, 529
 „ agitation in women, 548
 Mental affections, treated by bacteria products, 726
 „ disorders and bodily disease, 232
 „ „ rest and exercise in, 599
 Mercier, Dr., breaking strain of ribs of insane, 271
 „ „ collective investigation in mental disease, 449
 „ „ letter on lunacy law for medical men, 558
 „ „ recent medico-legal cases, 751
 Meyer, Prof. Ludwig, opinions on medico-psychological questions, 78, 274

- Microcephaly, 149**
Microscopical preparations, method of hardening, 531
Modified responsibility, 693
Monstrous suggestion, 694
Morbid sensory phenomena from injuries to head, 290
Mortimer, Dr., non-specific nature of general paralysis, 759
Myxœdema, etc., 131
- Narcolepsy, 359**
Neil, Dr. J., recovery from melancholia, 86
Nerve cells, nomenclature of, 531
 „ fibres wasting in insanity, 532
Nervous disease, rest and exercise in, 599
Neuritis, alcoholic, spinal lesions, 532
Nicolson, Dr. D., presidential address, 567
Nurses and attendants, examination, 182, 560
 „ training of, 711
- Observations on the effect of thyroid feeding, 50**
Obituary notices—Calmeil, Louis Florentin, 557
 Tuke, Dr. Hack, 323, 377
 Wilkes, Jas., Esq., 185
- Open door system, 697**
O'Reilly v. the Governors of Richmond Asylum, 496
Oswald, Dr., hæmatoporphyrinuria after sulphonal, 165
Ovarosalpingectomy, insanity after, 715
Oxford County Asylum, fire at, 555
- Paralysis, general (see general paralysis)**
Paramnesia, 163
Pathology of insanity—
- Atrophy and sclerosis of the cerebellum, 409**
 - Ataxic insanity, 486**
 - Cerebral hemiatrophy (illustrated), 420**
 - Cerebral sclerosis, 357**
 - Cortex fibres in idiocy, 149**
 - Degenerative lesions of arterial system (illustrated), 32**
 - Epilepsy with aphasia, 307**
 - General paralysis and renal disease (illustrated), 245, 422**
 - „ „ 460
 - „ „ spastic and tabetic types (illustrated), 222
 - „ „ in a girl, 482
 - Means and method of study, 722**
 - Method of hardening preparations, 531**
 - Nomenclature of nerve cells, 531**
 - Pia-arachnoid, thickening and opacity of, 622**

- Spinal lesions in alcoholic neuritis, 532
 Trophic intestinal affections, 295
 Wasting of nerve fibres, 532
- Patients in private dwellings, 211
 Paul, Dr., presentation to, 750
 Peckham murder case, 754
 Pelvic cellulitis with mania, 491
 Pensions, 98
 Percussion of the cranium, 361
 Pia mater, pathology of milkiness, thickening, and opacity, 622
 Plea of insanity, 694
 Presidential address, 567
 Prisons-asiles in Holland, 731
 Private asylums, 186, 715
 " patients, 1, 202, 211
 Psychology, experimental, 133, 591
 " in America, 158
 " of emotion, 159
 " retrospect of normal, 157
 Psychopathic epidemic, 360
 Public provision for pauper idiots and imbeciles, 640
 Puerperal insanity, 359
- Recognizance, clause of, Act, 496
 Reflex and toxic agencies causing insanity, 187
 Renal disease and general paralysis, 245, 423
 Reports of Lunacy Commissioners, 100, 113, 493, 695
 Rest and exercise, 599, 760
 Restraint, 276
 Responsibility, modified, 693
 " criminal, 657, 715
 Review of the influence of reflex and toxic agencies in the causation of epilepsy and insanity, 187
 Ribs, breaking strain of, 254
 Richmond Asylum, O'Reilly v., 496
 Rivers, Dr. W. H., experimental psychology, 591
 Robertson, Dr. G. M., sanity or insanity, 433
 " Dr. W. F., the pia mater in the insane, 622
 Robinson, Dr. G. B., mania after salicylate of sodium, 685
 Roper Moor murder case, 753
- St. Ann's Heath inquiry, 495
 Sanity or insanity? 433
 Salicylate of sodium causing maniacal excitement, 685
 Scotland, lunacy administration in, 1, 208, 709

- Scotland, prevalence of insanity in, 498
 Self accusations, 153
 Shuttleworth, Dr. G. E., public provision for idiots and imbeciles, 640
 Sibbald, Dr. J., lunacy administration in Berlin and Scotland, 1, 202
 Simpson, Dr. J. C., acute mania in a case of pelvic cellulitis, 491
 Some remarks on forcible feeding, 646
 Somnolence, hysterical, 534
 Sorcery, forms of lunacy treated as, 152
 Spastic and tabetic types of general paralysis, 222
 Spinal lesions in alcoholic neuritis, 532
 Stewart, Dr. R. S., spastic and tabetic types of general paralysis, 222
 Strapp, Dr. W. R., foreign bodies in vagina, 489
 Sulphates in the urine of general paralytics, 14
 Suicides, 111, 275
 " in Prussian Army, 154
- Tea, injurious effects of, 327
 Teaching of criminal anthropology, 367
 Telford-Smith, Dr. T., cretinism treated by thyroid extract, 280
 Terminal days of lunacy certificates and magistrates' orders, 319
 Thyroid feeding, 50, 169, 280, 636
 Toxic agencies in causation of insanity and epilepsy, 187
 Traumatic psychoses, 359
 Trional, poisoning by, 363
 Trophic intestinal affections in the insane, 295
 Tuberculous diseases in Irish asylums, 228
 Tuke, Dr. Batty, insanity of over-exertion of brain, 381
 " " " rest and exercise, 607
 " Dr. Hack, memoir of (illustrated), 323, 387
 " " " 540, 556, 733
- Turnbull, Dr. A. R., forcible feeding of insane, 646
 Turner, Dr. J., sulphates in the urine of general paralytics, 14
- Unilateral hallucinations, 535
 Urine of general paralytics, 14
 Urquhart, Dr. A. R., medico-psychological questions in Germany, 78, 274
- Vagina, foreign bodies in, 489
 Verbigeration, 82
- Warnock, Dr. J., catalepsy, with prolonged silence, etc., 82
 Wasting of nerve-fibres in insanity, 532
 Weakness of heart in idiots, 150
 Weir, Thomas, case of, 95
 Wet and dry packs, 95

- "Westminster Review" and private asylums, 186
 Wilkes, J., Esq., death of, 185
 Williams v. Beaumont and Duke, 176
 Winner of the Gaskell prize, 761
 Worcester County Lunatic Asylum, 387
-

PART II.—ORIGINAL ARTICLES.

- Beadles, Dr. C. F., on the degenerative lesions of the arterial system in the insane, with remarks upon the nature of granular ependyma (illustrated), 32
 Blachford, Dr. J. V., notes on a case of ataxic insanity, 486
 Bond, Dr. C. H., atrophy and sclerosis of the cerebellum (illustrated), 409
 Bristowe, Dr. H. C., the relationship between general paralysis and chronic renal disease (illustrated), 245, 422
 Bruce, Dr. L. C., observations on the effect of thyroid feeding in some forms of insanity (illustrated), 50
 " " on thyroid feeding, based upon the study of a second series of sixty cases, 636
 Bullen, Dr. F. St. J., a review of the influence of reflex and toxic agencies in the causation of insanity and epilepsy, 187
 " " the effect upon mental disorders of intercurrent bodily disease, 232
 Campbell, Dr. A. W., the breaking strain of the ribs of the insane (illustrated), 254
 Clonston, Dr. T. S., rest and exercise in the treatment of nervous and mental disease, 599
 Cooke, Dr. E. M., a review of the last twenty years at the Worcester County and City Lunatic Asylums, with some conclusions derived therefrom, 387
 Cowan, Dr. J. J., notes on a case of cerebral hemiatrophy (illustrated), 420
 Cowen, Dr. T. P., trophic intestinal affections of the insane (with cases), 275
 Dawson, Dr. W. R., a case of ecchymosis associated with insane excitement, 678
 Drapes, Dr., a case of remarkable morbid sensory phenomena of an explosive or epileptiform character the result of old injuries to the head, 290
 Dunn, Dr. E. L., case of general paralysis occurring in a girl aged nine and three-quarter years, 482
 Farrar, Dr. R., on the clinical and pathological relations of general paralysis of the insane, 460
 Finegan, Dr., tuberculous disease and its treatment in Irish asylums, 223

- Goodall, Dr. E., the effect upon mental disorders of intercurrent bodily disease, 232
- Greenlees, Dr. T. D., insanity among the natives of South Africa (illustrated), 71.
- Hay, Dr. F., notes of a case of epilepsy with aphasia, 307
- Ireland, Dr. W. W., memoir of Dr. Hack Tuke (illustrated), 377
- Kornfeld, Dr. H., the insanity of love, a study on Ariosto, 674
- Macleod, Dr. M. D., impressions of a flying visit to a Dutch asylum, 218
- Mandsley, Dr. H., criminal responsibility in relation to insanity, 657
- Mercier, Dr. C., collective investigation in mental disease, 449
- Neil, Dr. J., three cases of recovery from melancholia after unusually long periods, 86
- Nicholson, Dr. D., presidential address delivered at the fifty-fourth annual meeting of the Medico-Psychological Association, held in London, 26th July, 1895, 567
- Rivers, Dr. W. H. R., experimental psychology in relation to insanity, 591
- Robertson, Dr. G. M., sanity or insanity? a brief account of the legal and medical views of insanity and some practical difficulties, 433
- „ Dr. W. F., the pathology of milkiness, thickening, and opacity of the pia-arachnoid in the insane, 622
- Robinson, Dr. G. B., severe maniacal excitement following the administration of salicylate of soda, 685
- Shuttleworth, Dr. G. E., public provision for pauper idiots and imbeciles in England and Wales, 640
- Sibbald, Dr. J., lunacy administration in Berlin and in Scotland with special reference to the care of the insane in private dwellings, 1, 202
- Simpson, Dr. J. C., acute mania in a case of pelvic cellulitis, 491
- Stewart, Dr. R. S., the spastic and tabetic types of general paralysis (illustrated), 222
- Strapp, Dr. W. R., notes of a case of removal of foreign bodies from the vagina, 489
- Telford-Smith, Dr. T., cases of sporadic cretinism treated by thyroid extract (illustrated), 280
- Tuke, Dr. Batty, rest and exercise in the treatment of nervous and mental diseases, 607, 760
- Turnbull, Dr. A. R., some remarks on the forcible feeding of insane patients 646

- Turner, Dr. J., sulphates in the urine of general paralytics with special reference to their relation to the seizures in this disease (illustrated), 14
- Urquhart, Dr. A. R., current opinion on medico-psychological questions in Germany as represented by Prof. Ludwig Meyer, of Göttingen, 78, 274
- Warnock, Dr. J., a case of catalepsy, with prolonged silence, alternating with verbigeration (illustrated), 83

PART III.—REVIEWS.

- Alleged increasing prevalence of insanity in Scotland, 498
- Anatomy of melancholy, R. Burton, 120
- Atlas of the human brain and course of nerve fibres, by Dr. Flatau, 703
- Bain's senses and the intellect, 122
- Balfour, Right Hon. A. J., foundations of belief, 518
- Beach, Dr. F., treatment and education of mentally feeble children, 718
- Binet, A., introduction à la psychologie expérimentale, 133
- Blake, Dr. E., myxœdema, cretinism, and the goitres, 131
- Cervello in relazione con i fenomeni psichici, by D. G. Mingassini, 523
- Chorea and choreiform affections, by Dr. W. Osler, 336
- Colles, Dr. J. M., lunacy regulation, acts and orders, 706
- Collins, F. H., epitome of synthetic philosophy, 124
- „ Dr. W. J., pathology of insanity, 722
- Colonization of the insane in connection with the open-door system, etc., by D. A. Paetz, 697
- Commitment, detention, care, and treatment of the insane, 709
- Criminal types dans quelques formes graves de la criminalité, par A. MacDonald, 522
- Cures at Lourdes, by Dr. J. B. Gasquet, 126
- Dictionary of medicine, Quain's, 129
- Dumas, Dr. G., les états intellectuels dans la mélancolie, 529
- Epitome of the synthetic philosophy, by F. H. Collins, 124
- Essay on the human understanding, by Locke, 124
- Etiology of osseous deformities of the head, face, jaws and teeth, by Dr. E. S. Talbot, 521
- Female offender, by Prof. Lombroso and W. Ferrero, 719.
- Féré, M. Ch., La famille névropathique, 136.

- Foundations of belief, by the Right Hon. A. J. Balfour, 518
 Frage nach dem geborenen verbrecher, von Dr. A. Koch, 119.
- Gasquet, Dr., The cures at Lourdes, 126
 Godfernaux, Dr., Le Sentiment et la pensée, 344
 Grafologia, di Cesare Lombroso, 342
 Greenwood, Mr. F., imagination in dreams, 340
 Grundzüge der physiologischen psychologie, by Prof. W. Wundt, 347
- Imagination in dreams and their study, by F. Greenwood, 340
 Insane and the law, by G. Pitt-Lewis, Q.C., R. Percy Smith, M.D., and J. A. Hawke, B.A., 512
 Insanity of over-exertion of brain, by Dr. Batty Tuke, 331
 Introduction a la psychologie experimentale, par A. Binet, 133
 „ to comparative psychology, by Prof. C. Lloyd Morgan, 526
- Jeanne d'Aro la veritable, par Mon. Rioard, 342
- Koch, Dr. J. L. A., Die Frage nach dem Geborenen Verbrecher, 119
- Locke on the human understanding, 124
 Lombroso, Prof. C., Grafologia, 342
 „ „ The female offender, 719
 Lunacy law for medical men, by Dr. C. Mercier, 339
 „ regulation, acts and orders, etc., 706
- Macdonald, Dr., A., Le criminel-type dans quelques formes graves de la criminalité, 522
 Marshall, H. B., Pain, pleasure and æsthetics, 130
 Medical annual and practitioners' index, 525
 Mélancolie, les états intellectuels dans, par Dr. G. Dumas, 529
 Mercier, Dr. C., lunacy law for medical men, 339
 Mingazzini, Dr. G., Il cervello in relazione con i fenomeni psichici, 523
 Morgan, Prof. C. L., an introduction to comparative psychology, 526
 Myxœdema, cretinism and the goitres, by Dr. E. Blake, 131
- Nacke, Dr. P., Verbrechen und Wahnsinn beim Weibe, etc., 118
- Osler, Dr. W., Chorea and choreiform affections, 336
- Paetz, Dr. A., the colonization of the insane in connection with the open door system, 697
 Pain, pleasure and æsthetics, by H. B. Marshall, M.A., 130
 Pathology of insanity, the means and method of study, by Dr. W. Collins, 722
 Practical manual of mental disease, by Dr. E. Regis, 140
 Psychiatrie, by Th. Liehen, 348

- Quain, Sir R., a dictionary of medicine, 129
- Rapport et mémoires sur l'éducation des enfants normaux et anormaux, par E. Seguin, 717
- Regis, Dr. E., a practical manual of mental disease, 140
- Report of Commissioners in Lunacy, 100
- " " " " " for Scotland, 113
- " " Inspectors of lunatics, Ireland, 324
- Ricard, Mon., Jeanne d'Arc la Vénérable, etc., 342
- Seguin, Dr. E., l'éducation des enfants normaux et anormaux, 717
- Senses and the intellect, by A. Bain, 122
- Sentiment et la pensée—et leurs principaux aspects psychologiques, par A. Godfernaux, 344
- Spencer, Herbert, Weismannism once more, 139
- Talbot, Dr. E. S., the etiology of osseous deformities of the head, face, jaws, and teeth, 521
- Treatment and education of mentally feeble children, by Dr. Fletcher Beach, 718
- Tuke, Dr. J. Batty, the insanity of over-exertion of the brain, 331
- Verbrechen und Wahnsin beim Weibe mit Ausblicken auf die Criminal-anthropologie Ueberhaupt, von Dr. Paul Nacke, 118
- Weismannism once more, by Herbert Spencer, 139
- Wundt, Prof. W., Grundsuge der physiologischen psychologie, 347
- Ziehen, Prof. Th., Psychiatrie, 348

 PLATES.

- Lithographic diagram to illustrate Dr. Turner's article, 14
- Tables to illustrate Dr. Turner's article, 30
- Lithographic coloured plates of granular ependyma, to illustrate Dr. Beadles article, 32
- Lithographic charts to illustrate Dr. Bruce's article, 54, 57
- Lithographic plates of sphygmograph tracings to illustrate Dr. Bruce's article, 60, 61
- Tables to illustrate Dr. Bruce's article, 63, 64, 65
- Tables to illustrate Dr. Greenlees' article, 76, 77, 78
- Photograph of patient to illustrate Dr. Warnock's article, 83
- Lithographic coloured plates showing section of spinal cord, to illustrate Dr. Stewart's paper, 222

Lithographic coloured plates showing vessels of pia mater and cortex to illustrate Dr. Bristowe's paper, 245

Woodcuts of transverse sections of ribs to illustrate Dr. Campbell's paper, 259, 260, 261, 262

Photographs of Plate I. group of cretins, after treatment

" " II. children before treatment

" " III. children before treatment

" " IV. palate and hand of cretins, illustrating Dr. Telford

Smith's paper, 280

Photograph of the late Dr. Hack Tuke, 377

Woodcuts showing atrophy of cerebellum to illustrate Dr. Bond's paper, 419

Three photographs of brain to illustrate Dr. Cowan's paper, 420

Eight photographs of insane Africans to illustrate Dr. Greenlees' paper, 482

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