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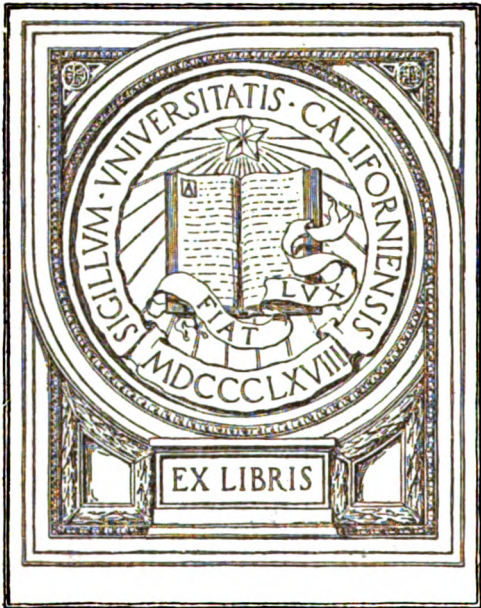
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THE JOURNAL
OF
MENTAL SCIENCE.

EDITORS :

J. R. Lord, C.B.E., M.D.

G. Douglas McRae, M.D.

Thomas Beaton, O.B.E., M.D.

VOL. LXXIII.



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"In adopting our title of the *Journal of Mental Science*, published by authority of the *Medico-Psychological Association*, we profess that we cultivate in our pages mental science of a particular kind, namely, such mental science as appertains to medical men who are engaged in the treatment of the insane. But it has been objected that the term mental science is inapplicable, and that the term mental physiology of 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. (Fourn. Ment. Sci., vol. vii, 1861, p. 137).*

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1888	—	—
1889	T. B. Hyslop.	—
1890	G. M. Robertson.	J. C. Mackenzie. W. J. Smythe.
1891	—	—
1892	G. R. Wilson.	G. M. Robertson.
1893	—	A. W. Campbell.
1894	C. Beadles.	—
1895	G. W. F. Macnaughton.	—
1896	W. R. Dawson.	J. Turner.
1897	C. H. Bond.	—
1898	—	J. R. Lord.
1899	—	F. G. Crookshank.
1900	M. Craig.	C. C. Easterbrook.
1901	W. H. B. Stoddart.	—
1902	—	—
1903	—	—
1904	—	A. A. D. Townsend.
1905	—	—
1906	J. M. Rutherford.	C. J. Shaw.
1907	—	—
1908	—	S. C. Howard.
1909	H. Devine.	C. F. F. McDowall.
1910	—	H. Morton.
1911	J. G. P. Phillips.	G. H. Garnett.
1912	W. Boyd.	—
1913	W. R. Thomas.	D. McKinley Reid.
1914	—	J. C. Wootton.
1915	—	—
1916	—	—
1917	J. C. Woods.	—
1918	—	—
1919	J. Walker.	R. Eager.
1920	—	—
1921	—	—
1922	—	W. S. Dawson.
1923	J. T. H. Madill.	—
1924	Mary Barkas.	—
1925	W. S. Dawson.	—
1926†	—	P. K. McCowan.

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1912. Considine, Thomas Ivory, L.R.C.P., F.R.C.S.Irel., Medical Superintendent, Criminal Lunatic Asylum, Dundrum, co. Dublin.
1913. Cooke, Sir (Edward) Marriott, K.B.E., M.B., Honorary Commissioner, Board of Control, 9, Colherne Court, South Kensington, S.W. 5. (*Ord. Mem.*, 1878.)
1902. Coupland, Sidney, M.D., F.R.C.P., Wootton Ridge, Boar's Hill, Oxford.
1876. Crichton-Browne, Sir J., LL.D., D.Sc., M.D.Edin., F.R.S., 45, Hans Place, London, S.W. 1. (PRESIDENT, 1878.) (*Ord. Mem.*, 1876.)
1924. Dawson, Col. W. R., O.B.E., B.A., M.B., B.Ch.Dubl., F.R.C.P.Irel., D.P.H., M.P.C., Chief Medical Officer, Ministry of Home Affairs, North Ireland, 26, Windsor Park, Belfast. (*Ord. Mem.*, 1894.)
1911. Donkin, Sir Horatio Bryan, M.A., M.D.Oxon., F.R.C.P., Medical Adviser to Prison Commissioners and Director of Convict Prisons, 28, Hyde Park Street, London, W. 2.
1925. Drummond, Sir David, C.B.E., M.A., D.C.L., M.D., J.P., 6, Saville Place, Newcastle-on-Tyne.
1923. Ellis, Henry Havelock, L.S.A., 14, Dover Mansions, Canterbury Road, Brixton, S.W. 9.
1895. Ferrier, Sir David, LL.D., D.Sc., M.D., F.R.C.P., F.R.S., 27, York House, Church Street, Kensington, W. 8.
1922. l'Hermitte, Dr. Jacques Jean, Médecin de l'Hospice Paul Brousse, Paris; 9, rue Marbeuf, Paris 8^e, France.
1924. McDougall, William, LL.D., M.B., F.R.S., Professor of Psychology in Harvard University, U.S.A.
1910. Macpherson, Sir John, K.B.E., C.B., M.D., C.M., F.R.C.P.Edin. (PRESIDENT, 1910-11.) (*Ord. Mem.*, 1886.)
1921. Maudsley, Sir Henry Carr, K.C.M.G., C.B.E., M.D., B.S., F.R.C.P., Consulting Physician, Melbourne Hospital, Victoria; 8, Collins Street, Melbourne.
1926. Meyer, Adolf, M.D., Psychiatrist in Chief, The Johns Hopkins Hospital, Baltimore, U.S.A.
1922. Pactet, Dr. François Florentine, Médecin en chef de l'Asile de Villejuif, Paris; 94, Avenue de la République, Villejuif, Seine, France.
1923. Rose, Sir Arthur, D.S.O., Chairman of the General Board of Control for Scotland, 25, Palmerston Place, Edinburgh.
1924. Sandhurst, Lord, Barrister-at-Law; Lord Chancellor's Visitor in Lunacy, Royal Courts of Justice, Strand, W.C.
1911. Semelaigne, Dr. René, Secrétaire des Séances de la Société Médico-Psychologique de Paris, 59, Boulevard de Montmorency, Paris, XVI, France. (*Corr. Mem.*, 1893.)

1922. **Smith, William Charles Clifford, Esq., O.B.E., F.R.I.B.A., M.I.C.E.,**
Dudley Lodge, Wallington, Surrey.
1901. **Toulouse, Dr. Edouard, Médecin des Asiles de la Seine ; 1, Rue Cabanis,**
Paris, XIV^e, France.
1923. **Willis, Sir Frederick James, K.B.E., C.B.,** Chairman of the Board of
Control for England, Caxton House, West Tothill Street, West-
minster, S.W. 1.
1926. **Winkler, C., M.D.,** The University, Utrecht, Holland. (*Corr. Mem.,*
1924.)

CORRESPONDING MEMBERS.

1911. **Boedeker, Prof. Dr. Justus Karl Edmund, Privat Docent and Director,**
Fichtenhof Asylum, Schlachtensee, Berlin.
1923. **Briggs, L. Vernon, M.D., 64, Beacon Street, Boston, Mass., U.S.A.**
1897. **Buschan, Dr. G., Stettin, Germany.**
1904. **Coroleü, Wilfrid, Medico forense del distrito de la Barceloneta, Aribau,**
31, pral, Chafan Consejo Ciento de 7 à 8, Spain.
1924. **Cotton, Henry A., A.M., M.D., Medical Director, State Hospital,**
Trenton, New Jersey, U.S.A.
1896. **Cowan, F. M., M.D., 109, Perponcher Straat, The Hague, Holland.**
1911. **Falkenberg, Dr. Wilhelm, Sanitätstrat, Direktor der Berliner, Torenan-**
stalt, Herzberge, Berlin-Lichtenberg.
1907. **Ferrari, Giulio Cesare, M.D., Director of the Manicomio Provinciale,**
Imola, Bologna, Italy.
1911. **Friedlander, Prof. Dr. Adolf Albrecht, Haus Sonnblick, Littenweiler,**
bei Freiburg i/Baden, Germany.
1901. **Gommès, Dr. Marcel, 5, Rue Parrot, Paris XII.**
1922. **Kure, Prof. Schuzo, Tokyo University, Japan.**
1909. **Moreira, Prof. Dr. Juliano, Directeur General de l'Assistance aux**
Aliénées ; Praia da Saudade 288, Rio de Janeiro, Brazil.
1922. **Morowoka, Dr. T., The Imperial University, Kyushu, Japan.**
1909. **Pilcz, Dr. Alexander, VIII/2 Alserstrasse 43, Wien, Austria.**
1922. **Sano, Dr., Gheel, Belgium.**

ORDINARY MEMBERS OF THE ASSOCIATION.

Alphabetical List of Ordinary Members of the Association on January 1, 1927, with the year in which they joined.

1801. Adair, Thomas Stewart, M.D., C.M.Edin., Medical Superintendent, Storthes Hall Mental Hospital, Kirkburton, near Huddersfield. (*Secretary, N. and M. Division, 1908-20.*)
1910. Adam, George Henry, M.R.C.S., L.R.C.P.Lond., Medical Superintendent, West Malling Place, Kent.
1919. Adey, J. K., M.B., C.M.Melb., Sunbury, Victoria, Australia.
1886. Agar, S. Hollingsworth, jun., B.A.Camb., L.S.A., M.R.C.S.Eng., Hurst House, Henley-in-Arden.
1923. Ahern, John Maurice, M.B., B.Ch.R.U.I., L.R.C.P.&S.Irel., Senior Medical Officer, H.M. Prison, Liverpool.
1923. Ainsworth, Cyrus Gerald, M.A., I.L.B., M.B., B.Ch.Camb., M.R.C.S., L.R.C.P.Lond., Deputy Medical Superintendent, Lancashire Mental Hospital, Rainhill, nr. Liverpool; Elton, Bury, Lancs.
1926. Albiston, Norman Arthur, M.B., B.S.Syd., D.P.M. (Travelling).
1924. Alexander, Douglas Reid, M.R.C.S., L.R.C.P.Lond., D.P.M., Assistant Medical Officer, London County Mental Hospital, Bexley, Kent.
1899. Alexander, Hugh de Maine, M.D., C.M.Edin., Medical Superintendent, Kingseat Mental Hospital, Newmacher, Aberdeen.
1922. Alexander, Marion Cameron, M.B., B.Ch.Belf., Dipl. Psych., Assistant Physician, Royal Hospital, Morningside, Edinburgh.
1899. Allman, Dorah Elizabeth, M.B., B.Ch.R.U.I., Assistant Medical Officer, District Asylum, Armagh.
1908. Anderson, James Richard Sumner, M.B., Ch.B.Glasg., Senior Assistant Medical Officer, Cumberland and Westmorland Mental Hospital, Garlands, Carlisle.
1926. Anderson, John Ford, M.D., C.M.Aberd., M.R.C.P.Lond., L.R.C.S. Edin., 54, Finchley Road, London N.W. 8.
1898. Anderson, John Sewell, M.R.C.S., L.R.C.P.Lond., Medical Superintendent, Hull City Mental Hospital, Willerby.
1921. Anderson, William, M.B., Ch.B.Aberd., Senior Assistant Physician, Royal Hospital, Aberdeen.
1918. Anderson, William Kirkpatrick, M.D., Ch.B., F.R.F.P.S.Glasg., 2, Woodside Crescent, Glasgow. (Prof. of Psychiat., Andr. Coll., Glasg.)
1912. Annandale, James Scott, M.B., Ch.B.Aberd., D.P.M., Senior Assistant Physician, Royal Hospital, Aberdeen.
1912. Aphorp, Frederick William, L.R.C.P.Edin., M.R.C.S.Eng., M.P.C., "Mulgrave," Church Road, Burgess Hill, Sussex.
1904. Archdale, Mervyn Alex., M.B., B.S.Durh., D.P.M., Medical Superintendent, Sunderland Mental Hospital, Ryhope.
1905. Archdall, Mervyn Thomas, L.S.A., L.R.C.P.&S.Edin., L.R.F.P.S.Glasg., St. Denys, New Milton, Hants.
1882. Armstrong-Jones, Sir Robert, C.B.E., D.Sc.Wales, M.D., B.S., F.R.C.P.Lond., F.R.C.S.Eng., F.S.A., D.L., J.P., Lord Chancellor's Visitor-in-Lunacy, 9, Bramham Gardens, London, S.W. 5 (and Plas Dinas, Carnarvon, North Wales). (*Gen. Secretary, 1897-1906.*) (PRESIDENT, 1906-7.) (Gresham Prof. of Physic.)
1910. Auden, George Augustus, M.A., D.Phil.Birm., M.D., B.Ch.Camb., F.R.C.P.Lond., D.P.H., F.S.A., School Medical Officer, Education Office, Council House, Margaret Street, Birmingham.
1891. Aveline, Henry Talbot Sydney, M.D.Durh., M.R.C.S., L.R.C.P.Lond., M.P.C., Medical Superintendent, Somerset and Bath County Asylum, Cotford, nr. Taunton. (*Secretary, S.W. Division, 1905-11.*)

1922. Back, Frederick, M.R.C.S., L.R.C.P.Lond., Deputy Medical Superintendent, Sunderland Mental Hospital, Ryhope.
1926. Bailey, Reginald, M.B., Ch.B.Glasg., Assistant Medical Officer, Bangour Village, Uphall, West Lothian.
1909. Bain, John, M.A., M.B., B.Ch.Glasg., Medical Superintendent, Derby Borough Mental Hospital, Rowditch.
1913. Bainbridge, Charles Frederick, M.B., Ch.B.Edin., Assistant Medical Officer, Devon County Mental Hospital, Exminster.
1906. Baird, Harvey, M.D., Ch.B.Edin., Medical Superintendent, Periteau Private Asylum, Winchelsea, Sussex.
1923. Baker, Geoffrey Thomas, M.C., L.M.S.S.A., D.P.M., Assistant Medical Officer, Kent County Mental Hospital, Chartham Down, near Canterbury.
1922. Banbury, Percy, M.R.C.S., L.R.C.P.Lond., D.P.M., Assistant Medical Officer, West Park Mental Hospital, Epsom, Surrey.
1922. Barclay, Rachel Mary, M.A., M.D.Edin., Dipl. Psych., 2. W. Crosscausway, Edinburgh.
1904. Barham, Guy Foster, M.A., M.D., B.Ch.Camb., M.R.C.S., L.R.C.P.Lond., Medical Superintendent, Claybury Mental Hospital, Woodford Bridge, Essex.
1919. Barkas, Mary Rushton, M.Sc.N.Z., M.D., B.S., M.R.C.S., L.R.C.P.Lond., D.P.M., Assistant Medical Officer, The Maudsley Hospital, Denmark Hill, S.E. 5 ; 46, Connaught Street, W. 2.
1923. Barnes, Francis Gregory Lawson, M.R.C.S., L.R.C.P.Lond., D.P.M., Assistant Medical Officer, London County Mental Hospital, Colney Hatch, New Southgate, N. 11.
1910. Bartlett, George Norton, M.B., B.S., M.R.C.S., L.R.C.P.Lond., Medical Superintendent, County Mental Hospital, Mickleover, Derby. (*Secretary, S.W. Division, 1916-22.*)
1901. Baskin, J. Lougheed, M.D.Brux., L.R.C.P.&S.Edin., L.R.F.P.S.Glasg., c/o Messrs. Glyn Mills & Co., 3, Whitehall Place, S.W. 1.
1902. Baugh, Leonard Dieckmann Hamilton, M.B., Ch.B.Edin., The Pleasaunce, York.
1874. Beach, Fletcher, M.B., F.R.C.P.Lond., 5, De Crespigny Park, Denmark Hill, S.E. 5. (*Secretary, Parliamentary Committee, 1896-1906.*) (*General Secretary, 1889-1896.*) (PRESIDENT, 1900-01.)
1892. Beadles, Cecil F., M.R.C.S., L.R.C.P.Lond., Gresham House, Egham Hill, Egham.
1921. Beaton, Thomas, O.B.E., M.D., B.S., M.R.C.S., M.R.C.P.Lond., Medical Superintendent, City Mental Hospital, Milton, Portsmouth. (Lect. on Ment. Dis., Bethlem Royal Hospital.)
1913. Bedford, Percy William Page, M.D., Ch.B.Edin., Dipl. Psych., Medical Superintendent, Dorset County Mental Hospital, Herrison, near Dorchester.
1909. Beeley, Arthur, M.Sc.Leeds, M.D., B.S., M.R.C.S., L.R.C.P.Lond., D.P.H., Assistant Medical Officer, E. Sussex Educational Committee, Windybank, King Henry's Road, Lewes.
1922. Bell, Andrew Allan, M.B., Ch.B., F.R.F.P.S.Glasg., D.P.M., Pathologist and Assistant Medical Officer, Hawkhead Mental Hospital, Cardonald, N.B.
1914. Bennett, James Wodderspoon, M.R.C.S., L.R.C.P.Lond., Marsden, Babbacombe Road, Torquay.
1914. Benson, John Robinson, L.R.C.P.Lond., F.R.C.S.Eng., Resident Physician, Fiddington House, Market Lavington, Wilts, and Laverstick House, Salisbury.
1899. Beresford, Edwyn H., M.R.C.S., L.R.C.P.Lond., Medical Superintendent, Tooting Bec Mental Hospital, Tooting, London, S.W. 17.
1922. Berkeley-Hill, Owen Alfred Rowland, M.A., M.D., B.Ch.Oxon., M.R.C.S., L.R.C.P.Lond., I.t.-Col. I.M.S., Medical Superintendent, Mental Hospital for Europeans, Ranchi, Bihar and Orissa, India.

1912. Berncastle, Herbert Melbourne, M.R.C.S., L.R.C.P.Lond., Senior Assistant Medical Officer, Croydon Mental Hospital, Warlingham, Surrey.
1920. Birch, William Somerset, M.C., M.R.C.S., L.R.C.P.Lond., Medical Superintendent, Jamaica Mental Asylum, Kingston, Jamaica.
1894. Blachford, James Vincent, C.B.E., M.D., B.S.Durh., M.R.C.S., L.R.C.P.Lond., M.P.C., 1, Victoria Square, Clifton, Glos.
1898. Blair, David, M.A., M.D., C.M.Glasg., Medical Superintendent, Lancashire County Mental Hospital, Prestwich, Manchester.
1919. Blake, Stanley, L.R.C.P.&S.Irel., Assistant Medical Officer, Grange-gorman Mental Hospital, Dublin.
1918. Blandford, Walter Folliott, B.A.Camb., M.R.C.S., L.R.C.P.Lond., Devonshire Club, S.W. 1.
1904. Bodvel-Roberts, Hugh Frank, M.A.Camb., M.R.C.S., L.R.C.P.Lond., L.S.A., Senior Assistant Medical Officer, Napsbury Mental Hospital, near St. Albans, Herts.
1920. Boland, James Joseph, M.B., B.Ch.N.U.I., Assistant Medical Officer, House of St. John of God, Stillorgan, co. Dublin.
1900. Bolton, Joseph Shaw, D.Sc., M.D., B.S., F.R.C.P.Lond., Medical Superintendent, West Riding Mental Hospital, Wakefield. (Prof. of Ment. Dis., Univ. of Leeds.)
1892. Bond, Charles Hubert, C.B.E., D.Sc., M.D., C.M.Edin., F.R.C.P.Lond., M.P.C., Commissioner of the Board of Control, Caxton House West, Westminster, S.W. 1. (*General Secretary*, 1906-12.) (PRESIDENT, 1921-22.)
1922. Bostock, John, M.B., B.S., M.R.C.S., L.R.C.P.Lond., D.P.M., Medical Superintendent, The Mental Hospital, Newcastle, N.S.W.
1920. Bowen, Tudor David John, M.R.C.S., L.R.C.P.Lond., Cae Cob, St. Mellons, near Cardiff.
1918. Bower, Cedric William, L.M.S.S.A., Joint Medical Officer, Springfield House, near Bedford.
1877. Bower, David, M.D., C.M.Aberd., L.R.F.P.S.Glasg., Springfield House, near Bedford. (*Chairman, Parliamentary Committee*, 1907-1910.)
1917. Bowie, Edgar Ormond, L.A.H.Dubl., D.P.H., Medical Superintendent, Stretton House, Church Stretton, Shropshire.
1896. Boycott, Arthur N., M.D., M.R.C.S., L.R.C.P.Lond., Gombards House, St. Albans, Herts. (*Secretary, S.E. Division*, 1900-05.)
1926. Boyd, William, M.B., Ch.B.Edin., D.P.H., Assistant Medical Officer, Fife and Kinross District Asylum, Cupar, Fife.
1898. Boyle, A. Helen A., M.D.Bru.x., L.R.C.P.&S.Edin., 9, The Drive, Hove, Brighton.
1926. Braithwaite, Joseph, M.B., Ch.B.Edin., Assistant Medical Officer, City Mental Hospital, Gosforth, Newcastle-on-Tyne.
1922. Bramwell, Edwin, M.D., F.R.C.P.Edin. & Lond., F.R.S.Edin., Physician to the Royal Infirmary, Edinburgh, 23, Drumsheugh Gardens, Edinburgh. (Prof. of Clin. Med., Univ. of Edinburgh.)
1911. Brander, John, M.B., C.B.Edin., M.R.C.P.Lond., D.P.M., Deputy Medical Superintendent, London County Mental Hospital, Bexley, Kent.
1919. Branthwaite, Robert Welsh, C.B., M.D.Bru.x., M.R.C.S., L.R.C.P.Lond., D.P.H., Stoke Park, Stapleton, Bristol.
1925. Brennan, Richard Dominick, M.B., B.Ch., N.U.I., Assistant Medical Officer, District Mental Hospital, Waterford, Ireland.
1922. Brock, Arthur John, M.D., Ch.B.Edin., 8, Rothesay Place, Edinburgh.
1924. Brown, Basil William, M.B., B.S.Lond., D.P.M., The Priory, Roehampton, S.W. 15.
1924. Brown, George, M.B., B.Ch.Glasg., D.P.M., Assistant Medical Officer, South Yorkshire Mental Hospital, Sheffield.
1905. Brown, Harry Egerton, M.D., Ch.B.Glasg., M.P.C., c/o Digby S. Brown, 116, Hope Street, Glasgow.

1923. Brown, Malcolm, M.B., Ch.B.Glasg., Assistant Physician and Pathologist, Gartloch Mental Hospital, Gartcosh, N.B.
1908. Brown, R. Dods, M.D., Ch.B., F.R.C.P.Edin., D.P.H., Dipl. Psych., Medical Superintendent, The Royal Hospital, Aberdeen.
1912. Brown, William, M.D., C.M.Glasg., M.P.C., Medical Officer, Stoke Park Colony; 1, Manor Road, Fishponds, Bristol.
1916. Brown, William, D.Sc.Lond., M.A., M.D., B.Ch.Oxon., 127, Harley Street, London, W. 1. (Wilde Reader in Mental Philosophy, Univ. Oxford.)
1917. Bruce, Alexander Ninian, D.Sc., M.D., F.R.C.P.Edin., 8, Ainslie Place, Edinburgh. (Lect. on Neurol., Univ. of Edinburgh.)
1893. Bruce, Lewis C., M.C., M.D., F.R.C.P.Edin., M.P.C., Medical Superintendent, District Asylum, Druid Park, Murthly, N.B. (*Secretary, Scottish Division, 1901-1907.*) (*Co-Editor of Journal, 1911-1916.*)
1913. Brunton, George Llewellyn, M.D., Ch.B.Edin., Medical Superintendent, Nottingham City Mental Hospital, Mapperley Hill.
1920. Bryce, William Henderson, M.B., C.M.Edin., Resident Physician, Kenlaw House, Colinsburgh, Fife.
1912. Buchanan, William Murdoch, M.B., Ch.B.Glasg., Medical Superintendent, Kirklands Mental Hospital, Bothwell, Lanarkshire. (*Secretary, Scottish Division since 1920.*)
1912. Burke, Joseph Dominick Gabriel, M.B., B.Ch.R.U.I., Deputy Medical Superintendent, St. Audrey's Hospital, Melton, Suffolk.
1924. Bushe, Charles Kendal, O.B.E., B.A., M.D., B.Ch.Dubl., Surgeon-Commander in Charge, Royal Naval Hospital, Great Yarmouth.
1921. Buzzard, Edward Farquhar, M.A., M.D., B.Ch.Oxon., F.R.C.P.Lond., Physician Extraord. H.M. The King; Physician, St. Thomas's Hospital; 78, Wimpole Street, London, W. 1.
1921. Caldicott, Charles Holt, M.B.E., M.B., M.R.C.S., L.R.C.P.Lond., Grantbourne, Chobham, Surrey.
1925. Cameron, Donald Ewan, M.B., Ch.B.Glasg., Assistant Medical Officer, Glasgow Royal Mental Hospital, Gartnavel, Glasgow.
1894. Campbell, Alfred Walter, M.D., C.M.Edin., M.P.C., Macquarie Chambers, 183, Macquarie Street, Sydney, New South Wales.
1909. Campbell, Donald Graham, M.B., C.M.Edin., F.S.A.Scotl., Medical Officer, District Asylum, "Auchinellan," 12, Reidhaven Street, Elgin.
1897. Campbell, Robert Brown, M.D., C.M., F.R.C.P.Edin., Medical Superintendent, Stirling District Mental Hospital, Larbert. (*Secretary, Scottish Division, 1910-20.*)
1905. Carre, Henry, L.R.C.P.&S.Irel., Medical Superintendent, Woodilee Mental Hospital, Lenzie, Glasgow.
1925. Carson, Josephine Alcorn, L.R.C.P.&S.Irel., Assistant Medical Officer, Farnham House, Finglas, Ireland.
1891. Carswell, John, F.R.F.P.S.Glasg., L.R.C.P.Edin., J.P., 14, Harley Street, W. 1.
1922. Casson, Elizabeth, M.D., Ch.B.Brist., D.P.M., Assistant Medical Officer, Holloway Sanatorium, Virginia Water, Surrey.
1888. Chambers, James, M.A., M.D.R.U.I., M.P.C., The Priory, Roehampton, London, S. W. 15. (*Assistant Editor, 1900-05. Co-Editor of Journal, 1905-1914.*) (PRESIDENT, 1913-14.) (*Treasurer since 1917.*)
1911. Chambers, Walter Duncanon, M.A., M.D., Ch.B., M.R.C.P.Edin., M.P.C., Physician Superintendent, James Murray's Royal Asylum; Murray House, Perth.
1923. Chevens, Leslie Charles Frederick, M.R.C.S., L.R.C.P.Lond., D.P.M., Assistant Medical Officer, Cheshire County Mental Hospital, Parkside, Macclesfield.
1917. Chisholm, Percy, L.R.C.P.&S.Edin., L.R.F.P.S.Glasg., Medical Superintendent, Queen Mary Hospital, Hammersprings, New Zealand.

1907. Chislett, Charles Game Angus, M.B., Ch.B., F.R.F.P.S.Glasg., Superintendent, Stoneyetts, Chryston, Lanark.
1921. Cholmeley, Mountague Adye, M.R.C.S., L.R.C.P.Lond., D.P.M., Ministry of Pensions Hospital, Maghull, nr. Liverpool.
1880. Christie, Joseph William Stirling, L.R.C.P.&S.Edin., 21, St. Matthew's Gardens, St. Leonards-on-Sea.
1920. Clark, R. M., M.B., C.M.Edin., Medical Superintendent, Lancashire Mental Hospital, nr. Whittingham, Preston.
1907. Clarke, Geoffrey, M.D.Lond., Medical Superintendent, London County Mental Hospital, Bexley, Kent.
1907. Clarkson, Robert Durward, B.Sc., M.D., C.M., F.R.C.P.Edin., Medical Officer, Scottish National Institute for the Education of Imbecile Children; The Park, Larbert, Stirlingshire.
1925. Cobb, Geoffrey F., M.R.C.S., L.R.C.P.Lond., D.P.M., M.P.C., Senior Assistant Medical Officer, County Mental Hospital, Burntwood, Lichfield, Staffs.
1900. Cole, Sydney John, M.A., M.D., B.Ch.Oxon., Medical Superintendent, Wiltshire County Asylum, Devizes.
1906. Collier, Walter Edgar, M.R.C.S., L.R.C.P.Lond., Senior Assistant Medical Officer, Kent County Mental Hospital, Barming Heath, Maidstone.
1903. Collins, Michael Abdy, *O.B.E.*, M.D., B.S., M.R.C.S., L.R.C.P.Lond., Medical Superintendent, Kent County Mental Hospital, Chartham Downs. (*Hon. General Secretary*, 1912-18.)
1910. Conlon, Thomas Peter, L.R.C.P.&S.Irel., Resident Medical Superintendent, District Asylum, Monaghan.
1921. Connell, Ernest Henry, M.B., Ch.B.Edin., D.P.M., 7, Greenhill Gardens, Edinburgh.
1920. Connell, Oliver George, *M.C.*, L.R.C.P.&S.Irel., Medical Superintendent, Norfolk County Mental Hospital, Thorpe, Norwich.
1914. Connolly, Victor Lindley, *M.C.*, M.B., B.Ch.Belf., D.P.M., Deputy Medical Superintendent, West Park Mental Hospital, Epsom.
1910. Coombes, Percival Charles, M.R.C.S., L.R.C.P.Lond., Medical Superintendent, Surrey County Mental Hospital, Netherne, nr. Coulsdon.
1903. Cormac, Harry Dove, M.B., M.S.Madras, D.P.M., Medical Superintendent, Cheshire County Mental Hospital, Parkside, Macclesfield; Parkside House, Macclesfield.
1891. Corner, Harry, M.D., M.R.C.S., L.R.C.P.Lond., M.P.C., Brook House, Southgate, N. 14.
1917. Costello, Christopher, M.B., B.Ch.N.U.I., Assistant Medical Officer, Graingegorman Mental Hospital, Donabate, co. Dublin.
1910. Coupland, William Henry, L.R.C.S.&P.Edin., L.R.F.P.S.Glasg., Medical Superintendent, Royal Albert Institution; Albert House, Haverbreaks, Lancaster.
1911. Cox, Donald Maxwell, M.R.C.S., L.R.C.P.Lond., County and City Mental Hospital, Burghill, Hereford.
1924. Craig, Alexander, M.B., Ch.B.Aberd., Assistant Physician, Royal Mental Hospital, Aberdeen.
1926. Coyne, William Joseph, M.B., B.Ch., N.U.I., D.P.M., Assistant Physician, Chiswick House, Chiswick, W. 1.
1893. Craig, Sir Maurice, *C.B.E.*, M.A., M.D., B.Ch.Camb., F.R.C.P.Lond., M.P.C., 4, Cambridge Gate, Regent's Park, N.W. 1. (*Secretary, Educational Committee*, 1905-8; *Chairman, Educational Committee*, 1912-19.)
1924. Craig, Roy Neville, M.D.Durh., M.R.C.S., L.R.C.P.Lond., D.P.M., Heath Court, Barton Road, Torquay.
1925. Creak, Eleanor Mildred, M.B., B.S., M.R.C.S., L.R.C.P.Lond., Assistant Physician, The Retreat, York.
1911. Crichlow, Charles Adolphus, M.B., Ch.B.Glasg., Senior Assistant Medical Officer, Bangour Village, West Lothian.

1917. Crocket, James, M.D., F.R.C.P.Edin., D.P.H., Medical Superintendent, Colony of Mercy for Epileptics, Consumption Sanatoria of Scotland, Craigielea, Bridge of Weir.
1915. Crosthwaite, Frederick Douglas, M.B., Ch.B.Edin., D.P.H., Mental Hospital, Queenstown, Cape Province, South Africa.
1923. Crow, Norah Annie, M.A.Edin., M.D., B.S.Lond., "Kingsclere," Harrington Road, Brighton.
1919. Cuthbert, James Harvey, M.B., Ch.B.Edin., D.P.M., Senior Assistant Medical Officer, West Hain Mental Hospital; 63, Eastwood Road, Goodmayes, Essex.
1907. Daniel, Alfred Wilson, B.A., M.D., B.Ch.Camb., M.R.C.S., L.R.C.P.Lond., Medical Superintendent, Hanwell Mental Hospital, Southall, Middlesex. (*Secretary, Educational Committee since 1920.*)
1926. Darlington, Arthur, B.A., M.B., Ch.B.Dubl., D.P.H., Deputy Medical Superintendent, Wells Mental Hospital.
1896. Davidson, Andrew, M.D., C.M.Aberd., M.P.C., 221, Macquarie Street, Sydney, N.S.W.
1925. Davidson, Thomas Wishart, M.B., Ch.B.Glasg., D.P.M., Assistant Medical Officer and Pathologist, City Mental Hospital, Humberstone, Leicester.
1922. Davie, Thomas Macnaughton, M.C., M.D., Ch.B.Edin., D.P.M., Barrister-at-Law, Assistant Physician, Royal Edinburgh Hospital; 2, Morningside Terrace, Edinburgh.
1921. Davies-Jones, Charles William Saunderson, M.B., Ch.B.Edin., First Assistant Medical Officer, City and County Hospital, Littlemore, Oxford.
1920. Dawson, William Siegfried, M.A., M.D., B.Ch.Oxon., M.R.C.P.Lond., M.R.C.S.Eng., D.P.M., Prof. of Psychiat., Univ. of Sydney, Sydney, N.S.W.; The University, Sydney, N.S.W.
1926. Deane, Frederick J., M.B., Ch.B.Edin., Senior Assistant Medical Officer, Down District Asylum, Downpatrick.
1922. Dearden, Harold, B.A.Camb., M.R.C.S., L.R.C.P.Lond., 43, Curzon Street, Mayfair, W. 1.
1925. Delany, J. J., L.R.C.P.&S.Irel., Assistant Medical Officer, Ballinasloe District Mental Hospital, Ireland.
1901. De Steiger, Adele Isabella, M.D.Lond., 26, Clarendon Road, London, W. 11.
1905. Devine, Henry, O.B.E., M.D., B.S., F.R.C.P.Lond., M.R.C.S.Eng., M.P.C., Medical Superintendent, Holloway Sanatorium, Virginia Water, Surrey; The Ridge, Virginia Water, Surrey. (*Assistant Editor of the Journal, 1916-1920; Co-Editor since 1920.*)
1904. Devon, James, L.R.C.P.&S.Edin., F.R.F.P.S.Glasg., Prison Commissioner for Scotland; 11, Rutland Square, Edinburgh.
1924. Devon, Martha Davidson, L.R.C.P. & S.Edin., L.R.F.P.S.Glasg., Assistant Medical Officer, Stirling District Mental Hospital, Larbert.
1925. Dhunjibhoy, Jal Edulji, M.B., B.S.Bombay, *Capt. I.M.S.*, Medical Superintendent, The Indian Mental Hospital, Tanke Ranchi, Bihar and Orissa, India; c/o Lloyds Bank, Cox's Branch, Bombay.
1921. Dick, Alexander, M.C., M.B., Ch.B.Glasg., Assistant Medical Officer, Glasgow District Mental Hospital, Woodilee, Lenzie.
1922. Dickson, James, M.C., M.B., Ch.B.Edin., Crichton Royal Institution, Dumfries.
1915. Dillon, Frederick, M.D., Ch.B.Edin., Medical Superintendent, Northumberland House Mental Hospital, Finsbury Park, N. 4; 72, Wimpole Street, London, W. 1.
1909. Dillon, Kathleen, L.R.C.P.&S.Irel., Assistant Medical Officer, District Asylum, Mullingar.
1905. Dixon, J. Francis, M.A., M.D., B.Ch.Dubl., M.P.C., Medical Superintendent, City Mental Hospital, Humberstone, Leicester.
1879. Dodds, William John, D.Sc., M.D., C.M.Edin., 19, Marina Road, Prestwick, Ayrshire.

1892. Donelan, John O'Conor, L.R.C.P.&S.Irel., M.P.C., Med. Supt., Grange-gorman District Mental Hospital; St. Dymphna's, North Circular Road, Dublin. (Lect. on Ment. Dis., Univ. of Dublin.)
1919. Drake-Brockman, Henry George, M.R.C.S., L.R.C.P.Lond., Deputy Medical Superintendent, City Mental Hospital, Middlesbrough.
1923. Draper, Arthur Phillip, M.C., M.D., B.Ch.Dubl., Capt. R.A.M.C., Mental Specialist, Southern Command, India; c/o Glyn Mills & Co., 3, Whitehall Place, S.W. 1.
1916. Drummond, William Blackley, M.D., C.M., F.R.C.P.Edin., Medical Superintendent, Baldovan Institution, Dundee.
1921. Drury, Kenneth Kirkpatrick, M.C., B.A., M.D., B.Ch.Dubl., Senior Assistant Medical Officer, Staffordshire Mental Hospital; "Swift Brook," Corporation Street, Stafford.
1907. Dryden, Arthur Mitchell, M.B., Ch.B.Edin., Medical Superintendent, Glasgow District Mental Hospital, Gartloch, Gartcosh.
1902. Dudgeon, Herbert Wm., M.D., B.S.Durh., M.R.C.S., L.R.C.P.Lond., Director of the Lunacy Department of Public Health, and Director of Abbassia Mental Hospital, Egypt.
1899. Dudley, Francis, L.R.C.P.&S.Irel., Medical Superintendent, Cornwall County Asylum, Bodmin.
1926. Duncan, Archibald Glen, M.D., B.S., M.R.C.S., L.R.C.P.Lond., D.P.M., Assistant Medical Officer, Severalls Mentall Hospital, Cochester.
1922. Duncan, Williams Arthur, M.B., Ch.B.Edin., Assistant Medical Officer, East Sussex County Mental Hospital, Hellingly, Sussex.
1923. Dunne, John, M.B., B.Ch.R.U.I., Assistant Medical Officer, Grange-gorman Mental Hospital, Dublin.
1922. Dunscombe, Nicholas Dunscombe, M.A., M.B., B.Ch.Cantab., L.M.S.S.A., D.P.H., Barrister-at-Law, 14, The Paragon, Bath.
1903. Dunston, John Thomas, M.D., B.S.Lond., Commissioner of Mental Disorders and Defective Persons, South Africa, and Medical Superintendent, West Koppies Mental Hospital, Pretoria, South Africa.
1923. Dwyer, Patrick, M.B., B.Ch.R.U.I., Assistant Medical Officer, Grange-gorman Mental Hospital, Dublin.
1906. Eager, Richard, O.B.E., M.D., Ch.B.Aberd., M.P.C., Medical Superintendent, Devon County Mental Hospital, Exminster.
1891. Earls, James Henry, M.D., M.Ch.R.U.I., I.S.A., D.P.H., M.P.C., Barrister-at-Law; Fenstanton, Christchurch Road, Streatham Hill, London, S.W. 2.
1921. East, Guy Roland, M.D., B.S., B.Hy.Durh., D.P.H., Medical Superintendent, Northumberland County Mental Hospital, Collingwood, Morpeth.
1907. East, Wm. Norwood, M.D., M.R.C.S., L.R.C.P.Lond., M.P.C., Medical Inspector, H.M. Prisons (England and Wales); Prison Commission, Home Office, Whitehall, S.W. 1.
1895. Easterbrook, Charles C., M.A., M.D., F.R.C.P.Edin., M.P.C., J.P., Physician Superintendent, Crichton Royal Institution, Dumfries.
1925. Eaton, Thomas Tighe Wandesforde, L.R.C.P.&S.Irel., Assistant Medical Officer, St. Patrick's Hospital (Lucan Branch), Dublin.
1924. Eddison, Herbert Wilfred, M.A., M.B., B.Ch.Camb., M.R.C.S., L.R.C.P.Lond., D.P.M., Assistant Medical Officer, London County Mental Hospital, Banstead, Surrey.
1895. Edgerley, Samuel, M.A., M.D., C.M.Edin., M.P.C., Medical Superintendent, West Riding Asylum, Menston, nr. Leeds.
1897. Edwards, Francis Henry, M.D.Bru.x., M.R.C.S., M.R.C.P.Lond., "Cherchefelle," Reigate, Surrey.
1924. Edwards, Thomas Lloyd, L.R.C.P.&S.Edin., L.R.F.P.S.Glasg., D.P.M., Assistant Medical Officer, Glamorgan Mental Hospital, Bridgend.
1919. Eggleston, Henry, M.B., B.S.Durh., M.P.C., Filey Lodge, Billericay, Essex.

1901. Elgee, Samuel Charles, *O.B.E.*, *L.R.C.P.&S.Irel.*, Medical Superintendent, Cane Hill Mental Hospital, Purley, Surrey.
1889. Elkins, Frank Ashby, *M.D.*, *C.M.Edin.*, *M.P.C.*, Waingroves, 103, Rickmansworth Road, Watford, Herts.
1912. Ellerton, John Frederick Heise, *M.D.Bruz.*, *L.R.C.P.Edin.*, *M.R.C.S. Eng.*, Rotherwood, Leamington Spa.
1908. Ellison, Arthur, *M.R.C.S.*, *L.R.C.P.Lond.*, 10, Sholebroke Avenue, Leeds.
1901. Erskine, Wm. J. Adams, *M.D.*, *C.M.Edin.*, Medical Superintendent, I. of W. Mental Hospital, Whitecroft, Newport.
1926. Esson, Walter Louis, *M.A.*, *M.B.*, *Ch.B.Aberd.*, Assistant Medical Officer, Devon County Mental Hospital, Exminster.
1895. Eurich, Frederick Wilhelm, *M.D.*, *C.M.Edin.*, Lanshawe Cottage, Ilkley, Yorks. (Prof. of For. Med., Univ. of Leeds.)
1894. Eustace, Henry Marcus, *B.A.*, *M.D.*, *B.Ch.Dubl.*, *M.P.C.*, Medical Superintendent, Hampstead and Highfield Private Asylum, Glasnevin, Dublin.
1909. Eustace, William Neilson, *L.R.C.S.&P.Irel.*, Resident Medical Officer, Glasnevin, Dublin.
1918. Evans, Albert Edward, *M.B.*, *B.S.Lond.*, *M.R.C.S.*, *L.R.C.P.Lond.*, *D.P.H.*, Inspector, Board of Control; 3, Rotherwick Court, Golders Green, London, N.W. 11.
1891. Ewan, John Alfred, *M.A.St.And.*, *M.D.*, *C.M.Edin.*, *M.P.C.*, Greylees, Sleaford, Lincs.
1914. Ewing, Cecil Wilmot, *L.R.C.P.&S.Irel.*, *D.P.M.*, Deputy Medical Superintendent, Storthes Hall Mental Hospital, Kirkburton, nr. Huddersfield.
1925. Fairweather, Anne, *M.B.*, *B.S.Durh.*, *D.P.M.*, Assistant Medical Officer, Hollymoor Mental Hospital, Northfield, Birmingham.
1894. Farquharson, William F., *M.D.*, *C.M.Edin.*, *M.P.C.*, Medical Superintendent, Cumberland and Westmorland Mental Hospital, Garlands, Carlisle.
1921. Farran-Ridge, Clive, *M.B.*, *Ch.M.Syd.*, *D.P.M.*, Assistant Medical Officer, Staffordshire Mental Hospital, Stafford.
1907. Farries, John Stothart, *L.R.C.P.&S.Edin.*, *L.R.F.P.S.Glasg.*, The Cottage, Hethersgill, Carlisle.
1903. Fennell, Charles Henry, *M.A.*, *M.D.Oxon.*, *M.R.C.P.Lond.*, 27, Cadogan Court, S.W. 3.
1908. Fenton, Henry Felix, *M.B.*, *Ch.B.Edin.*, Medical Superintendent, Worcester County and City Mental Hospital, Powick.
1906. Fielding, Saville James, *M.B.*, *B.S.Durh.*, Medical Superintendent, Bethel Hospital, Norwich.
1889. Finlay, David, *M.D.*, *C.M.Glasg.*, Medical Superintendent, Glamorgan Mental Hospital, Bridgend.
1906. Firth, Arthur Marcus, *M.A.*, *M.D.*, *B.Ch.Edin.*, Deputy Medical Superintendent, Worcestershire County Mental Hospital, Barnesley Hall, Bromsgrove.
1903. Fitzgerald, Alexis, *L.R.C.P.&S.Irel.*, Medical Superintendent, District Mental Hospital, Waterford.
1908. Fitzgerald, James Francis, *L.R.C.P.&S.Irel.*, Assistant Medical Officer, District Mental Hospital, Clonmel, Ireland.
1923. Fitzgerald, John Joseph, *M.D.Durh.*, *M.D.Bruz.*, *L.A.H.Dubl.*, *L.R.C.P.Irel.*, *L.R.C.P.&S.Edin.*, *L.R.F.P.S.Glasg.*, Assistant Physician, Cork Mental Hospital; Mile House, Cork.
1921. Fleming, Gerald William Thomas Hunter, *M.R.C.S.*, *L.R.C.P.Lond.*, *D.P.M.*, Deputy Medical Superintendent, Dorset County Mental Hospital, Herrison, near Dorchester.
1904. Fleming, Wilfrid Louis Remi, *M.R.C.S.*, *L.R.C.P.Lond.*, *J.P.*, Suffolk House, Pirbright, Surrey.
1925. Flind, James, *M.B.*, *Ch.B.Glasg.*, Senior Assistant Medical Officer, Peckham House, S.E. 15.

1925. Forbes, Hugh Scott, M.R.C.S., L.R.C.P.Lond., D.P.M., Assistant Medical Officer, Colney Hatch Mental Hospital, New Southgate, N. 11.
1911. Forrester, Archibald Thomas William, M.D., B.S., M.R.C.S., L.R.C.P.Lond., Medical Superintendent, Warwickshire County Mental Hospital, Hatton.
1926. Forrester, Robert Cairns, M.B., Ch.B.Edin., Assistant Medical Officer, Stirling District Mental Hospital, Larbert.
1916. Forsyth, Charles Wesley, M.D., M.R.C.S., L.R.C.P.Lond., Deputy Medical Superintendent, Winson Green Mental Hospital, Birmingham. (Clin. Lect. on Ment. Dis., Univ. of Birmingham.)
1924. Forsythe, Thomas Ronald, M.B., Ch.B.Sheff., D.P.M., Assistant Medical Officer, Kent County Mental Hospital, Maidstone.
1913. Forward, Ernest Lionel, M.R.C.S., L.R.C.P.Lond., D.C.M.S. Ministry of Pensions, 1, Sanctuary Buildings, London, S.W. 1.
1913. Fothergill, Claude Francis, B.A., M.B., B.Ch.Camb., M.R.C.S., L.R.C.P.Lond.; "Hensol," Chorley Wood, Herts; and 150, Harley Street, W. 1.
1925. Fox, Francis Elliot, B.A.Camb., M.R.C.S.; L.R.C.P.Lond., Medical Officer, Brislington House, Bristol.
1920. Fox, J. Tylor, M.A., M.D., B.Ch.Camb., M.R.C.S., L.R.C.P.Lond., D.P.M., Medical Superintendent, Lingfield Epileptic Colony; The Homestead, Lingfield, Surrey.
1923. Franklin, Marjorie Ellen, M.B., B.S., M.R.C.S., L.R.C.P.Lond., D.P.M., Medical Officer, Tavistock Clinic for Functional Nerve Cases; 28, Wimpole Street, Cavendish Square, London, W. 1.
1919. Fraser, Kate, B.Sc., M.D., Ch.B.Glasg., D.P.H., Deputy Commissioner, General Board of Control, Scotland; 25, Palmerston Place, Edinburgh.
1921. Fuller, Hugh Hercus Cavendish, M.B., Ch.B.Edin., "Oakdale," Priory Road, Great Malvern.
1902. Fuller, Lawrence Otway, M.R.C.S., L.R.C.P.Lond., Medical Superintendent, Three Counties' Mental Hospital, Arlesey, Beds.
1906. Gane, Edward Palmer Steward, M.D.Durh., M.R.C.S., L.R.C.P.Lond., Assistant Medical Superintendent, The Coppice, Nottingham.
1912. Garry, John William, M.B., B.Ch.N.U.I., Assistant Medical Superintendent, Clare County Mental Hospital, Ennis, Ireland.
1912. Gavin, Lawrence, M.B., Ch.B., L.R.C.P.&S.Edin., L.R.F.P.S.Glasg., Medical Superintendent, Mullingar District Asylum, Ireland.
1896. Geddes, John William, M.B., C.M.Edin., 15, Guessens Court, Welwyn Garden City, Herts.
1923. Gibson, George Herbert Rae, D.S.O., M.D., F.R.C.P.Edin., L.C.P.S. Brit. Columbia, Deputy Commissioner, General Board of Control, Scotland; 23, Cluny Terrace, Edinburgh.
1919. Gifford, John, B.A.Cape, M.B., Ch.B.Edin., D.P.M., Senior Assistant Medical Officer, Lancashire Mental Hospital, Rainhill, nr. Liverpool.
1921. Gilfillan, John Aitken, M.D., Ch.B., F.R.F.P.S.Glasg., D.P.M., Deputy Medical Superintendent, North Riding Mental Hospital, Clifton, Yorks.
1899. Gilfillan, Samuel James, O.B.E., M.A., M.B., C.M.Edin., Medical Superintendent, Colney Hatch Mental Hospital, New Southgate, London, N. 11.
1923. Gillespie, Isabella Annie, M.B., B.Ch.Edin., D.P.M., Assistant Medical Officer, Cheshire Mental Hospital, Upton, Chester.
1921. Gillespie, Robert Dick, M.D., Ch.B.Glasg., D.P.M., 152, Harley Street, London, W. 1. (Lect. on Psychol. Med., Guy's Hospital.)
1920. Gillis, Kurt, M.B., Ch.B.Edin., Assistant Physician, Alexandra Hospital, Maitland, S. Africa.

1897. Gilmour, John Rutherford, M.B., C.M., F.R.C.P.Edin., M.P.C., Medical Superintendent, West Riding Asylum, Scalebor Park, Burley-in-Wharfedale, Yorks. (*Secretary, N. and M. Division from 1920.*)
1906. Gilmour, Richard Withers, M.B., B.S.Durh., M.R.C.S., L.R.C.P.Lond., Physician-in-Charge, St. Luke's Hospital; 19, Nottingham Place, W. 1. (Lect. on Psychiat., Middlesex Hospital, London.)
1923. Golla, Frederick Lucien, M.A., M.B., B.Ch.Oxon., F.R.C.P.Lond., Director of the Laboratory and Pathologist to the London County Mental Hospitals, The Maudsley Hospital, Denmark Hill, S.E. 5; The Dene, Sunninghill.
1897. Good, Thomas Saxty, O.B.E., M.A.Oxon., M.R.C.S., L.R.C.P.Lond., Medical Superintendent, City and County Mental Hospital, Littlemore, Oxford.
1889. Goodall, Edwin, C.B.E., M.D., B.S., F.R.C.P.Lond., M.P.C., Medical Superintendent, City Mental Hospital, Cardiff. (PRESIDENT, 1923-24.) (Lect. on Ment. Dis., Welsh Nat. School of Medicine, Cardiff.)
1920. Gordon, George, M.B., Ch.B.Glasg., Deputy Medical Superintendent, Ministry of Pensions Hospital, Saltash, Plymouth.
1899. Gordon, James Leslie, M.D., C.M.Aberd., Medical Superintendent, Caterham Mental Hospital; Karaissi, Caterham, Surrey.
1901. Gostwyck, Cecil Hubert Gostwyck, M.B., Ch.B., F.R.C.P.Edin., Dipl. Psych., M.P.C., Assistant Medical Officer, Rampton State Institution, Retford, Notts.
1914. Graham, Norman Bell, M.C., B.A.R.U.I., M.B., B.Ch.Belf., D.P.M., Senior Assistant Medical Officer, Purdysburn Villa Colony, Belfast.
1894. Graham, Samuel, L.R.C.P.Lond., Resident Medical Superintendent, District Asylum, Antrim.
1918. Graham, Samuel John, L.R.C.P.&S.Edin., L.R.F.P.S.Glasg., Resident Medical Superintendent, Villa Colony Asylum, Purdysburn, Belfast.
1908. Graham, William Shepherd, M.B., B.Ch.R.U.I., Senior Assistant Medical Officer, Somerset and Bath Asylum, Cotford, near Taunton.
1921. Grant, Alastair Robertson, M.B., Ch.B.Aberd., Deputy Medical Superintendent, Lancashire Mental Hospital, Whittingham, Preston.
1925. Grant, John King, M.B., Ch.B.Aberd., Assistant Physician, Royal Mental Hospital, Aberdeen.
1915. Graves, Thomas Chivers, B.Sc., M.D., B.S.Lond., F.R.C.S.Eng., Medical Superintendent, Rubery Hill Mental Hospital, nr. Birmingham.
1916. Gray, Cyril, L.R.C.P.&S.Edin., L.R.F.P.S.Glasg., Senior Assistant Medical Officer, Newcastle City Mental Hospital, Gosforth.
1921. Gray, Joseph Anthony Wenceslaus Pereira, M.D.BruX., M.R.C.S., L.R.C.P.Lond., Visitor of Licensed Houses under Lunacy and Mental Deficiency Acts; 3, Northernhay Place, Exeter.
1909. Greene, Thomas Adrian, L.R.C.S.&P.Irel., J.P., Medical Superintendent, District Asylum, Carlow.
1922. Gregorson, Albert William, M.D., Ch.B., F.R.F.P.S.Glasg., Assistant Physician and Deputy Superintendent, North Middlesex Hospital, Silver Street, Upper Edmonton, N. 18; 9, Aubrey Crescent, Largs, Ayrshire.
1926. Griffiths, Gwenvron Mary, M.D., M.R.C.P.Lond., Assistant Medical Officer, Staffordshire Mental Hospital, Cheddleton.
1901. Grills, Galbraith Hamilton, M.D., B.Ch.R.U.I., D.M.D., M.P.C., Medical Superintendent, Cheshire Mental Hospital, Upton, Chester.
1916. Grimbly, Alan Francis, M.A., M.D., B.Ch.Dubl., D.P.M., Assistant Medical Officer, Essex Mental Hospital, Severalls, Colchester.
1923. Grossman, Simon, M.R.C.S., L.R.C.P.Lond., Assistant Medical Officer, City Mental Hospital, Cardiff.
1922. Guppy, Francis Henry, M.C., M.R.C.S., L.R.C.P.Lond., D.P.M., Deputy Medical Superintendent, Brighton Mental Hospital, Haywards Heath, Sussex.

1894. Halsted, Harold Cecil, M.D.Durh., L.S.A., M.R.C.S., L.R.C.P.Lond., Manor Road, Selsey, Sussex.
1920. Hancock, Allen Coulter, M.C., M.R.C.S., L.R.C.P.Lond., D.P.H., D.P.M., Deputy Medical Superintendent, Horton Mental Hospital, Epsom, Surrey.
1923. Hardcastle, Douglas Noël, M.R.C.S., L.R.C.P.Lond., D.P.M., Physician, Tavistock Clinic for Functional Nervous Disease; Elmcroft, Aldenham Road, Bushey, Herts.
1920. Harding, Edward Palmer, L.R.C.P.&S.Irel., Deputy Medical Superintendent, East Riding Mental Hospital, Beverley, Yorks.
1920. Harper, Raymond Sydney, M.R.C.S., L.R.C.P.Lond., Medical Superintendent, Psycho-Therapeutic Clinic, Ministry of Pensions, Brighton; 36, First Avenue, Hove, Sussex.
1904. Harper-Smith, George Hastie, M.A., M.D.Camb., M.R.C.S., L.R.C.P.Lond., Medical Superintendent, Brighton County Mental Hospital, Haywards Heath; Galagate, Haywards Heath, Sussex.
1924. Harris, John Stuart, M.D., Ch.B.Edin., D.P.M., Assistant Medical Officer, West Park Mental Hospital, Epsom, Surrey.
1898. Harris-Liston, Llewellyn, M.D.Bru.x., L.S.A., M.R.C.S., L.R.C.P.Lond., Middleton Hall, Middleton St. George, co. Durham.
1905. Hart, Bernard, M.D., F.R.C.P.Lond., M.R.C.S.Eng., 94, Harley Street, London, W. 1. (Lect. on Ment. Dis., Univ. Coll. Hosp.)
1886. Harvey, Bagenal Crosbie, L.A.H.Dubl., L.R.C.P.&S.Edin., Resident Medical Superintendent, District Asylum, Clonmel, Ireland.
1892. Haslett, William John Handfield, M.R.C.S., L.R.C.P.Lond., M.P.C., J.P., Resident Medical Superintendent, Halliford House, Sunbury-on-Thames.
1923. Hayes, Edmund Duncan Tranchell, B.A., M.D., B.Ch.Dubl., D.P.M., Assistant Medical Officer, Croydon Mental Hospital, Warlingham Park, Upper Warlingham.
1924. Hayes, Henry Douglas, M.D., Ch.B.Edin., D.P.M., Assistant Medical Officer, Hanwell Mental Hospital, Southall.
1900. Haynes, Horace Eyres, V.D., L.S.A., M.R.C.S.Eng., J.P., Littleton Hall, Brentwood, Essex.
1920. Haynes, Horace Guy Lankester, M.R.C.S., L.R.C.P.Lond., Littleton Hall, Brentwood, Essex.
1920. Henderson, Cyril John, M.B.Durh., Assistant Medical Officer, The Royal Albert Institution, Lancaster.
1916. Henderson, David Kennedy, M.D., Ch.B.Edin., F.R.F.P.S.Glas., Physician Superintendent, Royal Mental Hospital, Gartnavel; 17, Whittingham Drive, Kelvinside, Glasgow. (Lect. on Psychol Med., Univ. of Glasgow.)
1905. Henderson, George, M.A., M.B., Ch.B.Edin., 25, Commercial Road, Peckham, London, S.E. 15.
1923. Henderson, Norman Keane, B.A., LL.B.Camb., M.B., Ch.B.Edin., D.P.H., Assistant Medical Officer, Lincoln Mental Hospital, Bracebridge Heath.
1923. Hennessy, James Alphonsus, M.B., Ch.B.Edin., Boyce Street, Strannon, New Zealand.
1926. Henry, Dorothy Isabel, M.B., B.Ch.Dubl., Medical Officer, The Retreat, Armagh.
1924. Hensman, Henry Saumarez, L.M.&S.Madras, M.R.C.S., L.R.C.P.Lond., M.P.C., Medical Superintendent, Government Mental Hospital, Kilpauk, Madras.
1924. Herbert, J. E., M.B., B.Ch.R.U.I., Senior Assistant Medical Officer, District Mental Hospital, Omagh, Ireland.
1925. Heron, John, M.B., Ch.B.Edin., D.P.M., Assistant Medical Officer, Kent County Mental Hospital, Maidstone.
1912. Higson, William Davies, M.B., Ch.B.Liverp., D.P.H., Medical Officer, H.M. Prison; "Eversley," Boxley Road, Maidstone, Kent.

1900. Hollander, Bernard, M.D.Freib., M.R.C.S., L.R.C.P.Lond., 57, Wimpole Street, London, W. 1.
1925. Home, Bruce Fordyce, L.R.C.P.&S.Edin., L.R.F.P.S.Glasg., Medical Superintendent, Stretton House, Church Stretton, Shropshire.
1925. Honan, Bernard Francis, L.R.C.P.&S.Irel., Assistant Medical Officer, Down District Mental Hospital, Downpatrick.
1920. Hooper, Reginald Arthur, M.B., B.S.Durh., Medical Superintendent, City Mental Hospital, Fulford, Yorks.
1926. Hopwood, Joseph Stanley, M.B., B.S., M.R.C.S., L.R.C.P.Lond., Medical Officer, State Criminal Lunatic Asylum, Broadmoor.
1914. Horne, Laura Katherine, M.B., Ch.B.Edin., Poole, Dorset.
1926. Horton, Phyllis Mary, M.R.C.S., L.R.C.P.Lond., Assistant Medical Officer, Wye House, Buxton.
1918. Horton, Wilfred Winnall, M.D., C.M.Edin., Medical Superintendent, Wye House, Buxton.
1926. Hosie, William, M.B., Ch.B.Glasg., Assistant Medical Officer, County Mental Hospital, Mickleover, Derby.
1894. Hotchkis, Robert Dunmore, M.A.Glasg., M.D.Durh., M.B., B.S., M.R.C.S., L.R.C.P.Lond., M.P.C., Medical Superintendent, Renfrew District Asylum, Dykebar, Paisley.
1912. Hughes, Frank Percival, M.B., B.S., M.R.C.S., L.R.C.P.Lond., The Grove, Pinner, Middlesex.
1900. Hughes, Percy T., M.B., C.M.Edin., D.P.H., Medical Superintendent, Worcestershire County Mental Hospital, Barnesley Hall, Bromsgrove. (Lect. on Ment. Dis., Univ. of Birmingham.)
1904. Hughes, William Stanley, M.B., B.S., M.R.C.S., L.R.C.P.Lond., Medical Superintendent, Salop County Mental Hospital, Bicton Heath, Shrewsbury.
1897. Hunter, David, M.A., M.B., B.Ch.Camb., L.S.A., Medical Superintendent, The Coppice, Nottingham. (*Secretary, S.E. Division, 1910-1913.*)
1912. Hunter, George Yeates Cobb, M.R.C.S., L.R.C.P.Lond., M.P.C., I.M.S., c/o Messrs. Grindlay & Co., 54, Parliament Street, London, S.W. 1.
1904. Hunter, Percy Douglas, M.R.C.S., L.R.C.P.Lond., D.P.M., Deputy Medical Superintendent, Three Counties Mental Hospital, Arlesey, Beds.
1911. Hutton, Isabel Emslie, M.D., Ch.B.Edin., Hon. Physician, British Hospital for Mental and Nervous Disorders; 6, Montagu Place London, W. 1.
1888. Hyslop, Theo. Bulkeley, M.D., C.M., M.R.C.P., L.R.C.S., F.R.S.Edin., M.P.C., 5, Portland Place, London, W. 1. (*Chairman, Library Committee since 1926.*)
1926. Illingworth, Reginald Ernest, L.R.C.P.&S.Edin., Deputy Medical Superintendent, Northumberland County Mental Hospital, Morpeth.
1915. Ingall, Frank Ernest, L.R.C.P.Lond., F.R.C.S.Eng., D.P.H., Public Health Offices, Clarence Street, Southend-on-Sea.
1908. Inglis, James Pringle Park, M.D., Ch.B.Edin., Senior Assistant Medical Officer, Leavesden Mental Hospital, King's Langley, Herts.
1926. Ironside, Archibald Jennings, M.B., Ch.B.Aberd., Examiner of Mental Defectives, South African Schools. The Mental Hospital, Pietermaritzburg, Natal, South Africa.
1906. Irwin, Peter Joseph, L.R.C.P.&S.Irel., Medical Superintendent, District Asylum, Limerick.
1923. Jack, Victor William, M.B., Ch.B.Edin., Senior Assistant Medical Officer, Stirling District Mental Hospital, Larbert.
1920. Jackson, John Luke, M.B., B.Ch.Belf., Medical Superintendent, Hampshire County Mental Hospital, Knowle, Fareham.

1914. James, George William Blomfield, *M.C.*, M.D., B.S.Lond., L.S.A., D.P.M., Resident Medical Officer, Moorcroft House, Hillingdon, Uxbridge; 25, Upper Berkeley Street, Portman Square, W. 1. (*Secretary, Parliamentary Committee since 1926.*)
1921. Jardine, Maurice Kirkpatrick, M.B., Ch.B.Edin., The Infirmary, Shirley Warren, Southampton.
1922. Jarrett, R. F., L.M.S.S.A., F.R.F.P.S.Glasg., H.M. Prison, Cardiff.
1908. Jeffrey, Geo. Rutherford, M.D., Ch.B.Glasg., F.R.C.P., F.R.S.Edin., M.P.C., Medical Superintendent, Bootham Park, York.
1925. Jenkins, John Alexander, M.B., Ch.B.Glasg., Assistant Medical Officer, Argyll and Bute District Asylum, Lochgilphead.
1924. Jenkins, Reginald Edward, L.M.S.S.A., "Felton," Cedar Road, Sutton, Surrey.
1893. Johnston, Gerald Herbert, L.R.C.P.&S.Edin., L.R.F.P.S.Glasg., Brooke House, Upper Clapton, London, E. 5.
1905. Johnston, Thomas Leonard, L.R.C.P.&S.Edin., L.R.F.P.S.Glasg., Heckington Hall, Sleaford, Lincs.
1912. Johnstone, Emma May, L.R.C.P.&S.Edin., L.R.F.P.S.Glasg., D.P.M., M.P.C., Doune Cottage, Virginia Water, Surrey.
1878. Johnstone, J. Carlyle, M.D., C.M.Glasg., Scottish Conservative Club, Edinburgh.
1903. Johnstone, Thomas, M.D., C.M.Edin., M.R.C.P.Lond., 6, Victoria Avenue, Harrogate.
1924. Joyner, Charles, M.A., M.B., Ch.B.Glasg., 4, Popham Gardens, Richmond, Surrey.
1879. Kay, Walter Smith, M.D., C.M.Edin., M.R.C.S.Eng., Granby Hotel, Harrogate.
1886. Keay, John, *C.B.E.*, M.D., C.M.Glasg., F.R.C.P.Edin., Medical Superintendent, Bangour Village, Uphall, Linlithgowshire. (*PRESIDENT 1918.*) (*Chairman, Educational Committee since 1920.*) (*Lect. on Ment. Dis., Roy. Colls., Edin.*)
1909. Keith, William Brooks, *M.C.*, M.D., Ch.B.Aberd., M.P.C., Medical Superintendent, St. Audry's Hospital, Melton; Redwald House, Melton, Suffolk. (*Secretary, Parliamentary Committee, 1921-26.*)
1924. Kelly, Daniel Lane, L.R.C.P.&S.Irel., Inspector of Lunatics and Senior Medical Inspector, Local Government Department; Ardmore, Killiney, co. Dublin.
1907. Keene, George Henry, M.D., B.Ch.Dubl., Medical Superintendent, Stewart Institution, Palmerston; 14, Palmerston Park, Dublin.
1899. Kennedy, Hugh T. J., L.R.C.P.&S.Irel., Medical Superintendent, Enniscorthy District Asylum, Wexford.
1897. Kerr, Hugh, M.A., M.D., C.M.Glasg., Medical Superintendent, Buckinghamshire County Mental Hospital, Stone, Aylesbury.
1902. Kerr, Neil Thomson, M.B., C.M.Edin., *J.P.*, Medical Superintendent, Lanark District Asylum, Hartwood, Lanarkshire.
1920. Key, Gordon James, M.B., Ch.B.Aberd., Assistant Medical Superintendent Valkenburg Mental Hospital, Observatory, Cape Town, South Africa.
1923. el Kholy, Mohamed Kamel, M.R.C.S., L.R.C.P.Lond., D.P.M., Assistant Medical Officer, Abbassia Mental Hospital, Egypt.
1897. Kidd, Harold Andrew, *C.B.E.*, M.R.C.S., L.R.C.P.Lond., Medical Superintendent, Graylingwell Mental Hospital, Chichester.
1923. Kiddle, Frederick, *C.M.G.*, B.A., M.B., B.Ch.Dubl., Hillcot, Beverley Street, Colchester.
1920. Kimber, William Joseph Teil, M.R.C.S., L.R.C.P.Lond., D.P.M., Senior Assistant Medical Officer, Herts County Mental Hospital, Hill End, St. Albans.
1903. King, Frank Raymond, B.A.Camb., M.R.C.S., L.R.C.P.Lond., Medical Superintendent, Peckham House, Peckham, London, S.E. 15.

1923. King, Isabel Falconer, M.B., Ch.B., L.R.C.P.&S.Edin., L.R.F.P.S. Glasg., D.P.M., Senior Assistant Medical Officer, Rubery Hill Mental Hospital, Birmingham.
1902. King-Turner, Arthur Charles, M.B., C.M.Edin., Medical Superintendent, The Retreat, Fairford, Gloucestershire.
1915. Kirwan, Richard R., M.B., B.Ch.R.U.I., Assistant Medical Officer, West Riding Asylum, Menston, Leeds.
1919. Knight, Mary Reid, M.A., M.B., Ch.B.Glasg., Assistant Medical Officer, Paisley District Asylum, Riccarton, Paisley, N.B.
1898. Labey, Julius, L.S.A., M.R.C.S., L.R.C.P.Lond., Medical Superintendent, Public Asylum, Jersey; The Myrtles, St. Saviour's, Jersey.
1914. Ladell, Robert George Macdonald, M.B., Ch.B.Vict., Medical Officer, Ministry of Pensions, 395, Coventry Road, Small Heath, Birmingham.
1923. Laing, John Kidd Collier, M.B., B.S.Melb., D.P.M., Assistant Medical Officer, Colney Hatch Mental Hospital, New Southgate, N. 11.
1925. Landers, John Joseph, M.B., B.Ch.Camb., D.P.H., Medical Officer, H.M. Boys' Prison, Wandsworth, S.W. 18.
1896. Langdon-Down, Reginald L., M.A., M.B., B.Ch.Camb., M.R.C.P.Lond., Normansfield, Hampton Wick, Middlesex.
1919. Langton, Peregrine Stephen Brackenbury, M.B., B.S., M.R.C.S., L.R.C.P.Lond., Medical Superintendent, Royal Earlswood Institution, Redhill, Surrey.
1925. Lascelles, William James M.B., B.Ch.Belf., D.P.M., Assistant Medical Officer, Cane Hill Mental Hospital, Coulsdon, Surrey.
1919. Latham, Oliver, M.B., C.M.Syd., Pathologist, Mental Hospitals Laboratory, Medical School, Newtown University, Sydney, N.S.W.
1902. Laval, Evariste, M.B., C.M.Edin., The Guildhall, Westminster, London, S.W. 1.
1898. Lavers, Norman, M.D.Bru.x., M.R.C.S., L.R.C.P.Lond., Medical Superintendent, Bailbrook House, Bath.
1892. Lawless, George Robert, L.R.C.P., F.R.C.S.Irel., Medical Superintendent, District Asylum, Armagh.
1870. Lawrence, Alexander, M.A., M.D., C.M.Aberd., 26, Hough Green, Chester.
1923. Lawrie, Macpherson, M.A., M.B., B.Ch.Camb., 34, Dover Street, W. 1.
1883. Layton, Henry Albert, M.R.C.S., L.R.C.P.Edin., 14, Northwick Terrace, London, N.W. 8.
1915. Leech, Henry Brougham, B.A., M.D., B.Ch.Dubl., Senior Assistant Medical Officer, County Asylum, Hatton, Warwick. (*Acting Registrar 1923-24.*)
1909. Leech, John Frederick Wolseley, B.A., M.D., B.Ch.Dubl., Assistant Medical Officer, Wilts County Asylum, Devizes.
1899. Leeper, Richard R., L.R.C.P., F.R.C.S.Irel., M.P.C., Medical Superintendent, St. Patrick's Hospital, Dublin. (*Secretary, Irish Division since 1911.*)
1906. Leggett, William, B.A., M.D., B.Ch.Dubl., Medical Officer, Smithston Asylum, Greenock, Scotland.
1916. Lewis, Edward, L.R.C.P.&S.Edin., F.R.F.P.S.Glasg., Medical Superintendent, Drymma Hall, Skewen, near Neath.
1924. Lewis, John Biddulph Trafford, M.R.C.S., L.R.C.P.Lond., D.P.M., Assistant Medical Officer, Claybury Mental Hospital, Woodford Bridge, Essex.
1920. Lilly, George Austen, M.C., M.A., M.D.Camb., M.R.C.S., L.R.C.P.Lond., D.P.M., Deputy Medical Superintendent, London County Mental Hospital, Banstead, Surrey.
1908. Litteljohn, Edward Salterne, M.R.C.S., L.R.C.P.Lond., Medical Superintendent, Manor Cert. Institution, Epsom.
1925. Littlejohn, Mary Victoria, M.B., Ch.B.Aberd., D.P.M., Assistant Medical Officer, County Mental Hospital, Hatton, Warwick.

1921. Livesay, Arthur William Bligh, M.B., C.M., F.R.C.S.Edin., Assistant Medical Officer, Norfolk County Mental Hospital, Thorpe, nr. Norwich.
1920. Lloyd-Dodd, Edward Hamilton Howard, L.R.C.P.&S.Irel., Assistant Medical Officer, Caterham Mental Hospital; The Firs, Coulsdon Road, Caterham, Surrey.
1922. Logan, Frederick Colquhoun, M.B., Ch.B., F.R.F.P.S.Glasg., Deputy Medical Superintendent, County Mental Hospital, Prestwich.
1898. Lord, John Robert, C.B.E., M.D., C.M., F.R.C.P.Edin., Medical Superintendent, Horton Mental Hospital, Epsom; Horton House, Epsom. (*Assistant Editor of Journal*, 1900-11; *Co-Editor of Journal since 1911*; *Secretary, Post-Graduate Study Committee*, 1920-26.) (PRESIDENT, 1926-27.)
1924. Lornie, Peter, M.D., Ch.B.Edin., Senior Assistant Medical Officer, Monmouth County Mental Hospital, Abergavenny, Mon.
1924. Lothian, Douglas, B.M., M.B., Ch.B.Edin., D.P.M., Assistant Physician, Royal Edinburgh Hospital, Edinburgh.
1923. Lovell, Clement, M.D., B.S.Lond., Pathologist to the Royal Court of the Bridewell and Bethlem Hospitals; The Laboratory, Bethlem Royal Hospital, Lambeth, S.E. 1.
1906. Lowry, James Arthur, M.D., B.Ch.R.U.I., Medical Superintendent, Surrey County Mental Hospital, Brookwood.
1926. Lucas, Edmund Stanley Sayer, M.R.C.S., L.R.C.P.Lond., Assistant Physician, Kingseat Mental Hospital, Newmacher, Aberdeenshire.
1926. Lucas, Rosalie Evelyn, M.B., Ch.B.Brist., M.R.C.S., L.R.C.P.Lond., Assistant Medical Officer, Kingsdown House, Box, Wilts.
1904. Lyall, C. H. Gibson, L.R.C.P.&S.Edin., L.R.F.P.S.Glasg., Senior Assistant Medical Officer, City Mental Hospital, Humberstone, Leicester.
1923. Lynch, William Joseph, M.B., B.Ch.N.U.I., Assistant Medical Officer, Cheshire County Mental Hospital, Parkside, Macclesfield.
1923. Lyon, Thomas Malcolm Murray, M.D., C.M.Edin., J.P., 46, Palmerston Place, Edinburgh.
1920. McAlister, William Malcolm, M.A., M.B., Ch.B., M.R.C.P.Edin., Deputy Physician-Superintendent, Royal Hospital, Morningside, Edinburgh. (Lect. on Psychiat., Univ. of Edinburgh.)
1926. McCallum, Alexander Grigor, M.B., Ch.B.Glasg., Assistant Medical Officer, Peckham House, London, S.E. 15.
1906. Macarthur, John, M.R.C.S., L.R.C.P.Lond., D.P.M., Medical Superintendent, Lincoln Mental Hospital, Bracebridge Heath.
1923. Macaulay, Douglas Ian Otto, M.D., Ch.B.Edin., D.P.M., Medical Superintendent, Chiswick House, Chiswick, W. 4.
1880. MacBryan, Henry Crawford, L.R.C.P.&S.Edin., Kingsdown House, Box, Wilts.
1923. McCarthy, Owen Felix, L.R.C.P.&S.Edin., L.R.F.P.S.Glasg., Resident Medical Superintendent, Cork District Mental Hospital, Cork. (Lect. on Mental Dis., Univ. Coll., Cork.)
1900. McClintock, John, L.R.C.P.&S.Edin., Resident Medical Superintendent, Grove House, Church Stretton, Salop.
1922. McCord, Robert Neal Ballagh, M.B., B.Ch.Belf., Senior Assistant Medical Officer, Surrey County Mental Hospital, Brookwood, Woking, Surrey.
1920. McCowan, Peter Knight, M.D., Ch.B.Edin., M.R.C.P.Lond., D.P.M., Assistant Medical Officer, West Park Mental Hospital, Epsom, Surrey.
1921. McCutcheon, Archibald Munn, M.B., Ch.B., F.R.F.P.S.Glasg., Medical Superintendent, Monyhull Colony, King's Heath, Birmingham.
1923. Macdonald, Colin, L.R.F.P.S.Glasg., Medical Officer of Kilfinichen; Bunessau, Mull, by Oban, N.B.

1901. MacDonald, James Hogg, M.B., Ch.B., F.R.F.P.S.Glasg., Medical Superintendent, Govan District Asylum, Hawkhead, Cardonald, Glasgow. (Lect. on Psychol. Med., Univ. of Glasgow.)
1884. MacDonald, P. W., M.D., C.M.Aberd., *J.P.*, Grasmere, Radipole, Weymouth. (*First Secretary, S.W. Division, 1894-1905.*) (PRESIDENT 1907-8.)
1911. MacDonald, Ranald, *O.B.E.*, M.D., Ch.B.Edin., D.P.M., Medical Superintendent, Coton Hill Mental Hospital, Stafford.
1905. MacDonald, William Fraser, M.B., Ch.B.Edin., M.P.C., Olive Lodge, Polworth Terrace, Edinburgh.
1905. McDougall, Alan, M.D., Ch.B.Vict., M.R.C.S., L.R.C.P.Lond., Medical Director, The David Lewis Colony, Warford, Alderley Edge, Cheshire.
1906. McDowall, Colin Francis Frederick, M.D., B.S.Durh., M.R.C.S., L.R.C.P.Lond., Medical Superintendent, Ticehurst House, Ticehurst, Sussex.
1870. McDowall, Thomas W., M.D., L.R.C.S.Edin., "Burwood," Wadhurst, Sussex. (PRESIDENT, 1897-8.)
1895. Macfarlane, Neil M., M.D., C.M.Aberd., Principal Medical Officer, Maseru, Basutoland, South Africa.
1924. Macfarlane, Robert Melvin, M.B., Ch.B.Edin., D.P.M., Assistant Medical Officer, West Ham Mental Hospital, Goodmayes, Ilford, Essex.
1923. McGarvey, John, M.B., B.Ch.Belf., D.P.M., Medical Superintendent, Somerset and Bath Mental Hospital, Wells.
1922. McGeorge, Margaret Turner, M.B., Ch.B.Glasg., Assistant Medical Officer, Camberwell House, Peckham Road, S.E. 5.
1925. McGlashan, William Reid, M.A., M.B., Ch.B.Aberd., D.P.M., Deputy Medical Superintendent, County Mental Hospital, Mickleover, Derby.
1925. MacGowan, Agnes Mildred, M.B., Ch.B.Edin., Assistant Medical Officer and Pathologist, Edinburgh District Mental Hospital, Bangour, West Lothian.
1921. McGrath, Mathew Joseph, M.B., B.Ch.R.U.I., D.P.M., Deputy Medical Superintendent, West Riding Asylum, Wakefield; Northcote, Peterson Road, Wakefield, Yorks.
1902. McGregor, John, M.B., Ch.B.Edin., Senior Assistant Medical Officer, County Asylum, Bridgend, Glam.
1921. McKail, Robert Buchanan Forbes, M.B., Ch.B.Glasg., Deputy Medical Superintendent, "Calderstones" Certified Institution, Whalley, near Blackburn.
1924. Mackay, George William John, M.B., Ch.B.Edin., D.P.M., Assistant Medical Officer, St. Andrew's Hospital, Northampton.
1914. Mackay, Magnus Ross, *M.C.*, M.B., Ch.B.Edin., Newport Borough Mental Hospital, Caerleon, Mon.
1891. Mackenzie, Henry James, M.B., C.M.Edin., M.P.C., 254, Bishopsthorpe Road, York.
1911. Mackenzie, John Cosserat, M.B., Ch.B.Edin., Assistant Medical Officer, Burntwood Mental Hospital, near Lichfield.
1926. Mackenzie, John Muir, M.B., Ch.B.Glasg., Assistant Medical Officer, Rubery Hill Mental Hospital, Birmingham.
1903. Mackenzie, Theodore Charles, M.D., Ch.B., F.R.C.P.Edin., M.P.C., Medical Superintendent, District Asylum, Inverness.
1921. Mackie, George, *D.S.O.*, M.D., Ch.B.Edin., Thornyhill, Abbey Road, Great Malvern.
1924. McLagan, Francis M., M.B., Ch.B.St.Andr., D.P.M., Assistant Medical Officer, Hanwell Mental Hospital, Southall, Middlesex.
1926. McLaren, Mary Evelyn, M.B., Ch.B.Edin., Clinical Assistant, Royal Hospital, Morningside, Edinburgh.
1921. Macleod, Neil, M.B., Ch.B.Edin., D.P.M., Assistant Physician, The Retreat, York.

1925. McManus, Hugh Charles, M.B., Ch.B.Vict., D.P.M., Assistant Medical Officer, Hants County Mental Hospital, Park Prewett, Basingstoke.
1923. MacNab, Robert Allan, M.B., Ch.B.Edin., Junior Assistant Medical Officer, Holloway Sanatorium, Virginia Water, Surrey.
1904. Macnamara, Eric Danvers, M.A., M.D., B.Ch.Camb., F.R.C.P.Lond., 87, Harley Street, London, W. 1. (Lect. on Psychol. Med., Charing Cross Hosp.)
1925. MacNiven, Angus, M.B., Ch.B.Glasg., D.P.M., Deputy Medical Superintendent, City Mental Hospital, Cardiff.
1910. MacPhail, Hector Duncan, O.B.E., M.A., M.D., Ch.B.Edin., Medical Superintendent, City Mental Hospital, Gosforth, Newcastle-on-Tyne. (Lect. on Psychol. Med., Univ. of Durham.)
1922. Macphail, Iain Ross, L.R.C.P.&S.Edin., L.R.F.P.S.Glasg., Medical Superintendent, Kesteven County Mental Hospital; Greylees, Sleaford, Lincs.
1882. Macphail, Samuel Rutherford, M.D., C.M.Edin., Medical Superintendent, New Saughton Hall Mental Hospital; Linden Lodge, Loanhead, Midlothian.
1901. McRae, G. Douglas, M.D., C.M., F.R.C.P.Edin., J.P., Medical Superintendent, Glengall Hospital; Glengall House, Ayr, N.B. (*Assistant Editor 1916-20; Co-Editor of the Journal since 1920.*)
1922. McWilliam, William, M.B., Ch.B., F.R.F.P.S.Glasg., D.P.M., Senior Assistant Medical Officer, District Asylum, Inverness.
1925. Madgwick, John Reginald Alexander, M.R.C.S., L.R.C.P.Lond., D.P.M., Assistant Medical Officer, Claybury Mental Hospital, Woodford Bridge, Essex.
1923. Madill, Joseph Thomas Herbert, B.A.N.U.I., M.B., B.Ch.Edin., F.R.F.P.S.Glasg., D.P.M., M.P.C., Senior Assistant Medical Officer, County Mental Hospital, Chester.
1908. Mapother, Edward, M.D., B.S.Lond., M.R.C.P.Lond., F.R.C.S.Eng., Medical Superintendent, The Maudsley Hospital, Denmark Hill, S.E. 5. (Lect. in Psychology, King's Coll. Hosp.)
1903. Marnan, John, B.A., M.B., B.Ch.Dubl., Medical Superintendent, County Asylum, Gloucester.
1896. Marr, Hamilton C., M.D., C.M., F.R.F.P.S.Glasg., M.P.C., H.M. Commissioner, General Board of Control for Scotland; 10, Succoth Avenue, Edinburgh. (*Secretary, Scottish Division, 1907-10., (PRESIDENT-ELECT, 1926-27.)*)
1924. Marshall, Robert, M.D., B.Ch., F.R.C.P.Irel., D.P.H., 9, College Gardens, Belfast. (Medical Registrar, Royal Victoria Hospital, Belfast.)
1926. Martin, Alexander Reid, M.B., B.Ch.Belf., D.P.M., Assistant Medical Officer, Gartloch Mental Hospital, Gartosh.
1922. Martin, Frederick Robertson, M.B., Ch.B.Glasg., D.P.M., Assistant Medical Officer, Long Grove Mental Hospital, Epsom, Surrey.
1896. Martin, James Charles, L.R.C.S.&P.Irel., J.P., Medical Superintendent, District Mental Hospital, Letterkenny, Donegal.
1907. Martin, Mary Edith, L.S.A., L.R.C.P.&S.Edin., L.R.F.P.S.Glasg., M.P.C., 11, The Drive, Hove, Sussex.
1914. Martin, Samuel Edgar, M.B., B.Ch.Edin., Barrister-at-Law, Medical Superintendent, The Old Manor, Salisbury.
1911. Martin, William Lewis, O.B.E., M.A., B.Sc., M.B., C.M.Edin., D.P.H., Dipl. Psych., M.P.C., Certifying Physician in Lunacy, Edinburgh Parish Council; 56, Bruntsfield Place, Edinburgh.
1922. Martyn, Pierce Patrick, M.B., B.Ch.R.U.I., Colonial Medical Service, British Honduras, Central America.
1921. Masefield, William Gordon, M.R.C.S., L.R.C.P.Lond., D.P.M., Medical Superintendent, Essex County Mental Hospital, Brentwood.
1911. Mathieson, James Moir, M.B., Ch.B.Aberd., Assistant Medical Officer, South Yorks Asylum, Wadsley, Sheffield.
1926. May, George Francis, M.D., C.M.McGill, L.S.S.A., Medical Superintendent, Durham County Mental Hospital, Winterton, Ferryhill, Durham.

1926. Menzies, Duncan, L.M.S.S.A., Assistant Medical Officer, Somerset and Bath Mental Hospital, Wells.
1890. Menzies, William F., B.Sc., M.D., C.M.Edin., F.R.C.P.Lond., Medical Superintendent, Stafford County Mental Hospital, Cheddleton, near Leek. (PRESIDENT, 1920-21.)
1877. Merson, John, M.A., M.D., C.M.Aberd., "Willerby," Brayton Road, Selby.
1910. Middlemiss, James Ernest, M.R.C.S., L.R.C.P.Lond., F.R.F.P.S. Glasg., M.P.C., Neurologist and Specialist in Psychotherapy, Ministry of Pensions, Leeds; 131, North Street, Leeds.
1924. Miller, Robert Stewart, M.D., Ch.B.Glasg., Director, El Khanka Mental Hospital, Egypt.
1893. Mills, John, M.B., B.Ch.R.U.I., D.M.D., Medical Superintendent, District Asylum, Ballinasloe, Ireland.
1923. Minski, Louis, M.B., B.S.Durh., D.P.M., Assistant Medical Officer, Bootham Park, York.
1922. Molony, Charles Bernard, M.B., Ch.B.N.U.I., Assistant Medical Officer, Limerick Mental District Hospital, Limerick.
1910. Monnington, Richard Caldicott, M.D., Ch.B.Edin., D.P.H., D.P.M., Neurologist, Ministry of Pensions, 33, New Street, Salisbury.
1915. Monrad-Krohn, G. H., B.A., M.D., B.S.Oslo, M.R.C.P.Lond., M.R.C.S. Eng., M.P.C., Rikshospitalet, Oslo, Norway. (Prof. of Med., Royal Frederick University, Oslo.)
1925. Moran, Patrick, M.B., B.Ch.Belf., D.P.H., Assistant Medical Officer, District Mental Hospital, Mullingar.
1917. Morris, Bedlington Howel, M.B., B.S.Durh., Inspector-General of Hospitals, South Australia; "Tros-y-Parc," Pembroke Street, St. Peter's, Adelaide, S. Australia.
1925. Morris, John Vincent, M.B., B.Ch.Dubl., Assistant Medical Officer, Norfolk County Mental Hospital, Thorpe, Norwich.
1896. Morton, William Britain, M.D., M.R.C.S., L.R.C.P.Lond., Medical Superintendent, Wonford House, Exeter.
1896. Mould, Gilbert Edward, M.R.C.S., L.R.C.P.Lond., The Grange, Rotherham, Yorks.
1897. Mould, Philip G., M.R.C.S., L.R.C.P.Lond., Oaklands, Walmersley, nr. Bury, Lancs.
1914. Moyes, John Murray, M.B., Ch.B.Edin., D.P.M., Assistant Superintendent, Northumberland Mental Hospital, Morpeth.
1919. Mules, Annie Shortridge, M.R.C.S., L.R.C.P.Lond., House Physician, Devon and Exeter Hospital; Court Hall, Kenton, S. Devon.
1907. Mules, Bertha Mary, M.D., B.S.Durh., Court Hall, Kenton, S. Devon.
1911. Muncaster, Anna Lilian, M.B., Ch.B.Edin., Assistant Physician, Alexandra Institution for Mental Defectives, Maitland, Cape Town, South Africa.
1925. Murdoch, James Wilson, M.B., Ch.B.Aberd., Assistant Medical Officer, Devon Mental Hospital, Exminster.
1903. Navarra, Norman, M.R.C.S., L.R.C.P.Lond., D.P.M., Deputy Medical Superintendent, City of London Mental Hospital, Stone, Dartford.
1910. Neill, Alex. William, M.D., Ch.B.Edin., Physician-Superintendent, Warneford Mental Hospital, Oxford.
1903. Nelis, William F., M.D.Durh., L.R.C.P.Edin., L.R.F.P.S.Glasg., Medical Superintendent, Newport Borough Mental Hospital, Caerleon, Mon.
1920. Nicol, William Drew, M.R.C.S., L.R.C.P.Lond., D.P.M., Assistant Medical Officer, Horton Mental Hospital, Epsom, Surrey.
1923. Nicole, J. Ernest, L.M.S.S.A., Senior Assistant Medical Officer, Lancashire County Mental Hospital, Winwick, Warrington.
1923. Nicoll, James, M.D., C.M.Edin., D.P.H., Medical Superintendent, Fountain Mental Hospital, Tooting Grove, S.W. 17.
1869. Nicolson, David, C.B., M.D., C.M.Aberd., M.R.C.P.Edin., F.S.A.Scotl., Hanley, Park Road, Camberley, Surrey. (PRESIDENT, 1895-6.)

1920. Nix, Sidney, M.D., B.S.Durh., L.R.C.P.&S.Edin., L.R.F.P.S.Glasg., Deputy Medical Superintendent, Graylingwell Mental Hospital, Chichester.
1922. Noble, Ralph Athelstane, M.B., Ch.M.Syd., D.P.M., Hon. Physician, Psychiatric Clinic, Royal Prince Alfred Hospital, Sydney, Australia; "Montrose," 175, Macquarie Street, Sydney, N.S.W., Australia.
1888. Nolan, Michael J., L.R.C.P.&S.Irel., M.P.C., Medical Superintendent, District Asylum, Downpatrick. Consulting Visitor-in-Lunacy to the Lord Chief Justice, N. Ireland, and to the Chief Justice, S. Ireland. [PRESIDENT, 1924-25].
1913. Nolan, James Noël Green, B.A., M.D., B.Ch.Dubl., Deputy Medical Superintendent, East Sussex Mental Hospital, Hellingly.
1909. Norman, Hubert James, M.B., Ch.B.Edin., D.P.H., Medical Superintendent, Camberwell House Mental Hospital, Peckham Road, London, S.E. 5 ; 51, Crystal Palace Park Road, Sydenham, London, S.E. 26. (Lect. on Ment. Dis., Westminster Hosp.)
1923. Noronha, Frank, M.B., C.M.Madras, D.P.M., Superintendent, The Asylum, Avenue Road, Bangalore City, India.
1926. Northcote, Muriel L. M., M.B., B.Sc., M.R.C.S., L.R.C.P.Lond., House Surgeon, Royal Free Hospital; House Physician, Lady Chichester Hospital, Hove.
1924. Odlum, Doris Maude, M.A.Oxon., B.A.Lond., M.R.C.S., L.R.C.P.Lond., Medical Officer, Camberwell House Mental Hospital, Peckham Road, London, S.E. 5.
1903. O'Doherty, Patrick, B.A., M.B., B.Ch.R.U.I., Resident Medical Superintendent, District Mental Hospital, Sligo.
1918. Ogilvie, William Mitchell, M.B., C.M.Aberd., Medical Superintendent, Ipswich Mental Hospital, Ipswich.
1901. Ogilvy, David, B.A., M.D., B.Ch.Dubl., Medical Superintendent, London County Mental Hospital, Long Grove, Epsom.
1911. Oliver, Norman Henry, M.R.C.S., L.R.C.P.Lond., Barrister-at-Law, Medical Superintendent, Ministry of Pensions Hospital, Latchmere, Ham Common, Surrey.
1922. O'Flaherty, Very Rev. Claude, M.B., Ch.B.Edin., The College, Millport, Buteshire.
1920. O'Neill, Arthur, O.B.E., M.R.C.S., L.R.C.P.Lond., Medical Superintendent, Napsbury Mental Hospital, St. Albans, Herts.
1924. O'Reilly, James Joseph, M.B., B.Ch.Belf., Assistant Medical Officer, Dorset County Mental Hospital, Herrison, Dorchester.
1902. Orr, David, M.D., C.M.Edin., M.P.C., c/o The Manager, District Bank, Prestwich, Manchester.
1910. Orr, James Henry Cubitt, M.D., Ch.B.Edin., Medical Superintendent, Midlothian Asylum, Rosslyn Castle.
1914. Osburne, John C., M.B., B.Ch.N.U.I., c/o Glyn, Mills & Co., 3, Whitehall Place, S.W. 1.
1916. Overbeck-Wright, Alexander William, M.D., Ch.B.Aberd., D.P.H., M.P.C., Lt.-Col. I.M.S., Superintendent, Asylum House, Agra, U.P., India. Address: c/o Messrs. King, King & Co., Bombay, India.
1905. Paine, Frederick, M.D.Brux., M.R.C.P.Lond., M.R.C.S.Eng., D.P.M., Deputy Medical Superintendent, Claybury Mental Hospital, Woodford Bridge, Essex.
1920. Parkin, George Gray, M.D., Ch.B.Vict., Deputy Medical Superintendent, Cheshire County Mental Hospital, Parkside, Macclesfield.
1920. Parnis, Henry William, B.Sc., M.D.Malta, M.R.C.S., L.R.C.P.Lond., D.P.M., Assistant Medical Officer, Claybury Mental Hospital, Woodford Bridge, Essex.
1898. Pasmore, Edwin Stephen, M.D., M.R.C.P.Lond., Medical Superintendent, Croydon Mental Hospital; Chelsham House, Upper Warlingham.

1916. Patch, Charles James Lodge, M.C., L.R.C.P.& S.Edin., L.R.F.P.S. Glasg., Capt. I.M.S., 8, Jail Road, Lahore, India.
1899. Patrick, John, M.B., Ch.B.R.U.I., Medical Superintendent, District Asylum, Omagh, Ireland.
1907. Peachell, George Ernest, M.D., B.S., M.R.C.S., L.R.C.P.Lond., M.P.C., Whitechurch, Blandford, Dorset.
1920. Pearn, Oscar Phillips Napier, L.S.A., M.R.C.S., L.R.C.P.Lond., D.P.M., Deputy Medical Superintendent, Cane Hill Mental Hospital, Coulsdon, Surrey.
1913. Penny, Robert Augustus Greenwood, M.R.C.S., L.R.C.P.Lond., Assistant Medical Officer, Devon County Mental Hospital, Exminster.
1920. Penson, John Frederick, M.A., M.B., B.Ch.Oxon., M.R.C.S., L.R.C.P.Lond., D.P.M., Glanfield, Alexandra Road, Reading.
1911. Petric, Alfred Alexander Webster, M.D., B.S., M.R.C.P.Lond., F.R.C.S. Edin., D.P.M., Medical Superintendent, London County Mental Hospital, Banstead, Surrey. (Lect. on Ment. Dis., West Lond. Post-Grad. College.)
1908. Phillips, John George Porter, M.D., B.S., M.R.C.S., F.R.C.P.Lond., M.P.C., Resident Physician and Superintendent, Bethlem Royal Hospital, Lambeth, London, S.E. 1. (Lect. on Ment. Dis., Bart.'s Hosp. and Lond. Sch. of Med. for Women.) (*Secretary, Educational Committee, 1913-20.*)
1910. Phillips, John Robert Parry, O.B.E., M.R.C.S., L.R.C.P.Lond., Northwoods House, Winterbourne, Bristol.
1906. Phillips, Nathaniel Richard, M.D.Brux., M.R.C.S., L.R.C.P.Lond., Medical Superintendent, Monmouthshire County Asylum, Abergavenny.
1905. Phillips, Norman Routh, M.D.Brux., M.R.C.S., L.R.C.P.Lond., Senior Assistant Medical Officer, St. Andrew's Hospital, Northampton.
1921. Phillips, Philip Gordon, L.R.C.P.& S.Edin., L.R.F.P.S.Glasg., Medical Superintendent, Ministry of Pensions Neurological Hospital, Oulton Hall, Woodlesford, near Leeds.
1924. Pickworth, Frederick Alfred, B.Sc., M.B., B.S., M.R.C.S., L.R.C.P.Lond., A.I.C.(exam.), Ph.C., Pathologist to Joint Board of Research for Mental Diseases, City University of Birmingham; Hollymoor Mental Hospital, Northfield, Birmingham.
1891. Pierce, Bedford, M.D., F.R.C.P.Lond., "Rosewood," Middlecave Road, Malton, Yorks. (*Secretary, N. and M. Division, 1900-8.*) (PRESIDENT, 1919-20.)
1888. Pietersen, James F. G., M.R.C.S., L.R.C.P.Lond., Ashwood House, Kingswinford, near Dudley, Stafford.
1896. Planck, Charles, M.A.Camb., M.R.C.S., L.R.C.P.Lond., "Pontresina," Perrymount Road, Haywards Heath.
1912. Plummer, Edgar Curnow, M.R.C.S., L.R.C.P.Lond., St. Faith's, Mount Park Road, Ealing, W. 5.
1889. Pope, George Stevens, L.R.C.P.& S.Edin., L.R.F.P.S.Glasg., Medical Superintendent, Heigham Hall, Norwich.
1913. Potts, William A., M.A.Camb., M.D.Edin. & Birm., M.R.C.S., L.R.C.P.Lond., Medical Officer to the Birmingham Committee for the Care of the Feeble-Minded, 118, Hagley Road, Egbaston, Birmingham.
1923. Power, Thomas Declan, B.A., M.D., B.Ch.Dubl., M.R.C.P.Lond., D.P.H., D.P.M., Assistant Medical Officer, Essex County Mental Hospital, Brentwood, Essex.
1921. Poynder, Ernest George Thornton, M.R.C.S., L.R.C.P.Lond., D.P.M. Assistant Medical Officer, Long Grove Mental Hospital, Epsom.
1908. Prentice, Reginald Wickham, L.M.S.S.A., Bridge House, Ringwood, Hants.
1918. Prideaux, John Joseph Francis Engledue, M.R.C.S., L.R.C.P.Lond., D.C.M.S.; Ministry of Pensions, 1, Sanctuary Buildings, Great Smith Street, S.W. 1.

1894. **Rambaut, Daniel F., M.A., M.D., B.Ch.Dubl.,** Medical Superintendent, St. Andrew's Hospital, Northampton; Priory Cottage, Northampton. (*Registrar since 1924.*)
1926. **Ramsay, Johnston Campbell, M.B., B.Ch.Belf.,** Assistant Medical Officer, Claybury Mental Hospital, Woodford Bridge, Essex.
1889. **Raw, Nathan, C.M.G., M.D., B.S., M.R.C.P.Lond., F.R.C.S., F.R.S. Edin., L.S.Sc.Durh., M.P.C.,** Lord Chancellor's Visitor; The Green, Richmond, Surrey. (*Chairman, Parliamentary Committee since 1926.*)
1913. **Read, Charles Stanford, M.D., M.R.C.S., L.R.C.P.Lond., 22, Park Crescent, W. 1.** (Lect. on Psychol. Med., Bethlem Royal Hospital.)
1920. **Read, Walter Wolfe, M.D.BruX., M.R.C.S., L.R.C.P.Lond.,** Medical Superintendent, Berkshire County Mental Hospital, Wallingford, Berks.
1899. **Redington, John Murray, L.R.C.P., F.R.C.S.Irel.,** Revagh, Salthill, Galway.
1924. **Reed, John Charles Groscoart, M.R.C.S., L.R.C.P.Lond.,** Assistant Medical Officer, The Old Manor, Salisbury.
1911. **Reeve, Ernest Frederick, M.B., B.S., M.R.C.S., L.R.C.P.Lond.,** Medical Superintendent, County Mental Hospital, Rainhill. (Lect. on Ment. Dis., Univ. of Liverp.)
1911. **Reid, Daniel McKinley, M.D., Ch.B., F.R.F.P.S.Glasg.,** Medical Superintendent, City Mental Hospital, Exeter.
1924. **Reid, James, L.R.C.P.&S.Edin., L.R.F.P.S.Glasg.,** Assistant Medical Officer, Hereford County Mental Hospital, Burghill, Hereford.
1910. **Reid, William, M.A.St.And., M.B., Ch.B.Edin.,** Medical Superintendent, Burntwood Mental Hospital, near Lichfield.
1923. **Retallack-Moloney, Herbert Thomas, M.R.C.S., L.R.C.P.Lond., D.P.M.,** Assistant Medical Officer, Claybury Mental Hospital, Woodford Bridge, Essex.
1925. **Reynolds, Francis Esmond, M.B., Ch.B.Edin., D.T.M.,** Pathologist, Scottish Asylums Pathological Scheme, Royal Infirmary, Edinburgh. (Lect. on Neuro-Path., Univ. of Edinburgh.)
1899. **Rice, David, M.D.BruX., M.R.C.S., L.R.C.P.Lond., D.P.H.,** Medical Superintendent, City Mental Hospital, Hillesdon, Norwich.
1897. **Richard, William John, M.A., M.B., C.M., F.R.F.P.S.Glasg.,** Medical Superintendent, South General Hospital; Merryflats House, Govan, Glasgow.
1899. **Richards, John, M.B., C.M., F.R.C.S.Edin.,** Medical Superintendent, Joint Counties Mental Hospital, Carmarthen.
1922. **Riches, Reginald George, M.R.C.S., L.R.C.P.Lond., D.P.M.,** Deputy Medical Superintendent, Hanwell Mental Hospital, Southall, Middlesex.
1920. **Rickman, John, M.A., M.D., B.Ch.Camb.,** Chief Assistant, Mental Out-Patients, St. Thomas's Hospital; 26, Devonshire Place, W. 1.
1911. **Robarts, Henry Howard, M.D., Ch.B.Edin., D.P.H.,** Medical Officer, District Asylum; Ennerdale, Haddington, Scotland.
1922. **Robb, John Robert Beith, L.R.C.P.&S.Edin., L.R.F.P.S.Glasg.,** Assistant Physician, Gartloch Mental Hospital, Gartcosh, N.B.
1921. **Roberts, Edward Douglas Thomas, M.R.C.S., L.R.C.P.Lond., D.P.M.,** Assistant Medical Officer, Herts County Mental Hospital, Hill End, St. Albans.
1903. **Roberts, Norcliffe, O.B.E., M.D., B.S.Durh., D.P.M.,** Medical Superintendent, West Park Mental Hospital, Epsom, Surrey.
1887. **Robertson, Geo. M., M.D., C.M., F.R.C.P.Edin., M.P.C.,** Physician-Superintendent, Royal Hospital, Morningside, Edinburgh; Tipperlinn House, Morningside Place, Edinburgh. (Prof. of Psychiat., Univ. of Edinburgh.) (PRESIDENT, 1922-23.)
1908. **Robertson, George Dunlop, L.R.C.S.&P.Edin., L.R.F.P.S.Glasg., Dipl. Psych.,** Senior Assistant Physician, District Asylum, Hartwood, Lanark.

Members of the Association.

1920. Robinson, William, M.D., Ch.B.Leeds, D.P.M., Medical Superintendent, City of London Mental Hospital, Stone, Dartford.
1922. Rodger, Kenneth Mann, M.B., Ch.B.Glasg. D.P.M., Deputy Medical Superintendent, Bristol Mental Hospital, Fishponds.
1914. Rodger, Murdoch Mann, M.D., Ch.B.Glasg., Dechmont, Helouan.
1908. Rodgers, Frederick Millar, O.B.E., M.D., Ch.B.Vict., D.P.H., Medical Superintendent, County Mental Hospital, Winwick.
1895. Rolleston, Lancelot William, C.B.E., M.B., B.S.Durh., M.R.C.S., L.R.C.P. Lond., Queen Anne's Mansions, St. James's Park, S.W. 1.
1922. Rollins, Ernest Edward, B.A., M.B., B.Ch.Dubl., 38, Warwick Road, Earl's Court, S.W. 5.
1924. Rose, Edward Snow, M.R.C.S. L.R.C.P.Lond., D.P.M., Lansdowne House, Romsey, Hants.
1888. Ross, Chisholm, M.D.Syd., M.B., C.M.Edin., 225, Macquarie Street, Sydney, New South Wales.
1910. Ross, Donald, M.B., Ch.B.Edin., M.P.C., J.P., Medical Superintendent, Argyll and Bute Asylum; Tigh-ma-Linne, Lochgilphead, Argyll.
1923. Ross, Thomas Arthur, M.D., C.M., F.R.C.P.Edin., Medical Director, Cassel Hospital for Functional Nervous Disorders, Swaylands, Penshurst, Kent.
1899. Rotherham, Arthur, M.A., M.B., B.Ch.Camb., Commissioner, Board of Control, Caxton House West, Westminster S.W. 1; Elm House, Marshall Road, Farncombe, Surrey.
1922. Roy, John Allen Chisholm, M.B., Ch.B.Vict., Medical Superintendent, Cheadle Royal, Cheadle, Cheshire.
1924. Rudolf, Gerald de Montjoie, M.R.C.S., L.R.C.P.Lond., D.P.H., D.P.M., Assistant Medical Officer, Claybury Mental Hospital, Woodford Bridge, Essex.
1926. Russell, Elizabeth Dill, M.R.C.S., L.R.C.P.Lond., D.P.H., Assistant Physician, Mental Hospital, West Koppies, Pretoria, South Africa.
1923. Russell, John, M.B., Ch.B.Glasg., D.P.M., Assistant Medical Officer, West Riding Mental Hospital, Menston, nr. Leeds.
1912. Russell, John Ivison, M.B., Ch.B., F.R.F.P.S.Glasg., D.P.M., M.P.C., Medical Superintendent, North Riding Asylum, Clifton.
1915. Russell, William, M.C., M.D., Ch.B.Edin., Dip.Psych., D.T.M., Physician Superintendent, Witrand Institution, Potchefstroom, South Africa.
1912. Rutherford, Cecil, B.A., M.B., B.Ch.Dubl., Assistant Medical Officer, Holloway Sanatorium, Virginia Water, Surrey.
1907. Rutherford, Henry Richard Charles, L.R.C.P., F.R.C.S.Irel., D.P.H., Medical Superintendent, Farnham House, Finglas, co. Dublin.
1896. Rutherford, James Mair, M.B., C.M., F.R.C.P.Edin., M.P.C., Brislington House, Bristol.
1922. Ruthven, Morton Wood, M.B., Ch.B.Edin., D.T.M., Assistant Medical Officer, Banstead Mental Hospital, Sutton, Surrey.
1902. Sall, Ernest Frederick, M.R.C.S., L.R.C.P.Lond., Medical Superintendent, City Mental Hospital, Canterbury.
1924. Samuel, Edward Jeffrey, M.B., B.S.Lond., 12, Heaton Road, Peckham, S.E. 15.
1908. Samuels, William Frederick, L.M., L.Ch.Dubl., Medical Superintendent, Central Mental Hospital; St. Dymphna's, Tanjong Rambutan, F.M.S.
1923. Sang, Janet Adeline Agnes, L.R.C.P.&S.Edin., L.R.F.P.S.Glasg., Assistant Medical Officer, County Mental Hospital, Prestwich, Manchester.
1894. Sankey, Edward Hugh Octavius, M.A., M.B., B.Ch.Camb., Resident Medical Licensee, Boreatton Park, Baschurch, Salop.
1906. Scanlan, John James, L.R.C.P.&S.Edin., L.R.F.P.S.Glasg., D.P.H., Broad Street House, Old Broad Street, London, E.C. 2.

1926. Scoresby-Jackson, Margaret, M.D., B.S.Durh., Clinical Assistant, Neurological Department, Guy's Hospital, S.E.; Bethlem Royal Hospital Out-Patient Department for Mental Deficiency; 28, Weymouth Street, Portland Place, W. 1.
1925. Scott, Francis Leonard, M.R.C.S., L.R.C.P.Lond., Assistant Medical Officer, London County Mental Hospital, Bexley, Kent.
1911. Scroope, Gervace Wm. Mavy, M.B., B.Ch.Dubl., Assistant Medical Officer, Central Asylum, Dundrum, co. Dublin.
1880. Seccombe, George Samuel, M.R.C.S., L.R.C.P.Lond., c/o Lloyds Bank, Threadneedle Street, London, E.C. 3.
1925. Selkirk, Elizabeth Thompson, M.B., Ch.B.Edin., Deputy Medical Superintendent, Hollymoor Mental Hospital, Northfield, Birmingham.
1912. Sergeant, John Noel, M.B., B.S., M.R.C.S., L.R.C.P.Lond., Medical Superintendent, Newlands House, Tooting Bec Common, London, S.W. 17. (*Secretary, South-Eastern Division since 1913.*)
1921. Severn, Adolphe Gladstone Millott, B.A., M.D.Bru.x., M.R.C.S., L.R.C.P.Lond., D.P.H., F.C.S., Barrister-at-Law, 68, West Street, Brighton.
1925. Shand, George Ernest, M.D., Ch.B.Aberd., D.P.H., Senior Assistant Medical Officer, City Mental Hospital, Winson Green, Birmingham; 307, Gillott Road, Edgbaston, Birmingham.
1901. Shaw, Benjamin Henry, M.D., B.Ch.R.U.I., Medical Superintendent, County Mental Hospital, Stafford.
1905. Shaw, Charles John, M.D., Ch.B., F.R.C.P.Edin., J.P., Medical Superintendent, Royal Asylum, Montrose.
1904. Shaw, Patrick, L.R.C.P.&S.Edin., L.R.F.P.S.Glasg., Medical Superintendent, Hospital for Insane, Ballarat, Victoria, Australia.
1909. Shaw, William Samuel Jagoe, M.D.Belf., M.B., B.Ch. R.U.I., Lt.-Col. I.M.S., Superintendent, Central Hospital for Mental Diseases, Yeravda, Poona; c/o Messrs. Grindlay & Co., 54, Parliament Street, S.W. 1.
1920. Shearer, Christina Hamilton, M.B., Ch.B.Glasg., Senior Medical Officer, Cassel's Hospital, Swaylands, Penshurst, Kent.
1923. Shepherd, Charles Ernest Alan, M.R.C.S., L.R.C.P.Lond., D.P.M., Assistant Medical Officer, West Park Mental Hospital, Epsom, Surrey.
1914. Sherlock, Edward Birchall, B.Sc., M.D.Lond., D.P.H., Barrister-at-Law, Medical Superintendent, Darenth Industrial Colony, Dartford.
1914. Shield, Hubert, M.C., M.B., B.S.Durh., Assistant Medical Officer, Gateshead Mental Hospital; 73, Holly Avenue, Jesmond, Newcastle-on-Tyne.
1923. Shore, G. W., M.D.Lond., D.P.H., D.P.M., Assistant Medical Officer, Springfield Mental Hospital, Tooting, London, S.W. 17.
1922. Shortt, Jane Elder, M.B., Ch.B.Glasg., Resident Medical Superintendent, The Lawn, Lincoln.
1877. Shuttleworth, George E., B.A.Lond., M.D.Heidelb., L.S.A., M.R.C.S. Eng., 36, Lambolle Road, Hampstead, London, N.W. 3.
1901. Simpson, Alexander, C.B.E., M.A., M.D., C.M.Aberd., 8, Pavilion Buildings, Brighton, Sussex.
1905. Simpson, Edward Swan, M.C., M.D., Ch.B.Edin., Medical Superintendent, East Riding Mental Hospital, Beverley, Yorks.
1891. Skeen, James Humphry, M.B., C.M.Aberd., M.P.C., Medical Superintendent, Fife and Kinross District Asylum, Cupar, N.B.
1921. Skene, Leslie Henderson, M.C., M.B., Ch.B.Edin., Dipl.Psych., Medical Superintendent, Mental Hospital, Union Mills, Isle of Man.
1925. Skottowe, James Stewart Ian, M.B., Ch.B.Glasg., D.P.M., Assistant Medical Officer, Royal Mental Hospital, Gartnavel, Glasgow.
1914. Slaney, Chas. Newnham, M.R.C.S., L.R.C.P.Lond., 21, Walton Park, Liverpool.

1901. Slater, George Nathan Oscroft, M.D., M.R.C.S., L.R.C.P.Lond., Senior Assistant Medical Officer, Essex County Mental Hospital, Brentwood.
1910. Smith, Gayton Warwick, M.D.Lond., B.S.Durh., M.R.C.S., L.R.C.P.Lond., D.P.H., Senior Assistant Medical Officer, Springfield Mental Hospital, Tooting, London, S.W. 17.
1905. Smith, George William, O.B.E., M.B., Ch.B.Edin., Wyke House, Isleworth, Middlesex.
1926. Smith, Gordon John, M.B., Ch.B.Aberd., Assistant Physician, Royal Hospital, Morningside, Edinburgh.
1907. Smith, Henry Watson, O.B.E., M.D., Ch.B.Aberd., Director, Lebanon Hospital, Asfuriyeh, nr. Beyrout, Syria. (Prof. of Psychiat. and Neurol., American University, Beyrout).
1923. Smith, Herbert, M.R.C.S., L.R.C.P.Lond., Assistant Medical Officer, Bristol Mental Hospital, Fishponds.
1899. Smith, John Grimmond, M.D., C.M.Edin., Medical Superintendent, County and City Mental Hospital, Burghill, nr. Hereford.
1920. Smith, Maurice Hamblin, M.A.Camb., M.D.Durh., M.R.C.S., L.R.C.P.Lond., H.M. Prison, Birmingham. (Lect. on Criminology, Univ of Birmingham.)
1885. Smith, R. Percy, M.D., B.S., F.R.C.P.Lond., M.P.C., 36, Queen Anne Street, Cavendish Square, London, W. 1. (*General Secretary, 1896-7.*) *Chairman Educational Committee, 1899-1903.* (PRESIDENT, 1904-5.)
1913. Smith, Thomas Cyril, M.B., Ch.B.Edin., Assistant Medical Officer, 2nd, County Asylum, Barnwood, Gloucester.
1911. Smith, Thomas Waddelow, L.S.A., L.R.C.P.Lond., F.R.C.S.Eng., M.P.C., Deputy Medical Superintendent, City Mental Hospital, Nottingham.
1920. Smyth, Geoffrey Norman, L.R.C.P.&S.Irel., 189, Richmond Park, Cardiff.
1921. Smyth, John Francis, M.B., B.Ch.N.U.I., D.P.M., Assistant Medical Officer, West Riding Asylum, Wakefield.
1899. Smyth, Walter Samuel, M.B., B.Ch.R.U.I., Assistant Medical Superintendent, County Asylum, Antrim.
1926. Snell, Harvie Kennard M.B., B.S., M.R.C.S., L.R.C.P.Lond., D.P.H., Medical Officer, Prison Medical Service, H.M. Prison, Wandsworth, S.W. 18.
1923. Somerville, George, M.D., Ch.B.Edin., D.P.M., Assistant Medical Officer, West Ham Mental Hospital, Goodmayes, Ilford.
1913. Somerville, Henry, B.Sc., M.R.C.S., L.R.C.P.Lond., F.C.S., Harrold, Sharnbrook, S.O., Beds.
1885. Soutar, James Greig, M.B., C.M.Edin., M.P.C., 20, Royal Parade, Cheltenham. (PRESIDENT, 1912-13.)
1906. Spark, Percy Charles, M.R.C.S., L.R.C.P.Lond., 13, South Croxted Road, Dulwich, S.E. 21.
1925. Speer, James Millar Craig, M.B., B.Ch.Belf., Assistant Medical Officer, Wilts County Mental Hospital, Devizes.
1875. Spence, J. Beveridge, O.B.E., M.D., M.Ch.Q.U.I., L.A.H.Dubl., 1, St. Matthew's Road, St. Leonards-on-Sea. (*First Registrar, 1892-1899; Chairman, Parliamentary Committee, 1910-12.*) (PRESIDENT, 1899-1900.)
1922. Spence, Thomas Reginald Carwardine, M.C., M.B., Ch.B.Edin., Deputy Medical Superintendent, Kesteven County Mental Hospital, Sleaford, Lincs.
1920. Staley, Mildred Ernestine, M.B., B.S.Lond., 28, Grand View Road, Ramuera, Auckland, New Zealand.
1891. Stansfield, Thomas Edward Knowles, C.B.E., M.B., C.M.Edin., Southmead, Wimbledon Park, London, S.W. 19.
1901. Starkey, William, M.B., B.Ch.R.U.I., Medical Superintendent, Plymouth Mental Hospital, Blackadon, Ivybridge, S. Devon. (*Secretary, South-Western Division, since 1922.*)

1925. Steel, Samuel Maxwell, M.B., Ch.B.Glasg., Assistant Medical Superintendent, Monyhull Colony, Kings Heath, Birmingham.
1907. Steele, Patrick, M.D., Ch.B., F.R.C.P.Edin., Medical Superintendent, Roxburgh District Asylum; The Hermitage, Melrose.
1914. Stephens, Harold Freize, M.R.C.S., L.R.C.P.Lond., Deputy Medical Superintendent, The Manor Cert. Institution for Mental Defectives, Epsom, Surrey.
1909. Steward, Sidney John, D.S.O., M.D., B.Ch.Camb., M.R.C.S., L.R.C.P.Lond., D.P.H., Langton Lodge, Farncombe, Surrey.
1922. Stewart, Francis Hugh, M.A., D.Sc.St.And., M.D., Ch.B.Edin., Assistant Medical Officer, Staffordshire Mental Hospital, Cheddleton.
1887. Stewart, Rothsay Charles, L.S.A., M.R.C.S.Eng., Medical Superintendent, County Mental Hospital, Narborough, nr. Leicester.
1914. Stewart, Roy MacKenzie, M.D., Ch.B., M.R.C.P.Edin., D.P.M., Medical Superintendent, Leavesden Mental Hospital; Woodside, Leavesden, Watford.
1905. Stilwell, Henry Francis, L.R.C.P.&S.Edin., L.R.F.P.S.Glasg., Hayes Park, Hayes, Middlesex.
1899. Stilwell, Reginald John, M.R.C.S., L.R.C.P.Lond., Moorcroft House, Hillingdon, Middlesex.
1897. Stoddart, William Henry Butter, M.D., B.S., F.R.C.P.Lond., M.R.C.S.Eng., M.P.C., Harcourt House, Cavendish Square, London, W. 1. (*Secretary, Educational Committees, 1908-1912.*) (Lect. on Ment. Dis., St. Thomas's Hosp.)
1909. Stokes, Frederick Ernest, M.D., Ch.B.Glasg., D.P.H., Senior Assistant Medical Officer, Borough Mental Hospital, Portsmouth.
1903. Stratton, Percy Haughton, M.R.C.S., L.R.C.P.Lond., York Lodge, Cliff Cottage Road, Bournemouth.
1885. Street, Charles Tidbury, M.R.C.S., L.R.C.P.Lond., "Kettlebury," Churt, Farnham, Surrey.
1909. Stuart, Frederick Joshua, O.B.E., M.R.C.S., L.R.C.P.Lond., Medical Superintendent, Northampton County Mental Hospital, Berrywood.
1924. Sturrock, Alexander Corsar, M.A., M.D., C.M.Edin., M.R.C.P.Lond., Physician, Salford Royal Hospital; Preston House, Eccles, Manchester.
1900. Sturrock, James Prain, M.A.St.And., M.D., C.M.Edin., H.M. Commissioner, General Board of Control for Scotland; 36, Murrayfield Road, Edinburgh.
1886. Suffern, Alex. Canning, O.B.E., M.D., M.Ch.R.U.I., Glen-y-Mor, Hill Head, Fareham, Hants.
1921. Suffern, Canning, M.A., M.B., B.Ch.Camb., M.R.C.S., L.R.C.P.Lond., Glen-y-Mor, Hill Head, Fareham, Hants.
1922. Sullivan, Patrick Daniel, L.R.C.P., F.R.C.S.Irel., Medical Superintendent, Verville Asylum, Clontarf, co. Dublin; 44, Harrington Street, Dublin.
1918. Sutherland, Francis, M.B., Ch.B.Edin., D.P.H., Portree, Isle of Skye.
1919. Suttle, Ian D., M.B., Ch.B., F.R.F.P.S.Glasg., Medical Superintendent, Kenlaw House, Colinsburgh, Fife.
1908. Swift, Eric W. D., M.B.Lond., Physician, Valkenberg Mental Hospital, Observataans, Cape Town, S. Africa.
1926. Talbot, Geoffrey, B.Sc.(Hons.), M.B., Ch.B.Manch., Assistant Medical Officer, County Mental Hospital, Prestwich, Manchester.
1923. Tattersall, Stanley Roy, M.R.C.S., L.R.C.P.Lond., Pathologist, County Mental Hospital, Lancaster.
1910. Taylor, Arthur Loudoun, B.Sc., M.B., Ch.B., F.R.C.P.Edin., Senior Assistant Medical Officer, County Mental Hospital, Burntwood, Lichfield.
1924. Taylor, Frederic Cecil Marsh, M.R.C.S., L.R.C.P.Lond., D.P.M., Kent County Mental Hospital, Chartham Downs, nr. Canterbury.

1897. Taylor, Frederic Ryott Percival, M.D., B.S., M.R.C.S., L.R.C.P.Lond., Medical Superintendent, East Sussex Mental Hospital, Hellingly.
1925. Taylor, Robert, L.R.C.P.&S.Irel., Assistant Medical Officer, St. Patrick's Hospital, Dublin.
1926. Tennent, Thomas, M.B., Ch.B.Glasg., D.P.H., Assistant Medical Officer, Renfrew District Asylum, Dykebar, Paisley.
1921. Thomas, Cyril James, M.R.C.S., L.R.C.P.Lond., Assistant Medical Officer, County Mental Hospital, Lancaster.
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1925. Thompson, Robert, M.B., B.Ch.Belf., St. Patrick's Hospital, Dublin.
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1901. Tighe, John Valerian George Brosnan, M.B., B.Ch.R.U.I., Medical Superintendent, Gateshead Mental Hospital, Stannington, Northumberland.
1914. Tisdall, Charles Jerome, M.B., Ch.B.Edin., Shaftesbury House, Formby, Liverpool.
1903. Topham, J. Arthur, B.A.Camb., M.R.C.S., L.R.C.P.Lond., Senior Assistant Medical Officer, Kent County Mental Hospital, Chartham, Canterbury.
1896. Townsend, Arthur Allen Deykin, M.D., B.Ch.Birm., M.R.C.S., L.R.C.P.Lond., Medical Superintendent, Barnwood House Hospital for Insane, Gloucester.
1903. Tredgold, Alfred Frank, M.D.Durh., M.R.C.S., M.R.C.P.Lond., F.R.S. Edin., "St. Martin's," Guildford, Surrey.
1908. Tuach-MacKenzie, William, M.D., Ch.B.Aberd., Physician Superintendent, Royal and District Asylums, Dundee; Westgreen, Dundee. (Lect. on Ment. Dis., Univ. of St. Andrews.)
1906. Turnbull, Peter Mortimer, M.C., M.B., B.Ch.Aberd., D.P.M., Senior Assistant Medical Officer, Mental Hospital, Caterham.
1909. Turnbull, Robert Cyril, M.D., M.R.C.S., L.R.C.P.Lond., Medical Superintendent, Essex County Mental Hospital, Colchester.
1889. Turner, Alfred, M.D., C.M.Edin., Medical Superintendent, Plympton House, Plympton, S. Devon.
1906. Turner, Frank Douglas, M.B., M.R.C.S., L.R.C.P.Lond., Medical Superintendent, Royal Eastern Counties Institution, Colchester.
1922. Twomey, John Christopher, M.B., Ch.B.Liverp., D.P.H., Assistant Physician, The Mental Hospital, Queenstown, South Africa; c/o Secretary for Interior, Pretoria.
1917. Vevers, Oswald Henry, M.R.C.S., L.R.C.P.Lond., Villa Beaugeard, Arcachon, Gironde, France.
1922. Viehoff, Herman Crowther, M.R.C.S., L.R.C.P.Lond., 48, Moor Lane, Great Crosby, Lancs.
1894. Vincent, William James N., C.B.E., M.B., B.S.Durh., M.R.C.S., L.R.C.P.Lond., Medical Superintendent, South Yorkshire Asylum, Wadsley, nr. Sheffield. (Lect. on Psychiat., Univ. of Sheffield.)
1923. Wadsworth, George Reginald, M.B., B.Ch.Belf., Assistant Medical Officer, County Mental Hospital, Lancaster.
1926. Walk, Alexander, M.D., B.S.Lond., D.P.M., Assistant Medical Officer, Horton Mental Hospital, Epsom, Surrey.

1914. Walker, Robert Clive, M.D., Ch.B.Edin., Deputy Medical Superintendent, West Riding Asylum, Menston, nr. Leeds.
1923. Walker, William Henry, L.R.C.P.&S.Edin., L.R.F.P.S.Glasg., "Rydal," West Crescent, Darlington, Yorks.
1908. Wallace, John Andrew Lealie, M.D., Ch.B.Edin., M.P.C., J.P., Mental Hospital, Callan Park, Sydney, N.S.W.
1912. Wallace, Vivian, L.R.C.P.&S.Irel., D.P.H., Ballinakill, Multyfarnham, co. Westmeath.
1926. Wallis, Robert Lauder Mackenzie, M.A., M.D.Camb., Chem. Pathologist, St. Bartholomew's Hospital; 101, Harley Street, W. 1.
1889. Warnock, John, C.M.G., B.Sc., M.D., C.M.Edin., M.R.C.S.Eng., The Limes, 181, London Road, Twickenham.
1895. Waterston, Jane Elizabeth, M.D.Bruz., F.R.C.P.Irel., L.R.C.S.Edin., M.P.C., Govt. Official Visitor, Valkenberg Mental Hospital, Cape Town; 85, Parliament Street, Cape Town, South Africa.
1922. Watson, Douglas Chalmers, M.D., F.R.C.P.Edin., Physician, Royal Infirmary, Edinburgh; 11, Walker Street, Edinburgh.
1891. Watson, George Alfred, M.B., C.M.Edin., M.P.C., Pathologist to the Lancashire County Mental Hospitals; Rainhill Cottage, Rainhill, Nr. Liverpool. (Lect. on Neuro-Path. of Ment. Dis., Univ. of Liverpool.)
1908. Watson, Hugh Ferguson, M.D., Ch.B.Glasg., L.R.C.P.&S.Edin., L.R.F.P.S.Glasg., D.P.H., F.R.S.Edin., Deputy Commissioner General Board of Control for Scotland, 25, Palmerston Place, Edinburgh; Northcote, Edinburgh Road, Perth.
1924. Watson, John, M.C., M.B., B.Ch.Edin., Resident Medical Superintendent, Londonderry District Asylum, Ireland.
1911. Webber, Leonard Mortis, M.R.C.S., L.R.C.P.Lond., Senior Assistant Medical Officer, Surrey County Mental Hospital, Netherne, Coulsdon.
1922. Webster, William Leckie, M.B., Ch.B.Edin., Major R.A.M.C., "D" Block, Royal Victoria Hospital, Netley, Hants.
1919. Westrup, Joseph Perceval, M.R.C.S., L.R.C.P.Lond., Medical Officer, The Old Manor, Salisbury.
1911. White, Edward Barton Cartwright, M.R.C.S., L.R.C.P.Lond., Medical Superintendent, City Mental Hospital, Fishponds, Bristol. (Lect. on Ment. Dis., Univ. of Bristol.)
1884. White, Ernest William, C.B.E. M.B., L.S.A., M.R.C.P.Lond., M.R.C.S. Eng., Betley House, near Shrewsbury. (*Secretary, S.E. Division, 1897-1900.*) (*Chairman, Parliamentary Committee, 1904-7.*) (*PRESIDENT 1903-4.*)
1921. Whitelaw, William, M.B., B.Ch.Glasg., Director Western Asylums Research Institute; 3, Talbot Terrace, Scotstounhill, Renfrewshire
1905. Whittington, Richard, M.A., M.D.Oxon., M.R.C.S., L.R.C.P.Lond., 1, Eaton Gardens, Hove, Sussex.
1889. Whitwell, James Richard, M.B., C.M.Edin., 66, York Mansions, Battersea Park, S.W. 11.
1913. Wilkins, William Douglas, M.B., Ch.B.Vict., M.R.C.S., L.R.C.P.Lond., D.P.M., Senior Assistant Medical Officer, Stafford County Mental Hospital, Cheddleton, nr. Leek.
1900. Wilkinson, Harry Bacon, M.R.C.S., L.R.C.P.Lond., Deputy Medical Superintendent, Plymouth Mental Hospital, Blackadon, Ivybridge, South Devon.
1887. Will, John Kennedy, M.A., M.D., C.M.Aberd., M.P.C., Chesterfield, 214, Anerley Road, S.E. 20.
1925. Williams, Edward Lincoln, M.R.C.S., L.R.C.P.Lond., The Hall, Harrow Weald, Middlesex.
1905. Williams, David John, M.R.C.S., L.R.C.P.Lond., Havod House, Ystradnewig, near Aberystwyth, Wales.

1925. Williams, Rhodri Gwyn, M.R.C.S., L.R.C.P.Lond., Assistant Medical Officer, London County Mental Hospital, Bexley, Kent.
1922. Williamson, David Hardie, M.B., Ch.B.Edin., Assistant Medical Officer, Woodilee Mental Hospital, Lenzie.
1916. Williamson, Marguerite, M.B., Ch.B.Glasg., D.P.M., The Ochil Hills Sanatorium, Milnathort, Kinross-shire.
1923. Wilson, Alban, M.R.C.S., L.R.C.P.Lond., D.P.M., Deputy Medical Superintendent, Knowle Mental Hospital, Fareham, Hants.
1922. Wilson, Fred, M.B., Ch.B.Aberd., Assistant Medical Superintendent, Central Mental Hospital, Tanjong Rambutan, Federated Malay States.
1925. Wilson, Harriette Appleby, M.B., Ch.B.Leeds, D.P.H., Senior Assistant Medical Officer, West Riding Mental Hospital, Wakefield.
1923. Wilson, Isabel Grace Hood, M.B., Ch.B.Edin., D.P.M., Clinical Assistant, Bethlem Royal Hospital; 19, Park Crescent, Portland Place, W. 1.
1920. Wilson, James Leitch, M.B., Ch.B.Edin., D.P.M., 81, Harley Street, London, W. 1.
1899. Wolseley-Lewis, Herbert, M.D.Bruce, L.R.C.P.Lond., F.R.C.S.Eng., Medical Superintendent, Kent County Mental Hospital, Barming Heath, Maidstone. (*Secretary, Parliamentary Committee, 1907-12; Chairman, 1912-21.*)
1921. Wood, Bertram William Francis, M.B., B.S.Leeds, West African Medical Staff; c/o P.O., Lagos, South Province, Nigeria.
1869. Wood, T. Outterson, M.D.Durh., M.R.C.P.Lond., F.R.C.P., F.R.C.S. Edin., "Lodore," Chelston Road, Torquay. (*PRESIDENT, 1905-6.*)
1912. Woods, James Cowan, B.A.R.U.I., M.D., B.S., M.R.C.S., L.R.C.P.Lond., 45, Weymouth Street, W. 1. (*Lect. on Ment. Dis., St. George's Hosp. and London Hosp.*)
1885. Woods, John Francis, M.D.Durh., L.S.A., M.R.C.S.Eng., 7, Harley Street, Cavendish Square, London, W. 1.
1912. Wootton, John Charles, M.C., M.R.C.S., L.R.C.P.Lond., Medical Superintendent, Haydock Lodge, Newton-le-Willows, Lancs.
1922. Wootton, Leonard Henry, M.C., B.Sc., M.B., B.S., M.R.C.S., L.R.C.P.Lond., D.P.M., Medical Superintendent, The Colony, Ewell, Surrey.
1900. Worth, Reginald, O.B.E., M.B., B.S.Durh., M.R.C.S., L.R.C.P.Lond., Medical Superintendent, Springfield Mental Hospital, nr. Tooting, S.W. 17. (*General Secretary since 1919.*)
1917. Wright, Maurice Beresford, O.B.E., M.D., C.M.Edin., 86, Brook Street, London, W. 1.
1921. Yellowlees, David, M.B., Ch.B.Glasg., 5, St. James Terrace, Glasgow, W.
1914. Yellowlees, Henry, O.B.E., M.D., Ch.B., F.R.F.P.S.Glasg., F.R.C.P. Edin., D.P.M., Medical Superintendent, The Retreat, York.
1926. Young, Hubert Turner Penn, M.B., Ch.B.Edin., Medical Officer, H.M. Prison Service; H.M. Prison, Parkhurst, Isle of Wight.

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1878. Baker, Hy. Morton, M.B., C.M.Edin., 65, Cole Park Road, Twickenham.
1892. Cole, Robert Henry, M.D., F.R.C.P.Lond., 25, Upper Berkeley Street, London, W. 1. (*Secretary of Parliamentary Committee, 1912-21, Chairman since 1921.*) (Lect. on Ment. Dis., St. Mary's Hosp.)
1918. Cox, The Rt. Hon. Michael Francis, LL.D., M.D.R.U.I., F.R.C.P.Irel., Physician, St. Vincent's Hospital, Dublin; 26, Merrion Square, Dublin.
1881. Fraser, Donald, M.D., C.M., F.R.F.P.S.Glasg., Connel Head, Dyce, nr. Aberdeen.
1922. Gasperine, John Jones, M.R.C.S., L.R.C.P.Lond., D.P.H., D.P.M., Medical Superintendent, Rendlesham Hall, Woodbridge, Suffolk.
1903. Hopkins, Charles Leighton, B.A., M.B., B.Ch.Camb., St. Matthew's Gardens, St. Leonards-on-Sea.
1883. Legge, Richard John, M.D.R.U.I., L.R.C.S.Edin., 8, Bath Plaec, Cheltenham.
1922. McLuskie, Peter, M.B., Ch.B.Glasg., D.P.M., Assistant Medical Officer, Cane Hill Mental Hospital, Coulsdon, Surrey.
1899. Moore, William D., M.D., M.Ch.R.U.I., Medical Superintendent, Holloway Sanatorium, Virginia Water, Surrey.
1896. Mott, Sir Frederick W., K.B.E., LL.D.Edin., M.D., B.S., F.R.C.P.Lond., F.R.S., 25, Nottingham Place, Marylebone, London, W. 1. (Lect. on Morbid Psychology, Univ. of Birmingham.) (PRESIDENT, 1925-26.)
1870. Rayner, Henry, M.D.Aberd., M.R.C.P.Edin., Upper Terrace House, Hampstead, London, N.W. 3. (PRESIDENT, 1884-85.) (*General Secretary, 1877-89.*) (*Co-Editor of Journal, 1895-1911.*)
1920. Roscrow, Cecil Beaumont, L.R.C.P.&S.Edin., L.R.F.P.S.Glasg., 38, Hawthorn Road, Sutton, Surrey.
1917. Shaw, John Custance, M.R.C.S., L.R.C.P.Lond., Medical Superintendent, West Ham Borough Mental Hospital, Goodmayes, Essex.
1900. Shera, John Egar Percival, M.D.Brux., L.R.C.P.&S.Irel., Medical Superintendent, Somerset County Asylum, Wells, Somerset.
1914. Smith, Walter Richard Hugh, B.A., M.D., B.Ch.Dubl., Senior Assistant Medical Officer, Salop County Mental Hospital, Bicton Heath, Shrewsbury.
1898. Steen, Robert Hunter, B.A.R.U.I., M.D., F.R.C.P.Lond., 51, Sutherland Avenue, Bexhill-on-Sea. (*Hon. Sec. S.E. Division, 1905-10; Acting Gen. Sec. and Gen. Sec. 1915-19.*)
1894. Sullivan, William Charles, M.D., B.Ch.R.U.I., Medical Superintendent, State Criminal Lunatic Asylum, Broadmoor, Crowthorne, Berks.

THE JOURNAL

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The following Mental Hospital Reports for the year 1925-26 have been received:
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Also the following Reports, Reprints, etc.:

- Federated Malay States, Annual Report of the Medical Department, 1925.
- Bulletin of the Massachusetts Department of Mental Diseases, April, 1926.
- Merck's Annual Report, 1926, 3rd part.
- The Malarial Treatment of General Paralysis of the Insane, by *Dr. G. W. T. H. Fleming.*
- The Pathological Effects of Hypnotic Drugs upon the Central Nervous System of Animals, by the late *Sir F. W. Mott and others.*
- The Reaction of the Cerebro-Spinal Fluid to the Acetic Anhydride Test, by *Dr. J. P. Steel.*
- The Caduceus, August, 1926.
- Brief History of the Warnford Hospital, 1926.
- A Burden on the Medical Profession, by *Dr. S. Bailey.*
- The Twelfth Annual Report of the General Board of Control for Scotland for the year 1925.
- Minutes of Evidence taken before the Royal Commission on Lunacy and Mental Disorder, Parts I, II and III.
- Annual Report of the Board of Control (England and Wales) for the year 1925.

Books received for review:

- Les Troubles Mentaux dans les Tumeurs Cérébrales, par *H. Baruk.*
- Neurologie, par *A. Tournay.*
- Sigmund Freud, by *Honorio F. Delgado.*
- God and Reality, by *Dr. Marshall Bowyer Stewart.*
- The Mind in Disease, by *Dr. M. P. Leahy.*
- Brains of Rats and Men, by *C. Judson Herrick.*

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No. 264.

Part I.—Original Articles.

*The Cause and Prevention of Neuroses.** By Dr. ALFRED ADLER,
of Vienna.

I FEEL greatly honoured at having been invited by your Association to lecture to you on the science of individual psychology. You are rightly expecting me to set before you what is perhaps a novel point of view, and I may define my attitude by giving you as an alternative title, "The Feeling of Inferiority and its Consequences." To me it appears that every child, indeed every human being, for some reason, is continually striving to answer questions, to overcome difficulties, to solve riddles, and to develop himself in some degree towards a self-satisfying completion, the full achievement of his life purpose. No matter what may be the age of an individual, you will find tendencies which have their beginnings—if one may venture to use the phrase—in the dawn of life, and which, by their persistence, ever demand a development to a higher level. Such tendencies can only exist if there be a goal, and I will endeavour to put before you what, to my mind, this must be.

In the face of reality, we must always define our position and form a conception of our relationship to our environment, which conception involves and determines our standards of behaviour, our attitudes and our demands. Whatever is revealed in the character of a human being, there is always manifested this persistent demand for greater development and a continual striving for the achievement of a certain goal. One may instance the wish of a child to become a coachman, or that of an adult to become a physician or a judge. In every walk of life, in every situation where the problems of living are being attacked, there is to be observed this striving for superiority, this striving for power, and you can properly understand the particular reaction of the moment only if you

* Being an address delivered at a special meeting of the Association held in London on November 15, 1926.

realize the existence of this fundamental under-current. A symptom can only properly be distinguished and recognized when it is defined as an incidental object in the general current of the striving towards a goal of superiority. The goal of a normal man is easily appreciated, and we can realize that he has, in the main, three great problems to solve.

The first of these is the ambition to mix with, and be accepted by others. This is the problem of social relationships, the desire for fellowship; to take some place in the world of men. The approach to other men takes devious routes, but if we fail to find the actual social ideal of any one individual, we can yet judge by how much he falls short of the normal achievement in regard to this first question of life. For example, he may have no friends, or he may not interest himself in societies or in social functions, or he may have a positive distaste for companionship. You can, in this way, measure approximately the failure of achievement in this direction, and it is noteworthy that in the case of the neurotic, the degree of failure is usually very marked. So, as you can imagine, he must have another goal, and, in consequence, he is always trying to escape from the right, the normal, aim of social life.

The second problem which is always before us, and which cannot be avoided without increasing the difficulty of solving the first, is that of occupation, and the two are not wholly separated. The problem of occupation resolves itself literally into—"How can I be useful to the whole of mankind?" Every occupation, so-called, is a beginning of this trying to be useful, to live on the useful side. To be useful induces a feeling of great confidence and well-being, and the person who feels useless is always more or less shy, he feels himself isolated, and finds great difficulty in carrying out his work. As I have already remarked, this leads us to suspect the presence of another goal.

The third problem of life is that of sex. People live together in two sexes, and so an aim with everyone is to unite with someone of the opposite sex as a partner. This solution is the normal one; it is the normal goal for everybody. The degree of failure of achievement of this natural solution will always betray to what extent the problem is being evaded. If you ask what reason there can be for such an evasion, I reply that throughout the whole world there is one reason for it: it is a lack of self-confidence, a lack of courage; in the mind of the individual concerned there is the idea that he cannot reach this goal. You will realize this if you consider your experience of neurotic subjects. The question at once arises as to how it has happened that some people—many people—have

such a fear, so much so that they are averse to trying to solve this problem in the natural way.

I come from work in the pathological field, and in connection with psychological questions I have always noted that one of the most important reasons for such a lack of courage is the existence of an organic burden in childhood. Delicate children differ very much from the healthy in their view of the world, because they suffer from organic deficiencies and defects; they do not eat and assimilate as easily, they cannot see or hear so well, they have troubles due to abnormalities of the endocrine glands. To such children the world is a great difficulty, an embarrassing problem, yet in the first years of their life they must arrive at some answer. The attention the child has to give to the world shapes for him his style of life. He experiences the difficulties and the burdens of his own body, and these make a great impression on him. The investigation of the adult life of such children convinces me that these burdens are remembered.

I hope I may succeed in presenting the matter so that you may see how the whole attitude throughout life is based on what takes place and on what is the equipment in childhood, in short, on this feeling of personal inferiority, and that that feeling, in the case of children burdened with physical defects and deficiencies, is greatly intensified. We have to remember that these defects, in many cases, are inherited, and, therefore, there arises the question of the relation of inherited defects to the development of the character. However, the character is not everything. Even the ordinary child suffers in a difficult situation, and if he has disturbances of vision or hearing, or some similar disability, he feels his efforts are futile. In all cases there is a relationship between the child's defects and the particular problems that confront him in life. I have come to another conclusion also. In considering the lives of children in general, it appears to me that there are two situations which are peculiarly inimical to normal development. One of these arises where the child is made to face greater difficulties, in which case there is a greater feeling of inferiority. The other is concerned with the process of "spoiling," which is much worse. Such a child is always leaning on another person. He lives in a symbiotic manner, like a parasite, and he receives everything from others. As a consequence he cannot develop a normal style of life, for he is always demanding and receiving, and he never feels the necessity for using his own powers. If a child, or an adult, never attempts to stand alone, he always lacks confidence and courage, and we are justified in regarding such spoiled children as not properly prepared to meet the constantly changing situations of life.

If you inquire into the goal of such children, *i.e.*, those with organic deficiencies, or those who have been spoiled, you will find that their aim is to overcome the difficulties of life in the most complete fashion. They are not satisfied with that to which the normal child aspires; for them there must be no less than the complete command of the situation, an absolute security, and their demands upon others are unlimited. You will agree that this is a habit, or an attitude, which does not make for happiness in our life upon this earth. If you ask your nervous patients you will find, very often, that they have begun in such a way, as spoiled children, and the two types I have mentioned are very often combined. Sometimes it is impossible to educate the delicate child without spoiling it, and better methods are needed. As a rule, the custom is that, as regards education, no distinction is made between the abnormal and the normal child who has the normal goal, which is to mix with others, to be useful, to give and not always to receive and to demand. For the abnormal as well as for the normal child, however, new situations must continually arise. With every change the child, as it were, makes an experiment in adaptation, and it is obvious to the observer, as it no doubt is to the child, that the experiments are mainly unsuccessful, for children such as we have in mind are not capable of independence, of working with others for a common usefulness. As a consequence, the abnormal child will always be torn with conflicts.

I may describe a third type, the hated child, the child who grows up without warmth and love, very often illegitimate, or at any rate unwanted, and it will be apparent to you that for such a child the world is to a great extent comparable to an enemy country. He meets with nothing but enmity; kindness and love are unknown to him, and he experiences nothing but insult and attack. It follows that children of this type develop what may be termed a defensive attitude; they have no desire to join in with the efforts of others, and they have no wish to be useful in a hostile community. Thus, they also are always in a situation of conflict.

The general reactions of the third type are the same as those of the first and second; they are unhappy in school, in work, and in love, and they always feel restricted. The only satisfaction for them is to feel superior to every other man, to conquer, to be the first, to be God-like in their power and domination. They have no patience, opposition irritates them, and they feel that by any means they must defend themselves, justify themselves morally, and shine in the highest sphere. To accomplish this they adopt the only possible course of restricting their environment, for they cannot hold complete sway in the whole of society, where they feel

that their efforts are being curtailed. They evade occupation, and they evade love; their eccentricities are always signs of evasion, but those signs, or we may say symptoms, of the attempt to escape the solution of the three questions of life are not always obvious, for patients as well as others will justify their attitude to themselves by rationalizations. I have never met a man who frankly said, "I do not want to mix with others," but I have met many people who told me, "I cannot go into society because the people are so bad; the people around me cannot appreciate me, and they are distasteful." I have never seen such a man frankly avoiding occupation; he will only say, "I am tired, I cannot sleep, I have a headache," or "I have symptoms which hinder me from making up my mind in this matter." Another will say, "This occupation is not good enough for me; I must have something better; I have not a good memory," and so on, while another may say, "I cannot concentrate." Such are the justifications for evasions, but we physicians know there are no real reasons for these "symptoms."

Now I should like to say a few words about the appearance of symptoms. Symptoms do not arise suddenly in a night. There is always a long period of development which can be traced back, often to childhood, and I have found that the history of the case invariably indicates such antecedent situations as we have considered in the three types of children. For instance, the spoiled child will always tend to cling to the individual who spoils him; as a rule this is the mother, and commonly these tendencies are apparently prompted by anxiety. With nervous people this symptom is always in the foreground, for they are always attempting to justify the carrying out of their wishes by commanding other persons on the grounds of their anxiety. People who cannot be alone, who have agoraphobia, require and command that another person shall be with them, and this other person must obey—his life is ruled and ordered by the patient. If the neurotic person has a headache, all the family must be silent, must obey, must take care not to irritate him. There is constantly this striving for superiority and for domination by any means, however petty, and we can understand some of these symptoms, because they are nurtured and developed in childhood. In some cases the symptoms arise from a condition of emotional tension, and to thwart such a patient induces an almost inconceivable reaction of depression, even to the extent that there may be an attempt at suicide. Even in their play such individuals are very deeply moved emotionally, and it is only by realizing their life aims that we can appreciate the subjective disturbance.

The foregoing is a short description of the tendencies among

nervous persons. In every single reaction you can recognize the attitude to life if you have previously grasped the distortion of the personality. I am only in agreement with the whole current of medicine when I insist that we cannot treat symptoms; we can but treat the individual, and, in this matter, to be of any help you must change the whole attitude to life of the individual. So long as the patient persists in his morbid attitude, you cannot get rid of the symptoms. It is not sufficient to treat the consequences of a fault; we must go deeper, and perhaps I can show you, by relating one or two cases, what I mean.

I will cite the case of a young woman, 26 years of age, in good bodily health, who had been suffering considerably for about a year from agoraphobia and depression. She dated the onset of her trouble as a year ago in time, but, as is usual, on inquiring more fully I found that the symptoms really originated in a change of her life situation. When I asked this young woman what had happened a year before, she said that she had then become a mother for the first time. The connection is not at once obvious, but it is soon clear that such an event is full of possibilities in the hands of a spoilt person. Such an individual always aspires to be the centre of attention; the coming of a child of her own makes the difficulty the greater for her, and sometimes neurotic symptoms will commence from the time of the first confinement. In this case, however, that was not all. When I hinted at the point, she told me this story: "I like my husband very much, and he likes me also. He went away to Paris three days after my confinement. He amused himself there, and I have intended going to Paris in spite of him. I was very angry." Another point was that this woman had, as very often happens, a very annoying and foolish mother-in-law. She was a very critical woman, and the young wife was the spoilt child, the only child of very weak parents, and she could not tolerate this new situation. She often cried and became very angry when her husband showed a disposition to differ from her. They frequently quarrelled in spite of the love they had for each other. It appeared to me that when the child came, and the husband went off to Paris, she felt that the time had come to re-assert her own position. She no longer felt herself to be in command, to be the first and most important person and first in her husband's love. The husband loved the child very much, and took a great interest in it, and she became more and more irritable and also very depressed. It was clear to me that what she did then was a repetition of what she had done in her childhood: she aimed at being the centre of attention, feeling herself displaced, she developed anxieties, so she suffered from an anxious depression and forced

the husband to be with her always—an indication which enables us to understand her actions. She could not go on a tram, and she could not travel by train, but she could drive in a car. The point of that is easily seen if one bears in mind the underlying aim. In the train or in the tram the passenger is one of many: definite stopping-places are arranged and individual rights must be subordinated to the rules laid down, but with a private car the route and the stopping can be controlled. People constituted in the manner of our patient always feel they can "travel by car." This little characteristic is typical of the whole attitude to life. There is the feeling of superiority, the God-likeness, the desire to dominate, to be always first. Such signs should always be carefully noted, they are very informative, and indicate clearly in what direction the general attitude of the patient is tending. This woman came into the sanatorium, which is often in itself an ameliorating situation, because to be in a sanatorium is to command much weight of sympathy. The whole family is probably much more amenable when one is in a sanatorium. While she was there our patient improved considerably, but when she returned to her home she had a bad relapse. It appeared that in the sanatorium she found a physician whom she regarded as a very charming man; he flattered her, and was always attentive to her; she responded to him, and she regarded herself as on close terms of friendship with him. When she left the sanatorium she wrote him a letter full of kind thoughts and good sentiments, to which she had no reply, and from that time her symptoms increased, for she then became convinced that she could no longer make an impression on other men. In her phantasies there was always the fear that she had lost the capacity of attraction for men. She had never put the matter to the test of experience, but she always complained of such fancies, especially as they were accompanied by sexual irritation, and these irritations gave her a new reason for feeling depressed. By this time she had built up a guilt complex, concerning which she was very reticent; she had spoken to no one about it except myself. Still, she always felt guilty about it. This guilt complex could feasibly have been the cause of her depression and her illness, but if it be closely examined, it is clear that it constituted an excellent means of overcoming the husband. She was in a menacing mood, for she said, "I could betray my husband, because he has left me, he does not now flatter me as he used to, and is not so attentive to me." In the logical sequence of events it is only one more stage to the betraying of the husband, and the actual breaking of the marriage tie. I have always found this breaking up of the marriage tie to be an act of revenge against the partner.

In other directions, too, there were further indications of her attitude to life. For instance, if she had a quarrel with her husband her feelings would be expressed. She dreamed once on these lines : " Once I was going shopping with my friend, and I met this physician, but he did not want to greet me." I read this to mean that after this quarrel she had the desire to meet the physician. She held back, not because she was too chaste, or too modest, but only because she feared she could not make an impression on him. So, though she was a very beautiful woman, she had lost her self-confidence. Her whole demeanour showed that she feared defeats and rebuffs. There was, in fact, a feeling of great inferiority. She said, " I am only sure when I am with my parents or with similar people, when I feel this great warmth, this great love. I have been defeated by my husband, and now I have been defeated by the physician, so now I can only command in a restricted field, that is, in my family circle, where I can dominate my husband through my agoraphobia, and by means of my depression."

As time is short, I will conclude briefly. The development of such an attitude to life can be prevented. The best course is to begin in childhood, to avoid spoiling the child, and not to overlook deficiencies in various organs. The aim should be to make the child independent, to make him free, to give him enough self-confidence and courage. Every effort should be made to give such children enough courage to develop their social feelings, to be useful, and not to be terrified by the other sex, and if this could be done, there would be no more nervous adults. If the patient has reached adult age, he must be re-educated and given a fresh start. The patients must be approached with affection; the attitude of the physician must be parental. They must be stirred to the depths of their personality; they require honest and frank handling and no demands should be made upon them; one should simply seek to strengthen their courage, so that later they may feel independent.

In the treatment it is of the greatest importance to find out what mistake has been made in the past, to show what has been to blame for their neurotic attitude to life, to expose the connections between that attitude and the symptoms. The symptoms always fit the case. The nervous patient can be understood only if it be recognized that his behaviour harmonizes with his symptoms. When he has been convinced about this, then his personality will change, and with the change will come a new determination towards life; his neurotic tendencies can then be said to have been cured.

Prognosis in Schizophrenia. By EDWARD A. STRECKER, M.D., Professor of Nervous and Mental Diseases, Jefferson Medical College, Philadelphia, and Medical Director, Pennsylvania Hospital, Department for Mental and Nervous Diseases, Philadelphia; and GORDON F. WILLEY, M.D., Senior Assistant Physician, Pennsylvania Hospital, Department for Mental and Nervous Diseases, Philadelphia, and Instructor in Psychiatry, University of Pennsylvania, Graduate School of Medicine, Philadelphia.*

INTRODUCTION.

PROGNOSIS in psychiatry, and particularly in schizophrenia, is in a somewhat chaotic condition. The dearth of literature concerning prognostic landmarks is convincing evidence as to the truth of this assertion. For many years an unadulterated pessimistic outlook was almost a psychiatric boast. While such an attitude is no longer general, there still tends to be a more or less rigid dependence of prognosis upon diagnosis. Sometimes, and perhaps often, this dependence is so slavish that in a given case a favourable result is interpreted as a sure signal for diagnostic revision.

There are at least two reasons for the persistence of this fatalistic conception. In the first place, it should be freely granted that in general dementia præcox is not a benign psychosis. While, without doubt, prognostic hopelessness would be much lightened by the inclusion and careful consideration of early schizophrenic situations in which definite psycho-pathological and mayhap somatic reactions are clearly at work, though they have not progressed to obvious psychotic entities, yet in spite of this it is too true that deterioration does appear in a strikingly large number of patients. Therefore, a considerable percentage of the unfavourable predictions which are made may be referred to sound psychiatric experience.

The second reason is less valid and less imperative. It dates back to the period of purely formal and objective psychiatry. Modern and so-called dynamic psychiatry is so deeply indebted to this period, whose usefulness has not yet passed, that one hesitates to point out its deficiencies. However, it will be recognized that the descriptive method needed sharply defined material to describe. Therefore it had to deal largely with well-advanced

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psychotic phenomena. Naturally, dementia præcox became restricted to a clinical group, which almost always was synonymous with chronicity and deterioration. In this way diagnostic and prognostic criteria were continuously narrowed, and given the guise of infallibility which they never possessed.

Is Complete Prognostic Pessimism justified?

In order to give a prognosis with authority, one must be able to call upon reliable, unmistakable and crystallized diagnostic criteria. Such surety of knowledge is rare alike in psychiatry and internal medicine. In the latter field, tubercular meningitis with the bacillus of Koch and other evidence in the spinal fluid may be cited as a disease in which a bad prognosis is justified. In psychiatry, perhaps, paresis furnishes another legitimate example. But surely the diagnostic picture in schizophrenia is nothing like as clear nor are its clinical manifestations as exact. As a matter of fact, it would be difficult to name a morbid condition whose boundaries are more vague and inexact and whose clinical criteria are more fluid and changeable.

Clinical Limits of Schizophrenia.

Since diagnosis and outcome are apt to be regarded as more or less inseparable, it may be permissible to review briefly the clinical limits of the psychosis which is under consideration. As a clinical entity dementia præcox or schizophrenia rests on a very insecure foundation. Uncertainty and even total divergence of opinion in regard to ætiology has made for constantly shifting diagnostic criteria. At the Round Table Conference for Clinical Psychiatry of the American Psychiatric Association in 1921, a representative group of psychiatrists were unanimous in refusing to commit themselves to the mention of a single symptom which was surely an index of malignancy.

Kraepelin's conception of dementia præcox is too well known to require reiteration. Although rigidly objective, its value within certain limits is unquestionable. Perhaps a fair criticism is that he has made the association between præcox and catatonia altogether too binding. If we are to accept this relationship, then we cannot concur in Kraepelin's inevitably bad prognosis. To Stransky the basic element of symptomatology is intrapsychic ataxia, which has led to the designation "schizophrenia." By intra-psychic ataxia is understood "a disturbance of co-ordination between the intellectual attributes of the whole psyche and the

affective attributes." There is disharmony "between the expression of affect and the idea content of thought. For example the patient cries when he should be glad, or *vice versa*, though much more common than this contrasted reaction is an affective reaction which is inadequate—the patient merely simpers or smiles when the facts would warrant sadness or hearty laughter." Hoch postulates a particular type of dissociation: "In it there is an acceptance of what should be painful ideas evidenced either by incomplete manifestations of anxiety or depression or actually by smiling. We never see in dementia præcox the reverse—a painful interpretation of what would normally be pleasant. It is the pleasurable interpretation of what is really unpleasant that gives the impression of queerness in the mood of these deteriorating or chronic cases." Meyer emphasizes the affective alignment or contrast as determinants. Bleuler finds that the intra-psyche ataxia of Stransky is only a part of the splitting of the psyche. Negativism is a pure exhibition of such splitting. At the bottom of the degradation of attention and interest is emotional deterioration. Kirby's elementary description of schizophrenia does less violence to the various symptomatic notions than any we have been able to discover. Briefly there is a seclusive personality or "one showing other evidences of abnormality in the development of the instincts and feelings" . . . "defects of interest and discrepancies between thought on the one hand and the behaviour-emotional reaction on the other" . . . "gradual blunting of the emotions, indifference or silliness with serious defects of judgment and often hypochondriacal complaints, suspicions or ideas of reference" . . . "peculiar trends" . . . "fantastic ideas" . . . "odd impulsive or negativistic conduct not accounted for by any acute emotional disturbance or impairment of the sensorium" . . . "autistic thinking" . . . "dream-like ideas" . . . "feelings of being forced, of interference with the mind, of physical or mystical influences, but with retention of clearness in other fields (orientation, memory, etc.)." The four chief clinical forms, which, however, are often only transitory stages, are the paranoid, characterized by "prominence of delusions, particularly of persecution or grandeur, often connectedly elaborated, and hallucinations in various fields"; the catatonic, "prominence of negativistic reactions or various peculiarities of conduct with phases of stupor or excitement, the latter characterized by impulsive, queer or stereotyped behaviour and usually hallucinations"; the hebephrenic, "prominently a tendency to silliness, smiling, laughter, grimacing, mannerisms in speech and action, and numerous peculiar ideas, usually absurd, grotesque and changeable in form"; and the simple,

"defects of interest, gradual development of an apathetic state, often with peculiar behaviour, but without expression of delusions or hallucinations." This phase of the subject might be pursued indefinitely, and finally we might cite extreme points of view such as that of endocrine dysfunction, primary in the sex glands, secondary in the brain, which is not greatly concerned with the mechanism of disassociation of the psyche or the theory of focal infection, which practically ignores it. However, we have gone far enough to indicate that the clinical territory of schizophrenia is still very uncertain, and its limits are loosely placed.

On the whole, the true state of affect probably constitutes the safest index of prognosis. There is fairly common agreement among psychiatrists, that if the emotional life continues to flow in counter currents, is absolutely at odds with the thought and the behaviour and the remainder of the psychotic content, or is strikingly inadequate, then we have presumptive evidence of a chronic, deteriorating and malignant process. However, we should if possible be convinced that *the disharmony or diminution is actual and fundamental, and results from the unfolding of a basic psychopathological mechanism.* Such is the inadequacy of our clinical resources in judging affect, that frequently this determination cannot be made with any degree of surety. Affect cannot be measured as can, for instance, the output of urine. We are obliged to rely on observation and on the significance of the word and behaviour productions, which come to the surface much distorted, and which, unfortunately, usually permit of varying interpretations. This thought brings us to a statement of the chief premises of our study.

Premises of the Prognostic Study.

If possible we should like to disarm criticism by meeting it in advance. A recovery-rate of slightly more than 20% which is reported in this study no doubt will occasion valid objections. The high recovery-rate is only partially explained by the fact that the clinical material is from a private hospital, where considerable selection is exercised before admission as to acuteness and the favourable aspects of a psychosis. In addition to this we are entirely willing to admit that a percentage of diagnostic error may have occurred. It may be somewhat paradoxical to state in this connection that a measure of *possible* diagnostic error is needed if one wishes to attempt to unravel the prognostic tangle of schizophrenia. In other words, if the objective is to ensure absolute accuracy of diagnosis, then symptomatic criteria must be so rigid that they will be restricted to practically a single phenomenon,

namely deterioration of sufficiently long duration and of such gross type, that chronicity and malignancy are expressed in the unmistakable characters of true dementia. Needless to remark, we have not adhered to any such inflexible judgment. We were exceedingly careful in each case to found diagnosis on definitely established and generally recognized criteria. On the other hand, diagnosis was never revised because recovery occurred. Our effort was not to split diagnostic hairs, but to arrive at a prognostic index of psychotic reactions which would be regarded as schizophrenia in the mature judgment of competent psychiatrists.

A second objection which might be brought forward could refer to the fact that our analysis of pre-psychotic situations or psychotic signs often only served to show that we were *not* dealing with basic malignancy, but with a remarkably close simulation produced by a combination of extraneous or even internal circumstances and factors. Here again we plead guilty, and the justification is the same—that is, that the value of a prognostic research lies chiefly in its ability to uncover dementia præcox reactions, or if preferred, *præcox-like* reactions which are recovered from, and to discover how and to what extent they differ from those types which eventuate in chronicity.

Method of Approach.

We were anxious to select a single method of approach which would promise the most fruitful return. During the past decade, and even before it, a great deal has been written about "constitution" in schizophrenia. By it is understood "make-up" in a broad and very comprehensive sense—the organic and psychological make-up of the individual who develops or is apt to develop the psychosis. In this field the contribution of Adolph Meyer is outstanding. Gibbs, Lewis and many others have made meritorious efforts towards the delineation of somatic schizophrenic characteristics. There seems good reason to believe that eventually such studies will result in the recognition of a more or less distinctive type—basically schizophrenic. This will be of concrete value in prognosis, since it will separate a fundamental and intrinsic group quite different from the group in which extraneous and sometimes accidental factors are at work in imparting a clinical impression of malignancy to benign psychotic reactions. As the *résumé* of our studies is presented, it will be noted that perhaps they have succeeded in partially defining a class of patient, clinically rather typically schizophrenic, but on analysis, either in themselves or in their psychoses, susceptible to explanations which

revealed the disease process as other than basic and constitutional. Unfortunately the researches on constitution have not yet reached a point where they may be utilized as a complete method of approach.

The method of analytic interpretation of psychiatric trends—the unravelling of material coming to the surface as a portion of the psychotic content (words, postures, gestures, facial expressions, drawings by the patient, dreams, etc.), at first glance would seem to offer a tempting field, whose industrious exploration should yield valuable prognostic finds. Theoretically one should, according to the technique of psycho-analysis, be able to measure the amount and type of conflict and striving, the depth of regression to various levels, and thus, ultimately, the likelihood of recovery. We hesitate to make pronouncement concerning an aspect of psychiatry about which we may not be competent to judge, but we have the impression that the language of archaic symbolism which is most important in arriving at prognostic conclusions is at this time scarcely lucid and exact enough to admit of general clinical use. In other words, the body of knowledge which has been acquired is hardly sufficient to yield constant prognostic criteria. It may be that in other hands this plan of study would have been more fruitful, though we have not yet seen convincing evidence of its application, except in isolated case-reports. These sentences are not written in a critical vein at all, and we are fully cognizant of the impetus which the so-called “new psychiatry” has given. No doubt the future will bring even more important contributions, and in this way helpful prognostic guides may be furnished.

Thus by exclusion, and by a tentative testing of our case-material, we finally adopted what might be called the “long-section” method of clinical study as the most useful for our purposes. Practically, it is the plan utilized by Hoch and McCurdy in their contribution to the prognosis of involution melancholia. However, we have elaborated it to a considerable extent, and have not confined ourselves to a scrutiny of the psychotic content.

The scope of the investigation included certain statistical information, such as age, civil condition and nativity. Racial differences favouring the development of unusual psychotic trends were kept in mind. Family history was searched not only for the existence of abnormal types, but also for the presence of influential character traits, which might have been inherited by the patient and later have become dynamic enough to modify and distort the clinical expression of the psychosis. The personality was carefully reviewed on account of its intrinsic importance from the standpoint of prognosis. Certain idiosyncrasies of make-up, as for instance

seclusiveness, or even suspiciousness, are ordinarily regarded as suitable "culture media" for the growth of "malignant" mental illness, and in this connection an effort was made to discover whether such propensities were actually inherent in the individual, or whether they were artificially introduced and fostered by environmental circumstances. Furthermore, it is conceivable that the personality might be dominant enough to mould the symptomatology into peculiar forms, so that common diagnostic marks become of little avail, and prognostic judgment is apt to go astray. The physical pre-psychotic state was considered and appraised. The precipitating situation was retrospectively measured, its somatic and psychogenic elements, its acuteness or chronicity, and the possibility of its correction were considered. One of the queries proposed was: To what extent do the mental symptoms reflect the motivating extraneous happenings which antedated them, and may their unfavourable type be explainable as a disguised but nevertheless more or less logical response to the precipitating conditions? The onset was reviewed in regard to its abruptness, physical accompaniments and the setting in which it occurred. At this time, when resistance was at its lowest ebb and inhibitions were presumably much diminished, was there the intrusion of incidental factors which later imparted a false appearance of chronicity to the psychotic content? Finally, all the somatic and psychic phenomena of the mental disease itself were taken into consideration. There is, we believe, a tendency to underrate the former, and yet even mild toxic states may produce many obstacles which stand in the way of a true evaluation of the various elements which make up the mental state. Two symptoms in particular, stupor and disturbance of affect, are extremely difficult to judge correctly. The boundary line between "benign" and "malignant" stupor is not at all sharply defined, and there still remains much unexplored territory. Again, our methods of testing emotional resiliency and depth are markedly restricted. Slight disturbance of consciousness, racial or even individual habitual inadequacy or peculiarity of the expression of feeling may prevent moving affective trends from reaching the surface in a form which is likely to be rightly interpreted by the observer. Nevertheless, on the accuracy of the estimate of affect frequently depends a valid prognosis.

STUDY.

General Statistics.

One hundred and eighty-six patients, consecutive admissions, were subjected to this intensive study. They can be divided into

two groups, "recovered" comprising 38, and "not recovered" (improved, stationary or deteriorated), 148. The material is not recent; has been well worked over and the cases followed, so that mere remission of symptoms is excluded by the fact that the average symptom-free period of the "recovered" group is now upward of five years. Space forbids the presentation of cases in any detail, and in lieu of this, brief examples bearing on the points at issue will be given as the subject is expanded.

Not only for the sake of simplicity, but chiefly because no great difficulty was encountered in classifying the patients as catatonic, hebephrenic, paranoid and simple, this nomenclature was adopted. The recoveries included catatonic 18, hebephrenic 8, paranoid 12, and simple none. In the total list there were catatonic 45, hebephrenic 49, paranoid 85, and simple 7. This notation adds nothing essential to prognosis. The comparative frequency with which catatonia clears up has been noted by many writers. Further on, we will attempt to point out certain conditions which seemingly may determine a catatonic colouring and give the case a particularly benign aspect. The same will be shown to hold good, though less emphatically, for a few hebephrenic and paranoid syndromes. The average age of onset of the recovered group in each type was as follows: Catatonic 28 years, hebephrenic 24 years, paranoid 35 years. The civil condition in each group was: recovered—single 27, married 10, divorced 1; not recovered—single 73, married 65, widowed 4, divorced 1.

Race.

The first question of prognostic interest which we feel has not been sufficiently emphasized concerns race. Prominently among the catatonics in the favourable group there was a relatively high proportion of unassimilated Jewish patients, and another type belonging to that small division of Pennsylvania German stock, which, in spite of long residence in this country, has remained distinctly alien.

All authorities stress the essential and basic differences between the Jew and the Christian. Myerson particularly calls attention to the strong individuality of the Jew, but insists that this and other distinctive traits are due to the gradual narrowing of the sphere of activities enforced by the hostile attitude of society, so that he developed an urban, sedentary and cerebral character at the expense of his body. The oft-repeated observation that seemingly malignant psychoses show a high recovery-rate in the unassimilated Jew, if analysed, may probably be reduced to the likelihood of clinical

error which comes from our inability to gauge accurately habitual modes of reaction in an alien race, particularly when further complicated by a psychosis. Naturally, the appraisal of the kind and degree of affective trend is apt to be the more accurate the greater our familiarity with the subject. Thus, in our family and intimate friends we readily learn to discover the presence of certain feeling tones on slight observational evidence, which criteria, if applied to strangers, would be valueless and even misleading. Therefore, it should be expected that certain races and nationalities whose habits of life and characteristics are more or less akin to our own are emotionally much more understandable than those who are alien in manner and custom. The immigrant Jew, by virtue of unusual racial, historical and personal environmental factors would seem to belong to this latter group. It has been our personal experience, which we have heard confirmed by a number of psychiatrists, that a higher percentage of malignant-like psychoses seem to recover in the Jew than in any other racial or national classes. We feel that such a consideration is involved in four of our patients.

As has been stated, in addition to the purely alien type, there are groups of individuals who have retained more or less distinguishing characteristics, even though they have lived in this country for many generations. This is perhaps true of that small fraction of Pennsylvania German stock which remained isolated in rural communities, and perhaps by intermarriage and restriction of outside contact strengthened a common feeling and bond of self-sufficiency, distrust for the opinions of others, and an inflexible opposition toward new customs. Two of our patients belonged to this class.

Family History.

Probably our study was not of sufficient statistical magnitude to reveal differences in heredity between the recovered and the chronic groups. On the basis of mental disease, alcoholism, epilepsy, criminalism and other degenerative influences in the ancestry there was little variation, each averaging about 35% unsound stock. However, close attention to the family records revealed two instances in which mental disease in a parent seemingly influenced prognosis. We take the liberty of citing a single case in some detail, because it illustrates the indirect influence of heredity in creating a type of unfavourable environment to which the patient was exposed during the formative, imitative and suggestible years of childhood. Whatever may have been the nature of the psychosis from which she suffered, it *should* have been expected to

show a schizophrenic colouring, since the material from which it drew upon for its content came from close association with a true case of dementia præcox. This important fact should have been weighed in arriving at a prognosis. The presentation of this case may serve also to indicate our general method of attack and historical analysis.

Female, æt. 35, single, and born in Pennsylvania of American parents.

The patient was the second of three children, and following the birth of the youngest the mother developed acute mania (?), which merged into a chronic psychotic state, marked by paranoid ideas chiefly centred in her husband and persisting until her death at fifty-four of diabetes. Five maternal aunts and an uncle were alike artistic and "highly-strung." The father had tics.

The patient's personality was a helpful one. She was vivacious, eager and friendly, energetic and thorough, optimistic and philosophical. Her principal handicaps were self-consciousness and a tendency to introspection. Education was obtained in both public and private schools, amounting to the equivalent of a college preparatory course. The study of music began at six, and was probably a constant source of pleasure and relaxation. She taught kindergarten, was very successful in her chosen work and "handled children well." At the age of nine she had an injury (the details of which are lacking), and was "upset and nervous" for a long time after, but regained and maintained normal health.

The immediately precipitating circumstances have to do with overwork, gradually waning health and strength and loss of weight. The recital of these bare facts constitutes merely a statement of the culmination of a long history of deterrent influences which reach back into early childhood. Though remote, they are not only well authenticated by the historical account, but their motivating power is clearly emphasized by the content of the psychosis. From her babyhood until the early thirties the environment in which the patient lived was excellent culture material for the growth of mental abnormality. The mother was insane and the victim of many delusions, and there was constant friction in the household. She did not escape from these depressing surroundings until three years before the psychosis appeared, and it is clear that the single year in New York where she taught kindergarten was perhaps the most satisfactory of her existence. "She was happy and contented and had many friends and recreations." However, the mother died, and though a conflict between desire and sense of duty must have arisen, the patient, nevertheless, promptly returned to her home, where for three years she was "dissatisfied, unhappy and overworked." This was the opinion of her brother, who saw beneath the surface, but at the same time he states that although "she disliked housework, yet she did it cheerfully, repressing her feelings." During the psychosis, when inhibitions were lowered, the patient said, "Father and brother expect me to get strong and wait on them for the next thirty-five years."

The objective phenomena of the psychosis appeared abruptly. She became worried, talkative and erratic and visited the neighbours with a bottle of medicine which the physician had ordered, asking their advice as to whether it would be safe to take it. She was flighty, and had difficulty in completing sentences. "A few days later she had a sudden excitement, was noisy and fearful, had visual hallucinations—saw imaginary faces at the windows. Now has ideas of persecution. Accuses her father of hypnotizing her. Mistakes the identity of persons. Is often disoriented for time and place. Has crying spells."

The psychosis, which had a 14 months' course, recalls her mother's mental disease by its division into acute and chronic phases. For several weeks there were acute manifestations—objectless over-activity, shrieking, grunting, hawking and expectorating to rid herself of the "black stuff" in her teeth, visual hallucinosis, a paranoid delusional trend—her father had "wished something on her," she had been made "crazy," there were "no friends," "only fends," etc. There were episodes of posturing with closed eyes and mutism. These symptoms stood out from a background in which there was no discernible trace of affective accompaniment, and a diagnosis of catatonic dementia præcox was made.

Although the emotional component remained more or less formless, the delusional

direction of the psychosis came more clearly into view. Her mind was being "read" by doctors and nurses, she was in the hospital for "research," felt "harnessed like a horse"; someone was "using" her mentality; she referred to the "code of ethics of those who have me in charge," and "a consultation of the people in charge of me"; thoughts were thrust upon her mind and she was pulled like a rubber exerciser; she was in the hospital for a purpose; there were wires under the floor; while she was talking her mind was doing something else, and she "could not control" her muscles and gestures. Auditory hallucinations both broke in on and repeated her thoughts. She frequently asserted that she was married, and once declared that she was pregnant and hoped the child would be a boy. Memory was good, orientation not more than partially lost, if at all, and the sensorium not obviously disordered. However, something had "dropped" in her head and it felt "muddled." While the signs of affective currents in the main were wanting, occasionally there was flippancy or weeping; once she buried her face in the bedclothes until cyanosed (presumably, from the setting, a suicidal attempt), and finally, as the mental symptoms diminished, a suggestion of exhilaration.

The improvement was gradual, the recovery complete, and has been held for three and a half years.

DISCUSSION.

To have diagnosed anything but schizophrenia would have left too much of the symptomatology uninterpreted. The few emotional signs never gave the *motif* for the remainder of the psychosis, and the delusions and hallucinations were of the *præcox* type. However, there were threads which connected the content of the psychosis with the previous life of the patient, that might have been more carefully traced, for they would have given the clue to the particular complexion of the mental disease, and left the thought that its forbidding aspects were determined more by extraneous factors than by inherent qualities and mechanisms. Other things being equal, the former is capable of a more favourable prognostic interpretation.

It was evident that the father was the object of the patient's paranoid suspicions, just as he had been many years before the target of her mother's delusions. In this respect, at least, the psychosis obtained its colouring from impressions received in early life, becoming fixed during the formative period and stored up for almost three decades. One may assume that with maturity came clearer understanding and conscious evaluation, and notions which were held as facts during childhood received their proper perspective, but that these conceptions were ever lost is incredible. They were always at hand, ready to burst into activity, and in one sense the psychosis merely swept aside the barriers which education, custom and convention had erected, and there was a ready return to the beliefs of childhood. This was all the more easily accomplished, when the father inadvertently closed the door of the pleasant life which she had discovered among congenial friends and surroundings away from home, and the death of her mother plus her feeling of responsibility made it necessary for her to return

to keep house for him and her brother. This mechanism finds substance in the psychotic incidents, only a few of which may be given. Usually she was suspicious and at times frankly apprehensive of her father; even though the hospital was to her undesirable, from many standpoints, yet she preferred to remain. Once she said, "This insanity is awful; my mother had it before me." Again, "When I argued with him (father) he said I was like my mother. I was glad to get away from him. Always afraid of father because my mother was afraid of him," yet she will live with him "because it is my duty," etc. Does one have to probe very deeply to see in the delusional belief of marriage and pregnancy a method provided by the psychosis to permit escape from an undesirable situation?

A similar situation was at work in another patient whose mother and sister both had mental disease, in all probability præcox.

Personality.

Personality admittedly plays a significant rôle in the problem of schizophrenia. The study of "make-up" must go far beyond mere casual summing up of personal characteristics. This aspect of the individual must be intensively scrutinized, not only intrinsically, but in all its relations in the life and to the contacts of the patient, if it is to be of any value to prognosis. Viewed in this way, it furnished indications which helped to point to a more favourable outlook in at least twelve of our patients.

Meyer made a constructive contribution to psychiatry when he emphasized the "shut-in" make-up in his conception of dementia præcox. Other authorities have repeatedly dwelt on its frequency, so that the fundamental relationship between the personality which withdraws from socialization and schizophrenia is now well established. However, we may, perhaps, differentiate between what might be termed a constitutional "shut-in" type and one which is the product of environment. The former develops in spite of normal surroundings; the latter is a feasible defence against definitely inimical reality. Other things being equal, the first argues for an unfavourable prognosis; the second does not necessarily weight the balance against recovery. We felt that we were able to make such a differentiation in the case of two of our patients.

The first patient was markedly seclusive in her own family circle, but on analysis this seclusiveness resolved itself into a not wholly illogical tendency to withdraw and escape from hopeless home conditions which constantly threatened to engulf her. Toward those who stood outside the family circle, and particularly those who had educational assets which placed them in a relatively superior position, she was not seclusive. On the contrary she was demonstrative, craved affection,

and formed passionate attachments for them. Presumably the patient was the highest product of a very diseased family stock, and from childhood sought to raise herself above its low and sordid plane. The personal weapons which were unconsciously forged to accomplish this purpose were ambition, a love of the dramatic and affectation, which may be evaluated as child-like imitativeness of those whom she admired. Thus in one sense we may view the personality, particularly the seclusiveness, as a logical defence against an inimical environment. It provided an avenue of escape by making it possible to substitute unreality for hard and unpleasant reality. During the psychosis, which was quite schizophrenic in its symptomatology, there was the persistence of the wish to cut herself off from her family. She regressed to an infantile level in her behaviour, but several times said, "I am out of a book."

In the second patient there was likewise seclusiveness, but again it was clearly a refuge from the hard facts of the patient's life.

The patient, at 17, lived on a remote farm; existence was rigid and monotonous, the father denied the family necessities, and was of that type of stern, unbending religion which regards beauty as sinful and reverses ugliness as a virtue. Even the mode of dress was prescribed, and a drab and shapeless garb had to be worn. The defect in socialization reached a high degree, and at 20 the patient was typically "shut-in" and remained seclusive for eight years. During a rather typical schizophrenic psychosis this withdrawal was pronounced. An excellent recovery was obtained. The pre-psychotic mental isolation should have been regarded as a logical reaction, the only available protection against, and compensation for, an unnatural environment. In one sense the patient's withdrawal from the situation in which she found herself (at an age when there must have been both physiological and psychological stirrings which could not find satisfaction or adjustment in the surroundings) was an effort, not so much to seek relief in unreality, as it was an attempt to hold on to the worth-while things of reality. The reticence during the psychosis may be thought of as the result of habitual behaviour, which finally had become productive of real inability to meet the demands of any kind of society. There is reason for giving the entire reaction such a valuation, instead of assuming the more complicated mechanism which underlies schizophrenic isolation.

We may now briefly refer to three patients who recovered from what seemed to be clear-cut catatonic præcox reactions. In each patient there was evidence of a disposition which might be described as stubborn. It comprised a marked opposition to the acceptance of contrary opinion and undesirable situations. In one it was probably an inherited or very early acquired trait, and a physical reaction pattern had become ingrained, for "even as a child she would stiffen herself, open her mouth and roll her eyes about if opposed in any way." In another it was clearly the result of a spoiling process in an only child, and reached the point where anger appeared "in the face of the slightest opposition or interference." In childhood the third was "markedly stubborn" and "hard to conquer." It is noteworthy that each of these individuals, when confronted with concrete conditions to which perforce they had to bow (illegitimate pregnancies in two instances, and a serious conflict with a school board in the third), became psychotic, and manifested blind catatonic outbreaks. That this "catatonia" may have been merely the pathological accentuation of prepsychotic "make-up" may be worth prognostic consideration.

In three cases the personality contained a greater or less degree of mysticism. In the first an unusually long retention of the "pretend stage" of childhood merged in the early 'teens into a concentrated interest in Hindu occultism. The second was a firm believer in telepathy, and the third was grossly superstitious and readily influenced. In the psychoses which occurred, apart from other phenomena, the somewhat vague paranoid delusional formation was of the kind which seems to draw its substance from a background of confirmed and unusually pronounced unreality. There is, perhaps, a less serious prognostic implication in the notion that the *præcox*-like direction which the mental disease took was, in some degree, merely the outgrowth of personal habits of belief, and a disintegration of self was not involved in the process.

In three other patients were pre-psychotic sensitiveness and paranoid-like tendencies, increased by complicating life conditions, and in one case an unsatisfactory marriage sharpened the already existing distrust and suspicion. The psychoses were all paranoid with much to indicate splitting. However, they made complete recoveries. The point which is to be considered prognostically is that after all no deterioration of personality was involved, and it provided in each case a foundation upon which was erected, not illogically, the structure of an acute paranoid psychosis.

In reviewing a group of acute psychoses with symptoms resembling dementia *præcox*, Hoch likewise asserts that the personality sometimes places the psychotic symptoms in a favourable light. He says: "Where the history shows difficulties in making adjustments, eccentricities, peculiarities in conduct, suspiciousness and other oddities in make-up, these idiosyncrasies are naturally carried into the psychosis when it appears. Thus the personal history may strongly suggest dementia *præcox*; the delusional ideas and reactions may also be suggestive of a deteriorating type of disorder, and yet we may be dealing with a nearly pure type of acute psychosis, such as a simple depression, into which the slightly odd personality has obtruded itself and has been prominent enough to confuse the picture."

Finally, before dismissing personality, we should like to present in some detail a case in which the mental illness furnished an outlet and temporary satisfaction for a sense of inferiority. We believe that when this occurs the outlook is likely to be favourable, even if the psychosis is schizophrenic in its clinical markings.

Female, single, 29 years old, native born. The maternal grandfather and a maternal uncle were alcoholic. The father was quick, clever, but "nervous,"

and the mother is described as well-balanced, but "deaf" and "not alert." Three brothers and one sister are normal and efficient.

The patient was quiet and not unsocial. The remainder of the personal characteristics seem to have been determined largely by environmental circumstances arising after the period of childhood. The patient did fairly well through the graded schools, although she was not unusually bright. Her ambition led her to do much reading and self-teaching, and with outside aid she finally acquired the equivalent of a high school course. An attempt to teach privately eventually failed, probably because the patient was a pronounced dreamer, and lacked the practical ability to find ways and means to overcome the drawback of an informally acquired education. In order to support herself she had to take a position as sales lady. Always ashamed of the work, she compared herself to her more successful sister and brothers and constantly enlarged an already existing sense of inferiority. How motivating this influence was may be judged by the plaint which came to the surface even at the height of the psychosis—"I didn't want to sell stockings."

The previous physical history was negative.

The precipitating situation occupied a period of at least two and a half years. Its background was constructed of a series of ineffectual efforts to escape mediocrity. She tried to read "deep" books in order to increase her intellectual equipment. From the retrospective psychotic productions it is evident that at this time she had tried for "greater things for years," consoled herself with the vain hope that the work she disliked was merely "a stepping-stone" or felt herself "caged" and "an onlooker." The death of her father resulted in deep grief and a tendency to seclusiveness, and two years later the death of the minister whose church she attended was the occasion of sorrow "out of all proportion."

The onset was insidious. Depression, a desire for solitude, taciturnity, slowness, forgetfulness, lack of interest and incoherence in the letters she wrote developed gradually over a period of almost a year, but she was able to continue to sell goods until a week before the hospital admission. The depression became augmented, there were crying spells, but also episodes of silliness. There were ideas of personal unworthiness and self-accusation. She "influenced" people harmfully and "had a vision to do things, but could not." The "presence" had "departed." The patient had bizarre somatic notions, "coldness in the body and middle of forehead," which she feared would spread to the family.

The actual psychosis was somewhat unusual in type. Along with clearly retained consciousness and an affective reaction which had to be objectively judged as diminished and inappropriate, there was self-blame ("I am to blame"—"full of spirit poison"—"I did not illuminate my corner"—"I was perverted"—"should have let divine love in"), and a delusional somatic content ("iciness"—"stoniness"—"like cement"), but chiefly distinguished by belief in a power like "telepathy," which, against the patient's inclination, did harm to others. It made other patients and nurses "cough"—gave a "metallic harshness" to their voices—"caused stomach trouble." She did not want to look at the physician. "I don't want you to come into this strange queeriness," etc. Hallucinations were infrequent and indefinite—"thoughts speaking to me"—"I see people I knew"—"I am semi-conscious." In the initial and final stage of the psychosis there was evidence of depression, but in the interim practically no concomitant physical expression of emotional stirring. However, she said there was "no emotion left," and "I've lost and must regain something."

The recovery was fairly rapid, was complete, and there has not been any sign of recurrence for eight years. Fortunately the patient was put into contact with constructive conditions, and a year after her discharge graduated from P—Institute. The following letter deserves inclusion in the case-report, since it shows how tactful handling succeeded in overcoming the sense of inferiority:

"On this Thanksgiving Day it seems proper that I should write and tell you how I am faring, so much better than I had hoped when I last talked with you. Then I was preparing to go to — to take a position with —, a woman who, through my sister, had become interested in me. I did not think I could carry on the work through the summer, but as it seemed advisable to my family and also to yourself for me to try it, I did so. I found long hours and a great deal of work attached to the preparation of three meals a day for from three to six

boarders, besides three separate meals for the family and helpers, from four to seven persons. The daughter of the house helped when necessary and the mother sometimes, but before many weeks had passed they began to remark upon the improved order of the kitchen and how I had learned to avoid unnecessary work. At times things went wrong, but these people were very patient and helpful, seldom criticizing, always noting improvement. Mrs. — would make me talk sometimes, and when I spoke depreciatingly of myself, she would answer, 'What you do speaks so loud, that I can't hear what you say.'

"She is personally acquainted with some of the managers of — Institute here in —. Perhaps you know of the place, very much like — in —, giving practical courses in almost every subject you can mention. There is a one-year course in institutional household sciences, and this, upon application of Mrs. —, they recommended for me. It prepares for the work of matron, professional housekeeper, lunchroom manager, or dietician by giving instruction in chemistry, physiology, dietetics, principles of cookery, institutional problems, accounts, marketing, lunchroom work, laundry work, house-furnishing, care of the house, serving and physical training.

"My sister's very substantial rise in salary and her employer's kindly offer to stand ready to assist, making it financially possible, the persistence of Mrs. — and her confidence in my ability, opposed to my utter lack of confidence, led me to undertake the course, though in a very half-hearted way. Mrs. — had written several times to the Director of the School of Household Science and Art of the Institute, and also to the Registrar, a personal friend, concerning me, as a result of which I was received and welcomed very cordially.

"The Institute has no dormitories, and as a consequence, all the houses in the vicinity, most of them at least, are filled with roomers or boarders. I am a roomer here, with three other girls, the mother of one of them, a school teacher, and another woman. Our two maiden landladies take a kindly interest in their 'family' and the place is quite homelike in its atmosphere. They tell me I just fit into the place of a former student in my course, of whom they became very fond. The young art student rooming next to me says she has adopted me as a sister, and some of my class-mates are glad to come to my room or to invite me to theirs for help in their studies. They think I know a great deal. In fact I am tutoring one of them. I was one of four out of forty who passed the preliminary examination in arithmetic. The results were not made known for three or four weeks, when we were somewhat acquainted, and I received a real ovation from the class when it was known that I had passed. I have gained a reputation of having chemistry before, which I never did, and have received notice from two of the best educated women in our division of twenty students that I must never again dare answer correctly a question that has passed them, on penalty of meeting them some dark night!

"You know, I trust, Dr. —, why I mention these things. Because they seem so far away from the experience I am trying to forget. My mind is not even now what it should be, and sometimes I have dreadful dreams, but I can sleep from the time I put away my books, usually eleven or after, until daylight, even with an 'elevated' passing my open window. I eat a hearty breakfast and a good dinner with a light lunch at midday, and am, to all appearances, well and strong, though sometimes annoyed by aches and stiffness in elbows and knees. My weight when I went to — was 94 lb., when I came back ill, and I do not think I have lost much since September.

"I trust I have not taken too much of your time with this long letter. I really had not the heart to write once a month, but perhaps this will answer for all. If Dr. — is still with you, will you give her my regards? Thank you both for all the interest you have taken in me.

"Sincerely,"

The patient has had two good positions since 1916 and is doing well in every respect.

DISCUSSION.

This case may be said to illustrate the unfavourable diagnostic and prognostic opinion which may result from an effort to place every individual into one of the established symptomatic groupings.

On such a basis there were two possibilities—dementia præcox and manic depressive. The clinical evidence, particularly the apparent absence of real affect and the systematization of the delusional theme (which cannot be reproduced in an abstracted report) was somewhat in favour of the former. Incidentally, it may be remarked that vocal expressions such as “no emotions left” and the like, used by this patient, may really be an index of considerable underlying emotional activity which is masked by the logical sequence of the notion of defect, imparting to the conduct an indifference or failure to react proportionately. Finally, the delusional conception represented a kind of inverted reference idea, *i. e.*, the environment was being harmed by the patient and not *vice versa*, as is common in schizophrenia.

There is another way of looking at the psychosis, apart from the standpoint of conventional diagnosis. In a sense it was the psychotic representation of the struggle against inferiority. No psycho-analytic interpretation is needed to understand that such productions as “I felt the influence lived in me,” “the people I like I grip, and they can't get away, and they don't know what is the matter with them,” “I affect all those people about me,” “the highest characters are simple and dream-like,” “I've a feeling of rising and thinking,” are compensatory, symbolizing the attainment of power which was beyond reach in the pre-psychotic experiences and strivings. Thus the mental disease may, without too much effort, be regarded as an outlet which began after repeated failures “to find the keynote—to be successful and an idealist.” May we assume that whenever, as in the patient under consideration, the psychotic content is merely the pathological expansion and outgrowth of an understandable life situation, which for a time at least had come to an *impasse*, there is a better chance of ultimate return to normality? Is the close alignment between a sufficient and real precipitating situation and the temporary satisfaction and solution of the difficulty by the substitution of unreality against the existence of a malignant psychosis?

Physical Pre-Psychotic History.

While the entire group of recovered patients were rather heavily burdened from the standpoint of pre-psychotic organic morbidity, yet there was only a single instance in which a pre-psychotic somatic factor more or less directly influenced the prognosis:

The patient had early acquired deafness and was mute, and it seems likely that the sensory defects with the consequent inability to express emotional life and react to environmental contacts according to ordinary standards gave an aspect of malignancy to the psychosis. The psychosis had a duration of almost

eight months. For the greater portion of the time she was dull and unemotional. Otherwise the affective expression was limited to a peculiar shrill laugh and occasional crying spells, both apparently unrelated to behaviour. The characteristics of the latter were primarily inactivity, with the following variations from time to time; moderate cerea, mannerisms such as wagging the head to and fro with simultaneous protrusion of the tongue, grimacing, stereotypy of movement, seemingly purposeless motor excitation with aimless running about and destructiveness, or beating her head and blindly striking her hands against the iron porch screen. Often, and seemingly without stimulation from the environment, she would emit a series of short, sharp sounds like the bark of a dog. She was usually untidy. She did not refuse food, but first smelled it and examined it carefully. Only rarely did she appear to be in touch with her surroundings, once when she took the physician's stethoscope and placed it in her ears, and again when she tried to tease another patient, or when she looked at magazines.

Recovery as far as could be ascertained was complete, and for three and a half years the patient has been "the same as before the attack."

Precipitating Situation.

"Precipitating situation" is perhaps a loose term. It may erroneously be regarded as having chiefly a chronological bearing, and as being composed only of the detrimental somatic and psychogenic conditions which immediately preceded the psychosis. However, to students of what may be termed "analytic psychiatry" it has a somewhat broader meaning. They are inclined to think of mental disease in terms of destroyed resistance, usually the end-result of a series of destructive influences, which may be hereditary, environmental, psychogenic, or physical, sometimes in pure culture, but more often in various combinations. It is these factors, alone or combined, which constitute the precipitating situation, and though they may be acutely developed, they are still more apt to be insidious and gradually accumulated.

It is, of course, recognized that resistance to mental disease is an extremely variable quantity, and at times even the most insignificant thrust suffices to upset the equilibrium of an individual, who then might be designated constitutionally unstable. A valid basis of comparison concerning relative severity or precipitating situations is difficult to find on account of individual dissimilarity of viewpoint, but in a general way there is enough agreement to distinguish, at least, between intrinsically significant and trivial pre-psychotic circumstances. We believe, after careful perusal of the histories of the 38 patients, that 23, or 60%, were subjected to situations which were adequate for the precipitation of the psychoses. It is interesting to note that the percentage of significant situations was quite high in our series of recoverable "dementia præcox" reactions, but one of us found in 100 dementia præcox cases only 20 in which there were significant or important circumstances favouring the occurrence of the psychosis.

However, we are principally concerned with the attempt to trace

a connection between the outstanding elements of the precipitating situation and some of the malignant-like features of the symptomatology. A patient, for instance, who was but poorly equipped to meet the exigencies of hard reality, found herself illegitimately pregnant. Resort to criminal operation did not remove the need for secrecy, and only complicated matters by the addition of certain sequelæ, notably septic infection. During the mental illness it was the silliness, grimacing, flippancy, evasiveness, obviously superficial laughing and weeping, etc., which were construed as indications of underlying affectlessness, or at least of emotional inadequacy, and which gave point to the gloomy prognosis. On the other hand, these manifestations probably represented the pursuance of a childlike method of concealment, and the apathy may have been more apparent than real.

In at least two patients the precipitating circumstances included a strong emotional stirring. One, after an anticipatory period of worry and apprehension, had to face the sudden death of her mother, enforced separation from her husband, and a number of incidents calculated to acutely raise the fear state to a dangerous height (uprising of natives in Haiti, discovery of snake and tarantula). There were associated and no doubt resultant physical phenomena—menstrual irregularity and loss of weight. The other patient, possibly handicapped against the endurance of affective strain on account of her race, was subjected to constant worry and fear because her father, brothers and sisters were caught in the war zone of German occupation and she had no word from them. During the apathetic (³) stage of the psychosis she lost 22 lbs., or almost one-fifth of her entire body-weight. In the first, among the psychotic symptoms which contributed in greater or less degree to the notion of malignancy, were listlessness, indifference, stupor, catalepsy, mutism, and early an active paranoid delusional trend; in the second were catalepsy, cerea, brief stuporose states and vague paranoid delusional formation. In neither instance were there any convincing signs of retained affectivity.

Since in clinical psychiatry prognostic inferences are often so dependent on an accurate estimate of the emotions, it is unfortunate that we are limited practically to crude observation for our judgment. In spite of the splendid advances of experimental physiology, there are still many gaps to be filled, and further, there is the great discrepancy which results from the effort to apply the knowledge gleaned from animal experimentation to human beings. However, without reviewing at any length the contributions of physiology, we know in a general way that an emotion is always translated into physical concomitants, that these may be roughly divided into

stimulative and inhibitory, that not only the musculature but every organ and cell of the body is involved in the process, that these somatic accompaniments may prolong the affective state, and that the link connecting the psychic and the bodily phenomena is highly complex, but probably has as an important element the several units of the endocrine apparatus. The very incompleteness of our information should lead us to employ caution in pronouncing deterioration of affect, simply because there is some species of catatonia, exhibited particularly when there is the history of unmistakable antecedent emotional stress. Hoch's conception of benign stupor is the psychological portrayal of death. Although there must have been at some prodromal point considerable emotional life, the primary element of the stupor itself is absolute affectlessness, and yet there is always a hopeful prognosis.

Likewise in two other patients a careful scrutiny of the precipitating circumstances might have provided somewhat better prognostic indications. They had paranoid delusions. In one, their content was directly related to some of the component material of the predisposing factor (being an alien enemy), and in the other a chain of psychic and somatic assaults (worry, fear, overwork, pregnancy, influenza) induced pathological fatigue, which lessened inhibition, so that an accidental episode just before the onset of the attack (reading of luridly coloured and fantastic detective stories) was carried into the psychosis bodily and furnished the text of the persecutory beliefs.

In one patient the precipitating situation was corrected before the mental illness terminated. She was assured by the family that the man who was responsible for her illegitimate pregnancy was anxious to marry her, and thus a future satisfactory social status was insured. The elements which contribute to recovery or chronicity in a given case are always immensely complicated. A psychosis is after all the culmination of a life-long reaction between an individual and environmental circumstances, and there may be at hand unsuspected resources, recent or remote, innate or extraneous, which either favour readjustment or make it impossible. The same thought applies to purely physical disease. For instance, in pneumonia, recovery or death may hinge not so much on the virulence of the infection, as on the integrity or vulnerability of the circulatory system. In turn this may have been predetermined within certain limits by habits of living, or perhaps by the occurrence of a severe contagious disease in infancy, or even by congenital valvular defect. This may seem like overmuch theorizing about a mere detail, but it is in doubtful psychoses that exact appraisal of details may diminish the margin of the prognostic error.

The physical aspects of the precipitating situation as well as of the onset deserve discussion, but since they are likely to produce the same general effect, they may be more advantageously viewed retrospectively from the vantage ground of the psychosis.

Onset.

The question of onset is complex. Historical information generally must be obtained from the family, and usually the patient's relatives are neither trained observers, nor in the frame of mind which is consistent with careful observation and description. Furthermore, mental disease is seldom precipitate, and there is almost always a varying period of incubation not openly manifest. However, there is an instant when objective signs of abnormality come to the surface. It is in the character of these initial symptoms and the violence with which they impinge against the conventions and customs of familial and social environment that judgment of acuteness of onset or gradual development depends. By such a criterion the psychoses in 63% of our patients had an abrupt onset. Perhaps no index of prognosis may be taken from this finding, other than that in a general way there is a greater likelihood that a benign psychosis will be abruptly initiated and a malignant one will be evolved more slowly, and for a longer time the individual will conform in some measure to ordinary and superficial environmental requirements. Barrett looks on an acute and stormy onset as a favourable prognostic omen, feeling that it represents the struggle of the personality against the acceptance of psychotic material.

The period immediately preceding or coincident with the first obvious symptoms is extremely critical. It may be assumed that inhibition is enormously diminished and the individual is susceptible to outside influences, often accidental. This seems to be borne out, at least by some of the affective or benign psychoses, in which a great mass of the psychotic material is apparently drawn from chance events. Hoch found that the evolution of the mental picture is subject to considerable variation, "which is dependent partly on the causative agent and on the environmental factors, and it is occasionally given a certain twist by accidental suggestions or happenings of an emotional character."

In two patients external happenings at or just before the onset seemed to influence adversely the direction of the symptomatology :

In one instance, just before the illness, the patient, while profoundly fatigued, read a series of fantastic detective stories, which later were an almost literal part of the psychotic content and gave a strong paranoid præcox trend to the whole

reaction. Here there was an unusual degree of bizarre delusional expression. "Violet ray," "poisoned food," "throwing off gas," "white slave," "dictaphones," "germs," frequently recur, or "poison daggers being shot," "ivory arrows shot into the brain to cut off the nerve-endings," "celluloid pledgets driven into the brain with high-powered violet ray," etc. In the following there is a suggestion of splitting, "an influence pulling my thoughts away," and "he has gotten the velocity of my mind which must be the same as his own." As has been stated, this highly coloured material was directly drawn from the detective stories of Arthur Reeve, which the patient read with great interest just at the time when the break from reality occurred.

In the second case the patient, who was superstitious, was treated by an ignorant charlatan during the transition stage from sanity to unreality. He massaged the patient, hypnotized and baptized her, and among other things told her of spirits of good and evil, exhorted her to sleep with her head to the north, and warned her never to let anyone give her an hypodermic, as it would be fatal. During the psychosis she was restless, followed her mother about in an aimless fashion, stared vacantly into the mirror or at anyone who spoke to her, and became excited and resistive, biting, striking and expectorating. She attempted to convert those about her, quoted from the Bible in a desultory way, frequently assumed an attitude of prayer and was often mute. Angels of happiness and spirits of evil were seen, and mysteriousappings on the window, the voice of the devil and the conversation of the Deity (to which the patient listened attentively and smilingly) were heard. There was possibly at this time an undercurrent of depression, and letters were written to relatives asking forgiveness for wrongs which she had committed. A paranoid trend and reference ideas became prominent. The family were leagued with the evil spirits and people were talking about her and laughing at her. Food was refused, and both it and her clothing (which she removed and then stretched herself out nude on the floor) were poisoned. She protested that she was being kept in a house of prostitution.

Nine months is a maximum estimate of the duration of the psychosis. On the day of admission she appeared "toxic" and catatonic and opposed passive motion. Next there followed a resistive, noisy and destructive phase. Then she began to hide under tables and beds, and when pressed for an explanation said, "Just funny stunts." Clothing was removed; there was refusal to dress. When clothed, skirts were arranged to resemble trousers. She let her hair down, or danced, bowed and smiled in manneristic fashion and without traceable relation to environment or situation. Somewhat schizophrenic was an attempt at suicide (?) without any signs of depression, by suspending herself from the wrists, utilizing a portion of a curtain and the chain from a toilet tank. She would stand and look directly into the sun until her eyes became extremely bloodshot. There was no sustained production or conversation. Once she talked at random about "the blue and the grey," and again resentfully about her straight hair, which she braided in an effort to make it curl. A slight tendency to self-adornment was noted. At times she prayed loudly, asking forgiveness for those (her family) who had treated her badly. By every criterion of objective examination the affective reaction was *nil*. In the daily notes she is described as displaying a silly smile and was inaccessible. On a single occasion she accounted for the habitual smile by answering, "Just dreaming—everything comes like a dream." There was illogical affectivity even in the restricted sense of Hoch, and the silly grin with which she replied to queries concerning the suicidal (?) attempt. In the beginning she gave the impression of haziness, confusion and disorientation, but later was clear and placed herself correctly. Memory, recent and remote, was not disturbed. She referred to her lover, and made an illuminating comment on the "will-power doctor" —"He made me all funny—out of my mind—crazy—the more treatment he gave me the queerer I thought he acted." Hallucinosi did not reappear. Delusions came to the surface only for a few days following admission ("poison in food" and refusal to eat).

Is it not thinkable that a considerable portion of the dementia præcox behaviour was perhaps traceable to the suggestions implanted at the critical time of onset in a superstitious mind?

Toxicity and Exhaustion.

Our knowledge of the limits of the results which infection or bodily and nervous depletion may produce is very vague. The psychosis which might be viewed as a symptomatic prototype is infection-exhaustion psychosis (psychosis with somatic disease), and yet, even here, apart from the classical deliria the clinical ground is very uncertain. Manic-depressive insanity of severe grade is at times practically indistinguishable from infection-exhaustion mental disease (psychosis with somatic disease). Occasionally, too, dementia præcox bears a close resemblance. Mott believes that all psychoses belong to one group and are genetic in origin. While this is hypothetical and somewhat extreme, nevertheless, clinically, "states of infection and exhaustion may complicate any psychosis, producing a confusion engrafted on the original mental disorder." Still, the consensus of opinion would seem to be that although there is a considerable deficiency of attention and interest in schizophrenia, the patient is apt to be surprisingly clear and oriented concerning that which he really perceives, so that the state of the sensorium is a prognostic consideration which should not be neglected. Of course there are degrees of clouding of consciousness. Sometimes it is very slight, and indeed the patient may even seem clear, only to refute the clearness during convalescence by recalling a distinct feeling of mental diffusion and thought difficulty, so "that they could not sort out the real from unreal." All this uncertainty leads us to seek additional aids in attempting to establish or exclude the existence of toxicity or exhaustion in our patients. This is prognostically an important issue, since the mental symptoms they produce may make any psychosis more complex, and, more specifically, as seemed true in some of the instances reported, these added mental symptoms may cover or disguise affective signs and give the psychosis a malignant appearance.

A partial list of symptoms which occurred at some stage in our cases and which may be witnessed alike in both dementia præcox and in disorders and syndromes ascribed to intoxication or pathological fatigue is as follows: Some degree of sensorium disturbance, disorientation, auditory, visual, olfactory and gustatory hallucinosis, paranoid delusional formation, incoherence, emotional instability, catatonia and stupor. If we are able to uncover in the pre-psychotic period, and more particularly in the precipitating situation, somatic conditions which might be expected to give rise to such symptoms, then we are spared the necessity of viewing them at once as elements of chronic and deteriorating entities. We

feel that we are able to do this in at least 50% of the patients. Furthermore, if in the course of the mental disease itself there are clinical signs of toxicity, then there is additional confirmation, even though these signs may not be definite enough to make it possible to name the concrete infecting agent. There was fever, decline in weight, anæmia, alteration in blood-pressure, purulent adenitis, thyroid toxicosis, apical abscess, amenorrhœa, Neiserian infection, leucocytosis, lymphocytosis, eosinophilia, albuminuria and other pathological urinary findings, etc. We realize that it would not be difficult to find numerous instances of unquestionable schizophrenia in which likewise there were antecedent reasons for the development of toxic manifestations and somatic accompaniments during the mental illness, but nevertheless it is probably more than a coincidence that both these should be so prominent in a group of recoverable "dementia præcox" states, and finally, we feel that their presence should stay pronouncement of a bad outlook, if either at the onset or at some later stage the psychosis has some of the characteristics of an affective reaction.

Catatonía.

Some exhibition of catatonía occurred in practically all of the cases. This in itself is not remarkable, since the symptom catatonía, originally regarded as a motor or muscular phenomenon, in line with its derivation (*κατάσιμα*)—to stretch tight—has been continuously expanded, until now it is made to include a variety of behaviour abnormalities such as mutism, scolding spells, impulsive violence, refusal of food, stereotypies, etc. However, marked and more or less pure catatonía, either in its positive or negative phases, appeared in 18 of the 38 recovered patients. Even before Kirby's contribution established the fact that catatonía occurred frequently in emotional psychoses, psychiatrists were beginning to realize that its occurrence did not necessarily spell dementia præcox, although many felt that the idea still persists to some extent, that when it is present it constitutes an ominous prognostic sign. Catatonía is not peculiar to any psychosis, nor indeed is it restricted to the field of psychiatry. It occurs not only in dementia præcox, but in all the so-called functional psychoses, and in hysteria as well as in epilepsy and paresis. It has been reported in organic brain disease, abscess, tumour, cerebellar lesions, in epidemic encephalitis, in typhoid fever, pneumonia and acute infections and in toxic and exhaustive states. In spite of its wide distribution, there has been a tendency to interpret it solely as a psychological mechanism. It is conceivable that "catatonía," or symptoms which simulate it so

closely that they are indistinguishable from true catatonia, may arise from a number of factors, and the unravelling of these may give prognostic help. In our series of cases it was suggested that the development of catatonia might have been favoured by racial and familial traits, pre-psychotic personal attributes, precipitating situations and extraneous conditions at the time of the onset. Finally, in a number of instances there is reason to believe that the "catatonia" was a direct expression of somatic toxicity.

Since the consideration is important, and since it exemplifies a number of similar reactions, we feel it is advisable to quote this illustrative case :

An Irish-American Catholic girl, 20 years old, who had a parochial school education and was a saleswoman in a shoe store. She is one of five children. The father died of "stone-cutters' tuberculosis," and at the time of the onset of the psychosis the mother was in a public hospital suffering from a "depression." The patient was social, good-natured and popular. The ordinary diseases of childhood were not important, but acute articular rheumatism at fifteen in all likelihood produced permanent heart damage.

A circumstance which may have favoured the development of the psychosis was worry and grief over the mother's mental illness. It should also be noted that the first menstrual difficulty which the patient ever experienced was associated with the period immediately preceding the mental disease, menses being delayed and painful.

The onset was abrupt: an outbreak of vocal activity, which was hard to follow since the ideational elements seemed wholly detached from each other—the mother was dead; the patient herself was to be married; a stranger was trying to dope her and carry her away. She was a single day at a general hospital, and had to be removed because she was too noisy. During a stay of 18 days in the municipal psychopathic hospital she was "noisy, incoherent, disoriented, combative, silly," and was diagnosed dementia præcox. It became necessary to remove her to the medical wards on account of threatened collapse. Under our observation for six weeks, she gave an almost classical portrayal of catatonic excitement. The patient was noisy, screamed, was resistive, struck, kicked, and bit anyone who approached her, broke glass, threw herself on the floor, knocked her head against the wall and was hopelessly untidy. There was also mutism, and well-developed negativism. Grimacing and mannerisms were displayed. Complicated fixed postures were assumed and long maintained; for instance, the left leg was extended at full length, with the right bent at the knee and crossed posteriorly at right angles. At the same time the left hand was held over the occiput and the right upward with extended palm. Both the expression of thought and of affect were widely separated from the behaviour and from each other. The former was wholly incomprehensible and uninfluenced by questioning or external stimuli. It was disassociated, profane and occasionally neologistic. The following production, which was shouted without any evidence in facies, body attitude or tone of voice or any feeling is rather typical: "Pick out my eyes—go kill me—nail me to the cross—you are brutes—that's it, cut my head off—I must die—you for the electric chair—you are one of the gang—the last for the electric chair—you are going to hell—there you stand looking at me—I am going to die." Usually, however, there was less connectivity—"just blue—Vermont—not too many cakes either." Manifestation of emotional stirring was lacking; there was only silly smiling or apathy. The patient was scarcely accessible enough to permit of any valid judgment concerning consciousness. It could be determined that memory was not interfered with. Probably there was partial disorientation for time and person; the latter perhaps related to the fragmentary paranoid delusions. There was hallucinosis, "death bells," "shadows of her own ghost," and once a reference to a "gas" odour.

It was somewhat difficult to approach the patient for physical examinations, but from information gathered from time to time a fairly adequate estimate was

obtained. She looked anæmic and was poorly developed. There was a loud mitral systolic murmur. A broken-down cervical gland discharged almost continuously, and it may have been tubercular, since the lung findings were suspicious and there was a lymphocytosis of 38%. An eosinophilia of 5.6% was noted. A maculo-papular eruption gave a culture of staphylococci—*albus* and *aureus*. Blood-pressure—systolic 108, diastolic 70. A dozen thermometer readings failed to reveal fever.

The patient recovered exactly five months after the onset of the psychosis, and as far as we are able to determine has remained well for seven years.

DISCUSSION.

In spite of the recovery, the unanimous staff diagnosis of catatonic dementia præcox was justified, according to the canons of strict clinical psychiatry. It is obvious, however, that the somatic factor was underrated. The patient certainly had heart disease, and was depleted and possibly had phthisis and other infection. Catatonic reaction types to organic disease have often been observed, and this possibility is of considerable prognostic importance.

It is probable that in the analysis of the entire pre-psychotic life, together with a careful consideration of both psychic and somatic aspects of the psychosis itself, we may find more reliable prognostic guides than those which are afforded by confining our attention to the intrinsic nature of the catatonia.

Stupor.

Stupor, either deep or partial, was noted in 7 patients. We did not find it as useful prognostically as we had anticipated. Its characteristics as an isolated reaction are sometimes deceptive, and it is almost always necessary to consider it in its relations rather than separately. Undoubtedly there are frequent typical deep stupors such as Hoch has described, the cardinal symptoms of which are: (1) More or less marked interference with activity, often to the point of complete cessation of spontaneous and reactive movements and speech; (2) interference with the intellectual processes; (3) affectlessness; (4) negativism and, further, it is no doubt possible to make out the portrayal of the death idea. However, the syndrome is by no means constantly clear-cut, and there may be a breaking through in one direction or the other, even with suggestive præcox-like behaviour, but unless there is schizophrenic evidence apart from the stupor, it is unsafe to decide too certainly against the chances of recovery. Hoch's study of stupor has advanced psychiatry even though he was not able to formulate an exact clinical rule. However, to remark that the possibility of an organic aetiology of stupor was too lightly dismissed does not seem to be an unfair criticism. Naturally there are cases of organic brain

disease, tumour, abscess and the like or head injury in which no question can arise, and these Hoch clearly recognizes, but there are also toxic conditions which are less specific and which produce stuporose symptoms, difficult to distinguish from so-called benign stupor. Hoch admits that a close resemblance exists between the stupor which he considers benign, psychogenic in origin, and a part of manic-depressive psychosis and post-rheumatic stupor. On the authority of Knauer, who has studied the latter, the presence of illusions is cited as a differential feature. This constitutes somewhat slight proof. Recently one of us observed a stuporose phase appear abruptly during the course of a severe osteomyelitis. It has all the signs of a benign stupor—inertia, affectlessness, suspension of intellectual functioning, etc., and from the setting of its onset obviously represented for the patient the concept of death—but neither was it preceded or followed by any reliable symptoms of depression. Unfortunately, in presenting the physical manifestations of stupor Hoch had to depend on old case-notes, in which “records of the physical symptoms either were not made or were lost in many cases.” It is regrettable that these omissions could not be rectified, as the inadequate physical examinations scarcely parallel the splendid and comprehensive mental studies. For instance, the blood-cells were counted in only five patients, and there were only two blood-pressure readings. Four of the five revealed significant leucocytosis, 23,000 (91.5% neutrophilic), 12,000 to 15,000 (89% neutrophilic), 15,000 (no differential), 17,500 (no differential), and one had 41% lymphocytosis; the blood-pressure in two patients was systolic, 110 mm. Twenty-seven of the twenty-eight typical cases had fever; twice the temperature was 103° F. and once 104° F. Stockard supplied a somewhat ingenious explanation, in which the fever is traced by a series of steps—failure of heat loss function, imbalance in the involuntary nervous system, insufficient circulating adrenalin—and finally reduction to the chief component of stupor, namely, apathy. Hoch remarks that “the subject is so involved and the evidence so inconclusive that observers will probably interpret the phenomena here reported according to their individual preconceptions.” With such a viewpoint, from the analysis of our own material, and with the question of prognosis in mind, we feel that while there may be classical instances, yet it is difficult from an observation of the stupor itself to determine whether it is surely benign or malignant, and further, there seem to be border-line reactions revealing a commingling of psychic and somatic symptoms, possibly ascribable to a mixture of psychogenic and organic causes, and having a relatively good outlook.

The Psychosis as a Total Reaction.

Finally we wish to emphasize the fact that in many of our cases, and strikingly in some, the psychosis appeared probably because detrimental circumstances had made reality no longer desirable or tenable for a particular individual. For instance, one patient only succumbed after years of struggle against a rigidly unyielding, ugly and hated environment. Another, after many years, succeeded in breaking away from a home in which she was "dissatisfied, unhappy and overworked," only to be recalled from the first congenial and happy existence she had ever had by the death of her mother, and the impelling force of a sense of duty toward her father and brother. A third, an only and spoiled child whose every wish had always been anticipated, became psychotic when she found herself in a situation which she could not control—namely, an illegitimate pregnancy. A fourth was faced by the same *impasse*, finding herself at forty also illegitimately pregnant as the termination of a love affair, and with the knowledge that the position which she had laboriously gained in the business world would be lost. In a fifth the psychosis was a method of leaving behind reality which was no longer bearable, and which was made all the more undesirable by an overwhelming sense of inferiority; and in a sixth there was remorse concerning illicit intercourse and ever-increasing apprehension that illegitimate pregnancy had resulted. It seems to us that the test of a "situation" psychosis, that is, one which constitutes an escape from a reality that presented problems which could no longer be solved, is the appearance in the symptomatology of phenomena which correct the hard and uncompromising facts of reality. This was obvious in the psychotic content of these six patients. When this occurs, there is reason to be somewhat optimistic as to the outcome, even though the clinical syndrome at first glance may appear to be malignant in type.

CONCLUSIONS.

1. Thirty-eight cases diagnosed as dementia præcox, but terminating in recovery, were analyzed from the standpoint of potential prognostic indications occurring either before or during the attack of mental disease. The chief considerations were race, history, both familial and personal, personality, pre-psychotic somatic state, precipitating situation, onset, and the psychic and physical phenomena of the psychosis itself.

2. Racial or ancestral traits do not determine to any significant extent the presence of symptoms which bear a malignant aspect,

although clinical error may result from our inability to gauge correctly and to interpret habitual modes of reaction in an alien or unfamiliar people.

3. Heredity occasionally exerts an indirect effect, and the previous existence of chronic mental disease in a parent may apparently create an environment from which a benign psychosis in the offspring may take some of its unfavourable symptomatological aspects.

4. A close study of the personality is often fruitful and furnishes helpful prognostic guides. It is important to differentiate between a basic and constitutionally seclusive make-up, and one in which the withdrawal from socialization constitutes for the individual a somewhat logical defence and protection against definitely inimical surroundings. Catatonic manifestations during the psychosis may be occasioned by the reappearance of deeply ingrained dispositional "stubbornness." Abnormality of personality in itself is not pure evidence of chronicity, and a psychosis which seems prognostically unfavourable may be given, falsely, such an appearance by determining pre-psychotic idiosyncrasies of character. If the psychosis is in some sense an evolution of such peculiarities and no deterioration of personality is implied, the outlook is not necessarily hopeless.

5. Rarely sensory deprivation due to organic disease may influence the behaviour during the psychosis so that it seems bizarre and malignant, unrelated to affect. In reality this reaction may be the result of organic handicaps or defects which prevent emotional expression from reaching the surface in a recognizable and understandable form.

6. The precipitating situation needs to be considered in regard to its intrinsic seriousness, its somatic and psychogenic elements, its acuteness or chronicity and the possibility of its correction. If the precipitating situation is innately significant and the psychotic content reflects its component factors, then the psychosis may be benign even though the symptoms in themselves have a somewhat sinister aspect. It is possible that strong affective features in the precipitating situation may condition the occurrence of seemingly affectless catatonic phenomena in the psychosis.

7. The transition stage from reality or sanity to unreality or mental disease is an extremely critical period. Inhibition is decidedly lessened, and extraneous, accidental happenings may be deeply impressed and later elaborated into apparently malignant symptoms. Other things being equal, an acute stormy onset is a favourable prognostic sign.

8. An affective display which is markedly at variance with the remainder of the psychotic content (the ideation and the

behaviour) or a notable insufficiency of affect ordinarily constitute criteria of chronicity. Prognostically, however, it is important to distinguish between the psychosis in which the emotional disharmony or paucity results from the unfolding of a fundamental disease process, and the one in which the apparent lack of alignment and emotional inadequacy are determined by independent factors not concerned with the basic mechanism of the psychosis. Various factors may contribute to such an appearance of emotional disassociation or incompleteness. In our group of cases a childhood habit of evasion, previously determined organic deficiency, the influence of a personality steeled against any display of feeling, "paralysis" of physical expression, movements, etc., served to modify or distort the affective display.

9. Toxicity or exhaustion may complicate a benign psychosis and impart to it a deteriorating guise. For instance, this may result when affective expression is masked or distorted by intercurrent clouding of consciousness. Both the pre-psychotic life and the psychosis should be carefully scrutinized for evidence of infection or bodily depletion.

10. Catatonia has a widespread distribution and is not peculiar to dementia præcox. It may be a response to toxicity, and it then admits of a hopeful prognosis. Furthermore, it may simply be the result of an ingrained reaction pattern in a personality whose chief characteristic is stubbornness.

11. There are stuporose states, complete or partial, which do not meet the clinical requirements of benign stupor, and yet they need not be looked upon as infallible signs of deteriorating process. The stupor, in itself, does not furnish a safe prognostic indicator, and it must always be considered in its relations to the entire psychosis. We feel that the influence of somatic factors was not hitherto properly weighed in the delineation of so-called benign stupor.

12. When the psychosis as a total reaction constitutes an escape and psychotic correction of serious circumstances in life which have brought the patient to an *impasse*, then the prognosis may be favourable even though the clinical aspects are not promising.

13. Careful study, not only of the actual mental symptoms, but of all the antecedent factors which may have been influential in moulding or complicating the expression of the psychosis and their proper evaluation, should tend to reduce the margin of prognostic error.

References.—Wundt, Wilhelm, *Outlines of Psychology*. Leipzig: William Englemann, 1907.—Myerson, A., "The Nervousness of the Jew," *Mental Hygiene*, iv, No. 1, pp. 65-72, January, 1920.—Hoch, August, *Benign Stupors*. New York: The MacMillan Co., 1921.—*Idem*, "Personality and Psychosis," *Amer. Journ. of Insanity*, 1913, lxiix, Special No. 5, p. 887.—Urnstein, Maurycy, *Spatpsychose*

Katatoner Art. Berlin: Urban and Schwarzenberg, 1913.—Stocker, W., "Besteht zwischen einen Katatonischen Stupor und Erregungszustand einerseits, und einer Depression, vielmehr Depressivem Stupor und einer Manie andererseits ein grundsätzlicher Unterschied und worin besteht dieser," *Zeits. f. d. Ges. Neurol. u. Psychiat.*, Bd. xxxiii, heft 1, seite 39, March 11, 1916.—Stransky, Erwin, *Über die Dementia Præcox, Streifzüge durch Klinik und Psychopathologie.* Weisbaden: J. E. Bergmann, 1909.—Bonhoffer, K., "Die Psychosen," *Handbuch der Psychiat.*, Aschaffenburg, spezieller teil, III abteilung, I halfte. Leipzig und Wien: Deuticke, 1912.—Strecker, E. A., "A Psychosis of Seventeen Years' Duration with Recovery," *Journ. Amer. Med. Assoc.*, April 3, 1915, lxiv, pp. 1151-1154.—*Idem*, "A Preliminary Study of the Precipitating Situation in 200 Cases of Mental Disease," *Amer. Journ. of Psychiat.*, April, 1922, i, No. 4, pp. 503-536.—Bond, E. S., "A Study of Self-Accusation," *Amer. Journ. of Insanity*, October, 1917, lxxiv, No. 2, pp. 169-184.—Bond, E. D., "Personality and Outcome in 200 Consecutive Cases," *ibid.*, April, 1913, lxix, No. 4, p. 731.—*Idem* and Abbot, Stanley, "Personality in Dementia Præcox and Manic-Depressive Psychoses," *ibid.*, 1912, lxviii, p. 359.—Hoch, Theodore A., "Acute Psychoses with Symptoms Resembling Dementia Præcox," *Amer. Journ. of Psychiat.*, January, 1922, i, No. 3, pp. 365-732.—Crile, Geo. W., *The Origin and Nature of the Emotions.* Philadelphia and London: W. B. Saunders Co., 1915.—Cannon, Walter B., *Bodily Changes in Pain, Hunger, Fear and Rage.* New York: Appleton, 1915.—De Lee, popular communication.—Baer, popular communication.—Barrett, Albert M., personal communication.—Kraepelin, Emil, *Dementia Præcox and Paraphrenia*, translation by R. Mary Barclay. Edinburgh: E. & S. Livingstone, 1919.—White, William A., *Outlines of Psychiatry, Nervous and Mental Monograph Series*, No. 1, Seventh edition, Washington, 1919.—Meyer, Adolf, "Constructive Formulation of Schizophrenia," *Amer. Journ. of Psychiat.*, January, 1922, i, No. 3, pp. 355-365.—Bleuler, "Dementia Præcox oder Gruppe der Schizophrenien," *Handbuch der Psychiatrie*, Aschaffenburg, spezieller teil, IV abteilung, I halfte. Leipzig und Wein: Deuticke, 1911.—*Statistical Manual*, third edition, published by the National Committee for Mental Hygiene, New York, 1923.—Kirby, George H., "The Catatonic Syndrome and its Relation to Manic-Depressive Insanity," *Journ. of Nerv. and Ment. Dis.*, November, 1903, xl, No. 11, pp. 694-704.—Mott, Sir Frederick W., "The Genetic Origin of Dementia Præcox," *Journ. Ment. Sci.*, October, 1922, London, lxviii, No. 283, pp. 333-347.—Strecker, E. A., "The Non-Specificity of Mental Disease," *Ment. Hygiene*, April, 1923, vii, No. 2, pp. 277-306.—*Idem*, "Certain of the Clinical Aspects of 'Late Katatonia,' with Report of Cases," *Proceedings of the American Medico-Psychological Association*, 1917.—*Idem* and Willey, G. F., "An Analysis of Recoverable 'Dementia Præcox' Reactions," *Amer. Journ. of Psychiat.*, April, 1924, iii, No. 4.—Hoch, Theodore A., "Acute Psychoses with Symptoms Resembling Dementia Præcox," *ibid.*, January, 1922, i.—Raphael, T., "Psychological Level in Dementia Præcox," *ibid.*, April, 1923, ii.—Alford, L. B., "Dementia Præcox as a Type of Hereditary Degeneration," *ibid.*, April, 1925, iv.—Carroll, R. S., Barr, E. S., Barry, H. G., and Matzke, D., "A Septic Meningitis in the Treatment of Dementia Præcox," *ibid.*, April, 1926, iv.—Sullivan, H. S., "Schizophrenia: its Conservative and Malignant Features," *ibid.*, July, 1924, iv.—Williams, E. R., and Potter, H. W., "Significance of Certain Symptoms in Prognosis of Dementia Præcox," *State Hospital Quarterly*, May, 1921, vi.—Rutherford, H. R. C., "Prognosis in Mental Disease," *Irish Journ. of Ment. Sci.*, April, 1922, 5th series.—Unsworth, C. V., "Prognosis of Insanity," *New Orleans Med. and Surg. Journ.*, August, 1921, lxxiv.—Tarvis, L. E., "Tests for Distinguishing Schizophrenoses and Psycho-neuroses," *Journ. of Abnormal Psychol.*, October-December, 1924, xix.—Beaton, T., "Treatment of Dementia Præcox," *Lancet*, May 30, 1925, i, *et seq.*—Mott, Sir Frederick W., "The Neuropathic Inheritance," *Journ. Ment. Sci.*, April, 1913, xix.

*Chronic Epidemic Encephalitis.** By P. K. McCOWAN, M.D.Edin., M.R.C.P.Lond., D.P.M., and J. S. HARRIS, M.D.Edin. D.P.M., Assistant Medical Officers, West Park Mental Hospital, Epsom.

A GREAT amount of work has now been carried out in regard to epidemic encephalitis, which has led to a better understanding, not only of this disease, but of mental disorders generally. It is hoped that our investigations at this hospital can be regarded as a small contribution towards this more complete understanding.

The symptoms now shown by some of our patients appeared first during an attack of acute epidemic encephalitis, and persisted after the disappearance of their other symptoms, but, in the majority, it has not been until a considerable time after their acute attack (this, indeed, often having passed undiagnosed) that the chronic nature of the disease has revealed itself. It is thus seen that a prognosis of the ultimate outcome of an acute attack, no matter how mild, is impossible, and, on the other hand, a definite history of an acute attack is no more necessary to establish a diagnosis of the chronic condition than is a history of syphilis for a diagnosis of general paresis. It is impossible at present to say what proportion of surviving cases of epidemic encephalitis develop chronic symptoms, whether mental or physical. It is especially in children that later mental symptoms are common.

This paper is based on clinical and laboratory work carried out at this hospital and at the Maudsley Hospital. Being convinced from clinical experience, that hyoscine is of the nature of a specific in the treatment of encephalitic Parkinsonism, we considered an interesting line of research would be to find objective proof of its action on the bodily mechanisms in such cases. We first chose carbohydrate metabolism as represented by the blood-sugar curve, and followed this up with intelligence tests, experiments on cerebration and muscular tonus, and investigations into the altered affectivity as shown by the psycho-galvanic reflex. We found objective proof that all these phenomena are abnormal in these patients, and further, that hyoscine made them all approximate the normal. The present paper is concerned chiefly with carbohydrate metabolism as represented by the blood-sugar curve, and to show how this is influenced by hyoscine.

CLINICAL EFFECTS FOLLOWING THE INJECTION OF HYOSCINE.

In the Normal Person.

The subcutaneous injection of $\frac{1}{100}$ gr. of hyoscine hydrobromide is followed in from ten to fifteen minutes by dryness of the

* A paper read at the Quarterly Meeting held at Epsom, November 16, 1926.

mouth and throat, giddiness and a slight degree of mental confusion, some inco-ordination shown in slight slurring of the speech and inability to walk straight, and marked impairment of accommodation, with consequent difficulty in reading any but the largest print. These unpleasant early phenomena are followed by a feeling of laziness or fatigue; a great effort is required to perform the simplest movements, and, if left to himself, the individual will settle down in a chair and soon fall asleep, remaining in this state for three to six hours. Thus, the immediate and remote effects of hyoscine in the normal person are definitely depressant in character, and hence differ from those produced in a person suffering from encephalitic Parkinsonism.

In Encephalitic Parkinsonians.

The *immediate* effects of hyoscine are indistinguishable from those met with in the normal person—namely, dryness of the mouth, interference with accommodation, inco-ordination, etc. The *later or remote* effects, however, present a marked divergence from those found in the normal individual. A short period of drowsiness lasting for about two hours is often noticed, and is followed by signs of physical and mental improvement. In some cases these beneficial results are more marked than in others, but in practically every case, given the correct dose, some improvement is obtained. On the physical side there is diminution of the generalized muscular rigidity, lessening of the tremors of the face and extremities, and disappearance of the excessive salivation and lacrymation which are such frequent and distressing features of this condition. The patient becomes more alert, and instead of being content to sit huddled up in a chair, he will occupy himself with light tasks, his gait is much freer, his shuffling less pronounced, some expression creeps into his mask-like countenance, and he begins to exhibit interest in things outside himself. His articulation, though lacking in timbre, is less slurring and hesitant, he speaks more freely, and his speech, like all his actions, shows less of the retardation which is such a prominent feature of the disease. If the action of hyoscine is on the motor side of the neuro-muscular arc, it follows that in this action must lie the explanation of the increased sense of well-being, the diminution of the apathy, and the brighter outlook of those who benefit by its administration. It supports the thesis that, though the brain is the seat of the psyche, the functions of the mind are dependent upon the whole body and the harmonious interaction of all its parts, as implied in the time-worn dictum, "*Mens sana in corpore sano.*"

In this connection the effect of hyoscine on muscle tonus is of

interest, but since this work will shortly form the subject of a separate paper no details need be given here.

In the encephalitic it is always difficult to discount the element of suggestion in the appraisal of the benefits derived from any particular form of treatment, but extended experience of the administration of hyoscine in this disease leaves no doubt that in many cases it is, quite apart from suggestion, of profound benefit. The following two cases illustrate this :

CASE 1.—A girl, æt. 17, who suffered from Parkinsonism with excessive salivation, marked general rigidity, and who was completely dependent, requiring hand-feeding, washing, etc., immediately improved on hyoscine hydrobromide $\frac{1}{100}$ gr. daily, and, after three days, was up and about, able to dress and feed herself, was alert and cheerful, and by the end of a week took part in the social life of the ward, including dancing.

CASE 2.—A man, æt. 50, suffering from well-marked Parkinsonism, with rigidity and mask-like features, excessive salivation, entirely dependent and depressed, on hyoscine hydrobromide $\frac{1}{4}$ gr. daily became quite active and cheerful, his rigidity diminished and salivation and tremors disappeared. In order to eliminate the element of suggestion, sterile water was repeatedly substituted for the hyoscine without response.

As regards the suggestibility of the chronic encephalitic, it is more than coincidence that the functional aura is found here to an extent not approached in any other group of patients found in a mental hospital. It appears to us that the site of the lesion in these cases may be all-important, and a clue to the discovery of an organic basis for the so-called functional nervous disorders or psychoneuroses. We are not suggesting that these diseases are not psychogenetic in origin, but that they are not essentially functional in nature, in the sense that organic changes are set up secondary to the functional disturbances, but that these organic changes are the most important element in the establishment and continuance of the disease. No gross material change is suggested, but subtle biochemical or biophysical abnormalities may well be present. The site referred to is the basal ganglia. Certain it is that this area which is affected in encephalitis lethargica, with its hysterical aura, is of prime importance in the instinctive and emotional life of man, and this of course it is which is at fault in the neuroses. Support is lent to this hypothesis by the fact that in chorea and Wilson's disease we have two other diseases which, like encephalitis lethargica, have lesions of the basal ganglia and psychic manifestations of a functional or hysterical nature.

EFFECT OF HYOSCINE ON THE BLOOD-SUGAR CURVE.

We would now like to deal shortly with the laboratory part of these investigations, which was done in conjunction with Capt. Mann at the Maudsley Hospital, and firstly we would say a few

words about the method employed. In order to discover the effect of the injection of $\frac{1}{100}$ gr. of hyoscine hydrobromide on the blood-sugar curve, both in the normal person and in the encephalitic, the following precautions were taken: The person whose blood-sugar curve was about to be investigated was starved for 13 hours (from 8 p.m. till about 9 a.m.). He was kept in bed or seated comfortably in a chair, and the temperature of the room was maintained at about 65° F. A specimen of blood was taken to ascertain the fasting blood-sugar level, and then 50 grm. of glucose in 6 oz. of water were given by the mouth, and at the same time $\frac{1}{100}$ gr. of hyoscine hydrobromide was injected subcutaneously into the arm. Thereafter, specimens of blood were taken at fixed intervals— $\frac{1}{2}$ hour, 1 $\frac{1}{2}$ hours, 1 $\frac{3}{4}$ hours, 2 $\frac{1}{2}$ hours. In encephalitic patients it was necessary first of all to establish blood-sugar curves by giving glucose only, the effect of hyoscine being investigated the following morning.

Effect of Hyoscine on the Blood-Sugar Curve of the Normal Person.

To establish the effect of hyoscine on the blood-sugar curve of the normal person, eight nurses and three medical colleagues were selected, and they were all in good health. In Table I are shown the blood-sugar readings of these at the fixed intervals of time.

TABLE I.

No.	Sex.	Fasting level.	50 grm. glucose + $\frac{1}{100}$ gr. hyoscine.			
			After 45 mins.	After 75 mins.	After 105 mins.	After 150 mins.
1	F.	·09	·128	·108	·122	·120
2	F.	·102	·125	·108	·136	·105
3	F.	·10	·12	·13	·115	·13
4	F.	·104	·15	·115	·138	·125
5	M.	·095	·11	·096	·112	·106
6	M.	·12	·156	·144	·064	·122
7	M.	·10	·112	·117	·103	·118
8	F.	·10	·15	·136	·13	·098
9	F.	·114	·125	·143	·143	·108
10	F.	·106	·12	·13	·128	·09
11	F.	·098	·1	·116	·136	·125

Reference to the table will show that the effect of $\frac{1}{100}$ gr. of hyoscine hydrobromide on the blood-sugar in the normal individual is a general depression of blood-sugar values. These lowered values may be associated with a sluggish rise and fall of the curve, and it is not unusual to find a secondary rise of the blood-sugar

curve, resulting in some degree of hyperglycæmia two hours after the glucose meal and drug injection (Fig. 1).

At first sight, therefore, it would appear that hyoscine has an inhibiting action on the factors governing *both* the rise and the fall of the blood-sugar curve, but, as will be seen later, the results obtained in general with the cases of encephalitis lethargica show the same depression of blood-sugar values with *acceleration* of the fall of the curve (Fig. 5). The main effect of hyoscine on the blood-sugar curve is a depression of the glycogenolytic reaction and a variable glycogenetic response. Atropine gives a similar result, both as regards depression of the blood-sugar values and the accelerated fall in cases showing a sustained hyperglycæmia after glucose ingestion.

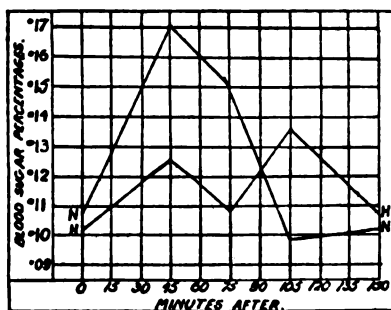


FIG. 1.—Blood-sugar curves of normal person. N, After 50 gm. glucose. H, After 50 gm. glucose plus $\frac{1}{100}$ gr. hyoscine.

The pharmacological action of these parasympathetico-mimetic drugs is to inhibit the external secretion of the pancreas and the alimentary tract. With the general arrest of alimentary secretions the alterations in the blood-sugar curve may find explanation either in diminished or retarded rate of absorption of the sugar from the intestines, or on the lines of Allen's theories regarding treatment in diabetes, *viz.*, that, with arrest of the external secretion of the pancreas, there may be increased activity of the internal secretion with corresponding glycogenesis.

Effect of Hyoscine on Blood-Sugar Curve of the Chronic Encephalitic.

To understand the effect of hyoscine on the blood-sugar curve of the encephalitic, it is essential to appreciate that in them the blood-sugar curves after glucose alone are abnormal in type. In a recent paper, "Blood-sugar Studies in Encephalitis Lethargica" (1) we showed that encephalitic blood-sugar curves fall into three definite and distinct types. These we term Types A, B and C.

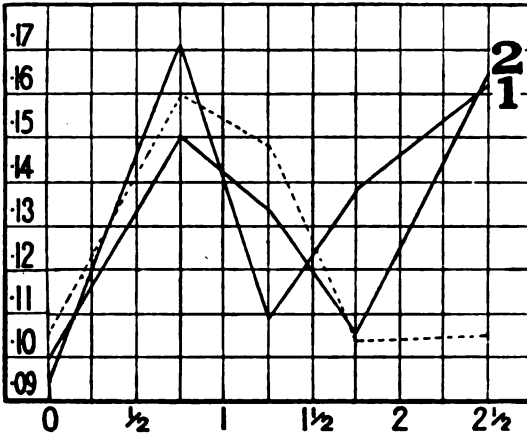


FIG. 2.—Type A. Blood-sugar curve normal in shape, but followed by a secondary hyperglycæmia. 2 cases.

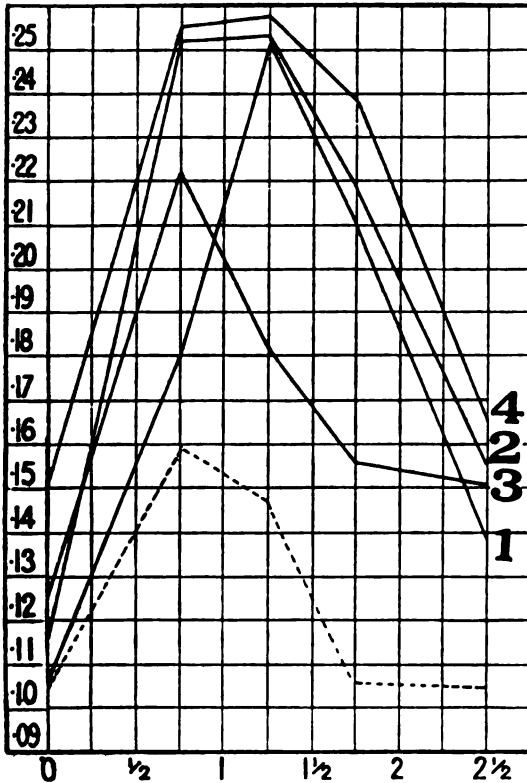


FIG. 3.—Type B. Blood-sugar curves of more or less normal contour, but with high maximum blood-sugar values.

In Type A we have a curve normal in shape, but followed by a secondary hyperglycæmia.

Figs. 2 to 4 are blood-sugar curves following 50 gm. glucose; encephalitis lethargica. The dotted line shows the normal blood-sugar curve.

In Type B we have curves with a more or less normal contour, but with high maximum levels, *i.e.*, above '2%.

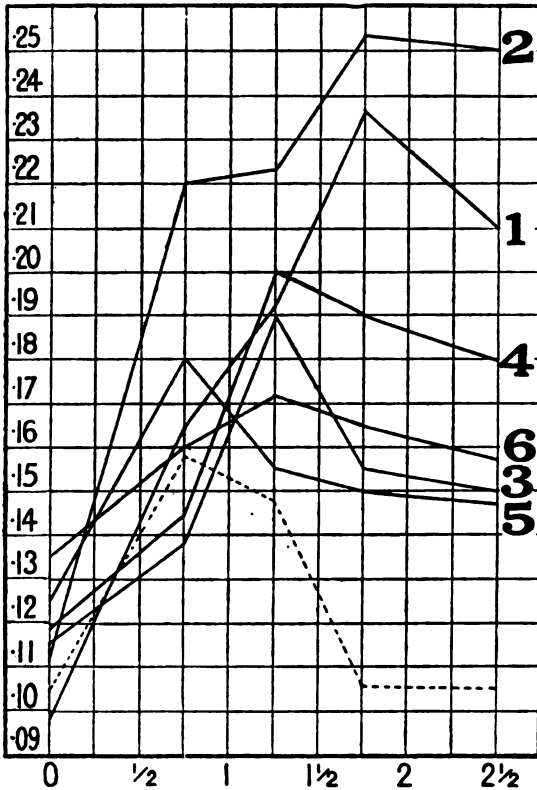


FIG. 4.—Type C. Blood-sugar curves showing sustained hyperglycæmia. 6 cases.

In Type C we have curves showing sustained hyperglycæmia.

We thus see that high blood-sugar values with a more or less sustained hyperglycæmia is the rule, and it is interesting to note that these findings are quite in keeping with the theory that we are dealing with a chronic toxæmia.

The results of the injection of hyoscine simultaneously with the glucose ingestion make it possible to classify the cases roughly into two groups.

TABLE II.—Showing the Blood-sugar Percentages in Encephalitic Patients. First, after a meal of 50 grm. of glucose, and, secondly, after a similar meal plus the injection of $\frac{1}{100}$ gr. of hyoscine hydrobromide.

No.	Type of case.	Fast- ing level.	Glucose only.				Fast- ing level.	Glucose + $\frac{1}{100}$ gr. hyoscine.			
			Minutes after—					Minutes after—			
			45.	75.	105.	150.		45.	75.	105.	150.
1	Parkinsonian . . .	.11	.2	.19	.17	.16	.1	.18	.15	.1	.095
2	„ (slight) . . .	.1	.18	.15	.136	.126	.095	.178	.15	.11	.094
3	„ . . .	.118	.145	.20	.19	.18	.115	.165	.235	.23	.135
4	„ . . .	.115	.252	.254	.22	.156	.12	.18	.235	.21	.115
5	„ . . .	.093	.17	.11	.138	.162	.096	.15	.165	.128	.10
6	„ . . .	.115	.138	.19	.155	.15	.11	.10	.12	.17	.11
7	„ . . .	.097	.14	.184	.20	.17	.10	.166	.187	.150	.11
8	„ . . .	.1	.142	.130	.16	.13	.11	.186	.135	.106	.11
9	„ . . .	.094	.167	.23	.2	.187	.092	.125	.187	.15	.12
10	„ . . .	.104	.176	.176	.15	.13	.098	.11	.152	.126	.10
11	Parkinsonian + apache	.11	.186	.176	.15	.144	.1	.17	.15	.13	.11
12	Parkinsonian . . .	.09	.16	.136	.125	.112	.095	.10	.134	.108	.096
13	„ . . .	.104	.166	.152	.150	.12	.102	.134	.150	.116	.130
14	Deluded (no Parkin- sonism)	.10	.165	.18	.235	.21	.102	.155	.12	.135	.162
15	Ditto . . .	.105	.15	.126	.11	.09	.10	.17	.15	.115	.128
16	„ . . .	.09	.138	.13	.112	.108	.1	.114	.09	.11	.126
17	Difficult (no Parkin- sonism)	.11	.15	.14	.12	.108	.12	.125	.15	.1	.17
18	Ditto . . .	.12	.18	.155	.15	.135	.13	.18	.15	.174	.135
19	Apache (no Parkin- sonism)	.10	.102	.108	.125	.10	.102	.108	.102	.102	.115
20	Depressed (no Par- kinsonism)	.11	.22	.225	.25	.25	.115	.17	.22	.155	.21

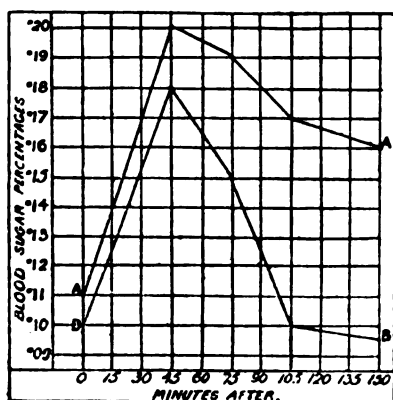


FIG. 5.—Blood-sugar curves of post-encephalitic Parkinsonian. A, After 50 grm. glucose. B, After 50 grm. glucose plus $\frac{1}{100}$ gr. hyoscine.

The first 13 cases exhibited Parkinsonism, and the effect of hyoscine on the blood-sugar curve is shown by a depression of

blood-sugar levels with acceleration of the fall of the curve, making a shape approaching the normal.

Case 13 was the only instance in which this reaction was indefinite. All the others show an "improved" blood-sugar curve and benefited clinically from the administration of hyoscine.

Seven cases (14 to 20), did not exhibit Parkinsonism, and this "improved" blood-sugar curve following hyoscine was not evident. Here there is a variable depression of blood-sugar levels, many of the cases showing a secondary blood-sugar rise, giving blood curves of the type shown to occur after hyoscine injection in the normal individual. In these cases the administration of hyoscine was not associated with clinical benefits.

The results show that in patients with chronic encephalitis, those with Parkinsonian symptoms receive most benefit from hyoscine therapy, and that this clinical improvement is coincident with an "improved" blood-sugar curve.

TREATMENT.

As a method of treatment, the hyoscine may be administered either subcutaneously or by the mouth. We have found the combined method most useful and practical. We give a hypodermic injection of $\frac{1}{100}$ gr. hyoscine hydrobromide in the morning, and follow this up with either one or two similar doses by the mouth during the day. When given subcutaneously it acts more powerfully, and its effects continue for a longer period than when the oral method is employed. The question of dosage is of importance. It is best to commence with fairly small amounts, and increase until the required effects are obtained. If given hypodermically, a start can be made with $\frac{1}{100}$ gr. once a day, and, if necessary, be increased until as much as $\frac{1}{50}$ gr. is reached. It is seldom that a larger dose than this is found necessary. When administered by the mouth, larger doses may have to be given even up to $\frac{1}{10}$ gr. three times a day, but we have never found it necessary to exceed $\frac{1}{50}$ gr. It should be given just after meals, since if taken before food the dryness of the mouth and throat makes mastication and deglutition somewhat difficult. In some cases we have found the addition of $\frac{1}{10}$ gr. pilocarpine useful in combating some of the unpleasant symptoms of hyoscine therapy, *e.g.*, the paralysis of accommodation and the dryness of the mouth.

Some of our patients have now been having hyoscine daily for over two years, and it is noteworthy that no deleterious effects whatever have accrued from the drug, and that little or no tolerance to it has developed, as shown by the fact that practically no increase of dosage has been found necessary during this prolonged period.

It should be noted that the action of the drug is merely temporary, and that as soon as the hyoscine is stopped the patient forthwith relapses into his original state. Thus we have found it essential for patients leaving the hospital for a few days to take a supply of the drug with them.

The administration of belladonna has been advocated by Prof. Hall. It, of course, belongs to the same pharmacological group as hyoscine, so that one would expect its action to be similar. We have tried it in most of our cases, and in no single instance did we find it superior to the oral administration of hyoscine, and in the majority it was of little use. These remarks apply equally to stramonium. All these drugs are, of course, merely palliative, and without effect on the progress of the disease. So far no treatment has been devised which can be claimed to be curative. We are quite satisfied in our own minds, chiefly from a clinical study of our patients, but also from pathological findings, that these cases suffer from an active disease, and it would be most unfortunate to regard them as merely exhibiting the after-effects of an acute process.

We have tried a large number of different therapies, including many of those recommended from time to time by various authorities, *e.g.*, "artificial fever treatment" by means of T.A.B. vaccine, the production of an intercurrent disease, *viz.*, hyperthyroidism by means of thyroid extract, intravenous injections of sodium cacodylate, and also sodium iodide. Two of our patients contracted erysipelas with severe hyperpyrexia, which lasted for several weeks, but no improvement in their encephalitic symptoms has so far resulted. We are satisfied that any benefits obtained by these methods are transient, and that in the majority of cases none resulted. Two other drugs which have seemed most hopeful to us are tryparsamide and argotropin, and we still continue to give them to our cases of encephalitis, irrespective of type. From experience of the drug in general paresis, we are satisfied that tryparsamide does gain access to the central nervous system in a way which no other arsenical preparation seems to do, and we therefore continue to pin our faith to it in our cases of encephalitis. What we can say is that not a single one of them has shown any further progress of his or her disease since receiving tryparsamide. We give a course of eight weekly intramuscular injections of 2 to 3 grm. The other drug which we still use is argotropin, as recommended by Wimmer of Copenhagen. This is a combination of 1% colloidal silver and 20% hexamethylene-tetramine. It is administered intravenously, one ampoule of 5 c.c. being given every other day. A course consists of 8-10 injections.

Time forbids more than the mere mentioning of other modes of treatment, *e.g.*, hot baths, massage and electricity, occupational therapy, psychotherapy, and care of the general health, all of which have their uses, but we would like to draw attention to the condition of the mouths of these patients. Pyorrhœa and other troubles are extremely common even in the youngest of them, and the correcting of these is accompanied by mental and physical improvement.

CONCLUSIONS.

1. Hyoscine is of undoubted value in the Parkinsonism of chronic encephalitis; its action is a specific one; its value is objectively demonstrable, amongst other methods, by its effect on the blood-sugar curve, which is made to approximate the normal curve.

2. It is important to remember that the action of hyoscine is only temporary, but its prolonged use does not lead to tolerance or any deleterious effects.

3. Though in the majority of cases the full benefit of hyoscine can only be obtained by hypodermic administration, there is no doubt that in many cases considerable benefit follows its oral exhibition. It is undoubtedly much superior to belladonna or stramonium in the treatment of encephalitic Parkinsonism.

4. The functional element in this disease is probably due to a lesion in or around the basal ganglia, and it has been suggested that an analogous lesion may account for similar symptoms in hysteria, chorea, Wilson's disease, etc.

5. Although no recovery can be claimed at present for the use of such drugs as tryparsamide and argotropin in the treatment of chronic encephalitis, it is hoped that time will show that they have been successful in the attack on the encephalitic virus as shown by the prevention of any further progress of the disease.

6. Oral hygiene is an important subsidiary line of treatment in the chronic encephalitic.

The authors take this opportunity of thanking Dr. Golla, the Director of the Pathological Laboratory of the Maudsley Hospital, and Dr. Norcliffe Roberts, the Medical Superintendent of the West Park Mental Hospital, for their encouragement and their unflinching interest in these investigations.

(¹) McCowan, Harris, Mann, *Lancet*, 1926, i, p. 802.

*The Aetiology, Psycho-Pathology, and Treatment of Mental Exhaustion and Paranoid States.** By ROBERT THOMPSON, M.B.Belf., D.P.M., Senior Assistant Medical Officer, St. Patrick's Hospital, Dublin.

INTRODUCTION.

THE teaching that the brain is the organ of the mind is not often referred to by psychiatrists, no doubt because of the relatively barren results which followed attempts to link up psycho-pathological theories with neurological facts. It is, however, I think, essential that we should keep this fundamental doctrine in the forefront of our minds, and that we should remember that some day an anatomical or a pathological verification may be required for our psychological or psycho-pathological theories.

Many attempts have been made to draw up a plan of the structure of the mind, but I think that the plan of McDougall (1) is at once the most logical and the most serviceable to psychiatrists. McDougall conceives the mind to be an elaborate structure resting on many pillars called instincts, which supply the energy for the whole working of the mind. The upper stories of this structure represent character and the moral and æsthetic sentiments, together with will or volition. Lower down one finds habit and automatic action, and still lower, pure instinctive behaviour. However one may regard these matters, most of us would acknowledge that the mind can best be understood by considering its structure as a series of levels, the bottom level consisting of the instincts with their primary emotions, and the upper levels consisting of the most recently acquired sentiments with their finer volitional activities. Strangely enough, pharmacologists have seized upon these facts, and have advanced the theory that the excitement following the use of narcotics is due to a paralysis of the higher and more recently developed volitional and inhibitory levels, allowing of unrestrained activity on the part of the lower emotional and instinctive levels. To bring the matter nearer home one might compare alcoholic excitement with the excitement of acute mania, and, recognizing the striking similarity, apply the pharmacologist's theories to mania.

Let us consider here for a moment the dictum of Hughlings Jackson, that "a destructive lesion in any part of the nervous system tends to produce 'negative' results due to impaired function of the part affected, and 'positive' results due to loss of control

* A paper read before the Autumn Meeting of the Irish Division, November 4, 1926.

of the injured part over other parts which are lower in the functional scale." Extending this dictum to the psychological aspect of mental diseases, we have, for instance, in mania "positive" effects in the form of great excitement, restlessness and elation, and "negative" effects in the loss of the inhibitory control over these emotional reactions. In delusional insanity we have also as "positive" effects many exaggerated and permanent emotional moods, principally those of anger, envy, jealousy and positive self-feeling, with, of course, corresponding delusions of persecution, and the "negative" effects are evidenced as before in the patient's inability to abolish or control these emotional moods. This structural plan seems to pervade the whole nervous system, and is simply demonstrated in the spinal cord by the exaggerated knee-jerks in disease of the lateral columns. Martin (2) has recently written a convincing article showing that epilepsy must be regarded as a failure of certain forms of inhibitory control, and not, as hitherto, of the nature of a cortical explosion.

It is interesting to recall at this stage that Shaw Bolton (3) places the volitional system in the second layer of the cerebral cortex (frontal lobe).

ÆTIOLOGY AND PSYCHO-PATHOLOGY.

I think it will be admitted by a majority of psychiatrists that, of all the causes of mental illness, long-continued mental stress must take first place. In 50 consecutive admissions to St. Patrick's Hospital during part of the year 1925 there was a marked history of long-continued stress in 22 cases. It has been argued, of course, that healthy people would not allow such stress to continue, and that therefore such a history would imply some previous instability, but with this view few of us will agree, and I feel satisfied that long-continued mental stress, either alone or in combination with physical illnesses, is sufficient to bring about a mental illness in what was previously a normal person. Mental stress largely consists of anxiety in one form or other, and the "contemplative fear" of Mott is an expressive description of some forms of anxiety. Mental stress is not confined to anxiety, and a person may be undergoing the most malignant stress and yet not be in the least anxious or afraid. This is especially so in the evolution of paranoid states, but here the stress is the inevitable outcome of the patient's personality. In the pre-maniacal state also the patient is rarely conscious of any stress or anxiety, and rarely consults a doctor. Disturbed sleep or a little nervousness is usually all that is felt, and the patient gives more and more freely

of his rapidly failing store of energy, until exhaustion or a toxic state completely upsets his balance.

A well-known anxiety is that connected with the illness of a near relative, and, in the opinion of Leeper, the nursing of relatives is the commonest single cause of mental illness. Here, of course, as in all other forms of stress, the anxiety is not unalloyed, but is combined with loss of regular sleep, gross neglect of proper nourishment, and often neglect of the hygiene of the body. Other forms of domestic anxiety and also financial worries are often in evidence, but the real anxieties which a normal person may have are innumerable and vary greatly in their effects. For example, fear of bankruptcy, a real anxiety to some people, has no terror for long-firm swindlers. Also, the anxiety must be personal and not collective. Great hardships can be borne collectively with little danger, as was shown by Bonhöffer (4), who found only 5% of insanity in the men who had undergone the rigours of the Serbian retreat. Here, although the general hardships were great, the conditions and reasons were well known, and I venture to think there was little or no individual anxiety.

If we accept the fact that prolonged anxiety is the main psychological factor in the ætiology of a group of mental diseases, how does prolonged anxiety bring about mental illness? Such a question justifies consideration.

The two emotions most frequently aroused by our contact with our fellows are fear and anger. Although anger comes into play largely in the development of paranoid conditions, fear, or its milder equivalent, anxiety, is almost ever present with us, and is a most valuable restraining and guiding force in our lives. We feel, however, that excess of this emotional condition for a length of time would be most harmful to the mind, and its actual effects on the mind are probably twofold. The first is most probably an exhaustion of the available nervous energy through the emotions, and the second a change in the balance of the mental forces, the will becoming increasingly unable to inhibit the emotion of fear and its ally despair, and the mind gradually becoming clouded by these emotional conditions. Delusions arise when the patient loses sight of the fact that he is ill, and attempts to give an explanation for the anxiety and despair he experiences. In fact, most of our beliefs about ourselves are mainly dependent upon the emotional mood we are experiencing at the moment.

Having granted all this prominence to psychogenic causes, I wish especially to draw your attention to the frequency with which definite physical illnesses appear to play a part in the genesis of mental illness. A history of an exhaustive or neurotoxic illness or

combination of illnesses is frequently given along with a history of mental stress, and indeed it must occasionally happen that a great part of the supposed mental stress has been due to the low state to which the body was brought by a toxic or exhausting illness. A considerable percentage of the admissions to St. Patrick's during the year 1925 exhibited more or less pronounced anæmia—perhaps caused by constipation or under-nourishment during the period of stress or other toxic factors. One sometimes does not realize how anæmic and poorly nourished a patient is on admission until one sees the contrast when that patient has recovered. The actual weight of the patient cannot always be taken as an indication of bodily health and vigour, as, although a patient may be well nourished, his muscles may be flabby and his tongue tremulous.

We will now consider another great factor, namely, toxæmia. In a small percentage of cases all the toxæmia one can find is intestinal, but in many cases the patient gives a history of an attack of influenza, after which "he was never the same." So often have I heard this that I have been forced to regard influenza as a dangerous neurotropic toxin, and all of us have met healthy people who were perplexed by the duration of the lethargy and depression which followed an attack of influenza.

Diphtheria figures in an undue proportion of St. Patrick's cases, the patient usually stating that he had a most severe attack (undiagnosed at first, as a rule) some years previously, and that he did not feel in good health for a year or more afterwards. I have regarded such a history as an important factor in the subsequent mental illness, even when the latter occurred years afterwards.

In a number of female patients the main cause seemed to be a long-continued menorrhagia, and several patients dated the very beginning of their symptoms from a severe prolonged hæmorrhage occurring at a miscarriage.

With regard to toxic foci in the body, many patients in St. Patrick's undoubtedly benefited by the extraction of septic teeth, and where permission to have these teeth extracted was not given, the illness often seemed to follow an obstinate course. In one patient who was confused, hallucinated and restless, the extraction of a number of septic and carious stumps was followed by great improvement. The hallucinations and restlessness had disappeared the following morning, and the confusion cleared up in about three weeks.

Finally I wish to draw your attention to the fact that a psychogenic stress in many cases is added to a toxic or debilitating illness, the unfortunate combination over a short period of time being more than the patient could withstand.

Mental Exhaustion and Early Symptoms.

I would like to discuss at this point the early symptoms of mental exhaustion, and to indicate those which should lead us to believe that we are dealing with a potentially grave condition and a possible forerunner of melancholia or confusional insanity, or, more rarely, of delusional insanity.

The patient usually complains of morbid thoughts, of obsessions, of loss of energy and inability to concentrate, but very often omits his most important and most obvious symptom—depression. These "morbid thoughts" often lead to the patient being treated as if suffering from "obsessions," the deeper underlying depression and mental exhaustion being completely overlooked. In point of fact, I question whether it is wise to speak of any affection as an "obsessional neurosis." The presence of marked obsessions always implies, in my opinion, grave loss of volition.

If the illness has lasted for a long time, the patient will have begun to elaborate all sorts of explanations for his depressed state, e.g., sins of his youth. Further inquiry often reveals the fact that a few weeks or months previously there were periods relatively free from this anxiety and depression, but that recently these periods have become shorter or have ceased to exist. The relatives often state that, prior to the onset of depression, the patient was unusually active and energetic. That this energy is the outcome of an anxious restlessness, and often has no relation to mania, I feel convinced, although transient states of elation are common in exhaustion. A mother, for example, became unduly solicitous about the health and welfare of her children and could not make enough new garments for them. A commercial traveller scarcely took time for his meals, and for several months before his onset of melancholia motored about 150 miles per day. That he was not in a state of mania is borne out by his statement that he felt very depressed, and often deliberately speeded around corners in the hope that an accident would befall him. This man complained of poor and irregular sleep at this time, but my experience has been that, as a rule, these patients sleep quite well but for terrifying dreams and nightmares. In some cases, before symptoms become too pronounced, sleep is excessive, the patient preferring to remain in bed during the day. This may happen again during convalescence. Other symptoms are irritability, sudden changes of mood, outbursts of anger, mild persecutory ideas, headaches, noises in the head, and even transient hallucinations. Failure to carry out resolutions and duties (Mercier's amnesia) and over-scrupulousness are also commonly found. Where a number of these symptoms are present

the condition is sometimes termed "anxiety state" or "anxiety neurosis," but these terms are often, in my opinion, misleading. There is often little apparent anxiety, but marked depression, and yet one could not usually term the condition "melancholia." I would suggest, in common with other writers, such a term as "exhaustion state."

The first realization that a mental illness is imminent is most alarming to the patient, who often becomes acutely anxious and depressed and scarcely able to resist an impulse to suicide. One lady told me that the symptoms suddenly set in while she was on a train journey and that she had an almost irresistible impulse to fling herself out of the train. Many patients gave me a history of their illness (melancholia or mental confusion), commencing with pronounced tremors and shivering fits accompanied by acute anxiety and depression. An analogous condition may, I believe, be caused by sudden uncontrollable fear.

On admission, many of these patients are anxious and restless, and talk very freely about their "obsessions" and about the mistakes they have made which gave rise to these "obsessions." Depression may not be complained of at all. The first change very often is that the anxiety and restlessness disappear, but depression becomes well marked and the patient actively suicidal. This initial depression, which may be due to the absence of stimulation from friends and relatives, I regard as unavoidable, but it is also, if not anticipated, exceedingly dangerous.

The further course of such a case is familiar to all of you, *i.e.*, gradually lessening depression, both in intensity and length of periods, and usually, from the seventh to the twelfth week, a gradual return of confidence. Uncomplicated cases appear to run an almost fixed course of about four months.

Paranoia and Paranoid States.

The evolution of paranoia is a process of intense interest to psychiatrists. How is it that a person's mind can become dominated by an unalterable system of false beliefs, while the memory and the intelligence remain apparently unimpaired? It is now accepted, I believe, by a majority of psychiatrists that paranoia can only be evolved in a certain type of mind. The main features of this type are, in my opinion, apparent in boyhood, and I shall therefore attempt to describe the pattern of mind which, in later years, may be slowly moulded into that of the paranoiac.

A paranoid boy holds himself aloof from the rough and tumble of school life, and avoids the more humble games and the spontaneous outbursts of high spirits. He is often an exceedingly

industrious and methodical worker, and may regard the more important games as seriously as his work, taking an intense interest in them, but rarely seeming to enjoy them in the manner of other boys. Although usually a boy of high ideals, he may give way to strange outbursts of ferocious anger at the most trivial insult, and he would appear to "nurse his wrath" for days over the most harmless joke. While displaying a lordly contempt for those beneath him, he often exhibits an intensely subjective attitude towards his superiors, and is inclined to hero-worship. He has few friends, and never one for long, but his unbounded faith in himself seems to carry him through all difficulties unaided. Indeed, the other boys soon learn not to proffer advice, but to leave him severely alone. He will hold to the most absurd opinions with mulish obstinacy, and will rarely alter his plans to suit anybody. He will take a curiously mean advantage of holding up a rival to ridicule, but, if criticized himself, will seek revenge. Keenly conscious of the ridiculous in others, he is unable to appreciate humour directed against himself, as he fails to recognize its hidden sympathy, and hence believes it is simply a veiled insult. He is very ambitious, and plans his career irrespective of the wishes of parents or the advice of friends. Lasting attachments with other boys are rarely formed, and few boys have cause to remember him for anything but his strange "superiority" and obstinacy, his "touchiness" and outbursts of temper. Nevertheless, he is not easily ignored by those in close touch with him, as his make-up constitutes a distinct and forceful personality. Although never popular, he forces his way to the leadership in sports and study by reason of his energy and determination.

Generally, one may say that such boys display the egocentrism characteristic of all paranoid states, and by that one means, of course, that their main interests never seem to omit the "ego" or the well-being of the self.

Psychologically, one may say that these individuals have inherited a poor control over all those emotions which, as McDougall has shown, are aroused by contact with the environment, namely negative and positive self-feeling—anger, envy, jealousy, etc.—and that the opposing sympathetic and tender emotions have either been deficient in strength from birth or have never had the opportunity to develop. Both types of emotion cannot, of course, be experienced at the same time. As a consequence the altruistic and moral sentiments are poorly developed.

The remainder of the course in the development of paranoia can be easily followed. Positive self-feeling (probably the most permanent emotional mood of these people) will lead to intense

ambitiousness (a trend that is largely sustained by altruistic sentiments in the normal person). The paranoiac personality has a faith in his own abilities and beliefs not usually shared by those around him, and his superior, scornful attitude (also the direct outcome of exaggerated positive self-feeling) renders the sceptics actively antagonistic. Furthermore, such an individual, lacking as he is in the sympathetic advice of colleagues, makes endless mistakes, and the very memory of these mistakes stirs up angry feelings and desires for revenge. His ambition takes him to still more unfamiliar ground, and his increasing difficulties lead to one emotional storm after another, in which all the antagonistic emotions are experienced, but may, or may not, be actively expressed. An unusual period of stress or an exhausting or toxæmic illness finally destroys the already weakened inhibitory powers, and the mind becomes permanently clouded with emotions of hostility (anger, revenge, jealousy) and positive self-feeling. In attempting to account for the presence of these moods he is forced to evolve a system of persecutory ideas.

It will be noticed that the emotional conditions found in paranoia are entirely aroused by the environment, and are, therefore, always being brought into play. The exaltation of mania, on the other hand, is only partly dependent on the environment. One often meets, however, as one would expect, cases exhibiting symptoms of both conditions. There are few cases of paranoia that do not exhibit some of the characteristics of chronic mania. They are tireless in letter-writing and play the simplest game with excessive energy. Definite elation, characterized by jocular and witty remarks, is sometimes pronounced.

In fully developed paranoia with its permanent emotional mood one can understand why beliefs will be unchangeable in type, but one often wonders why it is that people in ordinary life will stick so obstinately to an obviously erroneous or absurd belief.

In the normal person, the act of accepting the belief of a friend is closely bound up with sympathetic relationships. One accepts the suggestion of a close or trusted friend much more readily than that of a stranger. Now the paranoid personality, lacking as it is in the sympathetic sentiments that come into play so prominently in the above mechanism, and therefore regarding so few people as trusted friends, will thus stick stubbornly to his own beliefs. If hostile emotions be aroused, as is most likely, the absurd belief will then be elevated to the position of a standard on the field of battle.

The attitude of suspicion, so often found in this psychosis, is sometimes puzzling from the psychological point of view. If one

remembers, however, that confidence—the converse of suspicion—is rarely based on an intellectual process, but is supported by tender and sympathetic sentiments, some of the difficulty is explained. Furthermore, suspicion is probably—in essence—masked hostility.

The amorous paranoiac has added to his other failings less control over amorous or lustful feelings towards a member of the same or opposite sex. The incomplete development of control over the sexual instinct leading to amorous and lustful phantasy—thinking and conduct—is only to be expected in a personality so incomplete in other respects. The tender feelings which actuate and guide these impulses in the normal person are apparently absent.

As a contrast to the strong and fixed emotional bias of this illness, one should note the *intellectual* reduction frequently characteristic of mental states depending on organic conditions, *i.e.*, general paralysis, cerebral tumour, interstitial nephritis. In these important duties are forgotten, absurd actions performed, and the memory is often greatly impaired. No fixed emotional state may be apparent and the patient is most tractable.

Former writers explained the evolution of the delusional scheme on the principle of *projection*. The patient was supposed to *project* his failings into the minds of others and, hence, to see there faults that were really his own. While it is obvious that a person must quickly recognize in another a trait with which he is himself familiar, such recognition might evoke sympathy as easily as hostility. I believe that the theory of projection owes its origin to the poverty of the paranoid mind in the tender emotions and altruistic sentiments. Rarely experiencing impulses of this nature in himself, he is unable to recognize them and, hence, assigns them as motives for the conduct of others, and easily arrives at the conclusion that avarice, lust for power, exploitation, hedonism, etc., are the motives for all human conduct.

TREATMENT.

Mental Exhaustion.

I now propose to discuss the treatment of such an illness as that described in the previous section. When possible, I would apply a similar form of treatment to the more advanced conditions of melancholia and confusional insanity. Paranoid conditions must, I believe, be approached from a different angle.

Psychotherapy.—The most useful psychotherapy I can conceive of is that the patient shall be given at the outset a simple, clear and definite picture of his illness and its causes. The fact that such

illnesses are common, even amongst the finest intellects, should be impressed upon him. In my opinion the main object of psychotherapy is to relieve the patient's mind from anxiety, and in the early stages of his illness, by reason of the intensity of his depression, these anxieties are very real and painful. It is, of course, utterly impossible completely to remove these anxieties, which often amount to delusions, until the depression which has given rise to them has disappeared. A simple, direct explanation, however, will often convince the patient for a short time of the real nature of his illness, and even this temporary relief must materially shorten the duration of the illness. The actual anxieties which these patients may have are, of course, legion. Some trivial incident or mistake of youth is, as a rule, resurrected to explain the depressed state, and to impress upon all his friends that he can never recover and must become hopelessly insane. This latter fear is probably best dealt with by a diatribe against the word "insanity," and by assuring the patient that his illness is simply due to depression, the result of exhaustion, and that nothing worse can occur.

Fear of insomnia is very pronounced in some cases, and a useful line of attack here is to point out that absolute sleeplessness for several nights in succession is, of itself, harmless, and that it is the dread of the supposed effects of insomnia that is worrying them. This view, I should point out to you, is contrary to that of Sir Maurice Craig (5), who believes that insomnia should be dealt with energetically. Personally, as I have said before, I find that these patients sleep quite well—with perhaps an occasional disturbed night—when given 15 gr. of ammonium bromide three times a day.

It must be expected that, no matter how successfully one deals with a patient's worries, similar or new ones will recur the following day, if not earlier, with the recurring depression. The few hours of comparative relief which a rational reassurance may give must, however, assist the process of regeneration and shorten the illness.

After putting one's finger on the main worries of the patient and dealing with each one in turn, I think one ought to discourage outbursts of confidence on the part of the patient, or the unnecessary revealing of intimate matters. During the early stages a patient ought to receive some support from the doctor, at least once daily, but he should be told to expect many absurd and morbid thoughts and anxieties until convalescence is firmly established, and he should be encouraged to inhibit many of these by his own strength of will, and only to reveal the overmastering ones. Unless there are special indications, the discussion of intimate or sexual matters should be discouraged, as I feel certain that the recovery of many patients must be prolonged or even greatly jeopardized by

regrets at having needlessly disclosed them during the acute stage of their illness.

Physical Treatment.—In the physical treatment of these patients there is nearly always an indication for a prolonged course of iron, on account of the anæmia met with. In the under-nourished, depressed and amenorrhœic young girl, especially, the results at St. Patrick's have been gratifying, and few patients failed to respond to a lengthy course. For the first two or three months bromides should be prescribed in gradually decreasing doses. Depressed patients do better on bromides, and it is the only drug I know of that in some way seems to lessen the intensity of the depression. Conversely, the excitement of maniacal patients often seems to be aggravated by bromides.

A useful prescription for the first month or six weeks is :

℞ Ammon. brom.	.	.	.	gr. xv
Ferri. et ammon. cit	.	.	.	gr. vj
Liq. arsenicalis	.	.	.	ʒ ij ss
Aq. ad	.	.	.	ʒ ss
ʒss <i>t.d.s.</i> ; <i>ex. aq. p.c.</i>				

When the bromide is omitted, the arsenic should also be omitted. The iron may be continued almost up to the discharge of the patient. Any noteworthy reappearance of depression should be promptly met with an aperient and a temporary return to the original maximum dose of bromide. Stronger sedatives or hypnotics should rarely, if ever, be prescribed, with the exception of paraldehyde, and even this drug, in the opinion of Leeper, may be greatly abused. When required, it is most useful in ʒ ij doses at night, and, although harmless for occasional administration, it should only, I believe, in very exceptional cases be continuously administered. I agree with Cole (6) and Masefield (7) that sulphonal has deleterious effects on the delicately constructed cortical nerve-cells. The latter author attributes many cases of asylum dysentery to this drug. Many promising cases must, undoubtedly, be checked in their recovery by the use of strong hypnotics or sedatives, and the positive value or the rationale of the administration of these drugs has never, to my knowledge, been demonstrated. With good nursing and patience, sleep occurs perfectly well without them. They do not lessen anxiety, until the patient is almost stupefied, and they cannot be required for the sleeplessness and excitement of mania, which is, as every psychiatrist knows, usually recovered from, and appears to be almost harmless to the patient. Last year there was discharged from St. Patrick's a lady who had just had her twenty-second annual attack of mania. This patient, after

spending twenty-two winters in St. Patrick's with acute mania—restless, destructive, degraded, noisy and sleepless, night after night—went out to take up a prominent social position, apparently none the worse for her illnesses.* She had scarcely ever had a hypnotic or sedative of any kind, and hyd. c̄. cret. was substituted.

In recent cases of acute mania Leeper has got excellent results with repeated doses of calomel gr. iv-v *nocte* several times weekly for a few weeks, and this treatment is now followed as a routine in St. Patrick's Hospital. Tonics are administered, as before, after the first week or ten days. In depressed patients calomel tends to increase the depression.

If one accepts the conclusion, as I think one must, that in every mental affection there is an impairment of function of some group or groups of cortical nerve-cells, then the obvious treatment would include nerve tonics, but, so far, I am not satisfied that any of the so-called nerve tonics (glycero-phosphates, etc.) has any specific effect on the cortical nerve-cells.

Paranoia and Paranoid States.

The treatment of early paranoid states must be largely empirical, because these patients rarely consult a doctor, and would usually, in fact, be highly offended if it were suggested that they needed one. Still, relatives sometimes persuade them to see a doctor, or they may consult a doctor of their own accord for depression or sleeplessness—two symptoms which often accompany their emotional storms—and one must decide on some form of treatment. If the patient admits being "run down," one may prescribe tonics, in the form of iron, etc., but as a rule these patients either take medicine reluctantly or refuse it altogether, and, in any case, treatment of their physical condition must take a secondary place. Where it is at all possible, the obvious and, as a rule, the only effective treatment is an immediate and lengthy change of environment. The change should be as complete and as long as possible, for the dangers that lie ahead are very real. Companions should be chosen carefully, and only those who have a sensible grasp of the nature of the illness should be allowed to accompany the patient. The complete change, away from all objects and persons around which he has built sentiments of hatred, gives the patient the best chance of recovery. A congenial occupation should also be selected, and it may be advisable to allow the patient to occupy himself thus very fully, of course stopping short of exhaustion. In contradistinction to nearly all other mental illnesses, I do not think early

* This patient has been readmitted for the twenty-third time.

treatment in a mental hospital can be advocated for this type of patient. The enforced seclusion from the outside world affords him the strongest of proofs that he is the victim of a conspiracy or persecution. The physician, however, must always bear in mind that these patients are potentially both homicidal and suicidal, and the inability of relatives to guard against such contingencies is the strongest indication for certification. It must also be remembered that a mental hospital is a complete change of environment, and many patients recover to a marked extent after some months' residence. While in the hospital, a congenial occupation is almost the only treatment possible. Any conversation bearing on the patient's case or symptoms is usually resented by him, and I believe does harm, and even the volunteered information of the patient should be commented upon in a general and guarded manner.

Medicines, apart from any necessary purgatives, are usually resented, and may strengthen beliefs of poisoning, etc.

On their reaching a certain stage of convalescence, it is a difficult point to decide whether to allow these patients out on trial or not. Refusal to do so usually means permanent detention, while acquiescence may be fraught with terrible risks. On the whole, however, I think the risks are over-estimated, and that, given sensible and willing relatives, trials at home or with friends might be allowed with advantage to these patients.

If a case is seen very early, *i.e.*, before the development of fixed delusions, it may be ideal to give the patient a certain amount of insight into his condition, and gradually to train him to be on the alert to control and banish, by his own will-power, his antagonistic emotions. But this treatment is rarely practicable or even advisable, as it is a delicate and dangerous procedure, and one may lose for ever the confidence of the patient. The immediate treatment should probably always be a lengthy and complete change of environment.

In conclusion I wish to express my sincere thanks to Dr. Leeper, not only for permission to make full use of the records of the Hospital, but also for his advice and criticism.

References.—(1) McDougall, *Social Psychology, Outline of Psychology, Primer of Physiological Psychology.*—(2) Martin, *Lancet*, cex, No. 5354.—(3) Shaw Bolton, *Cole's Mental Diseases*, 3rd ed., p. 28.—(4) Bönhoffner, Mott, *Journ. Ment. Sci.*, lxxi, No. 295.—(5) Sir Maurice Craig, *Lancet*, Special No., "Early Treatment of Mental Diseases."—(6) Cole, *Mental Diseases*, 3rd ed., p. 316.—(7) Maschfield, *Journ. Ment. Sci.*, lxxii, No. 297.

Endocrine Therapy and the Psychoses. By CHARLES B. MOLONY, M.B., Ch.B., Assistant Medical Officer, District Mental Hospital, Limerick.

IN 1913 the late Sir William Osler made the prophetic statement that the glands of internal secretion would open up many fields of endeavour in the science of medicine within the next two decades. In view of subsequent events it must be acknowledged that he thereby displayed even more than the usual vision for which he was famous.

In the fourth edition of Leonard Williams's handbook, *Minor Maladies*, the following passage appears:

"Still more earnestly do I believe that the study of the whole field of the internal secretions will enable us to detect and correct morbid tendencies with a degree of success which has been denied to the older methods. The microbe—the seed—has ruled the immediate past; the future is with the soil, the endocrine glands."

In relation to a subject more germane to this article, Prof. Robertson, in his Maudsley Lecture on "The Prevention of Insanity" (1), lays great stress on the importance of disorders of the ductless glands in the ætiology of mental abnormalities. He says:

"Just as heredity is a factor to be reckoned with to a greater or less extent in every case of insanity, so we are beginning to recognize that disturbance of the internal secretions plays a more or less important part in all forms of mental disorder. Any future great therapeutic discovery in the domain of mental disease will probably be found in a knowledge and control of the internal secretions."

The above are general statements, and, proceeding from the sources from which they do, are entitled to command our attention and respect. It is when we endeavour to apply the well-known and carefully elaborated principles of physiological endocrinology to the treatment of the more elusive and consequently less well-known pathological entities that it behoves us to be critical, to curb our imagination and enthusiasm, and to substitute for these latter the maximum amount of common sense and cold logic in our assessment of the degree of success we can legitimately claim for such treatment. The number of pathological conditions which endocrine therapy claims to ameliorate or cure is already legion; the grounds for such claims are, I am afraid, in many cases anything but well-founded, and it is not the aim of this article to add the psychoses to this list without unimpeachable clinical evidence.

Physiological endocrinology has made huge strides in the present century, but more particularly within the last decade. The corresponding applied science has more than kept pace with it—in fact

it may be said to have pursued its own reckless course irrespective of the steadying hand of experimental work. This particular phenomenon invariably follows the transition from a pure to an applied science, but in this case more especially do we see its ill-effects, and the disrepute into which it has led honest attempts at scientific organotherapy.

In claiming that any particular drug can be credited with curing any particular disease I maintain it should be the aim of the clinician to observe three cardinal principles, *viz.* :

- (1) To eliminate spontaneous recovery.
- (2) Long periods of unsuccessful treatment by other methods—this obviously strengthens the case immensely; and—
- (3) By long-continued clinical after-observation to show that the particular therapeutic agent did, in fact, have the desired curative or ameliorative effect.

Bearing these fundamentals carefully in mind, I hope to show that, in my hands, endocrine therapy applied to carefully selected cases of mental disease has been remarkably successful. From the point of view of a rapid, complete and permanent cure of a psychosis, the discovery by the psychiatrist of an underlying basis of glandular insufficiency or dyscrinism points directly to a hopeful therapeutic agent at his command—I refer, of course, to substitutive or homo-stimulative organo-therapy. To appeal for a more general recognition of the possibility, the probability, nay the certainty, in many cases, of this direct causative association between such dyscrasias and certain of the psychoses is the prime object of these pages.

In this field, of course, I cannot claim to be a pioneer, but, looking over the literature of mental disorder on the one hand and endocrinology on the other, the dearth of observations on the successful use of extracts of the ductless glands in the treatment of mental derangement has struck me as being rather remarkable. In my more critical moments this has often moved me to question whether my results, reported, and, I hope, critically analysed below, can, after all, be genuine. By which I mean to convey, Can organo-therapy, *per se*, be credited with the undoubted cures? Further on I hope to show that, by carefully selecting one's cases, by accurately and impartially reporting their progress, and by reasonably close after-observation, one can conscientiously draw conclusions of definite clinical and scientific value, even in such ætiologically obscure conditions as the psychoses, and such physiologically complex entities as the ductless glands.

In the following descriptions of cases I do not propose to attempt

a classification based on the influence of defects of the secretion of individual glands in producing individual psychoses, because I believe in most cases there is a pluriglandular deficiency manifesting itself in an infinite variety of ways. The term "psychoses," therefore, is here used in its broadest sense to indicate any form of mental aberration, although indeed there has been a remarkable uniformity of symptoms in one group—the climacteric insanities; while it is only very isolated cases which have responded in a satisfactory manner to uniglandular, as opposed to pluriglandular, therapy.

Here, at the risk of being discursive, I must endeavour to establish the fact that pluriglandular therapy is based on rational principles, which have received abundant support from recent physiological, pathological and clinical investigation. No one will now deny that there is a very well-marked physiological endocrine inter-relationship, and that disturbance of one gland inevitably affects one or more of the others. To take a specific example which has been experimentally proved up to the hilt—the influence of the ductless glands on carbohydrate metabolism. The predominant hormone in regulating the amount of sugar in the blood is that derived from the B cells of the islets of Langerhans in the pancreas. Experimental removal of three-fifths of the pancreas, by producing hyperglycæmia and diabetes, establishes this fact. Adrenalin, the active principle of the suprarenals, when injected, causes hyperglycæmia and glycosuria, thereby demonstrating an antagonistic relationship between the adrenals and the pancreas as far as carbohydrate metabolism is concerned. Experimental injection of extract of the posterior lobe of the pituitary has been shown directly to antagonize the action of insulin, and to cause hyperglycæmia. In exophthalmic goitre, which is characterized pathologically by excessive secretion of the thyroid, increase of blood and urine sugar has been repeatedly observed; in the opposite condition—myxœdema—hypoglycæmia and high carbohydrate tolerance are invariably present. Here then we have an interacting quartette of endocrine activity, balanced to a nicety in the normal individual; but, by the very fact of such a delicate poise, alteration in the activity of one member will inevitably result in a proportionate positive or negative secretory disturbance in one or more of the remainder. I merely mention this well-known experimental work to establish a presumption in favour of the probability of endocrine disturbance in psychotic conditions being, in most instances, polyglandular, and therefore demanding, at the hands of the clinician, appropriate pluriglandular therapy.

Some quotations on this point from contemporary sources may not be amiss at this juncture :

"It should be recognized that when one gland is malfunctioning others are also disturbed, and may cause atypical conditions" (Osborne, *Principles of Therapeutics*, Part 4, p. 400).

"The most remarkable fact about the internal secretions is that they are correlated with one another. Not only has it been abundantly demonstrated by experiment, but in many cases pathological lesions of the individual glands cause some disturbance in the functional relations of other glands—the so-called pluriglandular syndromes" (Fielding H. Garrison, *Endocrinology and Metabolism*, I, p. 70).

"The theory of a correlation between the glands that constitute the endocrine system, though only vaguely understood, is, nevertheless, essentially well established. It may be stated in general that the ductless glands are normally so correlated as to form a perfect physiologic balance, which is preserved by a proper distribution of harmony and antagonism between the functions of the various glands. If one of the glands is diseased or injured, or extirpated, the normal balance is upset, and the organism of the individual may be affected by the abnormal action of one or more distant glands of the group" (Graves, *Gynecology*, p. 45).

Certain correlations between the individual glands have been definitely established both in experimental physiology and clinical medicine. Take the case of the thyroid and pituitary. Most investigators agree that the pituitary hypertrophies after thyroidectomy—on histological examination increased secretory activity, especially of the anterior lobe, is apparent. What practical conclusions can we draw from this fact? I admit it has yet to be proved that the pituitary can function for the thyroid. But is it unreasonable to assume, in cases where the thyroid secretion is diminished, that it *does* make a valiant attempt to do so? A constant symptom in many of my climacteric cases has been headache. Cannot this be interpreted, without unduly stretching the imagination, as due to increased activity of the pituitary compensatory to decreased ovarian, and probably thyroid, secretion, resulting in hyperæmia and enlargement of the first-named gland in its unyielding sella turcica? The fact that I have found the administration of a combined thyropituitary-ovarian extract of immense benefit for this otherwise intractable symptom convinces me that this explanation is well founded.

At the same time it brings me to another relationship, likewise experimentally and clinically well established. I refer to that between the thyroid and the ovaries. The thyroid hypertrophies during puberty, menstruation and pregnancy—obviously an attempt to help the sex-glands over these periods of stress and strain. Experimentally, thyroidectomy results in marked loss in the development of the ovary and uterus(2). Pathologically, abnormal menstrual conditions and atrophy of the gonads are fairly constant findings in Graves' disease. Clinically I have yet to see a case with well-marked hypothyroidism in which amenorrhœa was not a prominent symptom, and more important still, in which the administration of thyroid did not re-establish the flow in a remarkably

short time, and often after all other measures had failed. A typical case of this kind which exhibited an exceptionally striking endocrine psychosis is reported *in extenso* below.

Finally we can work round the circle to the reciprocal secretory relationship between the pituitary and the gonads. Experimentally the well-known syndrome of dystrophia adiposo-genitalis has been produced by numerous physiologists (Cushing, Biedl, Paulesco, Bell, etc.) by *partial* ablation or injury of the anterior lobe of the pituitary. Biedl concludes: "The anterior hypophysial lobe represents the vital portion of the organ, the complete extirpation of which is followed by death; its partial extirpation by disturbance of growth and metabolism and by derangement of the activity of the sexual organs"—the derangement consists of very pronounced atrophy. In pathological conditions such as acromegaly we get amenorrhœa in the female and impotence in the male. Clinical successes are claimed for the administration of pituitary in amenorrhœa, but of this I have no personal experience—in amenorrhœa occurring in endocrine mental disorders I invariably use a pluriglandular formula.

So much for the experimental and clinical basis of multiple-gland medication. The reports, on the one hand, of dramatic clinical successes in any particular form of uniglandular therapy, and hopeless failures in the same morbid conditions treated by the same gland on the other, seem to me to be often attributable to one or more of the following circumstances:

(1) Faulty diagnosis of the dyscrinism present, (2) the use of inert gland products, or (3) failure to recognize the existence of multiple associated dyscrasias.

The aim of the physician who wishes to achieve success in the domain of organotherapy should therefore be threefold: (1) Accurate diagnosis of the underlying endocrine deficiency, (2) treatment with what he knows to be reliable and potent gland products, and (3) to allow for the possibility of the dyscrinism being multiple—in other words to employ pluriglandular therapy when indicated, or where thyroid, ovarian, etc., medication alone, fail.

When I first began to use gland extracts in the treatment of mental disease, I must confess it was with the profound scepticism I watched for results from oral administration. I recognized, of course, that if I could establish an unequivocal diagnosis of thyroid insufficiency in any particular case, I might expect a positive result with practically the same certainty as I should in giving antidiphtheritic serum in a case of diphtheria, because thyroxin, the active principle of the thyroid, has been proved to be so stable that it passes into the blood unaffected by the digestive enzymes. I had

been so often told, and the text-books insisted so much, that this is the *only* internal secretion to escape from the stomach in a potent form, that I regarded the question as settled. A large portion of my experimental work involved prescribing ovarian extract plus pituitary or thyroid or both, for psychoses associated with the menopause. Consequently this problem loomed large in my mind.

Let us see what the experimental physiologists have to say on the subject. Unfortunately this is very little. I have come across the following reference by Hoskins. He distinguishes between the hormones proper and the protein contents of the extracts, and says:

"The hormones, on the other hand, are, so far as known, much simpler bodies. They are crystallizable and dialyze freely. They withstand boiling, and, according to Abderhalden, are not destroyed by the action of the digestive juices" (3).

I have not been able to trace the source of the reference to Abderhalden's work on this point, but presumably it is authentic. Feeding experiments with anterior pituitary, to mention only one, go to show that very definite results on growth processes and development in general, together with apparently selective stimulation of the sex-glands, can be experimentally produced, despite the alleged destructive influence of the gastro-intestinal tract on hormones of unknown chemical constitution. As Robertson says:

"The results obtained with pituitary (anterior lobe) tissue which have been cited tend to indicate that the active material in this instance is not totally destroyed by digestive juices, nor totally unassimilable from the digestive tract, but either of these factors, nevertheless, may have contributed to *reduce* the effect of the administration" (4).

The influence of the parathyroids in controlling the blood calcium is well known, and affords an experimental means of determining whether this influence is manifested when the gland substance is orally administered. In tuberculosis or sprue the blood-calcium is very much below normal; one-tenth of a grain of parathyroid two or three times daily by the mouth for a few weeks will increase the blood-calcium without any other treatment. I recently had to deal with a very obstinate varicose ulcer of the leg on which no treatment had the slightest effect. The calcium content of the patient's serum was 5 mgrm. per 100 c.c. The normal figures are said to be between 9 and 11 mgrm. per 100 c.c. (5). Parathyroid extract by the mouth increased the blood-calcium to 13 mgrm. per 100 c.c. by the end of a month, and the ulcer was almost healed.

I have already drawn a distinction between homo-stimulative and substitutive organotherapy; the *modus operandi* of the former is well summarized in "Hallion's Law": *The extract of an organ administered in suitable amount has an elective stimulating action on the functional activity of the same organ in the patient to whom it is administered.*

I believe that this is the way in which all extracts (not even excluding thyroid), orally administered, cure minor degrees of insufficiency of the homologous organs, and, as a clinician, I do not concern myself greatly with the problem whether it is the hormone itself, the lipoids, or the specific proteins of the prepared substance which achieves the satisfactory results. After all, when the physiologists, the bio-chemical purists and other laboratory workers have exhausted the possibilities, there still remains to us clinicians one very sound way of knowing whether or not the endocrine preparations which we prescribe are worth the paper on which the prescriptions are written, and that is that in 99 out of 100 selected cases we *do* achieve unimpeachable therapeutic successes by the oral route.

As far as my experience goes, psychoses associated with endocrine dyscrasias occur roughly at two well-marked periods in the lives of females—puberty and the menopause. These correspond to two of what Prof. Robertson calls the "Three Critical Periods of Life." I quote from a report of his recent lecture on "The Prevention of Insanity":

"Coming to the three critical periods of life, all connected with sex, Professor Robertson remarked that during pubescence and adolescence the balance of the internal secretions of the body was disturbed by the intrusion of the internal secretions from the sexual glands. For all practical purposes insanity occurred for the first time at this period of life. Leaving on one side the effect of heredity, there was, in insanity, almost always a physical basis, but usually combined with mental causes. The physical cause in adolescent insanity was the physiological disturbance produced by the internal secretions. The mental cause was the change in the social status of the young adult or adolescent. He had to adjust himself to the problems of life, and of these the most disturbing during these early days were those connected with sex.

"The next critical period was the climacteric, occurring between 45 and 50. This was the age when the powers first began to fail; an age when, to keep abreast of younger competitors, increased effort was needed. When the climacteric was surmounted the incidence of insanity for a period fell steadily" (6).

Sir Frederick Mott has left behind an extensive work done on the pathology of mental disorder occurring at puberty and adolescence. He investigated in particular dementia præcox, and, from the constancy of certain findings in the sex-glands, he strongly inclined to the opinion that in them is to be sought the most probable physical basis for this disease. Unfortunately, attempts at endocrine therapy on those lines have so far met with very little success, so I shall not pursue the matter further, but proceed to report and discuss some interesting cases in which disturbed internal secretions undoubtedly laid the foundations of very severe psychoses.

CASE 1.—Female, æt. 25, admitted December 29, 1924, suffering from a rather severe form of psychosis, manifested by great restlessness, insomnia, profound depression, some degree of confusion of ideas, suicidal tendencies, with hysterical interludes during which she became very excited, and at times violent. Hallucinations of sight and hearing being a prominent feature, a history of recent influenza,

the case was at first looked upon as acute confusional insanity or exhaustion psychosis, although the patient, on admission, exhibited no obvious bodily disease, but was well nourished and in fairly robust health. The usual rest and forced alimentation treatment for exhaustion states was tried for three months without any success whatsoever—in fact by this time the patient had become almost stuporose. She was put on thyroid co. with almost immediate beneficial result, and, as menstruation had been absent for some six months before admission, thyro-ovarian co. was substituted after a fortnight. Result: Menstruation recommenced (before the compound ovarian substance was begun), and patient was discharged completely recovered on May 13, 1925. Pluriglandular therapy was ordered to be continued, patient to report in one month.

Let us analyze this case more fully. When admitted the psychosis was already well established—she had been drifting along without treatment for over twelve months, and there was a history of amenorrhœa of six months' duration. There was no history of heredity, and I must confess I was not at all satisfied at the time with my provisional diagnosis of exhaustion psychosis, more especially when I found, on closer investigation, that the initial mental symptoms actually antedated the attack of influenza. Such exhaustion psychotic states are well-recognized entities in psychiatry—very many supervened on the influenza epidemic of 1918—but they invariably respond to mental hospital treatment after three months at most. In this case the patient seemed to get steadily worse, so much so that I began to consider the possibility of dementia præcox, and to regard the prognosis as hopeless. One morning I happened to feel her pulse—the rate was 54 per minute. Her hands felt cold and looked bluish. The skin of the face seemed unduly coarse and dry. We see such vasomotor and dermatological conditions very often in mental hospitals. They are not always manifestations of hypothyroidism. But to me, on that particular morning, there seemed to be something very suggestive about this lady's facies. It appeared coarser, duller and more puffy than usual, and I seemed to get a general impression, perhaps more intuitive than anything else, that her bodily metabolism was below par.

Being now convinced that the clinical picture, if not altogether due to, was undoubtedly complicated by hypothyroidism, I decided to try her on small doses of thyroid— $\frac{1}{2}$ gr. of the dried gland three times a day. Hand-in-hand with a hastening-up of the metabolic processes there followed a most remarkable clearing up of the mind. Within a fortnight her personality had altered beyond recognition, and she made a rapid and uninterrupted recovery. I saw her as recently as July 8, 1926 (14 months after her discharge), and she continues to enjoy physical and mental health.

A word about the pluriglandular formula, thyro-ovarian co., which, as mentioned in the notes, I thought wise to substitute for the plain thyroid after two weeks trial of the latter. Each tablet contains $2\frac{1}{2}$ gr. of ovarian substance, with corpus luteum, $\frac{1}{16}$ gr. thyroid, and $\frac{1}{2}$ gr. total pituitary, and is made up to 5 gr.

with a mixture of the phosphates of magnesium and calcium, glycerophosphates, and potassium and sodium bicarbonate. The salts are designed to help neutralize the acidosis so commonly found in conditions of reduced metabolism, of which hypothyroidism is the classical prototype.

As I shall have occasion to refer to the use of this formula often hereafter, I may anticipate events by saying that I regard it as a very rational combination, and personally have found it to give uniform results, which justify the high price charged. Needless to say the potency of the extracts used is of paramount importance.

CASE 2.—J. M., female, æt. 22, admitted July 6, 1925. First acute attack one and a half years ago. Mental condition more or less abnormal since. Acute exacerbations eight months, six weeks and two days ago respectively. Severe pelvic peritonitis nine months ago. Appendicitis and complicating oöphoritis at laparotomy—appendix and right ovary removed; psychosis subsequently very much aggravated, necessitating certification to private asylum, where followed eight months' treatment on the usual lines with little or no improvement. No history of heredity.

On admission restless, hysterical and spasmodically violent. Fits of crying and laughing. Delusions of persecution elicited. History of progressive insomnia, refusal to remain in bed, constipation, very irregular menstruation, followed more recently by total amenorrhœa, capricious taking of food, and repeated attempts at assault on the neighbours. Physical condition poor, but no obvious signs of disease.

July 13, 1925: Suggestive of manic-depressive psychosis—now in the depressed phase. No symptoms or physical signs referable to the abdomen (including pelvis), if we except amenorrhœa.

January 20, 1926: Six months of routine treatment without appreciable change. Remissions have occurred during which the patient has approached normality, but a mild degree of stupor and dementia, with vacant expression, have persisted. Menses still in abeyance despite hæmatics. Mental equilibrium unstable, and the prognosis, as far as complete recovery is concerned, appears hopeless. Blood-pressure persistently low (systolic, 90–95 mm. Hg) and general metabolism obviously subnormal. Hence, the next day, put on adreno-ovarian co. Improvement may be described as immediate. Menstruation re-established in three weeks; intelligence brightened and wits sharpened. Patient now began to live instead of to vegetate. (Habits had been "wet and dirty" at intervals.) Systolic blood-pressure 110 mm. Hg. Skin (previously rough, dry and scaly) cleared up and she has not looked back since. Discharged "recovered" on April 14, 1926; she has since been under the continuous observation of her brother (a medical man with some experience of mental disease), who reported (May 18, 1926) that past failures with various methods of treatment had rendered him totally unprepared for such a complete restoration of mental faculties. Patient, to his knowledge, had never previously, even before puberty, been, as now, 100% normal. Advised to recommence glandular therapy on any re-appearance of untoward signs.

Note that the mental disorder had been about two years in existence at the time endocrine therapy was begun. As in the first case reported, alternative methods of treatment had been given a fair and exhaustive trial—thus has been fulfilled the second of the three cardinal desiderata on which I have laid stress in the earlier portion of this article. In this case, also, I think we may eliminate the element of spontaneous recovery: I need not dwell on the significance of the "wet and dirty" habits in establishing the apparently bad prognosis. So that we may safely credit endocrine therapy with the cure—when last seen on July 10, 1926, she was normal in every way.

An interesting point is the adverse effect on the mental disorder of the oöphorectomy performed about nine months before she came under my care. Contrary to what one should expect, the removal of the septic foci in the appendix and ovary, instead of ameliorating, very much aggravated the mental condition. I would suggest that the surgical ablation of one ovary, resulting, of course, in the *complete* loss to the body of its internal secretion, served to accentuate the existing pluriglandular syndrome—a syndrome in which the diseased and defectively secreting organ doubtless played an important part; in view of the response to treatment, it cannot be denied that the multiple dyscrinism indicated must have been the predominant, nay, the sole factor in this psychosis.

The existence of a subnormal blood-pressure influenced me in the choice of *adreno-ovarian* co.— $\frac{1}{2}$ gr. adrenal gland substance, added to the *thyro-ovarian* co. formula already alluded to. In this connection it is interesting and suggestive to know that adrenal dysfunction as well as actual adrenal pathology have been often found in insane persons, and the late Sir Frederick Mott reported that, in 143 cases of dementia præcox, the average blood-pressure was comparatively low, and in 100 cases examined *post-mortem* "the adrenals were smaller than in any other class of cases studied to date." (7)

I would draw the reader's attention to the remark somewhat casually thrown out by the patient's (J. M—) brother that her mentality had, previously to endocrine therapy, never been perfect: there had always been, apart from the major disturbance which eventually supervened, a slight want noticeable to an acute observer. It occurs to me that a minor dysfunction, manifested in this way, is much more common than has been suspected, and the importance of its recognition should be ever present to the psychiatrist. Mental dullness, "slowness of apprehension, accompanied by slowness of execution" (8), no matter how slight in degree, should always be regarded with suspicion, and a careful search made for physical stigmata of dysthyroidism, dyspituitarism, etc. As evidences of the former condition I find the following particularly helpful—they are doubtless well known, but often overlooked, or have not the full significance attached to them:

(1) Lowered temperature with cold and blue extremities: the patient feels chilly, and is never warm.

(2) Loss of, or scanty, brittle, dry, hair: in children particularly this condition is very suggestive.

(3) Hertoghe's sign—thinning of the outer third of the eyebrow.

(4) A slow and small-volume pulse.

I have selected the above two cases from my series, because they

offer proof of the truth of my contention that disturbed endocrine secretion, usually polyglandular—but it may be of only one organ—will be found in practice, more particularly at or soon after puberty, to have an immense ætiological significance in the production of severe psychoses. They are two such cases as, in the absence of a recognition of this fact, might have been diagnosed as dementia præcox, or perhaps manic-depressive psychosis, and considered, from that view-point, incurable.

I now pass on to a more definite group, in which I think I may claim to have had unusual success with organotherapy, namely, the climacteric psychoses. Here we are on more solid ground as regards ætiology, and the literature is more generous. I have been fortunate in securing a typed translation of an exhaustive article on "Climacteric Difficulties," by Dr. Erwin Graff, which recently appeared in a German paper—the *Wiener klinischen Wochenschrift*. Other contributions which I have had from the same source are "A Review of the Action of Ovarian Preparations," by Dr. Michael Floris, and "Experimental and Clinical Research on the Dosage Question of Generative Gland Treatment," by Dr. Otto Kauders, Departmental Assistant to Prof. Wagner-Jauregg. I can commend the articles to anyone interested in the subject, but shall here only make use of that by Graff, which bears most directly on the subject of this dissertation. He says :

"The ultimate cause of all these difficulties is the reduced ovarian activity, and the consequent disturbances of the hormone balance. In what method the other endocrine glands are involved is not exactly determined, but it appears that the adrenals produce more secretion, while the thyroid is in a condition of hypo-function, which means less secretion introduced into the circulation. The rôle of the pituitary is not altogether understood, notwithstanding the beneficial effect of radio-treatment to the hypophysis for climacteric trouble."

On reading the above I was confirmed in my belief that the dyscrinism at the menopause is scarcely ever purely ovarian, but polyglandular. Graff states that he employs the preparations of the Sanabo works of Vienna, called polyhormone (feminine), whose ingredients are ovarian substance, thyroid and pituitary. Climacteric disturbances of polyglandular origin respond very favourably to 2-3 tablets daily. The reader will note that thyro-ovarian co., which I have been using in these cases for the past four years, has practically an identical composition.

I think the following summary, by the same author, of the consequences of disturbed ovarian activity, is very comprehensive, and I shall not attempt to improve on it :

(1) Diminished menstrual flow; (2) tendency to protracted hæmorrhage in consequence of changes in blood coagulability (perhaps also degenerative processes in the vascular walls); (3) plethora and retention of metabolic products after

commencement of the menopause; (4) obesity of thyroïdal and perhaps of pituitary origin; (5) *psychoses* [italics mine]; (6) the numerous climacteric disturbances of the senses which manifest themselves in abnormal irritability of the vegetative system and especially of the sympathetic.

Of these we are only concerned with No. 5, or at least with those cases of menopausal difficulties in which psychotic manifestations preponderate, and it was peculiarly gratifying to me as a psychiatrist to find this aspect of the question elaborated and given more space (small though this be) than I have yet seen in a general paper on the subject, as follows :

"It is rare for the mentality of a woman to remain undisturbed at the climacteric. The temper is variable: irritability, excitability, anguish and depression alternate, but states of depression predominate. As a rule this condition is not permanent, but during the climacteric period there is undoubtedly an increased tendency for the development of temperamental disturbances."

I think Dr. Graff, in common with the majority of writers, rather understates the case, and dismisses it more cursorily than its importance would seem to warrant by the somewhat mild conclusion, "during the climacteric period there is undoubtedly an increased tendency for the development of temperamental disturbances." In my experience climacteric temperamental disturbances are common, their severity and importance as a social problem are exemplified by the frequency with which they require certification, and often prolonged asylum treatment. They tend to become permanent, although the purely physical concomitants of this regressive period of woman's life have passed away. We must remember that the highly specialized cerebral tissue, on whose integrity depends the normal functioning of the mind, is infinitely more liable to damage by many adverse influences, metabolic or otherwise, than is the rest of the body, while the tendency to repair or regeneration is excessively weak. Of such importance do I regard endocrine disorders in producing certifiable insanity in women between the ages of 40 and 50 that I think it wise to spare no trouble in elucidating the minutest details of the history of these patients' past and present ovarian function, even should this entail a less thorough examination in other respects. I have mentioned that the dyscrasia is usually multiple, but to take the thyroid aspect only, is it not highly significant that 90% of cases of myxœdema (with its invariable mental syndrome) occur in women, and of these 90% are between the ages of 40 and 50?

Before I go on to report cases in this group, let me sum up my convictions thus: *To treat any menopausal disorder otherwise than by organotherapy is unscientific, and, in most cases, unnecessary; to modify the abnormal condition by supplying extracts containing the*

deficient hormone or hormones is rational in theory, and, I maintain, successful in practice.

CASE 3.—D. C—, female, æt. 45½; first seen October 13, 1925. Previous history: Unipara; no complications during pregnancy, parturition, or puerperium; child now aged 10 years. Sustained a severe fall and injury to the head in 1922 (three years ago); unconscious one day and a half. Was "unwell" at the time; has "never seen anything" since. Short time afterwards got a thorn stuck in right eye: lens had to be evacuated; sight now poor, but other eye healthy. Had tonsillar trouble simultaneously with ocular; incision made in one tonsil; doctor advised removal of tonsils, which has not since been done.

For the past year and a half has become very much changed in manner; from being quite placid and even-tempered has become very irritable, worries about trifles and flies into a rage at the slightest or no provocation (husband's information). Feels depressed and "down-and-out," especially in the morning; improves towards evening; restless at night; sleeps but poorly. Appetite good, bowels fairly regular. Has a *dull sensation at vertex—feeling of weight on top of head*; imagines her head has never been right since accident. Worries about her throat unnecessarily; tonsils are now normal. Does not care to mix in company, or, in fact, to leave the house at all; will not even go to church on Sundays. *Extremities always cold*—more so on right side. *Thyroid slightly enlarged and tender to touch*; says her swallowing is affected, she thinks by tonsils, but obstruction and pain occur in *middle* of throat. Pulse-rate 62 per minute.

Diagnosis.—Climacteric psychosis; general endocrine imbalance.

Treatment.—Three bromides with capsicum three times a day and at bedtime. Thyro-ovarian co.—one tablet *t.i.d.*

Progress.—October 19, 1925: Seen again. Somewhat improved. Feels calmer and steadier. Sleeps better. November 11, 1925: Improvement maintained. Feels more cheerful and no longer worries about trifles. Is getting rid of the idea that she may become insane. Normal in every way. Reports herself rid of objectionable symptoms, except very occasional and "short-lived spells of the blues," intensity of which has decreased.

May 24, 1926: Has been seen three times since last report. Only once since then has she felt not quite up to the mark. Advised to repeat short course of thyro-ovarian co. should such recur. May be regarded as permanently cured.

The possible influence of shock in determining the endocrine disturbance in this case required careful consideration, especially from the point of view of the thyroid. As is well known, the usual response of this gland to severe emotional disturbances is in the nature of a hypersecretion. Consequently, before thyroid medication could be considered, anxiety neurosis complicating exophthalmic goitre had to be carefully excluded. Although the thyroid was slightly enlarged and tender, there was no exophthalmos, while the *pulse-rate at no time exceeded 64 per minute*. The patient was, if anything, obese and rather phlegmatic. Then we have the coldness of the extremities, which, when complained of even in a warm atmosphere, as in this case, is, to my mind, highly suggestive of hypothyroidism. That a *non-exophthalmic goitre* may occasionally result from shock is well known, and Dr. Primmer recently reported two such cases in the *British Medical Journal*.

It will have been noticed that D. C— had been menstruating normally up to 42½ years of age, and the sudden and complete cessation was closely connected with the shock of the accident.

This, then, is a clear case of climacteric psychosis with a well-marked endocrine basis, seen sufficiently early to respond rapidly and completely to appropriate therapy. The rapidly-induced, steady, and finally permanent improvement in both physical and mental condition was most striking, and, to my mind, must be chiefly attributed to the pluriglandular therapy. Neither suggestion (only employed for very short periods, and at long intervals), the bromides (discontinued after two mixtures), nor the natural wane of the menopause can adequately explain such a rapid amelioration.

CASE 4.—M. D—, female, æt. 45. Seen May 17, 1925. Married eleven years; never pregnant. Menstruation irregular for past few years; absent last seven months. No history of heredity. Psychosis evident for six weeks. Peculiar in manner, suspicious; thinks people are jibing at her; imagines her sister-in-law is poisoning eggs intended for her consumption and that she has recourse to witchcraft in doing so. Is restless, sleepless and obstinately constipated. There is myocardial degeneration and she has passed no urine for eighteen hours. Resents all medical interference; obstinately refused an enema. Is taking only small quantities of liquid food.

A hypodermic injection of $\frac{3}{3200}$ gr. of hyoscine hydrobromide being given, a large enema was administered while patient was under the influence of the drug; successful result—urine was subsequently passed. The following were prescribed: Nujol (1 oz., night and morning), paraldehyde (2 drm.) for two successive evenings and afterwards as required, bromide mixture and thyro-ovarian co. (two tablets *t.i.d.*, to be commenced when the bowels became regular).

May 24, 1925: Considerable improvement. More amenable and tractable. Still somewhat resistive, but nurse was able to give enema with some assistance. Sleep broken up to last night, when she had a good rest. Bowels still sluggish, but general condition much improved. Heart better. There is a short, ineffectual cough; temperature normal. More rational and talking.

May 31, 1925: Patient very much improved. More amenable and communicative. Bowels now free (daily motion). Sleeps fairly well; appetite better. Still reluctant to be examined, but enjoys a joke and is more optimistic. Mentality nearly normal; her friends think she is as well as ever, but a certain amount of psychotic condition remains.

July 24, 1925: After having been very well for six weeks had a bad relapse, profound depression with suicidal tendencies, delusions and periodic fits of restlessness and subacute excitement. *The bowels were regular*, but insomnia was a marked feature. I found that the thyro-ovarian tablets, contrary to my instructions, had been discontinued three weeks after my last visit. On resuming them the patient showed a remarkable improvement within two weeks and finally became normal, and has continued so, to my certain knowledge, up to July 6, 1926, when I last saw her.

The endocrine aspect of this case may not be apparent at first sight, but I think I have not included it under this heading without justification. It may be contended that the improvement in the first instance might be attributed to general measures, such as energetic treatment of constipation. I do not deny the possibility of this, at least as an accessory factor, and have often seen very early cases of mental disorder respond to this simple procedure. On the other hand, I doubt whether intestinal or other toxæmia, in the absence of a strong hereditary predisposition or neuropathic taint, can ever, *per se*, initiate a psychosis—it is my belief that constipation is a result rather than a cause of insanity. In this

case heredity could be with certainty excluded. There appeared to be a direct connection between the discontinuance of the endocrine therapy and the recurrence of the acute melancholic symptoms. The frequent response of these latter to ovarian extract convinces me that melancholia occurring at the menopause, and manifested by symptoms ranging from slight temporary depression to strongly suicidal impulses, is a definite ætiological entity. It is well known that a similar condition exists in men between 50 and 60. Whether this type of case responds as well to testicular extract as the former undoubtedly does to ovarian I cannot definitely say, but my results in regard to the former, so far, have not been discouraging.

Depressed states, occurring in women or men, at a time when their respective sexual powers are on the wane, may be aptly grouped under the heading "involutional melancholia," and, in my opinion, a regressive change in the gonads, supervening in some unusual fashion, is the predominant factor in their causation. Just as the intrusion of the internal secretions from the sex-glands into the system at puberty predisposes the individual to mental instability at that period, so will their extrusion (so to speak) in the pre-senile epoch render her or him correspondingly liable to psychical aberration. In the former case, with the mind at the threshold of its development, states of excitement will be the rule; in the latter, with the whole system, and more particularly the mental powers, on the down grade, depression will predominate.

CASE 5.—The patient was a multipara aged about 41 years. There was a history of insanity in the family, and the onset was closely connected with shock, the sudden death of the husband, aggravated subsequently by financial worries. At an early stage she had a fixed delusion that she was developing cancer of the breast. When I first saw her in her own home she had recently returned from a private asylum, where she had undergone eleven months' treatment. She was practically in a state of chronic dementia—lay like a log in bed, would not speak, eat, or attend to her person, which was consequently in an indescribably filthy condition. I have scarcely ever seen a worse case. As she obstinately resisted all attempts at examination or medical interference, and skilled nursing facilities were not available, I had her certified and conveyed to Limerick Mental Hospital. Here she spent five months without appreciable improvement beyond the fact that she could be persuaded to take her food without artificial feeding (this had had to be resorted to for the first six weeks). She sat all day long in the day-room without moving or opening her lips, was dull, apathetic, and took no interest whatever in her surroundings; in fact she was just one of those apparently incurable demented who fill the wards of mental hospitals. At this stage I decided to try compound ovarian extract. In one month the patient was able to sew and knit; in two she played the ward piano in an accomplished manner, and I discharged her nine months from the date of her admission as "improved"—a conservative estimate of her mentality occasioned by the fact that she still exhibited a certain amount of sluggishness of perception and ideation. She continued to take the extracts, and the final result will be fully appreciated when I state that, on June 9 of this year, I had no hesitation in giving her a certificate of complete recovery and ability to resume her duties as assistant teacher in a National school. Only last week I had a letter from the manager of the school reporting that in the performance of those duties she has justified the certificate.

This is certainly a striking case. Endocrine therapy was tried empirically, if you like, but the result cannot be questioned. Neither can it be regarded as an isolated example of what gland extracts can do in the treatment of climacteric psychoses.

I propose, therefore, to give statistics detailing my experience of this line of treatment.

Since June, 1922, I have treated 53 cases of psychoses by endocrine therapy. Of these, 11 belonged to the adolescent group, and exhibited many features in common with Cases 1 and 2 described. There was not a single failure in this group, but I must emphasize the fact that this small series was very, very carefully selected, and includes only those who exhibited undoubted signs of glandular insufficiency. Any case in which pluriglandular therapy was empirically prescribed has been rigidly excluded here. 5 were private patients, all of whom were spared the ordeal of certification—4 completely recovered, the fifth is very much improved. There were 6 hospital cases, and all were discharged, after varying periods of detention, "recovered."

The climacteric group is naturally much larger—42 cases in all. Of the 27 private cases included in this number, only 2 required certification during the course of the treatment, and they eventually made perfect recoveries (Case 5 is one of them). Of the total (42), 34 were completely cured, 2 very much improved, 3 improved, while there were 3 total failures to record—possibly because of mistaken diagnosis or long-standing disease, and are the only ones at present in a mental hospital.

Percentages work out as follows: Treated, 53; recovered, 44 (83%); improved, 6 (11%); not improved, 3 (6%).

These figures are, to say the least, satisfactory, and taken in conjunction with the critical analysis I have endeavoured to make of individual cases, afford proof of what I set out to establish, and which I shall, in conclusion, thus summarize:

(1) No case of mental disorder, more particularly if it supervenes at puberty or the menopause, however advanced or hopeless, should be considered incurable until disordered endocrine function has been definitely excluded, whether this be done by the absence of characteristic symptoms or by the failure of response to organotherapy.

(2) Endocrine therapy fulfils a very important and useful rôle in the treatment of psychoses in carefully selected cases.

(3) Compound ovarian extract, in private practice, will obviate the necessity for certification in many cases.

(4) Polyglandular dyscrasias are the rule in the endocrine psychoses, and pluriglandular therapy should give the highest percentage of satisfactory results.

(5) The fact that physiologists have not yet succeeded in isolating the hormones or chalone of certain of the ductless glands, and therefore cannot *prove*, by experiments on animals, whether these hormones or chalone are or are not absorbed unaltered from the digestive tract, is no justification for our denying to our patients the benefits clinically proved to accrue from the oral administration of extracts of these endocrine organs.

(1) *Journ. Ment. Sci.*, lxxii, October, 1926, p. 482.—(2) F. S. Hammett, *Amer. Journ. Anat.*, xxxii, July 15, 1923.—(3) Hoskins, *Endocrinology and Metabolism*, i, p. 8.—(4) T. Brailsford Robertson, *The Chemical Basis of Growth and Senescence*.—(5) Beaumont and Dodds, *Recent Advances in Medicine*, p. 50.—(6) *Brit. Med. Journ.*, July 24, 1926, p. 151.—(7) *Ibid.*, July 21, 1923, p. 95.—(8) F. L. Golla, "Early Mental Disease," *Lancet*, extra numbers, No. 2, p. 156.—(9) *Brit. Med. Journ.*, July 24, 1926, p. 151.

*Observations on the Prison Psychoses.** By H. T. P. YOUNG, M.B., Ch.B.Edin., Medical Officer, H.M. Convict Prison, Parkhurst.

FROM time to time in convict prisons examples are seen of certain morbid mental states which are described as distinct disease forms under the name of "prison psychoses." These states may be defined as special types of mental reactions developing upon conflicts which arise as the result of imprisonment, and possibly from the shock attending the criminal act, trial and conviction. They have been the subject of much inquiry, but, on account of the variation in the material which was available and in the conditions under which the studies were pursued, some confusion of thought appears to exist as to what may or may not be regarded as belonging to this class of disorder, and whether, in fact, the classification is not redundant. The sole justification for the use of the term "true prison psychosis" lies in the ability to establish the disorder as a separate entity, lest the name should be applied to conditions which are adequately described under other titles, as has been the case with shell-shock and "barbed-wire" disease.

The problem is one of much interest on account of the relation borne by the condition to the psychoses on the one hand and the psycho-neuroses on the other, and in order that the existence of a separate and distinct disease may be demonstrated, it is essential that all those cases in which the chief external cause cannot be attributed to the effect of prison surroundings should be eliminated.

* A paper presented at the Annual Meeting held in London on July 16, 1926, and published with the sanction of the Directors of Convict Prisons, although it does not necessarily represent their views.

Thus mental states upon which imprisonment has imposed merely an unusual complexion clearly do not merit a special description. The objection applies more particularly to the cases of persons suffering from the milder and uncertifiable forms of mental abnormality, in whom evanescent mental disturbances are not uncommonly seen. These cases are characterized by vague and transitory delusions of poisoning or other kinds of persecution, impetuous attempts to commit suicide, and the smashing of cell furniture, founded upon a real or imagined grievance, which is sometimes attributable to the result of a conflict with prison regulations. In such persons it cannot be said that similar exacerbations do not occur when outside prison, for it is this class which is answerable for many acts of stack-firing and malicious damage. These states rarely lead to certification in prison and they show little variation in form, but it is clear that if there is to be any differentiation between mental disturbances which arise as a result of prison conditions and those which are met with elsewhere, cases of this kind cannot be accepted as instances of the former type, for their counterparts are to be found in many situations, and are by no means peculiar to prison, although the character of the symptoms may be fairly attributed to environmental influences. For this reason only those persons should be considered strictly eligible for inclusion in the group of whom no history of mental or nervous disease is known apart from their prison records. Subject to this reservation it was thought that persons who failed to maintain their equilibrium in prison were legitimate candidates for a prison psychosis. It must be admitted, nevertheless, that where a mentally unstable person has not developed more serious symptoms when at liberty, some connection may be traced to the effect of imprisonment should he become insane while undergoing a sentence, although this by no means implies that the resulting state is a true prison psychosis. There can, however, be no way of ascertaining without life-long observation how far the disorder may be attributed to imprisonment, or how far a similar development might have occurred elsewhere, given suitable provocation, and on account of this difficulty it was found advisable to allow greater latitude in the selection of cases.

The material from which these observations were made consists of male convicts serving terms of penal servitude of three years and upwards, and of habitual criminals undergoing sentences of preventive detention. They belong to many races and to all grades of society, and they vary in intelligence and in educational attainments.

All the more serious forms of crime are represented. These are

grouped for convenience under four headings, and their present distribution at this prison (excluding cases of preventive detention), is shown in the following table :

TABLE I.

	Percentage.
1. Crimes of violence	21
2. Sexual crimes { Natural	6
{ Unnatural	2
3. Crimes of acquisitiveness—	
Embezzlement, forgery, blackmail, counterfeiting	19
Stealing, breaking and entering	47
4. Other crimes*	5

Apart from those prisoners in whom no psychopathic taint is known to exist, there is a small group of men, forming about 5%† of the population at this prison, who, because of some distinct but uncertifiable mental abnormality observed either before or shortly after trial, or for other reasons, have been brought together from all convict stations for special mental observation and treatment. In addition to this group there are concentrated at this prison all convicts whose mental state, at any time subsequent to arrest, has given rise to doubt as to their fitness for ordinary convict conditions. Thus in considering the figures quoted, it should be clearly understood that they refer to a population which is, in part, specially selected, and that they do not represent the conditions at other convict establishments.

During the 5 years immediately preceding the war and 5 years subsequent to it, the average length of the sentences of persons becoming insane from any cause while serving a term of penal servitude at this prison was about 7 years (pre-war period 6·46, post-war period 7·58 years), while the average time spent in prison before symptoms of insanity leading to certification of these persons were observed amounted to about 2 years.‡

Table II shows the average *per cent.* of cases per annum during the same periods which were certified insane in each class of crime, and the average time spent in prison before the onset of symptoms.

In examining previous writings, it is necessary to appreciate the fact that changes have taken place both in the general conditions of penal establishments and in the type of prisoner with which they have to deal. Some differences may also be attributed to the circumstances under which the various authors observed their cases.

* See footnote 2, page 83.

† During the period 1904 to 1908 inclusive the corresponding figure was 8·9%.

‡ The period from which the above data were obtained was from 1909 to 1913 inclusive and from 1920 to 1924 inclusive.

TABLE II.

	Percentage certified.	Time before onset of symptoms.
1. Murder	2.5	2.9 years.
2. Other forms of violence to the person, including robbery with violence*	5.6	3.7 "
3. Sexual crime	1.6	1.6 "
4. Acquisitive crime	17.1	1.4 "
5. Other crimes†	1.0	0.7 "

The daily average population was 720.

Thus Delbrück (1), who was, perhaps, the earliest investigator in this field, was in charge of a prison containing a large proportion of convicts who had been sent there from other institutions because they were not amenable to discipline—a fact which is suggestive of mental abnormality of some standing. Reasons have already been given why it did not seem desirable to include such cases in the present series.

All Gutsch's (2) patients developed disease when undergoing solitary confinement. Sommer (3) investigated the cases of men who had been transferred from prison to a criminal lunatic asylum, and Kirn's (4) material consisted of short term petty offenders who had been in solitary confinement. Reich (5), Moeli (6), Ganser (7) and others reported on insanity chiefly among those awaiting trial, while Rüdín (8), Birnbaum (8a) and Bonhoffer (9) relied on observations which they made after the cases had been received into a clinic. Further inquiry shows that few writers, not excepting Siefert (10), had access to cases of long-sentence prisoners in their own peculiar surroundings and when the disease was in its early stages.

Again there is little doubt that punishment, more particularly as inflicted to-day, lacks the severity with which the older continental observers were familiar, and in consequence the comparison of cases of mental disease to be seen in prison at the present time with those previously recorded must be guarded.

It should be mentioned, however, in this connection that whereas harsh treatment and mismanagement in prisoner-of-war camps, where mass imprisonment obtained, was not found to increase the frequency of the anxiety neuroses which arose there, it was not possible to prevent them by just and considerate government (11).

Modern prison discipline, it is thought, is not provocative where it can be maintained in a way appropriate to each of the two chief classes of convicts, the recidivist and the star, and their complete separation is probably beneficial to both in this respect.

* Where there was more than one charge on the indictment the most serious one was taken as the cause of conviction.

† The heading "Other crimes" includes arson, malicious damage, maiming of animals, illegal operations, bigamy, treason.

A reference to the annual reports of the Commissioners of Prisons reveals the significant fact that the number of offences and breaches of discipline, particularly those of a violent or resistive nature, in one of the English convict prisons, and the corresponding number of punishments, has been halved in recent years, while the daily average number of prisoners among whom they occurred remains almost unaltered.

Failure to take into account the changes in prison conditions and in the severity of the sentences formerly inflicted would have led to difficulty in arriving at a reason for the greater intensity of the psychoses previously recorded. This added intensity may be partly explained by the fact that coercion gave rise to equivalent resistances, and with its disappearance there has been a corresponding diminution in the vigour of the symptoms.

In becoming more abstract, punishment has a greater effect upon the first offender, and it diminishes in potency in all respects as the convict's experience of imprisonment grows. The present tendency is for order and discipline in the prisons to be maintained more and more through enlisting the goodwill of the prisoners themselves. The classification of convicts according to the presence or absence of a criminal history, the privilege of earning remission by industry and good conduct and recently the organization of "honour" parties are examples of this. These measures result in the formation of a body of opinion among the less experienced convicts which is found to be a satisfactory means of checking irregularities of conduct and breaches of discipline, besides acting as a form of insurance against a subsequent relapse into crime.

But certain psychopathic individuals (*e.g.*, those of the *præcox* type) might develop greater seclusiveness, and with it a liability to further deterioration on account of this unless provision were made to guard against it. For persons who happen to be temperamentally asocial find on admission to a convict prison that they must become units of a community from which some form of mental dissociation provides the easiest means of escape. Thus it is characteristic of a certain type of psychopath, when he is admitted to a hospital ward, to request a transfer to a cell in order to avoid being in association with other prisoners. Such a contingency would be more apt to arise in the case of first offenders were it not for the separate treatment of these prisoners who, as a class, show a tendency to avoid contact with recidivists.

The maintenance of some such barrier was perhaps the surest way in the hands of prison officials of preventing recidivism among adult prisoners up to the time when complete separation of stars from recidivists became effective. It is probable that the loss of

support afforded by organized discipline and *esprit de corps* ("the stabilizing force of the group mind"—Mott) was an important factor in the production of anxiety states in prisoners of war, and that the segregation of star convicts (consisting of first offenders only) in separate prisons has the effect of counteracting this feeling of isolation, while the risk of contamination is reduced to a minimum. The few points in penal methods thus touched upon give an indication of some of the administrative reforms which have been carried into effect in recent times, and they will make clear the fact that association does not provide the only solution of many of the problems which arose as a result of solitary confinement, since experience has shown that those persons who are liable to develop mental disorder when in prison are the ones who prefer to isolate themselves from the rest of the community. Indiscriminate association, like indiscriminate discipline, has therefore been discarded, and better relations between convicts and prison personnel have been established.

Among other matters in which the modern system differs from the old, the question of occupation is probably the most important. It is recorded that anxiety states were common in prisoner-of-war camps where no work was available, and that in those where agricultural or other forms of manual labour were to be had the disorder was distinctly less prevalent (12).

Whereas in the prisons labour was formerly regarded as a method of inducing fatigue, it is now looked upon as a productive physical and mental exercise, and the extension of work hours has been attended with beneficial results to the prisoners.

Recently the question of occupation in the treatment of abnormal mental conditions has been receiving attention, particularly in America, where occupation therapy (13) has been practised on an extensive scale in the hospitals and asylums. Conditions in general and mental hospitals, however, cannot be compared with those prevailing in a convict prison. The satisfactory results which have been obtained in places where cure of mental disease is the object are no assurance of the success of similar methods in prisons, where it is desired to inculcate regular habits of work as a means of discouraging recidivism, incidentally checking the development of morbid mental states thereby. An examination of the tasks in which the conditions most closely resemble those of a contented industry reveals the fact that there is a decided preference among prisoners for employment calling for the exercise of their creative abilities. Examples of the most sought for tasks are those of fitting, carpentry and brick-laying with their associated trades. Agricultural work appeals to few but those who are farm labourers by trade.

Prison labour is, of course, deprived of one of the chief sources of interest, and is therefore more liable to become monotonous, in that it lacks the incentive of a weekly wage. In factories where repetitive work is inevitable schemes have been devised, of which Taylorism (14) is an example, to act as a counterpoise for the industrial unrest which is to some extent dependent upon monotony, and the stimulation of interest which they have brought about has led to a delay in the onset of fatigue and a reduction in the minor sickness rate (15). Opportunities in prisoners for aimless or active pernicious thinking after labour hours have become fewer as a result of the encouragement given to voluntary self-education, evening classes, the use of library books and other measures designed to preserve a healthy outlook, with the result that "smashing up" and other forms of abreaction are extremely rare except in persons of known mental abnormality.

Among other factors having a possible bearing upon the development of mental disorder in convicts the question of sexual deprivation was considered. It was found that the ages of 67% of the prisoners who came under the writer's observation were between 21 and 45 years. The majority of men were, therefore, at the time of life when sexual demands are most strongly felt. In this connection it may be mentioned that certain authors have attributed much of the responsibility for prison camp neuroses to sexual causes, more particularly during the earlier stages of imprisonment (16). Urges of this nature might be expected to exert an influence on healthy and vigorous men whose state of nutrition and general physical condition reached the standard required for the fighting zone. As a fundamental cause for the neuroses, however, this explanation could not be accepted, and in the writer's opinion it is equally inapplicable to the morbid states at present under consideration. Moreover the position with regard to the physical state of convicts, in spite of some similarity in age, does not bear close comparison with that of prisoners of war, for, with the exception of men convicted of frauds of a technical kind, and to a lesser extent those convicted of violence to the person, criminals, when compared with their equivalents in the general community, are relatively inferior in physique (17). This finding does not imply that sexual demands depend solely upon the physical development of the individual, for they bear a close relationship to his psychological and biochemical constitution.

Nervous disorders which arise on a sexual basis are probably as closely connected with psychical as they are with physiological reactions, and, on the assumption that a psychoneurosis is often the result of a conflict between individual tendencies and a respect

for social usages, there are some grounds for believing that recidivists as a class are less liable to develop this form of disorder upon repressions of this kind.

It is doubtful if the abrupt cessation of sexual life can be held responsible for those temperamental changes which may occur during the first few months after conviction, for hetero-sexual interest among normal prisoners appears to diminish after a short period of imprisonment, and morbid mental phenomena are occasionally observed in other types almost immediately after their arrest, when the sexual complexes could scarcely be expected to be otherwise than in abeyance. The most important of these is the Ganser state, to which a brief reference may be made at this point.

The Ganser syndrome and allied stuporose states, with which are associated the names of Moeli, Ganser, Raecke and others, are hysteroid conditions which would seem to be more directly attributable to the mental dislocation following a crime and arrest than to the effect of prison environment, for while they are occasionally seen in prisoners awaiting trial, no case of the Ganser state came under the writer's observation in either a convict or a local prison.

This state, although it cannot be included among the prison psychoses, as already defined, is an example of an almost immediate reaction to stress which is not often seen even in prison (although it can occur in free life), but is undoubtedly aggravated by prison surroundings. The symptoms rarely persist after conviction, but at the end of a short period of imprisonment others of a different type may make their appearance in prisoners convicted of serious crimes, who had shown no indication of the syndrome while awaiting trial. These symptoms, like those of the Ganser state, are more apt to occur in first offenders, and the emotional disturbance following the criminal act, arrest, and trial again appears to be the starting-point. Detention in prison therefore cannot be regarded as their immediate cause. In those cases, however, where this new disorder does not subside, the question arises as to how far the environment is responsible for its continuation, and, although the resulting condition does not strictly comply with the definition of prison psychoses, it would appear to be one of the few consequences for which prison surroundings can be held liable. These states are rare in persons who have pleaded guilty at their trial, and this repudiation of guilt is regarded as an important factor in the disorder. It is thought that suggestions of innocence or even of extenuating circumstances conveyed by counsel during the course of the trial are liable to initiate a feeling of wrongful conviction in neuropathic persons, and that this forms the basis of a system of rationalization brought about in the prisoner's effort to relieve

himself of the conscious responsibility for his crime. The process is perhaps best exemplified in cases of murder, although the mechanism is the same for all classes of crime.

Murder and Crimes of Violence.

Delbrück (18) and others have laid stress on the shock undergone during trial and conviction and the remorse following the act as being important factors in the causation of prison psychoses in first offenders convicted of serious crimes of violence. The same writer also noted the frequency of the projection of guilt in these cases. Although there are grounds for attributing some of the symptoms to the shock which is associated with a criminal trial, the effect of the reprieve in cases of murder should not be underestimated. Where mental instability exists, the act of reprieve may finally determine a train of doubts and rationalizations leading through the mechanisms of repression and projection to delusions of innocence, improper conviction and persecution. But in spite of the comparative frequency of this type of reaction in respited cases, the condition cannot be accepted as a true prison psychosis when all the facts are taken into account. An examination of the previous histories of these prisoners, apart from those who have been respited on the ground of youth or severe provocation, reveals the fact that the majority of cases are of men whose mental state prior to the act, while not falling within the limits of certifiability, gave rise to doubt as to the extent of their responsibility for the crime. It is therefore clear that these persons cannot be regarded indiscriminately as possible sufferers from prison psychoses, since, in many instances, some tangible form of mental abnormality had been recognized before the commission of the act, and, moreover, there is no means of showing that similar states do not occur in murderers who have evaded arrest. Their state of mind forms a fertile soil for the implantation of false perceptions and beliefs relating to the environment, but in the event of a psychosis developing, imprisonment, although exerting a definite influence upon its content, cannot be held directly responsible for its causation.

One would be ill-advised, therefore, to regard any disorder apparently depending upon external factors as a prison psychosis, and it is thought that respited murderers, although they not infrequently exhibit symptoms of a distinctly environmental type, are unsatisfactory subjects for investigation in that the real effect of the environment upon the mind is subordinate to that of other factors. It is, in fact, not so much the State act of imprisonment as the prisoner's anxiety to repress his sense of guilt upon which the

delusional system is based. It is therefore conceivable that in murder cases similarly selected, a conviction, followed by punishment not involving confinement, would result in an analogous disorder. The similarity of this attitude to that of the paranoid litigant is unmistakable.

Sexual Crimes.

These form a compact group in which the expression of the primary instinct is perhaps less circuitous than in any other criminal offence. The act itself is not complicated by the shock which is inevitable in cases of murder or attempted murder, and the accused man does not have to pass through an ordeal of trial and conviction in any way comparable to that experienced by persons who are brought before the Court on the capital charge. Remorse may be felt, but, in the writer's experience, so altruistic a sentiment is never the cause of a prison type of psychosis. Sexual offenders are particularly liable to deny their guilt and the justice of their conviction and sentence. They form about 8% of the population at this prison, and their crimes are all of a grave nature. At the present time roughly one-quarter of all persons serving sentences at this prison for these acts were convicted of homosexual offences. One-third of the total number of sexual offenders who were certified insane were persons convicted of this class of crime. The fact that drunkenness is frequently given as an excuse for sexual crimes of all kinds should not be allowed to lead the observer to believe that drink is a frequent accessory, in spite of finding that whereas the average number of sexual offenders who were sent to this prison per annum before the war, when the consumption of liquor was less restricted, was 21.6%, since the war it has fallen to 19.6%. The frequency of these crimes, however, is not accurately represented by the number of persons undergoing sentences in convict prisons for the statistics at remand prisons show a much more noticeable reduction after the war.

The aphrodisiac action of alcohol, however, cannot be ignored (19). In the cases available for study a history of alcoholism of either the habitual or the intermittent variety was present in 41%.

This figure was obtained from the reports of the police, of employers and of other persons well acquainted with the prisoner's habits, and cannot be regarded merely as an excuse put forward by the prisoner in mitigation of his offence. It has been observed (20) that convivial drinking may lead to petty thefts, rape and indecent assaults on adults, while the habitual form of drinking is liable to result in more serious crimes, such as incest, sexual assaults on children, or acts of violence. Susceptibility to the

effect of alcohol has been held to imply susceptibility to the effect of environment (21).

Sexual acts of whatever kind are frequently associated with a tendency to phantasy construction, and it is in this connection that these offenders are of particular interest in the study of prison psychoses. In a recently published paper on "exhibitionism" (22) it was shown that the visionaries, that is to say those persons who augment the sexual gratification of imaginary intercourse by indecent exposure, amounted to about 40% of all exhibitionists having psychopathic tendencies, or 27% of all persons charged with indecent exposure. Normal sexual intercourse, either of choice or necessity, was not sought by them, and persons whose imagination is so necessary to their sexual gratification when free are even more bound to rely on it when deprived by imprisonment of opportunities for augmenting their phantasies.

Acquisitive Crime.

Crimes coming under this head are varied and diverse in character. They include offences such as counterfeit coining, blackmailing, false pretences, burglary and robbery from the person. The great majority of recidivists and habitual criminals are therefore to be found among these men. Prisoners of this class form about 75% of the convict population. There is little to divide the mental state obtaining in some of the cases of this group from one of a still more paranoid type, and this again is but a short step from one of true paranoia. Certain points of difference, however, are observed, and these are sufficiently definite, in the writer's opinion, to make a diagnosis of paranoia inadvisable. Although systematization is present, the delusional field is much more contracted in the prison type than is usually the case in the other. The delusions are more dependent upon external factors, and have not the same inner origin which is so characteristic of the paranoia. The condition, moreover, would seem to be less obvious when the subject regains his liberty, for his conduct does not appear often to call for an inquiry into his state of mind when free in spite of the fact that the symptoms reappear on subsequent arrest. It is possible, in view of its non-appearance except in the presence of special external circumstances, that this state coincides with Kraepelin's mild form of paranoia (23) of psychogenic origin.

This type of disorder is most commonly seen in recidivists whose recurring convictions give them a familiarity with police and penal methods.

The delusions are of a combined grandiose and persecutory type based as a rule upon a belief in their own innocence and wrongful

conviction, and are directed towards police and prison officials. They lack, however, the permanency and unchangeableness of those seen in true paranoia, and little attempt is made towards the orderly elaboration of a system. Hallucinations are occasionally found. In prison it is characteristic of these cases to make frequent applications for privileges and to write numerous petitions dealing with fancied grievances, some of which may have occurred long before, or in previous sentences, and may have no bearing upon the circumstances of the moment. The granting or denial of their requests is used to bolster up either their grandiose or their persecutory ideas. They are egotistical, hypochondriacal, and of a rather solitary disposition, and are intolerant of discipline. Fluctuations in mood are common. Cases of this description are suggestive of a narcissistic origin, and support recent work on the connection between narcissism and paranoia (24), but were this assumption correct the rarity of the cases would oppose any theory which seeks to place the onus of recidivism in general upon one of the forms of sexual regression.

CONCLUSIONS.

Among approximately 300 convicts who have been placed under mental observation at this prison recently, there were 19 cases in which disordered states of a prison type were observed. This number does not include others whose symptoms bore the stamp of their environment, but in which the disorders themselves varied little from those to be seen in other situations.

Of the 19 cases, none can be said to have conformed in all respects with the conditions it seemed necessary to adopt in defining a true "prison psychosis." Five of them were certified insane, the remainder being discharged from the prison hospital after periods of observation varying from a few weeks to several months. On the material thus collected any attempt to indicate the frequency of this psychosis would be valueless, on account of the limited number of cases which were seen and the transitory character of many of them, circumstances made it impossible to obtain a reliable history of the mental states prevailing both before arrest and after discharge from prison. The condition which has been described appears to form a connecting link between the anxiety neuroses of a traumatic origin (25) on the one hand and systematized delusional insanity on the other, bordering on the former more especially in first offenders who have temporarily lost their capacity to realize the full responsibility for their crimes, and on the latter in recidivists whose anti-social feelings are more strongly developed, and whose facility in projecting their guilt appears to be more pronounced.

The recovery from the disorder on discharge from prison resembles in some cases the solution of a conflict in persons who have suffered from nervous symptoms as a result of an accident, when their claim for damages is settled by monetary compensation. In the more long-standing ones, however, the querulant habit may be too firmly established to permit of this solution.

The development of the symptoms is not rapid as a rule, a period of 6 to 18 months being usually required. The majority of the cases were in either the third or fourth decade.

From a reference to the insanity and age statistics it would appear that the age at which the greatest number of insane were found at this prison is between the 25th and 35th years, with the peak at the 30th year, rapidly rising to and falling from this point. Sentences of penal servitude, except in those instances where the death sentence has been commuted, are not given to persons of less than 20 years of age, the greatest number being between 21 and 35 years.

Proof of the existence of a specific action of prison environment on the mental condition of long-term prisoners would suggest that there should be some relation between the liability to mental disorder and the increasing length of imprisonment, and, in consequence, that the prevalence of prison psychoses would be greater in aged recidivists. This does not appear to be the case, however, for an analysis of the mental condition of 50 aged convicts does not reveal the presence of any disorder apart from the mental changes which may accompany old age in ordinary circumstances. The ages of these prisoners vary between 60 and 83 years, and none of them have served less than 15 years in penal servitude. Twelve have served over 30 years in convict prisons alone, and others over 40 years, in addition to many shorter terms at local prisons. 58% of them began their criminal careers before the age of 35. Each has received on an average five sentences of penal servitude, and acquisitive crimes account for 95% of them. Special mental observation is rarely required, and admission to hospital, except for ordinary physical complaints, is infrequent. The present mental condition of these men is a fact which cannot be ignored, since many years of imprisonment have left no pathological sign by which the latter period could be recognized.

It must be admitted, however, that no final conclusion can be drawn from the present state of a group composed of only 50 men. Circumstances may have been unusually favourable to the maintenance of their mental equilibrium, or the capacity to adapt themselves to prison conditions may be an indication of their inherent mental stability. That they have attained their present

age is evidence of a foundation of sound physical health—a factor which is of great importance in inhibiting tendencies to regress.

Attention has recently been drawn to the fact that certain chronic infections may be responsible for, or coincident with, the development of mental changes (26). Sepsis arising from oral, nasal and intestinal sources is an example of these. Foci of this kind were rarely absent in persons who developed morbid mental states while in prison. In no case was a positive Wassermann blood reaction found. The absence of the prison type of disorder among men of the tubercular group was also noticeable. (This group is composed of prisoners who are drawn from all convict stations and are located at this prison for the treatment of their disease. Their daily average population is about 25.)

An impaired state of health resulting from septic infections is not infrequently seen, and it would appear to exert a definite influence on the minds of certain persons, leading to the production of those phantastic conceptions through which a failure of adaptation may be diverted away from reality.

The prevalence of phantasy formation among persons working at monotonous occupations outside prison drew attention to the question of prison labour, and there is reason to suppose that this form of reaction was more frequent before the character of prison labour was altered. It is probable that the change which has been brought about in labour conditions has taken a part in modifying the intensity of the psychoses. There remains a group of prisoners, however, who are unable to derive the full benefit of the altered conditions. Convicts who are compelled, by reason of some physical defect, to work at the less productive or interesting tasks are, on the whole, more liable to develop morbid states of mind than are those whose tasks more closely approximate to the work to which their class is accustomed outside prison.

To what extent either the physical defect or the labour conditions is responsible for this increased liability it is difficult to say, except in so far as monotonous work outside prison is known to have this effect on persons who do not necessarily suffer from physical disease. It is thought, therefore, that prisoners employed at repetitive or less interesting tasks would derive considerable benefit from some scheme of payment (27), in addition to the incentive provided by stage privileges and the system of remission.

Masturbation is somewhat closely allied to monotony in its tendency to promote introspection and phantasy formation, although it is regarded less as a cause of mental disorder than as a symptom of the psychopath. Although it is not possible to quote any figures in support of the view, it is the writer's opinion that the

habit is proportionately more common among adult males in prison than in those outside it. It is, moreover, very prevalent among men who develop the prison type of psychosis. Monotony and masturbation may therefore have some influence in finally determining whether the neurosis arising from a failure to admit responsibility and to adapt themselves to the consequences of their acts is to flow into phantastic channels, or whether contact with reality is to be maintained. The absence of any of the grosser sequelæ of encephalitis lethargica such as the cranial, and in particular the ocular nerve lesions, Parkinsonianism, and displacement of the sleep rhythm, made the position of this disease as a contributory factor negligible according to present knowledge,* but it is a disease which may well assume greater importance when more is known of the after-effects. No case of acute encephalitis lethargica came under observation, nor was any connection found in the cases examined between febrile conditions of short duration, such as influenza, and the onset of mental changes.

The question of endocrine imbalance as a possible factor was considered, but although no bio-chemical tests were carried out, the routine physical examination revealed no gross changes in the thyroid gland. Instances of mild hypothyroidism were seen in some of the cases in which chronic infections occurred.

Finally an inquiry into the presence or absence of a history of alcoholism was made in each case. Excessive drinking in one or both parents was not uncommonly found—a fact which could only be regarded as a possible cause of any psychopathic tendencies in the subject.

Although there was no evidence to show that alcoholism was more prevalent in the prisoners examined than in others who exhibited no abnormal symptoms, it was realized that the individual estimate of what constitutes intemperance is unsatisfactory, and that it seriously vitiates the result of any inquiry on this point. For this reason the use of a history of alcoholic addiction as an indicator of a defective power of adaptation, and so of a special susceptibility to the environment, was considered unreliable. Furthermore, the interval elapsing between the onset of morbid symptoms and of any opportunity for indulgence in drink renders very remote the probability of alcohol being a contributory factor.

References.—(1) Nitsche and Wilmanns, *The History of the Prison Psychoses*, p. 1.—(2) *Ibid.*, p. 5.—(3) *Ibid.*, p. 12.—(4) *Ibid.*, p. 18.—(5) *Ibid.*, p. 30.—(6) *Ibid.*, p. 33.—(7) *Ibid.*, p. 33.—(8) *Ibid.*, p. 36.—(8a) *Ibid.*, p. 59.—(9) *Ibid.*, p. 50.

* Criminal conduct is not uncommonly associated with post-encephalitic disorders, and the above remark applies only to long-sentence prisoners in whom no previous attack of encephalitis lethargica has been recognized.

—(10) *Ibid.*, p. 44.—(11) Vischer, *Barbed Wire Disease*, p. 57.—(12) *Ibid.*, p. 56.—(13) Slagle, "Development of Occupational Therapy in New York State Hospitals," *State Hosp. Quart.*, August, 1923.—(14) Taylor, *The Principles of Scientific Management*.—(15) *Final Report Industrial Health and Efficiency*, Health of Munition Workers Committee, 1918, pp. 17 to 20 and 121.—(16) Vischer, *Barbed Wire Disease*, p. 39.—(17) Goring, *The English Convict*, p. 197.—(18) *The History of the Prison Psychoses*, p. 3.—(19) East, "Observations on Exhibitionism," *Lancet*, August, 1924.—(20) Sullivan, "Alcoholism in Relation to Insanity," *Brit. Med. Journ.*, March, 1924.—(21) Sullivan, *Crime and Insanity*, p. 4.—(22) East, "Observations on Exhibitionism," *Lancet*, August, 1924.—(23) Kraepelin, *Manic-Depressive Insanity and Paranoia*, p. 267.—(24) Wälder, *Internat. Journ. of Psy.-Anal.*, July, 1925.—(25) Buzzard, "Traumatic Neurasthenia," *Lancet*, December, 1923.—(26) Watson Williams, "Nasal, Aural and Other Focal Sepsis as a Cause of Neurasthenia and Insanity," *Brit. Med. Journ.*, July, 1925, also *Sup. 11th Ann. Rep. of the Bd. of Contr.*—(27) *Industrial Health and Efficiency*, Final Report, p. 51.

Child Murder and Insanity. By J. STANLEY HOPWOOD, M.B., B.S.
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CHILDBIRTH and lactation entail a severe stress on the female sex, and, under certain circumstances, are liable to cause insanity, during the course of which attempts at infanticide and suicide are common. For this reason the insanities connected with child-bearing and lactation have a definite medico-legal aspect. In the past very little has been written on this subject, though infanticide is by no means uncommon, and cases of child murder account for a large percentage of the population of the female division of the State Criminal Lunatic Asylum at Broadmoor. Possibly a study of some of these cases may not be lacking in interest.

Child murder may be divided into two classes: (1) Those cases occurring before the end of the lactation period, and (2) those cases occurring after that period.

This paper will only attempt to deal with the first of these classes, and will be confined to—

(a) Cases where a mother has killed her own child and (b) where the murdered child was not over one year of age, except in instances where lactation had been prolonged beyond that period, and (c) cases in which a mother, recently confined or nursing an infant, has murdered, not that child, but an older one, and again (d) cases where a mother has murdered more than one child, the youngest murdered being under one year of age.

An examination has been made of the Broadmoor records for a period of 25 years from January 1, 1900, to December 31, 1924, and during that period, out of a total number of 388 female receptions,

166 (or a percentage of 42·8) had been charged with child murder of the class with which this paper deals.

Troup (1) states that "in the twenty-two years from 1901-1922, out of 1,445 persons committed for trial on charges of murder, 585 were convicted and 517 were found to be insane, either before trial or by special verdict of the jury, and of those convicted, 13 were found insane on the Home Office inquiry." Although this paper covers a slightly longer period, it can be shown that cases of child murder by insane nursing mothers account for over 25% of the total number of murders committed by persons who cannot be considered to be responsible for their actions.

The insanities connected with childbirth may be divided into three classes :

(1) Insanity of pregnancy; (2) puerperal insanity; (3) lactational insanity.

It is not proposed to deal with the first of these classes. Pregnancy is often accompanied by severe mental depression, which at times develops into melancholia, and this condition may be accompanied by ideas of suicide and homicide. The crime, in these cases, is usually committed during the later months of pregnancy. These cases are not common, and an account of them is given by Baker in an article entitled "Female Criminal Lunatics: a Sketch"(2), in which he states that from the opening of the asylum in 1864 to the time of writing his paper in 1901 there were only 11 cases.

The distinction between puerperal insanity and lactational insanity is purely an arbitrary one, and depends on the length of time that has elapsed between the birth of the child and the onset of the insanity. Infanticide is not common in puerperal insanity, occurring soon after the confinement; at this time the insanity is usually of the nature of mania, and deliberate homicidal acts are not possible in the maniacal state. Further, it develops at a time when the mother is under the almost continuous observation of a nurse or relative, and steps can be quickly taken to safeguard the mother and child. When the insanity develops later in the puerperal period, it usually takes the form of melancholia with delusions of unworthiness, and in these cases ideas of suicide and homicide are more common.

Many mothers, who for various reasons are totally unfitted to do so, undertake the nursing of their children, and their systems are unable to withstand the severe strain which lactation entails, with the result that an attack of insanity develops. As this condition is in the nature of an exhaustion psychosis the insanity usually develops during the later months of lactation, or even after the weaning of the child has taken place. It is in cases of

lactational insanity that child murder occurs most frequently. In this condition the onset is more insidious than in puerperal insanity, and the symptoms are usually less pronounced, and although the relatives recognize a change in the patient, they often fail to realize that it is the start of a serious mental condition until a tragedy takes place which could have been avoided had medical advice been sought earlier.

FORMS OF INSANITY.

With the exception of 3 cases of epileptic insanity, 2 of alcoholic insanity, and 6 of congenital weak-mindedness, the cases of child murder received at Broadmoor can be classified under three forms of insanity.

- (1) Exhaustion psychoses, 117 cases.
- (2) Manic-depressive insanity, 22 cases.
- (3) Dementia præcox, 16 cases.

Exhaustion psychoses.—The large majority of the cases take this form. Such patients are restless and sleep badly, often take very little or refuse all food, and are usually anæmic and in a poor state of health. Confusion of ideas is marked, memory is frequently disordered, and disorientation is not an uncommon feature. Many are depressed, but not unduly so, others show an amazing lack of emotion. Some are stuporose. Many fail to realize the gravity of their crime. Delusions are common, and are generally expressive of self-depreciation. Hallucinations, usually of sight and hearing, are also present in some cases. As a rule they improve rapidly, and a large number of them are discharged recovered; a few, however, pass into a quiet dementia. In some cases the attack is of such short duration that by the time they reach the asylum after their trial the acute symptoms have subsided, and they may show only a slight depression, or perhaps not even that.

A. B—, aged 32; married. Murder of child, aged 1 month, by throwing it out of a window. An aunt insane. A short, stolid-looking woman with somewhat expressionless features. One of a family of three. Left school at 12 and went into service as a housemaid. When 18 years old she received a shock through hearing of the death of her brother, and states she then had a fit (? hysterical). She married when 22 years of age, and has had 4 children, of whom two are alive and one was stillborn. The youngest she killed. All her labours were severe, and instruments were used in each case. She has always had good health and has been temperate. She usually slept well, but frequently had bad dreams (? nightmares). Her disposition has always been quiet and reserved. During the last three months of her latest pregnancy this reserve deepened into despondency, and she took an anxious view of the result of her approaching confinement. She was prematurely confined of a 7½ months child. Although she seemed fond of the child, her conduct and demeanour were strange, there was an exaggeration of the symptoms of the period of pregnancy. She complained of feeling funny in the head, memory was impaired, there was no sequence of ideas; and she used to stare fixedly at one spot and paid little or no attention to what was said to her. She ate sparingly and the child did not seem to get enough milk, so other food had to be

given. She threw the child out of the window. According to her own statement this was done without premeditation. At the time of the murder, she said "I threw the child out of the window because the woman would not come to wash it." She was always worrying about the child being dirty although it was quite clean. On reception she showed marked confusion and some mental hebetude; she quite failed to realize the heinous nature of her crime. She was slightly depressed and her memory was impaired. Her condition gradually improved, and she became cheerful, rational and tranquil. She remained in this state till she was discharged recovered.

C. D—, aged 40; married. Murder of two children, aged 3 months and 2½ years respectively, by drowning. A paternal uncle insane. A slightly built woman, whose weary expression denoted that she had been a toiling nursing mother during her married life. She had an illegitimate child when 16, and the father married her a few years later. She has had 11 children, 6 of whom are dead. The two youngest she drowned in a tub. The last labour was a difficult one, and the milk suddenly left her when the child was 7 weeks old. Both the youngest suffered from a form of skin disease, and this was a source of intense worry to her. One day she was found by the police on the towing-path with her two children, and she told them that she had come to drown them. She was taken home, but about six weeks later she drowned the children in a tub and then put them to bed upstairs and went for a doctor. She was dazed when taken to the police-station, but began to cry about three hours later. On reception into prison she was confused and depressed. She had the delusion that she was shunned by the neighbours on account of the children's skin disease, and saw no means of ending the children's misery except by killing them. By the time of her arrival at the asylum her symptoms had, to a great extent, cleared up. She was somewhat depressed, and broke down on the subject of her children. Her memory was good for recent and remote events and the delusions had left her. She gave a clear account of her crime, but had no recollection of placing the children in bed afterwards. She gradually improved, but remained somewhat melancholic for about a year. After that time she became bright and cheerful and continued so till her discharge from the asylum.

Manic-depressive insanity.—The cases of this form of insanity are usually in the depressive phase, homicidal impulse being uncommon in the manic phase. They show marked emotion, are extremely depressed and dejected, and generally agitated. Memory, as a rule, is unimpaired, but occasionally amnesia is present. There is marked slowness of the cerebral functions. They are in poor bodily health and look ill. Constipation is a frequent symptom. They sleep but little, and are often disturbed by dreams of a terrifying character. Delusions of unworthiness are sometimes present, and they may imagine they hear voices. These voices tend to confirm their delusions and so increase their abject misery.

E. F—, aged 33; married. Murdered her child, aged 8 months, by drowning. A thin-featured melancholic-looking woman with a downcast expression. Married at age of 26, and has had 3 children. The first labour was difficult, but the other two were normal. She was anæmic after the last confinement, and she had to discontinue nursing the child after three months as she became so weak. She suffered from acute depression and became a prey to gloomy apprehensions, and thought that the neighbours looked down on her and called her names. She developed the idea that the carmen on the street shouted out that her child was the devil and that mother and child were going to hell. She drowned the child in a tub of water and then gave information to the neighbours. The child was well formed and healthy. She did not attempt suicide at the time, but two days previously she had sent a child to buy salts of lemon, but the chemist refused to sell it. After drowning the baby she went to a neighbour and said "I have drowned my baby,

go and take it out." She then met a policeman and told him the same story. During her trial her demeanour was that of extreme dejection. She sat with bowed head and manifested no interest in the proceedings. On reception she was extremely dejected and melancholic, she gave a fairly coherent account of her past life, and was very emotional when discussing the details of her crime. After remaining melancholic for some time she passed into a maniacal state, and these two states alternated for some years till she became demented. She is now demented, but restless and spiteful.

Dementia præcox.—Cases may belong to any of the different types of this form of insanity, but, as alterations of conduct are frequently one of the first signs of this disorder, it often happens that these cases are received into the asylum before the mental symptoms are well marked, and it is impossible to make a definite diagnosis until some time later. Kraepelin (3) states "that very sudden impulses not explicable to the patient herself interrupt the inner connection of psychic events." These impulsive acts are often an early manifestation of the condition, and may be homicide or other crime of a serious nature. Amnesia is very uncommon in this condition, but the patient, although aware of what she is doing, has a feeling that there is some force compelling her to act as she does. She feels that she is being driven by some power over which she has no control. Mott (4) explains why, in some cases, the onset of dementia præcox is delayed till the period of child-bearing.

G. H.—, aged 36; married. Murdered her child, aged 9 weeks, by drowning. No family history is available. In prison she was reticent and deluded, and exhibited hallucinations of hearing. She made impulsive attacks on officers. On reception into the asylum her cerebral faculties were considerably in abeyance—she showed slowness and hesitation. She gave monosyllabic answers to questions and no information could be gathered from her. She would take very little food, and usually had to be fed. She became resistive and negativistic, impulsive and quarrelsome, and was wet and dirty in her habits. At times she passed into a semi-stuporose condition, when she would take no interest in her surroundings, but would sit for hours in one position. At other times she was impulsive and would strike out without provocation. The dementia gradually became more marked and she died in the asylum nine years after reception.

DISPOSAL.

Of the 166 cases admitted, 94 have been discharged recovered, 10 have died, 4 have been transferred to county mental hospitals, and 58 are still in this institution. Five of the present patients have, in the past, been conditionally discharged, but owing to relapses have been readmitted. It is probable that some of the present patients will, at a future date, be sufficiently recovered to be discharged; 15 of them have only been in the institution for a short period.

Of the 94 cases that have been discharged from the asylum, in 13 of them the attack of insanity was of such a transitory nature

that by the time their trial was over and they reached the asylum the attack had subsided, and they were sane on reception and remained sane. The prison records of these cases show that there had been a definite attack of insanity, and that at the time of their crime they were not responsible for their actions. In five cases the attack had almost subsided, and the only sign was a slight depression, which rapidly disappeared. It may be argued that as these persons were sane they should not have been sent to an asylum, or if sent there, they should not have been detained. Troup (5) has definitely laid down that "much more than a mere certificate of sanity is required before a person who has committed murder and has been ordered to be detained 'during His Majesty's pleasure' can be turned loose again on society." Fifty-four were definitely insane on reception, but recovered, without any relapse, and 22, who were definitely insane on reception, suffered one or more relapses before their final recovery and discharge.

PROCEDURE LEADING TO RECEPTION.

At their trial, 43 were found to be insane on arraignment and unfit to plead; these were ordered to be detained during His Majesty's pleasure; 120 cases were found to be guilty but insane at the time of committing the act, and were also ordered to be detained during His Majesty's pleasure. One case was committed for trial by order of a Coroner's Court, but was sent direct to the asylum. One case was remanded *sine die* and removed to the asylum, and one case was conveyed to the asylum by order of the Home Secretary. These three cases show that, although there are other methods than arraignment before or trial by jury for committing criminal lunatics into safe custody, yet these methods are seldom used by the authorities, who much prefer that in all cases, unless there are strong indications to the contrary, a prisoner should be found to be insane by a jury in open court.

AGE.

The greatest number of cases occurred between the ages of 26-30, but a large number also occurred between the ages of 31-35 and 36-40. Infanticide with insanity was uncommon under 21 and over 40. The youngest case was aged 18 and the oldest 46.

Under 21 5	31-35 39
21-25 26	36-40 37
26-30 50	Over 40 9

The age of onset of the attack appears to have a slight but distinct bearing on the prognosis. All the cases under 21 years of age-

recovered, and were discharged, and the percentage gradually decreased as the age increased. The decrease is very slight after the age of 35. All that can be said with certainty is that, in a recoverable form of insanity, an age of under 30 is a minor point in favour of a good prognosis. Of those who recovered the ages were :

Under 21	5 (100%)	31-35	19 (48·7%)
21-25	19 (73%)	36-40	17 (46%)
26-30	30 (60%)	Over 40	4 (44·4%)

CIVIL STATE.

By far the greater number of receptions were married women—married, 128; single, 33; widowed, 5.

These figures do not agree with the statements that are to be found in most text-books to the effect that illegitimacy is a potent factor in the causation of the insanities of childbirth, but it is only fair to take into consideration that murders committed by unmarried mothers often take place at the time of the confinement, or very shortly after, and that at the trial the charge is frequently reduced to one of concealment of birth, and the question of the sanity or otherwise of the prisoner is not raised by the defence.

It is a noticeable fact that practically all the cases belong to the working or lower middle classes. This is not surprising, as in these classes the strain of bringing up a family is far greater than in those of a higher social standing. They are often faced with financial difficulties, and are therefore unable to obtain domestic help; this means that they have to resume the duties of looking after their children and the house before they are in a fit state to do so. They are apt to neglect themselves, and are often unable to obtain sufficient nourishment, and as their work must necessarily take up the greater part of the day they have little time for exercise in the fresh air and other relaxations. In this class it is the rule, rather than the exception, to nurse the baby, and lactation is often unduly prolonged with the idea of preventing conception.

INFANTICIDE COMMONER IN MULTIPARÆ.

In 122 cases the patients were multiparæ, and, with one exception, had not attempted violence on their children until the onset of the attack of insanity which caused them to commit a criminal act, when in some cases they killed more than one child. As the commonest insanity connected with childbirth is an exhaustion psychosis, it is to be expected that patients of an unstable temperament would feel the strain of the puerperium and lactation more acutely in a later than in their first confinement, and thus the

marked exhaustion, with attendant mental breakdown, is more likely to occur in multiparæ than in primiparæ.

In 44 cases the murder was related to the first confinement. Maurice Craig (6) has pointed out that first pregnancies, in neurotic persons over 32 years of age, are always accompanied by risk. Of these 44 cases, no less than 17 gave birth to their first child when over 32 years of age. Of the remaining 27 cases, 10 were legitimate and 17 illegitimate.

It may therefore be considered that insanity of childbirth with murder is of rare occurrence in young married primiparæ.

NUMBER OF ATTACKS.

Whether the patient is suffering from her first attack of insanity or not is an extremely important factor in prognosis.

In 101 cases the patient had never had a previous attack, and 73 (or 72·27%) of these cases have been discharged recovered. In the remaining 65 cases recovery has only taken place in 21 (or 32·3%).

Previous attacks of insanity thus have a very definite bearing on the prognosis, and the chance of recovery is much lessened in a patient who has been previously insane.

HEREDITY.

Cole (7) considers that insane heredity has a rôle in 40% of cases of the insanity of childbirth, and that dementia præcox invariably originates from a neuropathic stock. Maurice Craig (8) places neurotic inheritance as an important factor in the ætiology of the puerperal insanities, and finds that there is a defective heredity in a very large proportion of cases of dementia præcox.

In many of the cases admitted to Broadmoor it is not easy to obtain a reliable history of their antecedents owing to the natural reluctance of both patients and relatives to admit a defective or insane heredity, and it is often impossible to verify a suspicion of neuropathic taint in the family. Of the 166 cases, a family history of insanity has been admitted in 53 (or roughly 32%).

A direct family history of insanity was present in 19 cases, a collateral in 31 cases, and a history of insanity in the siblings in 21 cases. Of the 53 cases with a family history of insanity 28 have been discharged recovered.

METHODS EMPLOYED FOR PERPETRATION OF CRIME.

The methods employed by the mothers for the killing of their children were various, but in most cases they were simple and

impetuous, and lacked the previous planning which is sometimes shown by a murderer. In the large majority of cases no attempt was made to conceal the crime or to evade the consequences. In 14 cases the patient killed two or more children.

In 132 cases one of the following three methods was employed: drowning, of which there were 67 cases, cutting the throat, 45 cases, or strangulation, 20 cases.

The remaining methods were as follows: Poison, suffocation by coal-gas, suffocation by ammonia fumes, smothering, throwing into a dust-bin, throwing out of a window, jumping out of a window with the child, throwing out of a railway carriage, stabbing, violence on head, hitting with a hatchet, placing on fire, mutilating, setting on fire with paraffin. The last-mentioned case is interesting and unusual. The patient, a weak-minded woman who had previously been in an asylum, gave false evidence at the inquest, and stated that she had placed the baby, in its crib, near the fire, and that a live cinder had fallen out and set fire to the baby's clothes. A verdict of accidental death was returned. The true facts of the case were discovered by the mother-in-law, whose suspicions were aroused by the mother's apathy and strange behaviour, and also by the smell of paraffin on the baby's clothes. She questioned her daughter-in-law and extracted a confession.

SUICIDE.

Suicidal ideas are common in these cases. Out of the 166 cases admitted, suicidal ideas were present in 98 cases, and of these 59 had actually attempted to commit suicide, the remainder having only threatened or talked about it. This relation between suicide and homicide is instructive, as it shows that in a large number of cases it is probable that the original idea is suicide and not murder. Sullivan (9) has emphasized the fact that—

"In most cases of murder in manic-depressive insanity the homicidal tendency is associated with a tendency to suicide, and frequently seems, indeed, to be a transformation or extension of the latter impulse. A similar relation between the two impulses is also very common in senility and alcoholism; but in these latter conditions it appears to be of a somewhat different character to what is observed in melancholia. The distinction may be roughly expressed by saying that the destructive impulse in the senile and the alcoholic is, in some sort, a protest, in the melancholic it is an acceptance, so that in the former the impulse is homicidal-suicidal, and in the latter it is suicidal-homicidal." A few lines further on he states that "What has been said above with regard to homicidal crime in the melancholic forms or phases of manic-depressive insanity applies equally to the cases of murder associated with the exhaustion psychoses, which find their most characteristic and most frequent expression in the murder of their children by nursing mothers."

This statement is well borne out by the cases under review. In exhaustion psychosis and manic-depressive insanity it is seldom found that the killing has been committed with any idea of revenge, but rather because the mother has considered that it is the kindest, in fact the only thing that she can do to the child.

In many cases the patient is happily married, and is a good wife and fond mother, but she is weighed down during the strain of lactation, by domestic and other worries, real or imaginary, connected with the child. Ideas of suicide develop as she

imagines that she would be better dead; these ideas are thrown off, only to return in greater force, till at last they become a delusion. She feels that if she takes her own life she cannot leave the child behind to be neglected by other people and perhaps starved. She decides that the only possible thing to do is to take the child with her and argues that it will be happier in "Heaven." It frequently happens that after the deed has been committed a weight seems to be lifted from the mother, and she experiences, at first, a sense of relief that the child has been killed. This relief is short-lived, and soon gives way to a feeling of intense grief and sorrow. Severe vertex headache with a feeling of weight or oppression is a frequent symptom in these cases.

Occasionally a patient will give as a reason for the deed that she wanted to get hanged. In these cases the prevailing idea is a wish to die, but for some reason she shrinks from committing suicide and resorts to murder as a means to the same end.

Of the 59 cases of attempted suicide, 37 (or 62·7%) have been discharged as recovered.

In dementia præcox the suicidal impulse is very uncommon, only 2 cases in this series showed any evidence of an impulse to commit suicide.

ALCOHOL.

Alcohol appears to have but little importance in the causation of the insanities connected with infanticide. It is a noticeable fact that the large majority of patients who have been sent to Broadmoor on the charge of infanticide are not of the type that indulge in excessive alcohol, but, as has been previously stated, most of them are good wives and mothers who are fond of their homes and families.

A history of previous alcoholism was obtained in 18 cases, but in only 1 case was the patient under the influence of alcohol at the time of the act.

I. J.—, aged 38; married. Murdered her child aged 4½ months by cutting its throat. A strong featured, fresh-coloured woman with a healthy family history. Lived happily with her first husband till his death. She had eight children by him. Thirteen months after the death of her first husband she married again. Her second husband appears to have been a drunkard, and she lived unhappily with him; he squandered the money and treated her unkindly. One child was born and the labour was a difficult one. The day after the birth the husband came in drunk and began to illtreat one of the step-daughters. The mother rose from her sick-bed and interfered; this caused some fever and suppression of lochia, but the milk did not cease. She recovered in due time and was able to get about. A week before the tragedy she took part in a drunken orgy to celebrate the return of a relative from the war and drank beer steadily for four days. She returned home in a state bordering on D.Ts., became worse, had hallucinations of sight, saw devils, prayed long and loudly, and in a delirious paroxysm laid the child on the hearth-rug and cut its throat. She remembered nothing of the crime, her

first recollection being of the hospital ward to which she was conveyed. By the time she reached the asylum the attack had subsided and she remained sane till her discharge.

In none of the cases under review has the causation of the insanity been connected with drug-taking.

EPILEPSY.

In recent years much prominence has been given to epilepsy as a defence in cases of murder. Undoubtedly certain murders are committed during a state of epileptic automatism, but a defence of epilepsy, in the hope of proving insanity, is often brought forward when there is no true evidence of the prisoner ever having suffered from the disease.

Sullivan (10) has pointed out that the percentage of epileptics at Broadmoor is no greater than that among the ordinary asylum population of England and Wales: Broadmoor, females 5%; ordinary asylum population, females 5.6%. In this series of cases a history of epilepsy was present in 8 (4.8%), which is slightly less than that found throughout the whole insane population, and in only 6 cases can a family history of epilepsy be traced.

Three of the cases are undoubtedly the result of epileptic automatism, and exhibit all the features that are diagnostic of that condition. In each case the history of epilepsy is authentic, and the attacks have continued since reception into the asylum and in each case the murder has been a continuation, in an altered form, of the work on which the patient was engaged at the time, carrying on her task as though nothing unusual had happened, and shown total amnesia of the crime.

In one of the cases the mother placed the baby on the fire and the kettle in the cradle, and in another case the mother strangled her baby with a piece of chiffon which she was wearing round her own neck; she then placed the baby in the bed and continued her work. It was not till some time later, when, on the return of her husband from work, she went upstairs to fetch the baby that her deed was discovered.

AMENORRHŒA.

In the few cases where amenorrhœa has persisted there has been no improvement in, but rather a steady deterioration of the mental state. An early return of the menses is certainly a point in favour of a good prognosis.

It has been noticed that patients who state that they had a menstrual period whilst in prison awaiting trial often have a period of amenorrhœa after reception into the asylum.

AMNESIA.

From a medico-legal standpoint, the question as to whether there is total or partial amnesia is of the highest importance. If it is proved that the prisoner has no recollection of the deed, then she cannot be held responsible, but must be considered to have been insane at the time of the act. It is natural that any murderer should profess total amnesia as a defence, and if no alibi or better defence can be brought forward, then the defence of amnesia is a favourite one.

Because amnesia is often simulated it is unfair to deny its existence on that account, but rather should it lead those whose duty it is to examine the mental state of prisoners to a fuller realization of its importance, and cause them to make more exhaustive inquiries in order to satisfy themselves as to the genuineness or otherwise of the amnesia.

In differentiating between true and simulated amnesia points of importance in arriving at a diagnosis are :

1. In most cases of true amnesia there is a history of neuropathic inheritance.

2. A history of head injury or chronic alcoholism is often elicited.

3. Any previous loss of memory, partial or complete, is to be ascertained.

4. The deed is often committed without criminal motive.

5. A patient suffering from amnesia makes no deliberate attempt to escape after the deed has been committed.

6. Great importance should be placed on the beginning and end of the amnesic state. In true amnesia the patient cannot sharply define the beginning or end of the state. Simulated amnesia is to be suspected when the patient can accurately state at what moment her memory left her or returned.

7. In partial amnesia, ideas which are accompanied by marked emotion are remembered when less emotional ideas are forgotten. A patient who remembers leaving the house after the murder but has no memory of the actual murder is probably malingering a state of amnesia.

8. A sudden return of the memory of details of the act is most unlikely in true amnesia, and is highly suggestive of a simulated loss of memory.

In the series of cases under review, amnesia was present in 60 or 36.1%. Fifty-one cases gave evidence of complete amnesia, and of these 35 have been discharged recovered, 3 have died, and 2 have been transferred to other asylums. Of the 11 which remain, 6 have only been in the asylum for a comparatively

short time, and may eventually receive their discharge. Nine suffered from partial amnesia, and of these 6 have been discharged. Nineteen attempted suicide at the time of the infanticide. It is very uncommon to find simulated amnesia in a patient received into the asylum on the charge of infanticide.

Amnesia is commonest in cases of exhaustion psychosis; it is found, but to a much less degree, in manic-depressive insanity, but it rarely occurs in dementia præcox. A case where there are few signs of mental unsoundness, but where amnesia is present, is unlikely to be one of dementia præcox.

Amnesia of the crime, therefore, can be considered as a point, although perhaps a minor one, in favour of a good prognosis.

SUMMARY.

1. Infanticide is commoner in insanity during lactation than in puerperal insanity or the insanity of pregnancy.

2. Exhaustion psychosis is the most frequent form of insanity, and accounts for about 75·5% of the cases.

3. An age of under 30 is a point in favour of a good prognosis.

4. Insanity and subsequent infanticide is much more frequent in multiparæ than in primiparæ. The murder of her child by a young married primipara is of very rare occurrence.

5. Previous attacks of insanity have a definite bearing on the prognosis, the chances of recovery being much lessened when there has been a previous attack.

6. Little can be said with regard to heredity, owing to the difficulty of obtaining a reliable history.

7. Suicidal ideas are common, being present in about 60% of the cases. In many cases the primary idea is suicide, and the homicide is secondary. The presence of the suicidal impulse is not a contra-indication of a good prognosis.

8. Alcohol, as a causative factor, has but little importance in the insanities connected with childbirth and infanticide.

9. Epilepsy is not common in these cases, having no greater percentage than obtains in the whole insane population.

10. Amenorrhœa is a frequent symptom, and usually persists for some months. An early return of the menses is a point in favour of ultimate recovery.

11. Amnesia is frequently present. It is commonest in the exhaustion psychoses, and provided that it is not permanent, it is a point in favour of a good prognosis. Amnesia is of very rare occurrence in dementia præcox. Simulated amnesia is seldom found in the insanities of childbirth with infanticide.

In conclusion my thanks are due to the Home Office authorities for permission to publish this paper, and to Dr. H. P. Foulerton, the Medical Superintendent of the State Criminal Lunatic Asylum at Broadmoor, for allowing me access to the Broadmoor records.

References.—(1) Troup, Sir Edward, The Home Office.—(2) Baker, Sir John, "Female Criminal Lunatics: A Sketch," *Journ. Ment. Sci.*, January, 1902.—(3) Kraepelin, Prof. E., *Lehrb. der Psychiat.*—(4) Mott, Sir Frederick, *Brit. Med. Journ.*, October 24, 1925.—(5) Troup, Sir Edward, *op. cit.*—(6) Craig, Sir Maurice, *Psychological Medicine.*—(7) Cole, R. H., *Mental Diseases.*—(8) Craig, Sir Maurice, *op. cit.*—(9) Sullivan, W. C., *Crime and Insanity.*—(10) *Idem, ibid.*

Clinical Notes and Cases.

A Note on the Wassermann Reaction in the Blood-Serum of Male Admissions to Hanwell Mental Hospital. By G. A. LILLY, M.C., M.A., M.D., D.P.M., Deputy Medical Superintendent of Banstead Mental Hospital; and E. L. HOPKINS, M.C., M.R.C.S., L.R.C.P., D.P.H., D.P.M., Assistant Medical Officer, Hanwell Mental Hospital.

IN a series of 412 cases admitted between December 20, 1923, and December 29, 1925, the blood-serum was tested, and of these, 105, or 25.48%, were found to be positive. This shows the distinctly high incidence of syphilis of 1 in every 4 admissions.

The diagnoses on admission of the 105 positive sera cases, compared with the diagnosis on admission of the total admissions, were as follows :

Diagnosis on admission.	Total cases.	Positive sera.	Diagnosis on admission.	Total cases.	Positive sera.
General paralysis	. 54	50	Dementia præcox	. 75	3
Delusional insanity	. 46	8	Epilepsy . . .	. 24	3
Confusional insanity	. 73	21	Moral insanity . .	. 1	Nil
Melancholia . . .	. 51	4	Alternating insanity	. 1	"
Senile dementia . .	. 44	7	Volitional insanity	. 1	"
Gross brain lesion	. 12	3	Congenital imbecility	. 5	"
Mania . . . . .	. 25	6			
			Total . . . . .	. 412	105

A consideration of these figures shows several interesting features :

(i) On admission, 55 cases, although actively syphilitic, did not present signs suggestive of general paralysis. Later a certain number developed sufficiently to be recognized as general paralysis—a recognition hastened by the fact that their sera were known to be positive.

(ii) It is evident that syphilis occurred in 8 types of mental disorder, presenting symptoms in no way suggestive of syphilis.

(iii) Of the 105 admissions with positive sera, no less than 21, or 20%, were diagnosed on admission as confusional insanity. This is to be expected in view of the prevalence of a confusional state in the earlier stages of general paralysis—an expectation borne out by further observation of these confusional cases, in which 11 were diagnosed ultimately as general paralytics.

(iv) The immediate recognition of the presence of syphilis enabled early anti-syphilitic treatment to be carried out, with excellent results in many cases.

(v) The knowledge that syphilis is the causative factor has a definite bearing upon the prognosis, as it has been found that when the cerebro-spinal fluid is negative, anti-syphilitic treatment is often successful.

(vi) The knowledge that the chief factor in causation is not heredity has been some relief to the families of the patients concerned, whilst in cases where there is the possibility of transmission of the disease by contact, cohabitation, etc., it is possible to warn those exposed to such infection, and if they so desire, have their own serum examined.

(vii) In many cases the cerebro-spinal fluid could not be obtained for two reasons :

(a) Persistent refusal by the patient. (b) Extreme collapse and feebleness, rendering the attempt inadvisable.

Thus from the 55 cases not diagnosed as general paralysis, the cerebro-spinal fluid could be obtained in 43 only. The blood-sera were obtained easily in all cases.

(viii) Four cases with a clinical picture of general paralysis on admission were found to have negative sera. In the first case the serum on two separate occasions exhibited a negative Wassermann reaction, but as the clinical signs were so suggestive, the cerebro-spinal fluid was also sent for examination. This proved to be positive, therefore the original diagnosis of general paralysis was sustained.

In the second case the patient admitted syphilis, and was transferred to another mental hospital, where both serum and cerebro-spinal fluid were found to be positive. In the remaining 2 cases the serum and cerebro-spinal fluid were negative; both patients died, the one of broncho-pneumonia, in which the *post-mortem* revealed nothing suggestive of general paralysis. The second died rapidly of exhaustion without seizures; the brain in this case exhibited macroscopic signs of general paralysis.

It is not intended to discuss further those cases which were

diagnosed as general paralysis, since once the diagnosis was confirmed by a positive Wassermann reaction in both serum and cerebro-spinal fluid, they received treatment during 1924 at Hanwell Mental Hospital by inoculation with malaria, which continued after transfer in 1925 to another mental hospital.

The 55 cases with positive sera on admission, but without symptoms suggestive of general paralysis, were diagnosed under eight forms of mental disorder as—

Delusional, 8; confusional, 21; melancholia, 4; senile dementia, 7; gross brain lesion, 3; mania (recent), 6; dementia præcox, 3; epilepsy, 3: 55 cases.

A summary of results of anti-syphilitic treatment is appended for each of these mental disorders.

DELUSIONAL INSANITY (PARAPHRENIA).

Total admissions, 46. Cases with positive sera, 8. Percentage with positive sera, 17.39.

There was no alteration of original diagnosis. Two died without any response to treatment; 2 recovered and were discharged; 4 have improved physically, but not enough mentally to warrant discharge.

CONFUSIONAL INSANITY.

Total admissions, 73. Admissions with positive sera, 21, or 28.76%.

Diagnosis was changed to general paralysis in 11 cases. Seven have died; 10 have improved physically; 3 have recovered and been discharged; 1 was transferred without responding to treatment.

MELANCHOLIA.

Total admissions, 51. Admissions with positive sera, 4, or 7.84%.

No alteration of original diagnosis. Three have improved; 1 has recovered.

SENILE DEMENTIA.

Total admissions, 44. Admissions with positive sera, 7, or 15.90%.

No alteration of original diagnosis. One improved physically; 6 died.

GROSS BRAIN LESION.

Total admissions, 12. Admissions with positive sera, 3, or 25.0%.

No alteration of original diagnosis. In each case progress of disease has been checked.

MANIA.

Total admissions, 25. Admissions with positive sera, 6, or 24.0%.

In this series diagnosis was altered in 1 case. Four died within six months (2 from pulmonary tuberculosis); 2 benefited from treatment, but still require institutional care.

DEMENTIA PRÆCOX.

Total admissions, 75. Admissions with positive sera, 3, or 4.0%.

In this series original diagnosis was altered in 1 case. One recovered; 2 improved physically, but are still certified.

EPILEPSY.

Total admissions, 24. Admissions with positive sera, 3, or 12.50%.

No alteration of original diagnosis. One recovered; 2 improved physically, but are detained for epileptic confusion.

It is felt that the above notes and summary are a strong indication that a routine examination of the sera by the Wassermann test on each admission should be carried out.

The obtaining of sufficient serum causes little or no inconvenience to the patient, the most serious sequela being slight ecchymosis due to "buttonholing" of the punctured vein, which causes no pain, and clears up in a few days.

A positive serum is an indication for the routine examination of the cerebro-spinal fluid.

A positive Wassermann reaction of both serum and cerebro-spinal fluid is confirmation of the diagnosis of general paralysis, and suitable treatment can be initiated.

Those cases in which the serum is positive and the cerebro-spinal fluid is negative have been found to respond successfully to anti-syphilitic treatment.

The Wassermann reactions were carried out at the Pathological Department of the Maudsley Hospital, Denmark Hill, under the direction of Dr. F. L. Golla.

These notes are published with the permission of Dr. A. W. Daniel, Medical Superintendent of Hanwell Mental Hospital.

The Calcium Content of Serum in Mental Invalids. By EDWARD ARMSTRONG, M.D., B.Sc., and WILLIAMINA HOOD, B.Sc.
From the Laboratories, Crichton Royal, Dumfries.

In March, 1925, Clark and Collip (1) published a modification of Tisdall's method for the estimation of calcium. They had made extensive use of their method, and claimed that it gave an error of not more than 2%.

In order to test the method, aqueous solutions of calcium chloride of different strengths were made up, and the amount as found by the method in each solution was compared with its known amount. In all 34 estimations were made of 7 solutions, in which the amount of calcium varied from 7 to 13 mgrm. per 100 c.c. Our maximal errors were one of 6% and two of 5%. Including these figures, our average percentage of error was 1.5. Next, in order to ascertain whether the presence of serum influenced the method of estimation, mixtures were made of serum (in which the calcium had been estimated) and of calcium chloride solutions of known strength. The amount found in each mixture was then compared with its calculated amount. Twenty-four estimations were made of 7 mixtures, in which the amount of calcium varied from 9.0 to 12.7 mgrm. per 100 c.c. of mixture. Our maximal errors were one of 5% and two of 4%. Including these figures, our average

percentage of error was 1·5. Having thus satisfied ourselves that a fairly accurate method was available, it was decided to commence work on the calcium content of serum from patients. The question then arose—What is the normal content of serum?

According to Scholberg and Goodall (2):

“Weston and Howard (technique of Kramer and Tisdall) give the calcium content of serum (apparently normal) as 9–12 mgrm. per 100 c.c. Tomasson states that ‘like the majority of others,’ he finds the normal value of total calcium in serum, with de Waard’s method, 9·4–11·3 mgrm. per 100 c.c., mostly towards the upper limit. Only exceptionally in normal persons did he find values less than 10·66 mgrm. per 100 c.c. We are informed by Dr. Stanford that Hirth and Klotz have shown that by de Waard’s method too high results are of necessity obtained. De Wesselow gives figures for calcium in the serum of 4 cases (the method of Kramer and Tisdall); these vary from 9·7–10 mgrm. per 100 c.c. Kramer and Tisdall found a calcium percentage in the serum of 10 normal adults of 9·5–10·3 mgrm. per 100 c.c. Kramer and Howland—7 normal adults—give figures of 9·3–9·9 mgrm. per 100 c.c. Stewart and Haldane—3 normal adults—from 9·5 to 9·6 mgrm. per 100 c.c.”

We used the sera of 13 normal people as controls, with the following results in mgrm. per 100 c.c., one estimation being made in each case: 10·1, 10·1, 10·2, 10·2, 10·3, 10·3, 10·4, 10·4, 10·4, 10·5, 10·6, 10·6, 10·7. From our own work and that of others, we decided to consider normal any figure between 9·0 mgrm. and 11·0 mgrm. per 100 c.c.

The sera of 101 patients were examined, and of each serum two estimations were made, and the average taken. The patients, as in the case of the controls, were on ordinary diets, and the blood was taken between 3 and 4 hours after their latest meal, in most cases breakfast.

The results are summarized in the accompanying table:

No. of cases.	Mental condition.	Lowest and highest estimation of calcium in mgrm. per 100 c.c. of serum.	Average amount of calcium in mgrm. per 100 c.c. of serum.
3	Morosis	9·7–10·1	9·9
3	Imbecility	9·5–10·9	10·2
15	Melancholia	9·0–10·9	9·9
9	Mania	9·3–10·5	9·9
7	Stupor	9·1–10·2	9·8
26	Primary dementia	8·4–10·6	9·7
4	Secondary dementia	9·8–10·4	10·2
3	Delusion (unfixed)	9·8–10·2	10·0
11	Monomania (fixed)	9·0–10·6	9·66
2	Paranoia (fixed and systematized)	10·3–11·2	10·75
3	Degeneracy	9·3–9·8	9·6
1	Anxiety psychoneurosis	—	9·3
1	Dipsomania	—	10·1
1	Neurasthenia	—	9·7
7	Epilepsy with psychosis	8·7–10·8	9·6
3	General paresis with psychosis	8·8–9·1	9·0
1	Post-apoplectic confusion and aphasia	—	9·4
1	Post-encephalitic depression and dementia	—	10·0

3 cases of morosis, F. 1 and M. 2, aged 33, 26 and 25, gave figures of 9·7, 9·9 and 10·1 respectively.

3 cases of imbecility, F. 1 and M. 2, aged 47, 21 and 52, gave figures of 9·5, 10·2 and 10·9 respectively.

15 cases of melancholia, F. 13 and M. 2, varying in age from 38 to 73 years, gave a range of figures from 9·0 to 10·9, with an average of 9·9 mgrm. per 100 c.c.

9 cases of mania, F. 6 and M. 3, varying in age from 41 to 63 years, gave a range of figures from 9·3 to 10·5, with an average of 9·9 mgrm. per 100 c.c.

7 cases of stupor, F. 3 and M. 4, varying in age from 18 to 61 years, gave a range of figures from 9·1 to 10·2, with an average of 9·8 mgrm. per 100 c.c.

26 cases of primary dementia, F. 8 and M. 18, varying in age from 24 to 80 years, gave a range of figures from 8·4 to 10·6, with an average of 9·7 mgrm. per 100 c.c.

4 cases of secondary dementia, F. 3 and M. 1, aged 57, 48, 52 and 53, gave figures of 9·8, 10·1, 10·4, 10·4 respectively, with an average of 10·2 mgrm. per 100 c.c.

3 cases of "unfixed" delusion, F. 2 and M. 1, aged 37, 47 and 50 years, gave figures of 9·8, 9·9 and 10·2, with an average of 10·0 mgrm. per 100 c.c.

11 cases of "fixed" delusion, F. 7 and M. 4, varying in age from 34 to 70 years, gave a range of figures from 9·0 to 10·6, with an average of 9·66 mgrm. per 100 c.c.

2 cases of "fixed and systematized" delusion, F. 2, aged 50 and 62 years, gave figures of 11·2 and 10·3 respectively.

3 cases of degeneracy or deteriorated personality, F. 1 and M. 2, aged 44, 42 and 56 years, gave figures of 9·3, 9·8 and 9·8 respectively, with an average of 9·6 mgrm. per 100 c.c.

7 cases of epilepsy with psychosis, F. 3 and M. 4, varying in age from 24 to 56 years, gave a range of figures from 8·7 to 10·8, with an average of 9·6 mgrm. per 100 c.c.

3 cases of general paresis with psychosis, all men, aged 53, 41 and 49 years, gave figures of 8·8, 9·1 and 9·1 respectively, with an average of 9·0 mgrm. per 100 c.c.

From the summary it is evident that there is neither a high nor a low calcium content for any particular psychosis. Owing to the onset of spasm in parathyroidectomized animals with low calcium content, it was considered that epilepsy would show a fall in calcium content, but this expectation was not realized.

According to Henry and Ebeling (3), there is a relative increase of calcium in manic states, and a relative decrease in agitated depressed states. We found that the average for manic and depressed cases was the same, but we had no agitated cases of melancholia in our series.

The lowest average is in general paresis, and the highest average in paranoia, but more would have to be done to warrant any conclusion being drawn.

The figures below 9·0 mgrm. per 100 c.c. apply to 2 cases of primary dementia, 1 case of epilepsy with dementia, and 1 case of general paresis with mania. The only case above 11·0 mgrm. per 100 c.c. is a case of paranoia.

Briefly, our results show that the calcium content of blood-serum in mental cases lies within normal limits, and that a high or a low content is not diagnostic of any specific condition.

Our thanks are due to Dr. C. C. Easterbrook for his kind

assistance in diagnosing the cases, for his general interest in the investigation, and for his permission to publish this work.

References.—(1) Clark, E. P., and Collip, J. B., *Journ. Biol. Chem.*, 1925, lxxiii, p. 461.—(2) Scholberg, H. A., and Goodall, E., *Journ. Ment. Sci.*, 1926, lxxii, p. 51.—(3) Henry, G. W., and Ebeling, W. W., *Arch. Neur. and Psychiat.*, 1926, xvi, p. 48 (abstr. in *Journ. Neurol. Psychopath.*, 1926, vii, p. 169).

Medico-Legal Notes.

REX v. ALBERT THOMAS RUDGE.

THIS case was tried at the Monmouth Assizes on November 1, 1926, before Mr. Justice Swift. The prisoner is a farm labourer, aged 29 years. He was accused of murdering a girl named Doris Byard, aged 19 years. He lodged at the house of the girl's mother. He had been engaged to the girl. She had, however, broken off the engagement—a circumstance which appears to have greatly upset him. On September 12 he picked up a gun from a corner, in which he had placed it on the previous evening, went into the orchard, and shot the girl before her mother's eyes. After this he made an attempt at suicide. The facts were not disputed, the defence being that of insanity.

A police constable, who arrested the prisoner, stated that the prisoner had, almost immediately, asked "Is my darling girl dead?" The witness produced a letter, written by the prisoner, and found in the dead girl's possession, in which the prisoner threatened to take his own life. Another constable, who was guarding the prisoner in the hospital, on the day of the crime, stated that the prisoner had said, "We had a row in the orchard, and that got my temper up."

The prisoner gave evidence on his own behalf. He stated that he had no memory of any quarrel in the orchard, nor did he remember taking the gun, or shooting the girl. His memory only returned when he found himself in the hospital. He stated that the letter referred to had only been intended to frighten the girl, and so to induce her to return to him. He had only attained the third standard at school.

The prisoner's father deposed that the prisoner had a cut on his head at the age of 6 months, and, later, an illness which affected his head, and made him "unaccountable for his actions." Dr. S. B. Wyborn, Whitchurch, regarded the whole of the prisoner's family as a little deficient in intellect, but he did not think that the prisoner was insane in the legal sense. Dr. E. B. White, Medical

Superintendent of Bristol City Mental Hospital, had examined the prisoner, and had found him apathetic, confused and with defective memory. He considered that the prisoner's story of loss of memory was possible, but he would not go further than that.

Dr. R. Fitzroy Jarrett, Medical Officer of Cardiff Prison, who had kept the prisoner under observation, was called, by the Prosecution, as rebutting evidence. He stated that he had been unable to find any evidence that the prisoner was insane.

The judge's summing-up appears to have been strongly against the theory put forward by the Defence. But the jury found a verdict of "Guilty but Insane," and seem to have made use of the expression "temporary insanity."

REX *v.* LESLY GARDINER.

THIS case was tried at the Central Criminal Court on November 15, 1926, before the Common Sergeant. The accused is about 30 years of age, and the wife of a wealthy man. She was charged with stealing a dispatch box, and other articles, from an establishment in the West End of London. The stolen property was valued at £320. The theft occurred on October 7. There were other charges of stealing from a London club. Some of the stolen property had been sold, but it was stated that the owners had been compensated by the accused's husband. There had been a previous conviction for larceny in 1914, when she had been "bound over." The facts of the case were not disputed.

It was urged by the Defence that the accused, although not legally insane, was of disturbed mind. Dr. Porter Phillips stated that he had had her under his care since October. She had recently undergone two operations, and was in a bad state of blood-poisoning. He would not describe her case as one of kleptomania, but he considered that she had a morbid desire to acquire other people's property under an irresistible impulse. The judge remarked that "irresistible impulse" was not a term accepted by that court. Dr. Taplin, of Liverpool, said that he examined the accused in 1914, after her previous act of stealing, and came to the conclusion that she was suffering from what might be called moral insanity. The judge asked what was meant by "moral insanity," adding that he had not heard that expression before. The witness replied that it was a term, well known in medicine, to cover that condition in which people have a bent in a certain direction, and are not able to control it.

The judge declined to accept the view put forward on behalf of the woman. He stated that he could not treat her as a first offender,

and that, if he did so, there might be ground for the suspicion that the law differed as between rich and poor offenders. He sentenced her to six months' imprisonment in the second division.

While we recognize that morbid impulses and compulsions do occur (although this case may, or may not have been an example), and that the commission of offences may result therefrom, the practical difficulties in setting up such a defence are obvious. The chief point of interest in the case would appear to be the judge's remarks about irresistible impulse. It will be remembered that Lord Justice Atkin's committee reported, in 1923, that "there are cases of mental disorder where the impulse to do a criminal act recurs with increasing force until it is, in fact, uncontrollable," and made a recommendation that the law should recognize irresponsibility "when the act is committed under an impulse which the prisoner was by mental disease in substance deprived of any power to resist." This committee consisted exclusively of lawyers. It would appear that the suggested new criterion is far from commanding universal acceptance.

Occasional Notes.

The Mental Deficiency Bill (England and Wales).

THE main provisions of this Bill and the fact that it had left the House of Lords, where it was introduced in July, 1926, for the more contentious atmosphere of the Commons were reported to the Council at the November Quarterly Meeting. The Council referred the Bill to the Parliamentary Committee for examination and report.

It has so happened, however, that the Association has been denied the opportunity of taking any further action, for the consideration of the Bill commenced in the Commons almost immediately. The Bill passed its second reading on November 29 with but little emendation, though the occasion gave rise to considerable discussion and not a little opposition to the proposed measure.

The Bill was referred by the Commons to Standing Committee C, where it was dealt with on December 7. Two amendments to widen the definition of defectives in clause 1 so as to include cases of "mental disturbance" and "perverted development of mind" were negatived. Three new clauses amending Sections 4, 8 and 15 of the Mental Deficiency Act, 1913, were added to the Bill. The discussion took up a whole morning, and the Bill, as amended, was ordered to be reported to the House. The Bill came up for third reading on December 13, but a sheaf of further amendmends

having been tabled, and there being no time for their discussion owing to the lateness of the Session the Bill was not proceeded with, and was lost—at any rate for the time being.

Such being the fate of this Bill there seems little to be gained now by discussing it in detail. It had considerable sociological bearings in addition to enacting important changes of a far-reaching character in the administration of the Mental Deficiency Act of 1913. Though the Association, no doubt, would have been keenly interested in the former, it was in the latter respect that it would have been mainly concerned. Interest would have centred round clause 1, *i.e.*, the proposal to enlarge the scope of the definitions of the classes of mental deficiency as laid down in the principal Act so as to include cases arising not only from causes operating from birth or early age, but also from those “induced after birth by disease, injury, or other cause.”

For future reference we chronicle here clause 1 as amended by Standing Committee C :

CLAUSE 1.—(*Definition of Defectives.*)

(1) The following Section shall be substituted for Section I of the Mental Deficiency Act, 1913 (in this Act referred to as “the principal Act”)—

“ 1.—(1) The following classes of persons who are mentally defective shall be deemed to be defectives within the meaning of this Act :

(a) Idiots, that is to say, persons in whose case there exists mental defectiveness of such a degree that they are unable to guard themselves against common physical dangers :

(b) Imbeciles, that is to say, persons in whose case there exists mental defectiveness which, though not amounting to idiocy, is yet so pronounced that they are incapable of managing themselves or their affairs or, in the case of children, of being taught to do so :

(c) Feeble-minded persons, that is to say, persons in whose case there exists mental defectiveness which, though not amounting to imbecility, is yet so pronounced that they require care, supervision, and control for their own protection or for the protection of others, or, in the case of children, that they appear to be permanently incapable by reason of such defectiveness of receiving proper benefit from the instruction in ordinary schools :

(d) Moral defectives, that is to say, persons in whose case there exists mental defectiveness coupled with vicious or criminal propensities and who require care, supervision, and control for their own protection or for the protection of others.

(2) For the purposes of this Section ‘mental defectiveness’ means a condition of arrested or incomplete development of mind whether innate or induced after birth by disease, injury, or other cause.”

In the preamble to the Bill it was plainly stated that one of its main objects was to include in the operations of the Mental Deficiency Act, 1913, troublesome cases of encephalitis lethargica occurring in early life and adolescence.

The question of the best way of accommodating and administering these cases has been discussed by the Association on more than one occasion recently, but no decision or declaration on the subject has been made as yet, and it seems to be one upon which the Association

must express a definite opinion sooner or later, and, in view of the probable early re-introduction of this or an amended Bill next session, the sooner the better.

Speaking on the broad issue raised by clause 1, we think it would be unwise to depart from the hitherto closely observed distinction between cases of arrest of mental development and cases of acquired mental disorder. Both clinically and administratively there are important differences, chiefly, however, in the latter respect. Though they are both included in the science of psychiatry, yet irrecoverability and training are the chief aspects of the former and recoverability and treatment of the latter, and these several aspects present the practical side of the subject. As to whether or not acquired cases of arrest of mental development should be included in the operations of the Mental Deficiency Act we have never been in any doubt. In these pages we have more than once expressed our view that they should, and the only objection we have recognized as having any real basis is the economic one. This was, no doubt, the reason for their non-inclusion in the first instance. We have frequently pointed out that the full extent of the mental arrest cannot be gauged until the instinctive activities of puberty and early adolescence have made themselves felt, and the individual's mental development been put thereby to the supreme test.

We fully agree that the time had come for a revision of the definitions of the classes of mental defectives as set forth in the Mental Deficiency Act of 1913. We are also aware that such definitions are for administrative and legal purposes, and need not necessarily have a strict clinical significance. It is highly improbable, if not impossible, that they could, under the circumstances, satisfy a medico-psychological standard; still, their departure from the latter should be restricted to a minimum, and certainly the proposal that acquired forms of idiocy and imbecility should be presumed to exist was startling. We admit that the definition of mental defectiveness in Section 2 of clause 1 of the Bill as applied to classes (a) and (b) need not necessarily imply this, but the explanation offered is so intricate and not a little obscure that the necessity for it should be avoided if the practical purpose can be secured by using other words.

We certainly do not share the views of many that the practical outcome of these amended definitions would result in the certified institutions becoming the dumping-ground for cases of dementia—even of senile dementia—and their great purpose as training institutions thereby greatly embarrassed. Even wilder views prevail in some quarters. The Minister of Health repeatedly stated that the measure was meant to apply only to cases of arrest of development

in early life and adolescence, and the Board of Control were made responsible that the intentions of the Bill were carried out. This we have no doubt they could be entrusted to do, having regard to their financial control and involvement. Still if a better Bill can be drafted and one not likely to cause so much apprehension and anxiety in both medical and administrative circles, it should be attempted, and it is satisfactory to know that our Parliamentary Committee has now the whole matter in hand, and that the Association will have the opportunity, on the next occasion such legislation is attempted, of expressing its views.

The Retirement of R. W. Branthwaite, C.B., M.D., D.P.H.

DR. BRANTHWAITE has for some twenty-seven years devoted his life to the Public Services, and amongst other appointments has held those of Inspector of Certified Inebriate Reformatories under the Inebriates Act, Inspector of Prisons and Inspector and Medical Commissioner of the Board of Control (England and Wales). In addition he has been Chairman of the Departmental Committee on Dietaries in Mental Hospitals, and was an active member of the Departmental Committee on Morphine and Heroin Addiction. Dr. Branthwaite has also been a delegate to the important International Congresses on Home Relief in Edinburgh, and on Alcoholism in Stockholm, London and The Hague, and has published various papers on alcoholism and mental defect.

In 1914 he went as Surgeon-Captain with his regiment to France, and remained with it until ill-health compelled his retirement. He was mentioned in despatches, and in 1919 was created a C.B.

During his years with the Board of Control, notwithstanding his poor health, he never spared himself, and was always ready to undertake extra duties whenever required. His interest in all branches of the work and his thoroughness in all he did were remarkable, but perhaps his chief interest lay in investigations on the prevalence of infectious diseases and improvement in the dietary of mental hospitals. He frequently made local inquiries into these matters, and his advice was much valued by medical superintendents.

He was a welcome visitor at all times, and his sincerity and evident desire to be helpful rather than critical (though in this latter respect he never failed to disclose exactly what was in his mind), invited whole-hearted confidences in return, and resulted in a more fruitful and better understanding of the matters under consideration.

He will be greatly missed, both by the Board and by the medical superintendents, and our best wishes go with him for many years of happy leisure and recreation he so well deserves.

Part II.—Reviews.*

Psychotherapie: Ein Lehrbuch für Studierende und Ärzte. Von Dr. MAX ISSERLIN, Professor an der Universität in München. Berlin: Julius Springer, 1926. Pp. ii + 205.

This short and compact text-book ought to prove a welcome addition to the library of the practitioner and of the student of psychotherapy. It reveals common sense everywhere, and in the discussion of controversial matters the author keeps a detached mind and is always fair.

The book is divided into two parts. The first part deals with "General Psychotherapy," where, after a short "Introduction" and a succinct "Historical Review," the different psycho-therapeutic methods are reviewed and criticized. These are "Suggestion Therapy," "Re-education Therapy," and "Analytical Psychotherapy." In the second part on "Specific Psychotherapy" the subject is treated from a different angle, as the different methods are applied to symptoms and symptom-complexes (anxiety states, constitutions (hysteria and psychopathies), and in a last short expectation-neurosis states, compulsion states, tic, etc.), to abnormal chapter the author discusses the help that may be derived from psychotherapy in organic diseases.

In the chapter on suggestion therapy the author deals first with hypnotherapy, and discusses the phenomena of hypnosis, the post-hypnotic phenomena, superficial hypnotic states and abnormal hypnoses. There follows a well-informed discussion on the theory of hypnosis and the definitions of the term. Isserlin favours a modification of the Lipps-Moll definition of suggestion, namely: "Suggestion is a process where, under inadequate conditions, an effect is brought about owing to the production of an adjustment (*Einstellung*) towards the occurrence of this effect." The hypnotic state he defines as "a sleep-like condition with consciousness narrowed by suggestive rapport."

The author considers the "Unconscious" as a necessary helpful conception (notwendiger Hilfsbegriff). Of course nothing can be said against using a given term for an idea which has been carefully defined, if this definition is constantly kept in mind; and one is at liberty to apply the term "*the Unconscious*" to certain neural dispositions to produce certain psychic processes. That this is the author's meaning is evident from the following quotation:

"After what has been said just now the Unconscious is not a separately existing, independent sphere clearly apart from the Conscious. Every psychic element may pass from conscious through all degrees of consciousness to unconscious, and may become conscious again. Further, what has been said gives no ground for the belief that given psychical experiences have a separate lasting unconscious existence. It has rather been emphasized that there exist numberless connections between the unconscious dispositions among themselves as well as towards the

* The Editors are not responsible for the contents of signed reviews (*vide* Bye-Law 51).

actually conscious, that the revival of the unconscious happens on the one hand according to the laws of association and the strength of dispositions, on the other hand systematically according to the mental adjustments (Einstellungen)."

Isserlin is at great pains to make his position respecting "the Unconscious" quite clear, and reverts to the question repeatedly, adding, "Want of clearness and contradiction on this point have produced disastrous consequences, not only for the understanding of these phenomena, but also for the psychotherapeutic practice." Yet his very phraseology, "psychic elements passing through all degrees, etc.," opens the door wide to that mythology against which he warns us, and which was expressed so admirably by Breuer in the following words :

"All too easily one gets into the habit of thought of assuming behind a substantive a substance, of gradually understanding by consciousness an entity. If, then, one has got used to employing local relations metaphorically, as, e.g., 'sub-conscious,' as time goes on an idea will actually develop in which the metaphor has been forgotten, and which is as easily manipulated as a material thing. Then mythology is complete." (Breuer and Freud, *Studien über Hysterie*, 2te Aufl., 1909, p. 199).

Why, then, expose ourselves to this danger, to which we are all, some more, some less, prone, if the strictly scientific concept and term of "neural disposition" once understood and grasped can offer no difficulty? A psychic process is just a *process*, and a process can have no existence before it takes place, nor after it has taken place. That similar processes may occur again is due to the traces, the dispositions, left behind by past processes. The concept of the "Unconscious" has been banned from empirical and experimental psychology, and Wilhelm Wundt was right when he wrote :

"The want of clearness that still obtains respecting the relation of consciousness and attention, and respecting the question of the 'Unconscious,' is perhaps some excuse if the psycho-pathologist gets up a psychology of his own, to suit his own requirements, and is then tempted to transfer the product of the observation of special abnormal psychical states to general psychology. But, after all, here, too, holds good what for the physical side of human life no one questions to-day. However valuable pathological experience be for the understanding of physiological functions, pathology has, after all, to rely on physiology, and not *vice versa*. Though the help which experimental psychology offers to psychopathology be but a modest one, there is nevertheless no need to lose heart as regards dreams and hypnosis, as well as psychoses. And that which it offers has still the advantage of being gathered from real observation and is not a mere fiction, as the 'Unconscious' and the 'Pre-conscious,' together with the imaginary battle that is said to rage between them, before the portals of consciousness are opened to some thought arising from the darkness of the "Unconscious." (Wilhelm Wundt, *Grundzüge der Physiologischen Psychologie*, 6te Aufl., Leipzig, 1911, p. 653).

The "Technique of Hypnosis" and "Indications and Contra-indication" as well as "Waking Suggestions" terminate the chapter on "Suggestion Therapy."

In the following chapter on "Re-Education Therapy" the author deals sympathetically with "Instruction," "Persuasion," "Education of the Will," and "Therapy by Occupation." The various

views and methods (Dubois, Dégérine, Camus et Pagniez, Mohr, Oppenheim, Moll, Brissaud, Meige und Feindel, etc.) are discussed.

The next chapter is concerned with "Analytical Psychotherapy." The author devotes twelve pages to a condensed but fair and clear statement of Freud's teaching. Then follow twenty-six pages in which Freud's teachings are closely examined and criticized. After Freud had published his *Traumdeutung* he complained that psychologists took no notice of his book, and that it would have been "*totgeschwiegen*"—killed by silence—had not the general public taken to it kindly. Now psycho-analysts appear to mete out the same treatment to the various criticisms that have appeared since; no refutation is attempted of these. The only answer critics receive is, "Get psycho-analysed yourself and you will be convinced." The conduct of experimental psychologists towards Freud is comprehensible from the fact that by their training they are accustomed to scientific method, verifiable facts and logical reasoning, all of which are conspicuous by their absence in the whole of Freud's writings. But these strictures cannot be levelled against Freud's critics. One is therefore forced to conclude that the reason of their silence is not the same as in the case of the *Traumdeutung*, and the inference nearest at hand appears to be that these criticisms *cannot* be answered. The conclusion Isserlin comes to is this :

"The psycho-analytic method of Freud is, in both its parts, the simple successive association method and the actual procedure of interpretation, scientifically unwarranted, and its pretensions untenable. All assertions founded thereon of definite mechanisms (repression, determination) must be regarded as unproven and also in part as unprovable. Jung's assertion that it is possible with Freud's method to reconstruct out of each psychic particle the whole psychic constellation appears to be a ghastly error."

As to the results alleged to have been obtained by psycho-analysis and to be obtainable only by it, Isserlin rightly remarks that if these really existed they would still not prove anything as regards Freud's theoretical views. Other factors are potent also here, namely, suggestion and absorption in the psychic life of the patient, which makes it possible to engross his attention for a much longer period than can be done by any other method.

"I myself have, like others," continues the author, "seen in the course of years a goodly number of cases return from the treatment of well-known psycho-analysts of all schools. Some of these had been treated for years, and by no means those who, as Bleuler thinks, were angry because their complexes had been touched. I have seen no success in the treatment of these patients. On the other hand, after what the patients told me I have been forced to modify my previous views, and am now of opinion that Freud's psycho-analysis is never to be recommended, and that it is, in insufficiently careful or conscientious hands, a most dangerous weapon. I have been informed by patients of methods which far surpassed that which Freud, who warns against such excesses, narrates of the 'wild psycho-analysts.'"

Since in this method there is absolutely no restraint or censorship, it is evident that all depends upon the tact of the individual psycho-analyst. However, such tact does not appear to accompany a profession of faith in psycho-analysis, but it seems rather as if a

therapeutic optimism and pride to be able to master the "depth-psychology" on occasion entices to a reckless radicalism even in the treatment of patients.

"Is it then not possible to employ Freud's procedure in order to verify his results and to understand better his theoretical views? This is just the reproach which is levelled against the opponents by Freud's adherents that they content themselves with theoretical criticism. I believe indeed that it is difficult for him who is convinced of the unsoundness of the suggested procedure to verify it. What should we expect at these tests—which I, too, have made? That things take place as they are reported we do not doubt; but we contest the conclusions which are drawn, and deny that the interpretations put on them are permissible."

The following chapter of this section is devoted to the "Psycho-analytic technique." Here the author gives a fair description of the technique of Freud and Adler, with incidental criticism of the latter.

In the fourth chapter of this section the "Practical Use of Analytic Methods" is discussed. The author points out that associations, tracing of hidden complexes in hypnosis, examination of dreams (without their interpretation), are all theoretically justifiable and practically useful, for these procedures permit a thorough penetration into the psychic life of the patient. He admits that they, in themselves, have already a most beneficial influence, and prepare the ground for a thorough psychotherapeutic treatment. All this, as T. A. Ross has pointed out, ought to be included in case-taking. Oscar Vogt's and Breuer and Freud's cathartic methods are discussed, and Frank's questioning in deep hypnosis are mentioned. Association experiments, as evolved by the school of Wundt and Kraepelin, and later adopted by Jung for psycho-analytic theory and practice, are examined and recommended, although Isserlin dissociates himself from Jung's theoretical conclusions. That the reaction-time in association tests was increased by emotional processes was known from the work of Mayer and Orth before Jung.

The second part of the book treats of "Specific Psycho-therapy." In the first chapter on "Symptoms and Symptom-complexes" the author describes anxiety states, expectation neurosis states, compulsion states, tic, depression states, nervous, circulatory and gastric disturbances, pathological propensities, psychosexual anomalies and psychotherapeutic treatment of children, and discusses the various therapeutic measures and their relative importance.

The second chapter deals with "Abnormal Constitutions." Here the author repeats once more that the pre-requisite of a scientific foundation for all therapeutic endeavours, as well as of its practical possibility, is the intelligent penetration into the personality of the patient. After some further general remarks he discusses the psychotherapeutic methods in hysteria and various psychopathies.

A few remarks in a very short chapter on the value of "psycho-therapy in organic disease" terminate this compact and very readable little text-book.

A. WOHLGEMUTH.

The Inheritance of Mental Diseases. By ABRAHAM MYERSON. Baltimore: Williams & Wilkins Co., 1925. English agents: Baillière, Tindall & Cox. Demy 8vo. Pp. 336. Price 22s. 6d. net.

The objects of this book are clearly defined at the outset. The author has attempted to restore some sort of order out of the confused conceptions which have been allowed too long to obscure the issue in the investigation of the relation between heredity and mental disorders, and has sought to clear the ground by limiting his research to the biogenic psychoses, *viz.*, the manic-depressive psychosis, schizophrenia and allied states. As the book is intended for social workers, biologists and other laymen, as well as for the medical profession, several chapters are taken up with descriptions of the various clinical types met with in the practice of psychiatry. Dr. Myerson points out that a great amount of research has been vitiated by the fact that data have been collected and diagnoses made by workers who have lacked adequate training in psychiatry, and that psychopathy has been ascribed to ancestors and collaterals on the flimsiest of evidence (there is an amusing table of criticisms of Davenport's criteria of mental abnormalities on pp. 65 and 66). The story of the celebrated Kallikak family given by Goddard is shown to rest on equally scanty foundations.

The chapter headed "Five Important Mental Diseases" (dementia præcox, manic-depressive psychosis, paranoid psychoses, involution diseases and senile dementia) is of special interest in that the author calls attention to the different pictures shown by the "hospital" non-recoverable, and the "community" early, recoverable or arrested types. Dr. Myerson's general attitude towards the biogenic psychoses is expressed in the following words:

"It seems probable that in all the periods of life there occur three main types of mental disease. The one is a paranoid type, a disease with hostility, suspicion, a deluded interpretation of life around it, and a gross egoistic, over-evaluation of the self. The second is a dementing disease, whose prototype is dementia præcox, but which occurs in modified form in the involution and senile periods. The third is a disease marked mainly by a depressed mood, with lowered energy, absent interest and delusions of a depressive, apprehensive nature, occasionally associated with excitement and exaltation. The main disease of this type is manic-depressive insanity, but the involuntional and senile melancholia are related diseases—perhaps the same disease coloured by the emotional and mental reactions of these periods of life.

"It might thus be stated that these three types of mental disease may occur at any period of life, in youth, maturity, involution or senium. Whatever is their cause, the less resistant individuals develop these conditions early, others more resistant hang out until the changes of the involution, and still more resistant individuals develop them late in life."

The second part of the book is devoted to the clinical reports upon which Dr. Myerson's conclusions are founded. He asks,

"Given a certain type of mental disease in an ancestor, what form of mental disease is to be expected in his direct insane descendants?" As regards the paranoid psychoses, dementia præcox or paranoid states are more likely to appear in the insane descendants, with a distinct downward trend in intellectual capacity. Manic-depressives are most commonly followed by their like, though schizophrenic descendants may occur. While there is some evidence for anticipation, this factor is not stressed so strongly by Dr. Myerson as it was by Sir Frederick Mott. Insane stocks can be mended as well as ended, and the prognosis is not invariably downward to dementia præcox and imbecility.

As regards horizontal transmission, the clinical types of insane siblings, Dr. Myerson finds that the psychoses of brothers and sisters tend to be alike. Cases of supposed mental deficiency in a fraternity of schizophrenics are often cases of simple dementia præcox. The types of mental disorders of siblings are much more alike than those of parents and children.

Dr. Myerson's conclusions are based on a study of case-histories of 1,547 related individuals, representing 664 families admitted into Taunton State Hospital from 1854-1916. The criticisms as regards the collection and evaluation of data which Dr. Myerson has brought against others apply to some extent to his own work, since case-records can often be interpreted in different ways, and he himself has frequently found it necessary, after considering the clinical notes, to disagree with the diagnosis of many cases which had not come under his direct notice.

Our knowledge of mental diseases is still too vague to allow of any theorizing about the transmission of definite characters according to Mendelian laws. After considering Mendelism, Weismannism and polymorphism, or the transmission of some psychopathic unit which may be displayed in a variety of forms, Dr. Myerson inclines to the theory of blastophoria, *viz.*, that the germ-plasm may be adversely affected by environmental conditions. Unless it be by a process of exclusion or for the sake of wish-fulfilment, it is not quite clear how he has arrived at this conclusion. There is a general tendency in American psychiatry to ascribe more to a possibly alterable environment than to a probably intractable constitution. To quote the author again:

"If we too readily assume heredity of an inevitable kind as cause, the result is a paralysis of investigation, for any fundamentally fatalistic doctrine inhibits research and study. But if we say that the environment, in some of its forms, as toxin, infection and lowerer of vitality, acts in a blastophoric way, we are stirred to research and study, and *results must follow.*" (Reviewer's italics.) The nature of the blastophoric influences remain to be discovered in a programme of research outlined at the end of the book.

Dr. Myerson has summarized a great deal of material, and is to be congratulated on having produced an interesting and readable volume. He has not, however, offered very much in amplification of the work of the late Sir Frederick Mott or of the Munich School. If he has shaken a few cherished beliefs and spread a little doubt he

has performed a good service. The volume is well got up, but contains more typographical errors than might be expected from a firm whose motto is "*Sans tache.*"

W. S. DAWSON.

The Purpose of Education. By STGEORGE LANE FOX PITT. Cambridge University Press, 1925. 5th edition. Large crown 8vo. Pp. xxviii + 94. Price 4s.

The object of this little book is to show that modern education is often faulty both in aim and method, and that the elucidation of educational problems should come through the knowledge obtained by the experimental psychology of recent years. The reflections on the inadequacy of ordinary training are valuable, especially when worked out in such an interesting chapter as that on "Economics," in which competition as a stimulus to learning is condemned. When first published in 1913 and for some years after, this book fulfilled an important purpose in exposing the hollowness of the mechanistic theory of life with its materialistic outlook. But at the present time we want constructive criticism, and a definite pronouncement about the new psychology.

In the appendix we are told that psycho-analysis has been dealt with more fully in Chapter I than in previous editions; on investigation, however, we do not find it adequately dealt with; reading between the lines we infer that the author does not approve of Freud, but there is no definite statement. The writer's ideas make us think he would approve of Jung rather than Freud, but there is no reference to either Adler or Jung, although both these psychologists published their principles before 1913.

On p. 12 we read that "true freedom is a quality which springs from within and has to be gained by effort and perseverance, for freedom means a release from bonds mostly of our own forging." But the writer does not seem to realize the difficulty of seeing that the bonds are of our own forging, and the value of help from outside in loosing the entangling chains. It is not study of the conclusions of psychology, as stated on p. 27, but individual psychological investigation, that leads, in a difficult case, to the self-knowledge described as essential by the author.

W. A. POTTS.

The Problem-Child in School. By MARY B. SAYLES and HOWARD W. NUDD. New York, 1926. 8vo. Pp. 288. Price \$1.00.

This book is published by the Joint Committee on Methods of Preventing Delinquency. It consists of narratives from the case-records of visiting teachers. Successes alone are not recorded; some failures are quite fairly set out, and their causes are analyzed. The visiting teacher is an official whose operations are, so far as we know, confined to the United States of America. It is recognized in that country, as in this, that the child who is "difficult" in school, who is constantly in trouble, who cannot agree with his teachers and his companions, who commits small acts of dishonesty

and of sex misconduct, is the child who eventually becomes the psycho-neurotic or the delinquent. But it is also recognized that many of these character deviations are amenable to correction, provided that the case is taken in hand early, and is investigated with understanding. Many of these difficulties are due to faulty environment in the school, in the home, or in both. The function of the visiting teacher is to investigate the case, and to act as a kind of *liaison* officer between the school and the home. It is most clearly pointed out that it is not her function (the officer appears always to be a woman) to usurp the duties of the physician, the psychologist, or the psychiatrist. She may have to refer the case to one or all of these officials. But in many instances the character deviation is due to comparatively simple causes, and can be handled with success by a woman who possesses the necessary qualifications.

What, then, are these qualifications? The visiting teacher must have a thorough knowledge of educational aims and methods, and of the social conditions in the locality. She must possess a knowledge of child psychology, and of modern psychological theories and methods. She must carefully avoid reading her own conflicts into the cases with which she deals. She must be tactful in a high degree. Above all else, she must possess the gift of sympathy, and must always realize that her function is to understand and not to blame. These are, admittedly, high requirements. But they should not be unattainable. Indeed, we know not a few teachers, and others, who would fill such a position admirably.

The professional psychologist will not find much that is novel in the book. School medical officers will read it with interest. But it should be studied by all teachers, and, above all, by school managers. It should serve to convince the latter that the establishment of such a service, in this country, is much to be desired. When this necessity is understood, the required workers will be found.

M. HAMBLIN SMITH.

Three Problem-Children. New York: The Joint Committee on Methods of Preventing Delinquency, 1926. 8vo. Pp. 146. Price \$1.00.

The case-studies of three children who presented behaviour problems are reproduced in this book. Psychologists will find the studies very superficial; and that this is so is admitted by those who are responsible for the book. But the studies are of value, as indicating what can be done, in comparatively simple cases, by means of sympathetic handling. As in many recent books, the dread word "psycho-analysis" is avoided. But the Freudian conception of mental conflict and repression is adopted. All who have any experience in these cases know well how often, quite apart from any attempt at formal analysis, much good may be accomplished by quietly talking over difficulties with the patient. The book puts it admirably, when it describes the good effect produced on one of the three children when brought into contact

with an adult "who didn't try to teach her anything or to correct her, who seemed to understand things when all the words wouldn't come, who somehow made the whole business of life seem a little less desperate and hopeless." It is by the attempt to understand, and, above all else, by the studied avoidance of even a suggestion of blame, that assistance can be afforded. It is made clear that the problem is never the fault of the child alone. The parents, the school system, and only too often the teacher, may be at least equally concerned. The share of the school in producing these difficulties is discussed in an additional chapter, written by Prof. Henry C. Morrison, of Chicago.

M. HAMBLIN SMITH.

God and Reality. By MARSHALL BOWYER STEWART, D.D. New York and London: Longmans, Green & Co., 1926. Crown 8vo. Pp. x + 220. Price 8s. 6d. net.

The term "God" has been, and still is used in many different senses. As Dr. Stewart remarks, everybody is talking about God without anyone knowing what anybody else is talking about. And, we may add, many people use the word without any clear idea as to what they themselves are meaning. It is not, therefore, surprising that there is unbounded confusion.

The author's object is not the enunciation of any new definition, but an attempt at the clarification of the existing confusion. And in this attempt he has attained much success. He assumes that the idea of God implies the existence of superior power, or of superior goodness, or of both, although this superiority does not necessarily proceed to the idea of supremacy in either attribute. And he then gives a lucid, although a brief account of the gradual development of the idea of God. We would remark that it is, perhaps, a little misleading to represent, as is done in one passage, Spinoza as holding that God is "all substance." The essential element in Spinoza's system is that there is but one substance—that is God. Incidentally, Dr. Stewart shows us that some of the distinctions which have been drawn are by no means, as is often asserted, mere ecclesiastical hair-splittings. The differences indicated by these verbal distinctions are of considerable moment. Whether the differences justified quarrelling, not to speak of persecution, is quite another matter. Of course, a great part of the history of the idea of God has gone on in the minds of people who knew nothing of philosophy. The culture tradition and the popular tradition run side by side.

It is next pointed out that no highest common factor can be found for all these different ideas. But three main currents of thought begin to appear. God is conceived as Proximate Reality, or as Supreme Value, or as Ultimate Reality. The first of these conceptions corresponds to the view held of God as a distinct object of religion. This particularism passes easily into the doctrine that God is finite—a doctrine which was held by William James, and which is maintained by certain living writers, notably Mr. H. G. Wells. It is also the root idea of the devotional system of

several, otherwise divergent, religious bodies. People pray for a God concomitant rather than for a God immanent. God, in this view, is the great "ideal companion," and is sometimes personified as the spirit of social service. (We wish that the author had worked out more fully the influence of fantasy in producing the many different conceptions of Deity.) This view of God is, on the surface, strongly ethical. But the author contends that it is not satisfying to the religious consciousness, nor, we may add, to the mind which, apart from formal religion, is looking for an explanation of the universe.

The doctrine of God as supreme value may be traced from Plato, through Anselm, to Kant. In this connection, the argument of Kant was, Can there be moral values without a moral governor? It is the great wish-fulfilment idea of God. And its influence may be seen in the tendency to make up for distrust of metaphysics by setting a high standard in the emotional realm. There is a desire to reduce religion to the dimensions of morality. But the doctrine is open to the grave objection that it implies, ultimately, that God is to be judged by our human value standards. It easily slides into complete subjectivity. And the author maintains that to hold this doctrine is to break with every considerable religion.

The conception of God as ultimate reality results from an insistent reaching out beyond value. It is a comparatively late idea of God. But it can be found in Aristotle, and has been held, although with verbal distinctions, by many other great thinkers. (An interesting discussion of Herbert Spencer's "agnosticism" is given.) In this view we face the facts. It is the most "metaphysical" of the three main views. But the author holds that the human mind is incurably metaphysical. And he maintains, we think rightly, that men to-day are more vitally interested in metaphysics than in ethics. We believe that this view of God is more tenable by the scientist than any other. And Dr. Stewart maintains that it is the best doctrine from the religious aspect. This may lead to a synthesis, of which more presently.

Finally, Dr. Stewart discusses the manner in which the three main doctrines are combined into the orthodox Christian view. Into this it is not our place to follow him. But the sending of such a book to this Journal for the purpose of review seems to us to be a fact of some significance. Dr. Stewart writes with comprehension and sympathy with the modern psychological position. We on our side realize that, as psychologists, we cannot study religion too much. The situation at the present time is not wholly unlike that which existed in the third century, when (as is described in this book) the traditional Jewish idea of God emerged into the Græco-Roman world, to which the present new world of science and philosophy corresponds. Dr. Stewart despairs of any modern synthesis. Is he not unduly pessimistic? We cannot look for complete agreement between psychologists and orthodox teachers of religion. But is it unduly sanguine to hope for some harmony? For it is harmony which, as Dr. Stewart happily says, "furnishes the test for reality and for value."

M. HAMBLIN SMITH.

A Present-day Conception of Mental Disorders. By CHARLES MACFIE CAMPBELL. Harvard University Press (Oxford University Press), 1924. Foolscep 8vo. Pp. 54. Price 4s. 6d. net.

This little book contains one of the public lectures delivered at the Medical School of Harvard University.

The author, after explaining the nature of the disorder of the mental mechanism as it is manifested in the minor psychoses, proceeds by an analogous method to the major and acute psychoses. His method is so free from technical jargon that his aim to educate the public to regard disorders of the mind simply and directly as human ailments to be treated and investigated from their onset in the same considerate manner as other ailments, should gain for him, it is hoped, a wide circle of readers.

H. de M. A.

The Mind in Disease: Some Conditions Cured by Suggestion. By M. P. LEAHY, B.A., M.B. London: Wm. Heinemann (Medical Books), 1926. Crown 8vo. Pp. 172. Price 6s.

The first part of the title of this book is misleading, as the book contains very little psychopathology, but much suggestion therapy.

In the physical treatment of disease simple remedies, such as purges, general or local sedatives, fomentations, incisions, far outnumber major surgical operations. Similarly in psychotherapy simple procedures, such as are included under the name of "suggestion treatment," far outnumber the occasions calling for minute psychological investigation or psycho-analysis. Thus Dr. Leahy's book, dealing as it does with simpler methods of psychotherapy, will appeal to a relatively wide circle of medical readers, and will afford to general practitioners a good insight into the operation of the mental factor in treating disease. Dr. Leahy's technique will be also of great interest and assistance to psychotherapists generally.

Dr. Leahy sets forth what suggestion treatment can and cannot do, and he points out that not only can it cure certain illnesses, but it can help greatly in many other illnesses, and ought to be freely combined with other forms of treatment. He relates the technique which he has applied successfully to his own illnesses as well as to those of others; to illnesses mainly mental, to those mainly physical, and to those in which the mental and physical factors are of equal importance. The technique is a combination of various well-known methods of suggestion therapy. He uses hypnosis in order to confine the patient's attention to the ideas intended to effect the cure, and also persuasion to impress the fact that the cure follows the operation of imagination and will-power. He completes the cure by auto-suggestion to render the patient independent and self-reliant.

The clinical cases Dr. Leahy presents will be found useful to quote to patients when treating them along the lines of "suggestion" and "persuasion."

M. A. ARCHDALE.

Études de Psychiatrie Sociologique. Par HENRI DELAYE. Paris : A. Maloine et Fils, 1925. Crown 8vo. Pp. 152.

THIS small book is a popular account of the social difficulties in mild forms of mental disorder and have to be overcome if the latter are to receive suitable treatment. It consists of 31 papers on diverse subjects.

The first paper advocates the formation of a council of mental hygiene, to co-operate with those concerned in general hygiene in furthering the education of the general public and the medical profession as to the borderline of mental disorder and the problem of prophylaxis. In other papers the existing mental hospital conditions are severely criticized, and a sketch is given of the sort of out-patient clinics and mental hospitals for in-patients he thinks would meet the needs of the case. The author, however, believes that even psychopathic cases of a mild type suffer from abnormalities of the brain-tissue, rendering them less capable of enduring stress. He attributes most of these to syphilis, tuberculosis and alcohol, and seems to consider that prevention involves changes of the social order, notably religious influences, politics and education, upon which he holds extreme views. M. R. BARKAS.

Psychological Monographs: Studies in Psychology. No. IX and No. X. Edited by CARL E. SEASHORE. Princeton, N.J., and Albany, N.Y. University of Iowa, 1926. Price \$6.50 each.

A considerable proportion of the articles in these two volumes consists in studies of sound, vocal or instrumental in origin. The first, on "Technique for Objective Studies of the Vocal Art," describes an apparatus for recording sound-waves photographically. The sounds from a gramophone record can of course be recorded in the same way, the advantage being that the voice of an artiste can thus be subjected to analysis without the disturbance that might ensue from his being aware that his voice was being scientifically scrutinized. For comparison, Metfessel also used Seashore's tonoscope, which depends in principle on the movements of an acetylene-gas flame produced by sound-waves impinging on a diaphragm. Both methods proved satisfactory for the investigation of pitch. The second article, on the "Variability of Consecutive Wave-lengths in Vocal and Instrumental Sounds," after describing a technique, comes to the conclusion (among others) that trained voices are distinguished from the untrained mainly by their greater periodicity of pitch-fluctuation. The third article on "The Vibrato" finds that the vibrato is a periodic phenomenon of three variables, *viz.*, pitch, time and intensity, and that it is produced chiefly by trained vocalists. Incidentally it is revealed that musical critics differ in detecting the occurrence of the vibrato, and in assessing its value. Because of this uncertainty, and indeed of the general ignorance, hitherto prevailing, of the nature of vibrato, the author was unable to proceed in the meantime with his psychological inquiry into the influence of emotions on it.

Travis employed the technique described in the first two papers in a "Study of the Stutterer's Voice and Speech." His conclusions as to the effect of emotional situations on the stutterer's voice are interesting. In stutterers emotion reduces the variability of pitch in a sustained tone, but increases the range of pitch in the repetition of spoken sentences, while the opposite is true of non-stutterers in both cases.

The problem of rhythm, whether from the psychological or the physiological aspect, remains a very difficult one. The literature on the subject gives no satisfaction. In "Studies in Motor Rhythm," R. H. Seashore endeavours to analyse rhythm-functions from the cognitive and motor aspects, but chiefly from the former. He defines rhythm as "a progression in action by balanced deviations in time, intensity or quality from the simple periodicity of any regularly recurrent action." By employing a large series of tests and by the use of the method of partial coefficients, he concludes that there is a "general cognitive factor in the form of kinæsthetic memory," which is "the ability to apprehend and retain a motor set long enough to repeat or compare the action with a second presentation," and a special factor "basic rhythm," which is evidently considered to be simply a specialized kind of kinæsthetic memory. He does not deal with the modification of the preceding "kinæsthetic memory" by a second slightly different presentation, which Dawson (*British Association Reports*, 1926) finds is remarkable. Seashore finds part of the basis of kinæsthetic memory in (1) actual motor activity, at first largely the result of attention and voluntary, and later more or less automatic (passive attention) and involuntary, and (2) rhythmic vegetative processes, such as the heart-beat. A third factor in motor rhythmic activity is "general muscular co-ordination." On the basis of these results a test of motor rhythmic ability, or rather of ability to reproduce in movement a rhythmic sound-series, was standardized, and found to give results independent of general intelligence and of musical training.

The whole research in this paper is concerned with the perception and reproduction of sound-rhythms. It does not deal with the natural rhythms of the body, e.g., the more automatic limb movements and their susceptibility to external influences. This is a problem of at least equal importance, and certainly of much practical and industrial significance. It was touched upon by Dawson (*loc. cit.*), and perhaps the ingenious American investigators may extend their researches in this direction also.

A paper by Brennan compares the scores given by twenty students of music in response to tests of musical capacity with those of skilled musicians. Another article by the same author describes the development of three singing tests (singing key-note, singing interval, and discriminative control of pitch), and suggests some modification of their present form.

In the second volume there is an article of some interest to psychiatrists. It represents an attempt to differentiate clinical types by the methods of auditory and visual threshold discrimination. The two "types" dealt with are the psycho-neurotic

and the schizophrenic. But it is doubtful to refer to them as clinically "opposed" groups. There are many relationships as well as differences. Briefly the author's finding is that in states of reverie, psycho-neurotics have a lowered and schizophrenics a raised threshold for auditory and visual sensations as compared with their usual condition. The author seems to set out in his preface to discover better means of differentiating the two groups than are obtainable clinically, and suggests that actual experiment may assist the diagnostician. This would be all very well if the diagnosis were the chief end of the physician, and if one sign would clinch it. But even on the narrow diagnostic view it seems that the test described is a test of a phenomenon—the capacity for abstraction—which is altered in every general morbid mental reaction. Furthermore the instructions are so complicated that many schizophrenics would have difficulty in carrying out the test. Nothing seems to be said about co-operation. A small proportion of the admittedly schizophrenic patients did not exhibit a raising of the threshold.

In another paper Travis demonstrates that there is a refractory phase in vision having some analogies to the refractory phase in spinal reflexes. Its length varies inversely as the intensity of the stimulus when dark adaptation is constant, and inversely as the degree of dark adaptation with the intensity is constant.

Two papers deal with tests for typewriting ability, and the remaining two deal with speech. Travis and Davis show that certain speech defectives give abnormally low scores in tests of sense of pitch and intensity and of tonal memory.

Ericson contributes an interesting discussion on the basic factors in the human voice, showing that these include sensory, motor, intellectual and emotional factors. He quotes Blanton to the effect that pleasant emotions improve the voice, while unpleasant ones affect it adversely.

R. D. GILLESPIE.

Part III.—Epitome of Current Literature.

1. Psychology.

A Comparison of Directed and Free Recalls of Pleasant and Unpleasant Experiences, as Tests of Cheerful and Depressed Temperaments. (Amer. Journ. of Psych., April, 1926.) Washburn, M. F., Booth, M. E., Stocker, S., and Glicksmann, E.

The authors found a close correlation between the methods of directed and free recall. The method of directed recall was slightly superior. The experiments were carried out on groups of college girls.

G. W. T. H. FLEMING.

Individual Differences in the Sense of Humour. (Amer. Journ. of Psych., April, 1926.) Kambouropoulon, P.

The author divides types of humour into personal and impersonal. The personal he subdivides into passive and directed; the impersonal

is subdivided into perception of incongruity in situations and the perception of incongruity in ideas or the perception of nonsense. Mental ability as represented by academic standing has some influence in decreasing the proportion of physiological laughter, and of laughter with a physical cause, and increasing the appreciation of the nonsense jokes.

G. W. T. H. FLEMING.

A Further Study of Revived Emotions as Related to Emotional and Calm Temperaments. (Amer. Journ. of Psych., April, 1926.) Washburn, M. F., Rowley, J., and Winter, G.

The authors studied the relation between emotional and calm temperaments on the one hand, and the intensity with which the emotions of anger, joy and fear were revived in memory, the recency from which they were recalled, the number of such emotionally toned incidents that could be recalled, and the galvanometric disturbance accompanying the recall. They found that the method of reviving emotions, except when the galvanometer is used, is not successful in separating an emotional from a calm group. On applying the Downey group will-temperament test, they found that the calm observers showed a greater motor impulsion, less suggestibility, less interest in detail and poorer motor co-ordination than did the emotional observers. They showed a tendency to be slower in movement with less flexibility—both introvert traits. Lack of interest in detail and lack of suggestibility are considered to be extrovert traits.

G. W. T. H. FLEMING.

An Experimental Study of Mental and Physical Functions in the Normal and Hypnotic States: Additional Results. (Amer. Journ. of Psych., July, 1926.) Young, P. C.

In a former article the author found that the resemblances between waking and hypnotic consciousness were more noticeable than the differences. Both states are alike in showing equal abilities in the fields of sensation, perception, present memory (learning and retention), and physical work not involving fatigue. In hypnosis there is more ability to endure pain and to recall long-past incidents, and decreased ability in some stages, at least, to make continuous responses. In the present study the author found that perceptual acuity was the same in the two conditions, and considered that the marvellous results of hypnosis given by some writers are due to the fact that the normal conditions were either not investigated at all or only in a cursory manner. Memory for long-past events is much better in hypnosis than in waking—in some persons, at any rate.

It appears doubtful whether there is ever a total post-hypnotic amnesia; something from the *séance* is always retained; better scores are made in re-learning what had been taught in hypnosis. Post-hypnotic amnesia is no more valid as a criterion for hypnosis than dreamlessness is of sleep.

Spontaneous catalepsy in hypnosis is held to be not proven; suggestion must be added. Prestige appears to be an effective

means of bringing about a concentration of the attention. Hypnosis consists of an attitude of mind taken with great conviction.

These hypnotic attitudes are emotional, impulsive and voluntary rather than intellectual. The author defines hypnosis as a state in which a person will do in a *bonâ fide* manner, possessed of conviction, what he will not do in waking life for lack of such conviction.

G. W. T. H. FLEMING.

A Method for the Experimental Production of Emotions. (Amer. Journ. of Psych., July, 1926.) Verwoerd, H. F.

Experiments were made with colours presented in rapid succession and in different series to observers who have to perform given reaction tasks. A Ranschburg memory apparatus with two reaction keys is used. Punishment can be applied when necessary by means of shocks from a small inductorium. Introspection reveals that satisfaction normally accompanies the correct reactions. When a trap is set to give the observer a painful shock whenever he is caught, keen disappointment and regret is felt if trapped, and exaltation or elation in some cases when he escapes. Shame is sometimes felt when the observer realizes he is being punished for a silly mistake. By predicting a severe shock when, say, purple appears, preceded by several warning colours, fear develops during the warning colours. By varying the procedure the author was able to produce compassion, shame and embarrassment, malicious joy, anger and vexation. The emotions which arise are quite natural in the sense of agreeing in quality with those of daily life, even though the contents of consciousness in connection with which the emotions arise are comparatively simple.

G. W. T. H. FLEMING.

On Consciousness. (Brit. Journ. of Med. Psych., May, 1925.) Myers, C. S.

The author points out how inadequate are some of our old ideas of psychology, and that affective consciousness deals with more than pleasure and displeasure. It includes feelings of familiarity, of doubt, of certainty, and of relationship. He divides feelings into ipsi-affective, attached to the self, and actu-affective, attached to the acts of the self. Consciousness is a selector of alternative responses and of alternative stimuli. It seeks and maintains an environment which is favourable and avoids one that is unfavourable, whether that environment be physical or mental. It is the co-ordinator of all the past and present experiences of the organism, and so can select its future activities and environment.

Myers believes that the ability of the self to regard its own changes of state as something outside itself is of great importance. The integrity of the supreme, dominant self he thinks may prove to be the future criterion between the psycho-neurotic and the psychotic conditions. The author thinks that the importance of the affects as the source of energy determining our actions has been very much over-estimated. The attribution of every slip of the

tongue and of forgetting to emotional conflict and inhibition is not justified. An act may suffer through its excessive exercise, as well as through direct inhibition by other acts.

G. W. T. H. FLEMING.

2. Neurology.

Neural Syphilis: Tabes, Epilepsy, General Paralysis, Sensory Aphasia [Syphilis du Nevraxe; tabes, épilepsie, paralysie générale, aphasie sensorielle]. (Bull. Soc. Clin. de Méd. Ment., 1925.) Capgras, F., and Cullerre.

The case of a woman, æt. 51, in whom the diagnoses mentioned in the title were made at various times, is fully set forth.

W. D. CHAMBERS.

The Cure of Ascites following a Perforation (? Suicidal) of the Abdominal Wall [Guérison d'une ascite à la suite d'une perforation de la paroi abdominale (dans un but de suicide ?)]. (Bull. Soc. Clin. de Méd. Ment., 1925.) Trénel.

The ascites in this syphilitic patient, æt. 34, had lasted six months. She had been tapped several times with only temporary relief, when she punctured her own abdomen with a penknife either suicidally or to relieve the ascitic tension, probably the former. The fluid did not reaccumulate.

W. D. CHAMBERS.

Histological Examination of a Case of Tabes with Negativism [Examen histologique d'un cas de tabes avec délire de négation]. (Bull. Soc. Clin. de Méd. Ment., 1925.) Trénel.

The cerebro-spinal fluid in this case showed Wassermann reaction +; Pandy ++; lymphocytes 58; albumen +. At autopsy some small granulations were seen in the fourth ventricle, and the naked-eye cerebral lesions were those of general paralysis. Diffuse chromatolysis and rarefaction of fibres, especially in the column of Goll, were the most notable histo-pathological changes.

W. D. CHAMBERS.

Anatomo-pathological Examination of a Case of Diffuse Meningo-blastoma [Examen anatomto-pathologique d'un cas de méningo-blastome diffus]. (Bull. Soc. Clin. de Méd. Ment. 1925.) Trénel.

The main bulk of this tumour lay in the falx cerebri (two pieces as large as a cherry), and at the base of the brain. Nervous tissue was much compressed, but not invaded. Reference is made to the work of Oberling on these and similar neoplasms.

W. D. CHAMBERS.

The Prophylaxis of Nerve Syphilis [À propos de la Prophylaxie de la Syphilis Nerveuse]. (Gaz. des Hôp., April 24, 1926.) Nicolot, V.

A short but suggestive note on the treatment of syphilis. The author points out that the disease used to be regarded as a prolonged

exanthem, and states that the central nervous system was affected most commonly in *formes frustes* and cases where the cutaneous and mucous surfaces had only shown very slight signs of the disease. He considers that important antibodies were developed when the integuments were sufficiently infected, and that the present early and apparently efficacious methods of treating syphilis prevent cutaneous complications, and therefore forestall the development of the natural defences. This, he states, is the reason for the present earlier appearance of general paralysis, and the greater proportion of cases of neuro-syphilis. He suggests that treatment of cases of syphilis should be delayed until the secondary rash is fully established, and also that provocative doses of virus might be alternated with courses of arsenic, mercury, etc., as a biological corrective.

W. D. CHAMBERS.

Conjugal Syphilitic Dementia [*Démence syphilitique conjugale*]. (Bull. Soc. Clin. de Méd. Ment., 1925.) Laignel-Lavastine.

This paper describes the case of a woman (whose husband died of general paralysis) suffering from marked dementia and exhibiting Argyll-Robertson pupils, dysarthria due to a hemiplegia and not typically general paralytic, and inequality of deep reflexes. Wassermann reaction negative in blood, positive in cerebro-spinal fluid. Lymphocytosis and increase of albumen in cerebro-spinal fluid. The author diagnoses the case as syphilitic dementia instead of general paralysis. He states that conjugal general paralysis is rare.

W. D. CHAMBERS.

Cerebral Tumour (Glio-blastoma) with Initial Psychasthenic Syndrome (*Tumeur Cérébrale (Glioblastome) avec syndrome Psychasthénique Initial*). (*L'Encéph.*, February, 1926.) Marchand, L., and Schiff, P.

The patient described, æt. 40, suffered from general fatigability, intellectual retardation and depression for eighteen months before admission. At that time he showed psychic enfeeblement, muscular tremor and episodic incontinence of urine, and began to suffer from headaches and cerebral vomiting. The cerebro-spinal fluid pressure was much increased and contained albumen and excess of cells. Wassermann reaction negative. The autopsy showed a glioblastoma arising from the knee of the corpus callosum and invading both frontal lobes. Two micro-photographs accompany the paper.

W. D. CHAMBERS.

Tumours of the Frontal Lobe (excluding Abscess) [*Les Tumeurs du Lobe Frontal (Abscess exceptés)*]. (*L'Encéph.*, January, 1926.) Nuñez, P. Escuder.

The author describes two cases of frontal tumour (glioma and hydatid cyst), which he has recently seen, and reviews the literature on this subject, giving short accounts of 16 cases in addition to his own. He finds that a morbid state of psychic excitation occurred in 9 cases, lethargy or coma in 4, loss of memory in almost all, and

motor disorders in 13. The most striking psychic change consists of a hyper-excitation of the imagination, affecting the memory, the attention, reasoning, etc., with unconventional and immoral conduct. The author agrees that unless the evolution of the case is known, the diagnosis is often very difficult.

W. D. CHAMBERS.

Action Tremor. (*Journ. of Nerv. and Ment. Dis.*, July, 1926.)
De Jong, H.

The author distinguishes action tremor from intention tremor, and therein differs from Kinnier Wilson, who considers them identical. An action tremor does not exist in rest but appears with movement. Any action may initiate the tremor. He considers all striated tremors to be action tremors. The frequency of action tremors is greater than that of intention tremors. Clonus is a phenomenon of rhythmical oscillations occurring in pyramidal hypertonia; tremor is a rhythmical phenomenon of extra-pyramidal rigidity. Tremor, then, is an extra-pyramidal clonus.

G. W. T. H. FLEMING.

A Clinical and Pathological Résumé of Combined Disease of the Pyramidal and Extra-Pyramidal Systems, with Especial Reference to a new Syndrome. (*Brain*, June, 1926.) Lhermette, K., and McAlpine, D.

A male, æt. 60. Weakness of lower limbs first noticed at 52. This progressed and rendered walking difficult. He had then a spastic paresis with evidence of a bilateral pyramidal lesion. There was considerable motor difficulty in the upper limbs, but no true paralysis in any of the limbs. At 56 he improved, and at 58 showed a typical paralysis agitans *sine tremor* and without involvement of the facial muscles. There was a bilateral extensor plantar response. Involuntary movements, choreiform in type, were present in the muscles of the face, pharynx, larynx, and at times in the left hand. There was considerable articulatory difficulty. He died æt. 60. The main histological features of the case were: In the putamen a marked reduction of the cells with neuroglial overgrowth. Degeneration of many of the fibres running to the globus pallidus and ansa lenticularis from the putamen. Many of the fibres having origin in the caudate nucleus were affected. In the globus pallidus a slight but definite reduction in the number of motor cells, neuroglial overgrowth and degeneration of some of the fibres rising in the globus pallidus, especially those which go to form the ansa lenticularis. Degeneration of the pyramidal tract was not evident above the level of the medulla. In the cord, degeneration of the crossed pyramidal tracts.

The condition has to be distinguished from Parkinson's disease, pseudo-bulbar palsy, progressive pyramido-pallidal degeneration, spastic pseudo-sclerosis and amyotrophic lateral sclerosis. The authors discuss the differential diagnosis.

From a pathological point of view we have to distinguish it from paralysis agitans, the Parkinsonian syndrome following epidemic encephalitis and syphilitic encephalitis of the corpus striatum. In discussing the physio-pathology the authors, after considering the histology of Huntington's chorea, in which there is a widespread cellular atrophy and demyelination in the frontal cortex, together with disappearance of many of the cells of the caudate nucleus and putamen with neuroglial cell overgrowth, conclude that no theory

of the pathogenesis of choreo-athetosis is adequate that does not take into account the neo-striatum as a factor in the production of such movements.

The essential condition for the development of choreiform movements is a diminution of muscular tone. Should a hypertonus be subsequently added to the symptoms, then the involuntary movements will tend to abate, or even disappear.

G. W. T. H. FLEMING.

Tryparsamide in the Treatment of Late Neurosyphilis. (*Journ. of Nerv. and Ment. Dis.*, June, 1926.) Moore, F. R., and Sutton, I. C.

Tryparsamide penetrates to the nervous tissue, and when it reaches the lesions resolves and heals them. It has little direct action on the spirochætes, but builds up resistance. The authors recommend the giving of bismuth simultaneously with the tryparsamide. They showed abnormal sexual stimulation and an excitement during the early stages of treatment. Whilst most authors emphasize the importance of examining the fundi, Moore and Sutton point out that as the damage is central, not peripheral, there is little to be gained by examining the fundi. Changes in the peripheral fields and the objective symptoms of blurring, spots before the eyes, etc., are of much more importance. Treatment should be stopped for several weeks or damage may be done. The improvement after tryparsamide, while chiefly clinical, is also manifest in the spinal fluid findings. Globulin, cell-count and colloidal reactions are commonly affected; the Wassermann is less often changed.

Clinically, tryparsamide occasionally produces brilliant results, especially in cases with gastric crises and lightning pains. Patients as a rule put on weight. The authors were of the opinion that those cases which had received a prolonged and intensive saturation with mercury and arsphenamine showed better results than those who had received no preparatory treatment. The previously treated case is also less subject to the Herxheimer-like flare-ups so often seen during the first course of tryparsamide injections.

G. W. T. H. FLEMING.

Pathological Changes of Senile Type in Charcot's Disease. (*Arch. of Neur. and Psychiat.*, September, 1926.) Bogaert, L. V., and Bertrand, I.

The authors describe in a woman, æt. 46, and a man, æt. 59, both suffering from amyotrophic lateral sclerosis, characteristic senile formations in the cortex. These formations are exceptional in Charcot's disease. The authors then discuss the question of senile plaques, which Alzheimer described in senile dementia. Ley considers these to be the expression of a general senile process. Simchowicz supports this and says that senile dementia does not necessarily differ from old age, and constitutes merely its highest degree. Bogaert and Bertrand consider that there is no relation between the crystallized plaques of Laignel-Lavastine and Tinel,

the military sclerosis of Blocq-Marinesco and the plaques of Alzheimer. The cellular lesions of Alzheimer consist of an agglutination of fibrils which over-stain and adhere to the surface of nerve-cells. They have been found in senile dementia, normal senility, in the basal ganglia and neighbouring grey matter in true Parkinson's disease, in experimental parathyroidectomy, and in a young person with hereditary cerebellar ataxia. The granulovascular lesion of Simchowicz, found only in Alzheimer's disease, shows one or more confluent vacuoles in the cell-protoplasm. These vacuoles contain granules of various sizes. The nucleus is pushed to the periphery. These two cases of Charcot's disease both showed a lacunar condition about certain blood-vessels resembling the *état précriblé* of Vogt. This perivascular necrosis recalls similar lesions in epidemic encephalitis. In the prolonged form of epidemic encephalitis there are found all varieties of senile vascular lesions which may or may not be combined with cortical nuclear atrophy. In amyotrophic lateral sclerosis and senile sclerosis the condition of *état criblé*, *état précriblé* and lacunar state are all stages of a single perivascular parenchymatous disintegration which may be observed in both toxic and infectious processes. G. W. T. H. FLEMING.

3. Psycho-Pathology.

A "Play" Syndrome: Orientation of the Mental Activities in "Play," and the Degree of Conviction [Sur un syndrome de jeu: *Activité mentale de jeu et conviction délirante*]. (Bull. Soc. Clin. de Méd. Ment., 1925.) Toulouse, E., and Schiff, P.

The authors define this syndrome as a combination of psychomotor reactions accompanied by a tendency to personal amusement, without real intention to deceive and without solid conviction. They describe an interesting case in a young foreign student, concluding that though at first sight manic-depressive, the condition is really early dementia præcox. A number of references to literature on the subject are given, and a similar case was described by M. Leroy. W. D. CHAMBERS.

A Compensation Psychosis in a Schizoid [Psychose de Compensation chez une Schizoïde]. (Ann. Méd. Psych., February, 1926.) Laignel-Lavastine and Kahn, P.

This paper is a detailed account of a case of schizoidism, combined with a discussion on the related conditions of schizomania and schizophrenia. The conclusion reached is that an affective shock or an infection may in a schizoid precipitate a sort of dream-delirium state, wherein memories and hopes become real to the patient, in the nature of a compensation psychosis. W. D. CHAMBERS.

Schizoidism, Imagination and Mythomania [Schizoïdie, Imagination et Mythomanie]. (Ann. Méd. Psych., February, 1926.) Nathan.

The author disagrees with the absolute distinction drawn by other writers between the schizoid and the mythomaniac. He quotes

a number of cases to illustrate his thesis, including Balzac, de Loyola, Calvin and Machiavelli. He concludes that the schizoid and the day-dreamer have much in common with the man of rich imagination in ordinary life, and especially in literature and art.

W. D. CHAMBERS.

On the Classification of the Psychoses. (*Journ. of Nerv. and Ment. Dis.*, June, 1926.) Alford, L. B.

By a process of analogy, Alford regards the psychoses as some regard the abiotrophies or heredo-degenerations in nervous disease. Taking Huntington's chorea as an example, we find it has a motor component and a psychic one. The mental symptoms are of the same order as those occurring in the psychoses. Take away the motor component of chronic chorea, and we have a psychosis analogous to dementia præcox. He thinks it reasonable to conclude that the psychoses have their origin in an abiotic degeneration of certain nervous structures. On examining the nervous abiotrophies, one finds that the individual diseases in the separate groups are related to one another. In the same way in the psychoses one finds confusion between manic-depressive insanity and dementia præcox. In the involuntional psychoses we find mixed types of agitated depressions resembling other psychoses.

He regards the psychoses as a major group, with each psychosis a subtype containing a number of typical cases, but not including the intermediate forms. Heredity in the psychoses can be better understood by comparing what occurs in other abiotrophies.

G. W. T. H. FLEMING.

A Further Contribution to the Psychology of the Essential Epileptic. (*Journ. of Nerv. and Ment. Dis.*, June, 1926.) Clark, L. P.

Pierce Clark points out that the essential epileptic presents a singularly pure type of narcissism, and that nothing less than a complete analysis of the narcissistic state will afford permanent relief. Dream analysis has not yielded desirable results. There must be a specific reawakening of the infantile unconscious, carried out by a narcissistic transference, using the mother libido as a transference leverage. Our efforts must lie along lines to discover the original trauma of birth and weaning. Clark used the phantasy method of analysis, and claims this as the first successful attempt to analyse the essential epileptic. One case, epileptic for nearly twenty years, has had no complete *grand mal* attacks for more than a year. Another case with weekly attacks has passed several months without any; another epileptic has had but two attacks in the past year, where they occurred regularly every ten days previously. The epileptic is the most tragic and pitiable of all oral and anal erotics. His distress at the birth and weaning trauma proclaim him so weak and sensitive that his defence reaction is a stupendous narcissism. Treatment consists in rebalancing the ego and object libido by reducing the

narcissistic protection, and removing the infantile fixations occurring at the birth and nursing periods. G. W. T. H. FLEMING.

A Psycho-biological Conception of Consciousness and its Disorders in the Epileptic. (*Brain*, September, 1926.) Clark, L. P.

Clark points out that Cajal and Duval's original theory of consciousness still holds good. They maintained that the end-processes of the neurons have make-and-break contacts at the twig-like projections from their cell-bodies, the nerve impulse passing from one cell to the next across this synapse. Clark points out that consciousness can only be present in active or transmitting neurons—consciousness means cortical transmission. Consciousness in its earliest differentiation is an awareness of bodily functions, while the latter are in progress. Conscious powers arose, not with intent to perform certain useful acts, but during and in the performance of such acts. Psychological factors are historically subsequent to more primitive biological types of impulse, and arose upon these as a foundation. Reflexes and instinctive actions function in terms of racial experience. The association centres form the great storehouse for personal memories, the residue of individual experience. These reserves are drawn upon to co-operate in deciding, on the basis of personal as well as racial experience, what act is appropriate to the situation. Clark suggests that possibly the earliest rudiment of consciousness was an ill-defined affective colouring of the act. The epileptic is warped and distorted mentally, and any undue physical or mental stress may produce a seizure. The type of idea dominant in the personality make-up cannot find a tranquil lodgment in the altruistic world, and an intrapsychic conflict is set up, so that the epileptic personality is thwarted and recoils upon itself until the organism breaks under the strain in loss of consciousness, and finally, if not adjusted, in mental deterioration.

He emphasizes the necessity for very early training of the epileptic child, so that the associative and reflex systems may be adequately inter-related, and the individual find a proper adaptation at the psycho-social level. The memory impairment in epileptics Clark considers as a protective mechanism from a too ambitious struggle to adapt to the environment. The field of consciousness is insecure and lacks variety and richness. There is a narrowing of the field of objectivity with a heightening of self-awareness. The epileptic reaction is an involution of the normal development of consciousness. The fit has a definite deteriorating influence on the power of sustained interest and attention. The epileptic is loth to give up his egotistic concerns and accept a life of self-denial. Self-anamneses of patients with *petit mal* show a return to infantile instincts and desires. Clark states that scientifically there is no loss of consciousness in the epileptic fit. There is simply a retraction of the field of consciousness and a corresponding intensification of subject awareness, which in the severest attacks may be narrowed to the deepest infantile egoistic life. G. W. T. H. FLEMING.

Constitutional Psychological Factors in "Functional" Psychoses.

1. *Manic-Depressive Insanity.* (*Journ. of Nerv. and Ment. Dis.*, August, 1926.) *Lundholm, H.*

Lundholm begins with a consideration of McDougall's theory of manic-depressive insanity. He starts from the conception of a cycloid and a schizoid constitutional type. He defines the cycloid type as having an innate moodiness between elation and melancholia. The schizoid type has an innate disposition to split in the psychiatric sense of the word. Looking at the question from another viewpoint, he found an innate disposition for the development of egocentric personality traits, and another innate disposition for the development of what he calls altrocentric traits, by this meaning the opposite of the former. The egocentric traits are introspective, seclusive and egoistic, the altrocentric traits being extrospective, extro-active and sympathetic (altruistic).

In well-adjusted conduct there is an even balance of all six traits. From varying combinations of these types we get a varying number of personalities. In the differential diagnosis of dementia præcox and manic-depressive insanity the author considers the pre-psychotic life of the individual, and scores *plus* and *minus* for dementia præcox and manic-depressive insanity according to the existence of egocentricity or altrocentricity. The altrocentric traits acting on the self-assertive instinct might strengthen it, and if these traits meet with approval, the person might become strongly self-assertive. If the altrocentric traits are thwarted, then the self-submissive instinct is strengthened. In a similar manner the egocentric traits might strengthen self-assertion, but the individual's seclusiveness will hold him back, and society does not interest him except as a means of self-display, self-assertion and self-satisfaction. At the same time the egotistic individual finds it impossible to submit so that his self-submissive instinct is not affected, although he may become more seclusive. If these premises are true we would expect to find both altro- and egocentricity in a manic-depressive mania but only altrocentricity in a manic-depressive depression. The author points out that the manic is extro-active and extrospective, and without doubt, sympathetic, but more egotistic than sympathetic. If his self-assertion is opposed, then anger comes into the picture as McDougall points out. From a study of the retarded, agitated and non-agitated, non-retarded depressions, Lundholm concludes that all three states show marked egocentricity, particularly the agitated depressions. This conflicts with McDougall's theory that depressions are due to over-emphasis of the self-submissive instinct. The author considers that egocentric tendencies in a constitutional cycloid favour the occurrence of manic-depressive insanity. Normally the egocentric tendencies are inhibited and sympathy is more in evidence. Strong altrocentric tendencies even in a cycloid do not lead to insanity even under very distressing physical or mental suffering. The tendencies of sympathy and egotism are the fundamental traits of altro- and egocentricity, and also of extroversion and introversion. It is not

enough to explain the two phases of manic-depressive insanity as due to a predominance in each phase of only a simple instinct, the self-assertive and the self-submissive; there is rather a favouring or disfavouring of a number of instincts and instinctive tendencies by agents that are more fundamental, namely, the althro- and ego-centric tendencies.

G. W. T. H. FLEMING.

4. Clinical Psychiatry.

Psychic Disorders following Wounds caused by a Lion: Emotion, Commotion, Infection [*Troubles psychiques consécutifs à des blessures occasionnées par un lion: Emotion, Commotion, Infection*]. (*L'Encéph.*, February, 1926.) Ceillier, A.

An interesting account of the mental symptoms exhibited by a man who was mauled by a lion in a Paris menagerie. For three days he suffered from terrifying hypnagogic hallucinations without confusion or loss of orientation, such as were common among soldiers in the war. He then became delirious as a result of toxic absorption from the septic wounds. Later on he became irritable, and suffered from headaches and vertigo, with flashes of light, these symptoms being due to the blows on the head struck by the lion.

W. D. CHAMBERS.

Precocious Cerebral Syphilis [*Syphilis cérébrale précoce*]. (*Bull. Soc. Clin. de Méd. Ment.*, 1925.) Carrette, P., and Lamache.

The case of a woman, æt. 23, the diagnosis of which rests between juvenile general paralysis, dementia præcox with independent syphilis, and precocious neuro-syphilis. The authors favour the third.

W. D. CHAMBERS.

Paranoid Dementia and Cerebral Syphilis [*Démence paranoïde et syphilis cérébrale*]. (*Bull. Soc. Clin. de Méd. Ment.*, 1925.) Abély, X., and Bauer.

The description of a case of typical paranoid dementia præcox due, in the opinion of the authors, to cerebral syphilis.

W. D. CHAMBERS.

Exhibitionism in a Parkinsonian [*Exhibitionnisme chez un Parkinsonien*]. (*Bull. Soc. Clin. de Méd. Ment.*, 1925.) Dupouy and Abély, X.

This paper relates the repeated occurrence of exhibitionism in a man, æt. 47, who had suffered from encephalitis nine years before. Unlike the presenile case, the attacks were remembered with lively remorse, and indicate rather a retardation of inhibition due to encephalitis than a loss due to dementia.

W. D. CHAMBERS.

Continuous Manical Excitement in an Epileptic treated by Luminal [*État d'excitation maniaque continu corrélatif du traitement par le gardénal chez un épileptique*]. (*Bull. Soc. Clin. de Mén. Ment.*, 1925.) Trénel and Lacroix.

In this chronic epileptic (who has been exhibited before) the administration of luminal, even in a dose of gr. i daily, is followed by a state of strong manic excitement lasting till the luminal is stopped. The authors state that luminal is a valuable drug, and cases of this kind are an exception.

W. D. CHAMBERS.

Demonstration of Nasal Feeding without a Tube [*Démonstration de l'alimentation par voie nasale sans sonde*]. (*Bull. Soc. Clin. de Méd. Ment.*, 1925.) Trénel.

The patient refused all food by the mouth. She was fed for some weeks by nasal tube without any resistance, till it occurred to the nurse to introduce the feed directly into the patient's nostril. It was accepted, and the method has continued to be successful for three weeks.

W. D. CHAMBERS.

Dementia Præcox, Schizophrenia and Schizoidism [*Démence précoce, schizophrénie, schizoidie*]. (*Ann. Méd. Psych.*, March, 1926.) Minkowski, E.

This paper is an excellent review of the states named in the title, and of their relations to one another. It begins with an outline of Kraepelin's original conception of dementia præcox in four principal forms and the criteria on which it was founded—the interchangeable character of the symptoms, the specific terminal state and the similar heredity. Neither precocity of onset nor final dementia is claimed to be essential to the conception.

Bleuler reached his conception of the four forms of schizophrenia by another route. While Kraepelin described "samples" and later synthesized them, Bleuler sought a common factor for this group and found it in disorders of ideation, affectivity and volition. These constitute the fundamental disorders of schizophrenia and other symptoms are secondary or accidental. By another step the concept of "latent" schizophrenia, comprising maladjustments of the same three psychic functions but not amounting to psychosis, was reached.

Following his study of Freud, Bleuler elaborated the psychopathology of schizophrenia with the idea of the complex, the content of the psychosis, and autism. He is, however, not a psychoanalyst, and he does not restrict the morbid activity of the complex to schizophrenia, or even regard it as mainly causal in this disease. While the presence of a complex may have to do with the genesis of symptoms, schizophrenia and schizoidism, according to Bleuler, rest on a physical basis.

Bleuler's interest in schizophrenia is not merely diagnostic and analytical, it is also therapeutic. By early discharge to private care, occupation therapy, psycho-therapy to establish contact with the

patient and to rouse him from his autism, and medical therapeutics, every case is attacked from the beginning.

The schizoidism of Kretschmer includes all the attributes which might be considered as predisposing to schizophrenia. There are many varieties of schizoids—dreamers and men of action, hyper-sensitive and apathetic, irritable and impassive, but following on numerous anthropometric observations a definite physical schizoid type has been described, as distinguished from the syntonico-cyclothymic type.

In conclusion the author follows Bleuler whole-heartedly. He considers that the term "dementia" should be restricted to true intellectual loss, mainly of memory and judgment, and he states he has not himself seen any case of real primary intellectual dementia in a young person. The conception of schizophrenia will easily include almost all the cases hitherto labelled dementia præcox.

W. D. CHAMBERS.

Confusion of more than Two Years' Duration cured instantly by an injection of Turpentine [*Confusion mentale datant plus de deux ans guérie à la suite d'une injection de térébenthine*]. (*Ann. Méd. Psych.*, March, 1926.) Guiraud, P., and Chanes, Ch.

The patient, a woman, æt. 28, was admitted two years previously, suffering from severe delirious mania with tachycardia and slight fever. At the end of two months a fixation abscess was brought about and drained, and though the physical condition was better, there was no improvement in the mental state. After two years (in August, 1925) an injection of 1 c.c. spirits of turpentine was given in the thigh. Suppuration did not result. Twelve days later a sudden marked improvement began and the patient was discharged recovered in a month. She had incomplete amnesia of her illness.

The authors state that they have used injections of spirits of turpentine (1 c.c., or 0.5 c.c. repeated) in 30 cases without any bad effects. In 4 cases incision of the abscess was needed. They do not say how many cures resulted. They recommend this treatment in extreme confusion if the bodily condition is not too grave, in prolonged but milder confusion, and to reinforce arsenical or bismuth treatment in general paralysis. In dementia præcox and manic-depressive psychoses the results are disappointing.

W. D. CHAMBERS.

The Marriage of Asylum Patients: A Case in Point [*À propos du mariage des malades internés: Un cas d'espèce*]. (*Ann. Méd. Psych.*, March, 1926.) Beaudouin, H.

This is the account of the marriage of a patient while resident in an asylum, with references to similar cases, and many quotations and extracts from French civil law.

The patient, who suffered from undoubted general paralysis, was placed in the asylum on a voluntary basis by his family with a request that he be not allowed to communicate with a certain lady who had been his mistress for twenty years. The family did not expect nor apparently hope for any improvement in his condition. The lady got in touch with the patient and was allowed to see him, after two months, and about then his mental condition improved and a remission took place, leaving only some neurological signs. After much consideration of the laws relating

to marriage the ceremony was carried out in the asylum by the civil authorities with the support of the medical staff. A few days later the patient left to the care of his wife.

Possible legal objections to such a contract are fully stated and argued, but the author concludes that there is nothing in French law to prevent its legality, whether the patient is voluntary or certified, provided he is aware of what he is doing and is not acting under duress.

In the discussion which followed the paper, it was remarked that as the patient was able to leave the institution immediately after the ceremony, it would have been simpler to send him out before it.

W. D. CHAMBERS.

The Psychiatric Clinic of Adolf Meyer [La Clinique Psychiatrique d'Adolf Meyer]. (Ann. Méd. Psych., March, 1926.) Flourno, H.

This paper is a very detailed account of the psychiatric clinic at the Johns Hopkins Hospital, managed by Meyer, and of its methods and aims. The clinic contains 100 beds, and all mental cases of any severity are eligible for admission. The majority are carefully diagnosed, and the pathology worked out as far as possible with the aid of the three-connected laboratories—medical, neuro-anatomical and psychological—and then transferred for suitable treatment. A number of cases are retained for longer periods for study and research. No certification or analogous step is required, and it has not been found that the treating in the same building of severe mental cases and slight neuroses has had any disadvantages. Treatment is on broad lines, but the most encouraging results have been obtained from scientifically adjusted occupation. Great importance is attached to obtaining a complete life-history in all cases, and careful inquiry is made into the home life and environment of all patients by a "social service" before any attempt is made to help each to readjust himself. In view of the important influence they can bring to bear on mental patients, nurses in the clinic are always given sufficient enlightenment about the special difficulties of the cases in their charge. The Meyer Clinic is rigidly limited in size in order that each case may have exhaustive study, but it is not stated how the cases to be admitted are selected from the large numbers constantly seeking admission.

W. D. CHAMBERS.

The Arthritic Diathesis and Epilepsy [Arthritisme et Épilepsie]. (Ann. Méd. Psych., March, 1926.) Pasturel, M.

The author, after seven years' experience in the care and study of epileptics, has concluded that idiopathic epilepsy is closely allied to the arthritic diathesis. This thesis is developed at length in the paper. He states that arthritism comprises gout, obesity, diabetes, biliary lithiasis, migraine, asthma and chronic poly-articular rheumatism. Points of agreement between epileptics and sufferers from gout, etc., are recorded, and typical symptoms in both are regarded as due to a retardation of the lymph-flow, and by

metastasis one group of symptoms may alternate with another. The toxic products resulting from the diathesis may affect either the joints as in gout, the bronchi in the asthmatic or the cortex in the epileptic. The author admits that his view is hypothetical.

W. D. CHAMBERS.

Cerebro-meningeal Hæmorrhage and Consequent Mental Disorders [*Hémorragie cérébro-méningée et troubles mentaux consécutifs*]. (Bull. Soc. Clin. de Méd. Ment., 1925.) Carrette, P., and Vidacovitch.

This paper describes the state of a chronic alcoholic with high blood-pressure who had a sudden attack of unconsciousness followed by amnesia and aphasia. The cerebro-spinal fluid was blood-stained five weeks after the attack, which is longer than usual. The authors conclude the case is not true aphasia, but the pseudo-aphasia described by Meynert.

W. D. CHAMBERS.

Conscious and Unconscious Manifestations during Ambulatory Epileptic Automatism [*Manifestations conscientes et inconscientes au cours de l'automatisme ambulatoire comitial*]. (Bull. Soc. Clin. de Méd. Ment., 1925.) Toulouse, Marchand, and Montassut.

The patient described suffered from a number of attacks of automatism of some hours' duration, ushered in by confusion, but no convulsions, and followed in some cases by complete, in others by partial, amnesia. The conduct seemed natural throughout, and the patient always found her way home unaided. The possible diagnoses are discussed, but the authors conclude the condition is epileptic. They lay stress on the apparently natural conduct of the patient during the attacks and on the partial recall of her adventures after them.

W. D. CHAMBERS.

A Dipsomaniac Fugueur [*Fugueur dipsomane*]. (Bull. Soc. Clin. de Méd. Ment., 1925.) Laiguel-Lavastine and Largeau, R.

A detailed description of the case of a man of cyclothymic personality and subject to numerous fugues, without amnesia, during which he drank to excess. The author disputes the teaching of Magnan that dipsomania is always obsessive in origin, and other speakers supported him in this.

W. D. CHAMBERS.

Another Case of Permanent Flexion of the Fingers due to Catatonic Contracture [*Un nouveau cas de rétraction permanente des doigts par contracture catatonique*]. (Bull. Soc. Clin. de Méd. Ment., 1925.) Trénel and Vuillame.

The case of a young woman suffering from severe dementia præcox of fifteen years' standing with contracture of the fingers of the left hand. Reference is made to the various theories as to the cause of this condition and the mechanism of muscle tone generally.

W. D. CHAMBERS.

General Paralysis and Dementia Præcox [*Paralysie générale et démence précoce*]. (*Bull. Soc. Clin. de Méd. Ment.*, 1925.)
Abély, X.

This paper describes a patient who suffered from syphilis at the age of 16. At 27 he presented a picture of classical general paralysis—mental, neurological and serological. During the last seven years there has been gradual but steady evolution to one of hebephreno-catatonia with suppression of the paralytic signs and symptoms. The Wassermann reaction is now negative in the blood and faintly positive in the cerebro-spinal fluid. The previous excess of cells and albumen in the cerebro-spinal fluid has disappeared. Memory is good and the intellect is little damaged, but there is marked loss of affectivity. The author concludes that this case represents a special form of cerebral syphilis evolving slowly from a paralytic to a hebephrenic phase. The pathological process invaded first the membrane and cortex and passed on more deeply towards the central nuclei, this suggestion being borne out by the improvement in the cerebro-spinal fluid. It is not stated whether any anti-syphilitic treatment was given at any time.

W. D. CHAMBERS.

Syphilitic Dementia Præcox [*Démence précoce syphilitique*]. (*Bull. Soc. Clin. de Méd. Ment.*, 1925.)
Marchand, L.

The author describes the case of a woman, æt. 44, who has been under treatment for ten years. Syphilis was diagnosed nine years ago, but the cerebro-spinal fluid was not then examined. She has always presented a mixture of paralytic and catatonic signs and symptoms, but recently the latter have predominated and the cerebro-spinal fluid is now negative, though ocular and reflex signs of syphilis are still present. The author discusses whether it is a case of atypical general paralysis or of dementia præcox in a syphilitic, but concludes that the cerebral syphilitic infection was a causal agent in the production of the catatonic syndrome.

W. D. CHAMBERS.

Dromo-Dipsomaniac Attacks in a Cyclothymic [*Accès dromo-dipsomaniaques chez un cyclothymique*]. (*Bull. Soc. Clin. de Méd. Ment.*, 1925.)
Marchand, Dupouy and Montassut.

The authors describe the case of a cyclothymic, æt. 36, of similar heredity, who presented episodic fugues combined with dipsomania and followed by partial amnesia. They distinguish the case from the true alcoholic fugue, and eliminate hysteria, epilepsy and psychasthenia. It is pointed out that the genuine manic-depressive dipsomaniac exhibits remorse after each attack.

W. D. CHAMBERS.

A General Paralytic Household [*Un ménage de paralysie générale*]. (*Bull. Soc. Clin. de Méd. Ment.*, 1925.)
Marie and Bernadou.

A case is recorded of undoubted general paralysis in husband and wife, and the authors consider that the large numbers of such cases

recorded strongly support the view that there is a special neurotropic strain of treponema. They report also another case of conjugal syphilis with developing psychosis in both partners, which, though not yet classical general paralysis, is likely to develop into it. They conclude that there is often the greatest difficulty in proving conjugal general paralysis, and think that many cases occur which escape observation and report. W. D. CHAMBERS.

A Series of Cases of Epidemic Hiccough in the Asylum of Villejuif
[*Sur une série de cas de hoquet épidémique à l'asile de Villejuif*].
(*Bull. Soc. Clin. de Méd. Ment.*, 1925.) Trénel.

A short account of an epidemic of 8 cases (7 male and 1 female) of hiccough in an asylum, one patient only being affected. There had been no cases of encephalitis in the asylum for two years and the infection appeared to have come from the neighbouring town. References to papers on the connection between encephalitis and epidemic hiccough are given. W. D. CHAMBERS.

Ossifying Bulbar Arachnitis [*Arachnitis ossifiante bulbaire*]. (*Bull. Soc. Clin. de Méd. Ment.*, 1925.) Trénel.

A case of ossifying arachnitis in a chronic mute melancholic, æt. 53, reported because of the unusual site of the disease. Virchow's description of the condition is quoted. In this case there were no neurological signs. W. D. CHAMBERS.

Two Cases of Painful Contraction of the Fingers due to Catatonia, in Dementia Præcox and Melancholia at the Menopause [*Sur deux cas de contracture douloureuse des doigts par catatonie dans la démence précoce et la mélancholie de la ménopause*]. (*Bull. Soc. Clin. de Méd. Ment.*, 1925.) Trénel and Vuillame.

Two cases as set forth above were presented and described. The author considers them analogous, and supports the theory that climacteric psychoses are catatonic in origin. The meeting, however, thought that while in the younger patient the contracture was due to a vegetative disorder, in the older patient it might rest on an organic cerebral or pyramidal lesion. W. D. CHAMBERS.

Opiomania by means of Paregoric [*Opiomanie par élixir parégorique*].
(*Bull. Soc. Clin. de Méd. Ment.*, 1925.) Trénel.

The paper gives a full description of the personality and symptoms of this "opium-drinker." The patient stated she had taken opium in this form and as much as 8 or 9 oz. per day for thirty-four years since the age of twelve. A recent ocular paralysis suggested syphilis, but all tests were negative. The prominent mental symptoms following abrupt cessation of the opium were pseudo-memories combined with perfect lucidity, and delusions of influence. It is pointed out that the amount of alcohol absorbed no doubt coloured the symptoms, as in the case of de Quincey.

W. D. CHAMBERS.

Co-ordinated Epileptoid Automatism in a Wood-Carver [*Activité automatique coordonnée de nature épileptique chez un sculpteur sur bois*]. (Bull. Soc. Clin. de Méd. Ment., 1925.) Marchand, L., and Bauer, E.

The patient has suffered from *petit mal* attacks for twenty-one years. At intervals he suffers from "absences" of which some are remembered, some not. When the attacks occur in the course of the patient's daily occupation, he usually continues at his work with marked skill. The authors stress the medico-legal importance of such cases.

W. D. CHAMBERS.

Polymorphous Delusional States [*Les Délires Polymorphes*]. (L'Encéph., January, 1926.) Targowla, R.

This paper begins with a review of Magnan's teaching on the subject of delusional conditions, dividing them into two classes—chronic systematized and primary delusional states. From this second class there are now separated two groups—chronic hallucinatory psychoses and paranoid dementia—and the author claims to separate a third, which he proposes to call polymorphous delusional state. This is described as an acute or subacute disorder, often relapsing and becoming chronic, having complex manic, melancholic and psycho-toxic components, and accompanied by bodily symptoms. It is particularly distinguished from paranoid dementia by the polymorph delusions of sudden origin and no evolution, on a degenerate mental basis; by the confusion of manic, melancholic and oneiric symptoms which form the foundation of the disorder; and by the precarious physical state and signs of auto-intoxication. Kraepelin admitted that certain cases which he had classified as dementia paranoides did not evolve to dementia, and tended to recover, and the author states that these would be included in *délire polymorphe*.

The paper describes in great detail an illustrative case.

W. D. CHAMBERS.

The Delimitation of "Legitimate" Paranoia [*Délimitation de la Paranoia Légitime*]. (L'Encéph., January, 1926.) Claude, H., and Montassut, M.

This paper is an able historical review of the various connotations ascribed to the term "paranoia" from the earliest times. It concludes that the legitimate meaning of the word now is that given it by Kraepelin, and supported in almost identical terms by French and Italian teachers, namely, a primary systematized chronic delusional state, of endogenous origin and without terminal dementia. The Italians tend to lay more stress on the evidence of constitutional disorder, the French on the multiplicity and extension of false interpretations and on the rarity and unimportance of hallucinations.

W. D. CHAMBERS.

Surgery and Psychiatry [Chirurgie et Psychiatrie]. (Ann. Méd. Psych., February, 1926.) Courbon, P.

This rather long paper is an interesting and suggestive consideration of the relations between surgery and psychiatry, past, present and potential. Past incursions of the surgeon into the domain of the alienist, dating according to the archæologist from the earliest times, are noted and their lack of success admitted. In addition to craniotomies for various conditions, reference is made to the periodic onslaughts of the surgeon from time to time upon certain organs such as the gonads, the kidneys, the uterus, etc., in the treatment of morbid mental states. The very different viewpoint of the surgeon and of the alienist with regard to their patients is obvious, but how much more emphatic is the difference in the attitude of patients toward on the one hand a surgeon, whose glance may rest only on the body, and on the other a psychiatrist, who may see into the dark places of the mind.

The author considers that at present the only psychopathic states which may be improved by surgery are confusion, hypochondriasis and retarded development in children. He emphasizes the need for care by surgeons in operating on psychopaths, and quotes a number of tragedies which have resulted. He condemns entirely "surgical psychotherapy"—the simulation of an operation to relieve or mitigate a delusion.

Psychiatry may expect assistance from surgery in the future in therapeutics and prophylaxis. Light is required on the phenomena of pain, disorders of cœnesthesia, asthenia, impotence, etc., and valuable data may be gained in operations upon mental patients. Sympathectomy in epilepsy and craniotomy in general paralysis offer promising scope for advances in knowledge. The paper is concluded by a quotation from Lecène, to the effect that surgery has served to eliminate mysticism in medicine.

W. D. CHAMBERS.

The Polyneuritic Syndrome in a Leper [Syndrome de Psychopolyneurite chez un Léproux]. (Ann. Méd. Psych., February, 1926.) Peyre, E.-L.

The case of an oriental leper who, in an attack of delirium followed by amnesia, killed his wife. The disease was predominantly nervous and the bodily and mental signs are fully described. The author concludes that leprosy is a possible cause of Korsakoff's syndrome.

W. D. CHAMBERS.

A Contribution to the Study of Chronic Hallucinatory States [Contribution à l'Étude des Hallucinoses Chroniques]. Ann. Méd. Psych., February, 1926.) Halberstadt, G.

The author reports in detail two cases of chronic psychosis characterized by predominant sensorial disorders in the absence of any (known) toxic or infective agent. In one case, of twenty-five years' standing, the hallucinations referred to general sensation, in

the other, of five years' duration, to hearing only. A careful bibliography of work on chronic hallucinosis is given, and the diagnostic possibilities discussed.

The author tabulates the points of agreement and difference of the two cases, and concludes that hallucinosis is an autonomous syndrome, of equal standing with confusion, depression, etc.

W. D. CHAMBERS.

Mental Automatism and Syphilis [*Automatisme mental et syphilis*]. (*L'Encéph.*, February, 1926.) Heuyer, G., and Sizaret.

The authors describe two cases of mental automatism associated with syphilis, in support of their view that this mental condition may arise from an organic cause.

W. D. CHAMBERS.

Angry Excitement of Emotive Origin [*Agitation coléreuse d'origine émotive*]. (*L'Encéph.*, February, 1926.) Robin, G., and Cénac, M.

This paper is an account of a young man of bad heredity whose father died unexpectedly after a short illness. The patient passed into a state of blind anger, in which he attacked his mother, the doctor, the furniture, and even his dog. He said his father's death was due to negligence. He claimed that he could see his father moving about. The extreme violence lasted for some days, and was followed by partial amnesia. The relations of the case to epilepsy are discussed.

W. D. CHAMBERS.

Loss of Weight: Its Importance as an Early Symptom in General Paralysis. (*Arch. of Neurol. and Psychiat.*, July, 1926.) Bunker, H. A.

In a series of 74 male patients loss of weight, often gradual but well marked, was essentially the earliest abnormality noted in 22 cases. In 16, loss of weight had definitely taken place, but as a later manifestation. In 12 of these 38 cases there was a history of bulimia after the loss of weight had set in. In 7 additional cases in which no known loss of weight had taken place, there was likewise a definite history of bulimia.

G. W. T. H. FLEMING.

Mescal Visions and Eidetic Vision. (*Amer. Journ. of Psychol.*, October, 1926.) Klüver, H.

The author swallowed powdered mescal buttons and describes his experiences. The observations were made with eyes closed. Klüver remarks that he is neither Eidetiker, nor does he possess vivid and complete optical memory images of objects. His observations agreed with other observers that the phenomena defy description. The visions are usually localized at reading distance. They cannot be influenced by thought or will. The observation of the phenomena is accompanied by pleasant feeling—it is a state of enchantment accompanied by restlessness. Noises were increased in intensity. No hunger or thirst was felt during 48 hours; Klüver ate only some bread and bananas. There was a unwillingness to

be intellectually active; the idea of being subject to experimentation was unpleasant. There was a distortion of time. Owing to optical changes, visions and external objects became phenomenologically similar. His body and organs seemed most of the time to be non-existent or detached from him as a functioning machine. While speaking he seemed to listen to a speech apparatus. Getting up from his armchair he seemed to walk on clouds. He felt he could kick through the walls of the room, although he knew they were of stone. Subject and object were indistinguishable.

G. W. T. H. FLEMING.

Idiopathic Narcolepsy: A Disease Sui Generis; with Remarks on the Mechanism of Sleep. (*Brain*, September, 1926.) *Adie, W. J.*

Idiopathic narcolepsy is characterized by the occurrence of irresistible sleep without apparent cause or curious effects on motion in which the muscles relax suddenly, so that the victim sinks to the ground fully conscious, but unable to move. The tendency persists with varying intensity throughout life, and treatment, apart from rest, has little effect. In Adie's cases, night sleep was normal or excessive and deep. Many patients have a definite aura, some complaining of the feeling of intense fatigue that preceded sleep. The sleep closely resembles normal sleep and may last only a few minutes. The patient feels refreshed and can often remember his dreams. The cataplectic attacks often follow laughter, anger or annoyance. All gradations between the cataplectic attacks and the sleep attacks exist; they are expressions of the same process differing only in degree.

Narcolepsy differs from epilepsy in (1) being reactive in origin, *i.e.*, there is always a definite exciting cause, emotion, and in (2) not producing any mental deterioration. Pyknolepsy is not reactive and always commences between 4 and 12 years of age. Narcolepsy rarely begins before puberty.

Pavlov's conception of the nature of normal sleep receives confirmation from the study of narcolepsy. A sleep centre appears to exist in the floor of the 'tween brain in and around the vegetative centres that form part of the pituitary 'tween brain system. This subcortical centre can initiate sleep. True narcolepsy is probably an undue fatigability of nerve-cells in individuals, with a peculiar kind of nervous activity that allows excessive responses to emotional stimuli and favours the spread of inhibitions.

G. W. T. H. FLEMING.

5. Treatment.

Another Case of Mania following the use of Luminal in a Syphilitic Epileptic [*Un nouveau cas de manie consécutive à l'emploi du Gardénal chez une épileptique syphilitique*]. (*Bull. Soc. Clin. de Méd. Ment.*, 1925.) *Trénel and Vuillame.*

The case of a woman suffering from hereditary syphilis and epilepsy in whom one dose of luminal (approx. gr. iv) induced

a mild mania, which lasted seven weeks until the luminal was replaced by bromide. (The number of doses of luminal daily is not stated.) There was no change in the number and severity of the fits during the administration of luminal. Some months later luminal was again given in half the previous dose, and a milder maniacal state recurred and lasted for a fortnight, gradually diminishing. On this occasion the fits were fewer.

W. D. CHAMBERS.

Researches in the Chemo-Therapy of General Paralysis [Recherches sur la Chimiothérapie de la Paralyse Générale]. (L'Encéph., January, 1926.) Sézary and Barbé.

The authors publish in full detail the results of their attempts to treat general paralysis by the administration of certain anti-syphilitic agents. They have previously tested "606" and "914," and now refer to the following: Eparséno, the amino-arsenophenol base of 606, arsacetin, an acetyl-atoxyl, and tryparsamide. The drugs were given by various routes and in various combinations. Eparséno, combined with sodium nucleinate and mesothorium, was followed by improvement in 3 cases in 22. The other two drugs gave no encouraging results, and their use was followed by optic atrophy in some cases. The authors conclude that further trials with eparséno should be made.

W. D. CHAMBERS.

Researches in the Chemo-Therapy of General Paralysis [Recherches sur la Chimiothérapie de la Paralyse Générale]. (L'Encéph., February, 1926.) Sézary and Barbé.

In this third report of their research the authors record their results in the administration of the insoluble and the soluble salts of bismuth. The results when either was given alone were disappointing, but in the only two cases treated by luatol (tartrobismuthate of potassium and sodium) combined with arsenic, notable improvement occurred.

The authors also record their results with sodium nucleinate, mesothorium, iodo-quinine, sodium uranate, etc., none of which appeared to have any action.

In a conclusion to their three papers, the authors say that pentavalent arsenic has given them the best results, but that arsacetine is dangerous and should be avoided. The only action of bismuth is the secondary one of reducing the leucocytosis of the cerebrospinal fluid.

W. D. CHAMBERS.

Accidents due to the Barbituric Group [Les Accidents du Barbiturisme (Veronalisme)]. (Gaz. des Hôp., No. 30, April 14, 1926.) Levent, R.

The author points out that there are a number of hypnotic drugs allied to veronal, and that the symptoms of poisoning by any of these are similar. Formerly, accidents resulting from the use of these drugs were mainly subacute and due to accumulation, but in recent years many acute poisonings have occurred—due to idiosyncrasy and to suicidal attempts. The smallest possible

poisonous dose is said to be at least gr. 15; fatal results have followed a dose of gr. 30; but as much as gr. 150 has been followed by recovery.

In acute barbituric poisoning the onset of symptoms is rapid. At first there may be agitation, confusion, vertigo and vomiting, followed very quickly by coma, more or less severe. Respiration is slow and stertorous, pulse feeble, pupils dilated, reflexes absent, sphincters relaxed, temperature often raised. Convulsions may occur. In very severe cases the pupils are contracted and Cheyne-Stokes breathing is present. Death is due to cardiac failure, or if delayed, to pulmonary or renal complications.

In chronic cases the urinary signs are very important—suppression most commonly, sometimes polyuria with albumen and casts, and signs of hepatic failure are constant. The poison, as in acute cases, can always be recovered from the urine. Blood-urea is increased. Nervous signs are less constant, but dysarthria, confusion, amnesia, diplopia, nystagmus, ocular inco-ordination, deafness, etc., may occur. Cutaneous eruptions, especially a polymorphic erythema, are common, and are always irritating.

The prognosis depends on the dose taken, the depth of coma, and the state of the lungs and kidneys, and especially the previous condition of the liver.

As for treatment, up to 60 hours after the poisoning gastric lavage is important. In every case 500–600 c.c. of blood should be withdrawn, and strychnine, caffeine, etc., and diuretics administered.

W. D. CHAMBERS.

The Action of Bulbocapnine in Three Cases of Paralysis Agitans and One Case of Tremor of Paralysis Agitans Type. (*Arch. of Neurol. and Psychiat.*, July, 1926.) De Jong, H., and Herman, W.

Bulbocapnine is closely allied to apomorphine, but its ortho-side-chains are different. Four patients with a Parkinsonian tremor were treated with a group of drugs known to have a quieting action on the central nervous system. Two showed a marked improvement after bulbocapnine, and two a slight improvement. Two showed a striking improvement after scopolamine, two were unresponsive to scopolamine. Atropine and phenobarbital were without effect. When double doses of bulbocapnine and scopolamine were given, there was still no effect on the tremor, but the patients became very drowsy.

G. W. T. H. FLEMING.

General Paralysis treated with Tryparsamide. (*Arch. of Neurol. and Psychiat.*, July, 1926.) Hassin, G. B., and Barsoe, P.

These authors, following autopsy, found neither the degenerative process nor the spirochaetes had been influenced by the tryparsamide.

The inflammatory changes were milder than in an average case of general paralysis. The case had been treated with neo-arsphenamine as well, and had shown marked clinical and serological improvement.

G. W. T. H. FLEMING.

A Comparative Study of Various Methods of the Administration of Luminal in Epilepsy. (Fourn. of Nerv. and Ment. Dis., May, 1926.) Patterson, H. A., Damon, Le G. A., and Levi, P.

The authors used oral, subcutaneous, intravenous and intrathecal methods of administration. Orally they usually gave $1\frac{1}{2}$ gr. each evening. Hypodermically they gave from 5 to 15 gr. of sodium luminal in sterile water. Intravenously 2 gr. of sodium luminal in sterile physiological saline solution was given, gradually increasing at two-day intervals by 1 gr. to a maximum of 5 gr. In using the intrathecal method, 1-3 c.c. cerebro-spinal fluid was withdrawn, and then sodium luminal solution in sterile physiological saline was given, gradually increasing the dose from 1 gr. to 5-6 gr. Whilst using this method, the patients were kept in bed under observation. Cases in which the therapeutic dose was exceeded showed in the fluid typical sterile meningitis with a very high cell-count, sometimes up to 6000 cells per c.mm.

No tolerance develops by any of these methods. The time required for the appearance of therapeutic effects is as follows: Orally, 1-2 hours; subcutaneously, 15-30 min.; intravenously, almost immediately; and intrathecally, $\frac{1}{2}$ hour or more.

Luminal by any of these methods has more effect on the severe seizures than on the mild ones.

The employment of the intravenous method is indicated in *status epilepticus*, the subcutaneous method in serial seizures. Intrathecal injection may subsequently render unresponsive cases more amenable to other types of treatment.

G. W. T. H. FLEMING.

Therapeutic Results with Tryparsamide in the Treatment of Neuro-Syphilis. (Fourn. of Nerv. and Ment. Dis., August, 1926.) Neymann, C. A., and Singleton, D. E.

The authors treated 50 cases of neuro-syphilis, including 18 of general paralysis with tryparsamide. The average number of doses given to each patient was 28, the average observation period about 1 year. Of the 18 cases of general paralysis, 5 made a social recovery and were at work, 4 were strikingly improved, but were still in hospital, 9 were unimproved. The 5 recovered cases showed negative serology, as did also one of the improved cases. Of 12 cases of tabo-paresis, 4 made complete social recoveries, 2 were greatly improved, and 6 were unimproved. Three of the cases that made social recoveries finally had a negative spinal fluid. Of 4 cases of tabes, 2 improved, 1 remained stationary, and 1 progressed. Of 10 cases of endarteritic type and 3 of meningitic type of cerebral syphilis, 3 recovered and 4 improved. The authors found 10% of their cases showed a slight transitory toxic amblyopia. They consider the toxicity of the drug as practically negligible, however. Any evil results are far outweighed by the therapeutic value of the drug.

G. W. T. H. FLEMING.

1. *The Treatment of General Paralysis by Inoculation with Malaria.* (*Arch. of Neurol. and Psychiat.*, August, 1926.) Bunker, H. A., and Kirby, G. H.
2. *Malaria Inoculation in the Treatment of General Paralysis.* (*Arch. of Neurol. and Psychiat.*, August, 1926.) McIntyre, H. D., and McIntyre, A. P.
3. *The Significance of Gain in Weight in the Malaria Treatment of General Paralysis.* (*Arch. of Neurol. and Psychiat.*, September, 1926.) Bunker, H. A.

1. Of 106 cases of general paralysis inoculated with B.T. malaria (representing 54 successive passages from host to host), 22 died, 26 were unimproved, 8 slightly improved, 13 attained moderate remissions, and 37 attained full remissions. Of the 37, the duration of the full remission has been more than a year in 21 cases, more than two years in 12 cases, and in only 6 cases was it at the time of writing less than six months.

Of the cases of the simple dementing type (which formed 53% of the total), 12% achieved full remissions and 14% moderate remissions. Of the expansive type (19% of the total), 55% obtained full remissions and 10% moderate remissions. Of the manic type (17% of the total), 67% reached full remissions and 16% moderate remissions. The authors call attention to the fact that failure of the treatment depends on the presence of anatomical changes beyond the possibility of functional restitution, or inability of the organism to react to the treatment.

2. The authors inoculated 42 patients and 15 months afterwards 20% were in complete remission (at home and at work), 12.5% in almost complete remission, 20% improved, 17.5% unimproved, and 30% had died. They found as complications to be faced: (a) A tendency to pyogenic infections in 7 cases; (b) uræmia—2 patients developed uræmic coma; this can be forestalled by estimating the urea nitrogen content of the blood; (c) circulatory collapse—3 collapsed and 1 died; (d) acute bulbar palsy—3 died; (e) convulsions—1 patient died in a paretic seizure.

3. The author found in 80% of 62 cases an increase in weight above the pre-treatment level in cases. This increase occurred in only 50% of the mentally unimproved cases, but in 95% of the cases which achieved full remission and of those who showed moderate mental improvement. Failure to recover part or all of the weight lost during the actual course of the malarial infection seems to be of unfavourable prognostic significance. A marked and rapid rise of the post-treatment weight curve above the pre-treatment level often coincides with well-marked mental improvement, and is of favourable prognosis up to a certain point. The post-treatment increase in weight may be ascribed to malarial therapy, because (a) many patients exhibit it who show no mental improvement; (b) the maximum weight reached is not infrequently in excess of the usual weight in health; (c) the maximum gain is often only temporary; (d) a similar phenomenon has been observed in connection with foreign protein therapy of other types.

There would appear to be a fundamental alteration in the vital processes of the organism—underlying the striking therapeutic results of malarial therapy.

G. W. T. H. FLEMING.

6. Pathology.

The Colloidal Paraffin Reaction in the Cerebro-spinal Fluid. (Brain, June, 1926.) Critchley, A. M.

Critchley uses a modification of the original Kafka technique, as follows (termed colloidal paraffin C) :

A .2% stock solution of Grüber's white paraffin wax of melting-point 52° C. is made in absolute ethyl-alcohol by dissolving at 52° C. For the working solution, 10 c.c. of this 52° C. are taken, and to it is added quickly 20 c.c. of twice distilled water warmed to 52°. An opalescent colloidal suspension results. There is a saline solution of .2%. Into each of 10 tubes put .5 c.c. of .2% saline solution. Into tube 1 put .25 c.c. cerebro-spinal fluid, mix and transfer .5 c.c. into tube 2 and so on. Into each tube put .75 c.c. of colloidal paraffin and mix. Into an eleventh tube put only paraffin and saline; examine in twelve hours at room temperature. All fluids with protein over .05% gave abnormal curves (except cases of spinal compression). Cases giving a positive Pandy or Nonne-Apelt with a few exceptions have abnormal curves. No case with a positive Wassermann in the fluid gave a normal reading with colloidal paraffin.

The results are strikingly similar to the Lange reaction. It is cheaper, simpler, does not deteriorate so easily, is easier to read, and more reliable. It requires only .25 c.c. of fluid, whereas the colloidal benzoin test requires 1.75 c.c. of fluid.

G. W. T. H. FLEMING.

Lymphorrhages in the Muscles in Exophthalmic Goitre. (Brain, June, 1926.) Dudgeon, L. S., and Urquhart, A. L.

In 9 cases of exophthalmic goitre the authors examined the extrinsic eye muscles and the heart muscle and, of the skeletal muscles, the deltoid, rectus and biceps. In 8 of these they found lymphorrhages in the muscles, most marked in the ocular muscles. The lymphorrhages were both large and small, the large ones causing wide separation of the muscle-fibres. The cell-content of the deposits were chiefly lymphocytes with some plasma- and endothelial cells. The muscle in proximity to the lymphorrhages may show atrophic changes, while an interstitial myositis is by no means uncommon.

G. W. T. H. FLEMING.

Significant Chemical Changes in the Spinal Fluid in Meningitis. (Arch. of Neur. and Psychiat., June, 1926.) Osnato, M., and Killian, F. A.

In tuberculous and meningococcal meningitis the authors confirm the findings of Tashiro and Levinson in 1917. In tuberculous meningitis the mercuric chloride precipitate is usually twice the height of the sulphosalicylic acid precipitant. In epidemic meningitis the ratio is usually 1 : 2 or 1 : 3. In encephalitis the ratios

are similar to those in tubercular meningitis, but the sugar content was higher in encephalitis.

In normal people the sugar is usually between 54 and 75 mgrm. per 100 c.c., and the lactic acid between 6.3 and 9.4 mgrm. per 100 c.c. Usually the fluid sugar runs from 45-65% of the blood-sugar. Cooper found after a careful review of the literature that a high rate of sugar was by no means constant in encephalitis. Osnato and Killian found an increase in the lactic acid in the fluid after the convulsions of nephritis and epilepsy. The lactic acid of the fluid bears a close relation to its concentration in the blood. Spinal fluids obtained from meningitis showed high figures for lactic acid. The source of the increased formation of lactic acid appears to be the cellular metabolism. In some cases no decrease was noted in the sugar in fluids in which the lactic acid was increased above normal; in others no reaction for sugar was obtained. In no instance did the increase in lactic acid account for all the sugar lost.

G. W. T. H. FLEMING.

Fixation of the Cells of the Cerebro-spinal Fluid with Iodine Vapour. (Arch. of Neur. and Psychiat., June, 1926.) Cunningham, R. S., and Kubie, L. S.

A strip of thick plate-glass is placed in a Petri dish and a few crystals of iodine are scattered over the bottom of the dish. Very gentle warming soon fills the dish with purple fumes. The slide or cover-slip, with a drop of cerebro-spinal fluid, is then placed on the strip of plate-glass, and the cover of the dish replaced. Within a few moments the drop of fluid turns a light yellow-brown, and is kept in the iodine chamber until dry. It is then washed in a fresh concentrated aqueous solution of potassium iodide. This must be very thoroughly done and then the potassium iodide rinsed off with distilled water, and the preparation then stained as desired. The authors used Unna-Pappenheim's pyronin methyl green. They differentiated in absolute alcohol to which a little hydroquinone was added. Mayer's carmalum gives excellent stains after the iodine.

G. W. T. H. FLEMING.

Blood Calcium and Phosphorus in Personality Disorders. (Arch. of Neur. and Psychiat., July, 1926.) Henry, G. W., and Ebeling, W. W.

These authors find that the calcium and phosphorus content of the blood in personality disorders is within normal limits. In manic states there is a relative increase; in tense, agitated, depressed states a relative decrease in the calcium and phosphorus content. In dementia præcox the calcium and phosphorus content is normal, but is lowest in the catatonic type. The content in personality disorders is not affected by ultra-violet radiation.

G. W. T. H. FLEMING.

7. Sociology.

Some Observations on Social Capacity; Application of the Porteous Maze Tests to 100 Borstal Lads. (Lancet, November 20, 1926.)
Jarrett, R. Fitzroy.

The most important and the most difficult task of those who are responsible for the disposal of a Borstal inmate, on his release from the institution, is to decide how far the lad is capable of standing on his own. The individual's innate capacity for social adaptation is of paramount importance. The practical value of "mental tests" lies in the degree to which they assist in the estimation of this social adaptability. In this connection, it is claimed that the maze tests have great advantages over the various modifications of the original Binet scale. The maze tests require the individual to act in the face of a concrete situation, in such a manner as must reveal the presence or absence of qualities essential to social progress. The 100 subjects dealt with had all been tested with the "Terman" scheme, as well as with the mazes. But the latter tests were applied under somewhat more favourable conditions. Only 16 of the 100 reached the level of 14 years or over, and 53 were below the level of 12 years. In no case did any lad achieve a Porteous score higher than his Terman level, and in a number of cases the Porteous score was lower. The application of the Porteous tests is recommended in addition to those of the Terman scheme.

M. HAMBLIN SMITH.

8. Mental Hospital Reports.

SOME REGISTERED AND PRIVATE HOSPITALS.

The Retreat, York.—The report is for the year 1925, and includes amongst many interesting features a short historical retrospect of the institution from the days when the Tukes initiated the movement in the treatment of mental cases which has culminated in the modern mental hospital.

During the year there were admitted 122 patients, that is, 35 more than in the previous year, and 56% of these were admitted as voluntary boarders—a condition of affairs that must be most gratifying to the hospital authorities, though we sympathize with the complaint put forward by Dr. Yellowlees as to the quite unnecessary difficulties associated with these cases, and regret that the comfort which he hoped for from the report of the Royal Commission does not appear to be maturing.

No doubt we are all in general agreement with Dr. Yellowlees' views on statistics of mental disease as published in official reports, and probably no one is more aware of their limited value than the original compilers of the tables; in the meantime, however, so difficult is the work of reconstruction that we must take poor comfort, as Dr. Yellowlees says, in the fact that "few, if any, beyond the unfortunate officials who compile them take the trouble to study them."

A considerable amount of improvement and structural alteration has occurred during the year, the most noteworthy being the building of a new nurses' home, to be opened shortly by Dr. Bedford Pierce.

Dr. Yellowlees' remarks upon the establishment of an admission hospital are worth quoting :

" The superstition that patients have a harmful effect on one another dies hard, but is slowly being replaced by the realization that association with others need never harm a patient, and may often be of the greatest benefit, provided that a 'grading' process is carefully carried out. It is just here that the difficulty lies. Not only the general public, but many physicians who ought to know better, persist in speaking of 'recent admissions,' 'recoverable patients,' 'early cases' and so forth, as if these expressions necessarily meant the same thing or connoted patients whose symptoms were similar in type in each instance. Unfortunately this is very far from being the case. If it were so an admission hospital would be a very easy place to design and manage. The admission department may be almost considered to be a replica of the whole hospital in miniature as regards the widely differing types of mental illness which come into it. Recent cases require to be graded just as much as any others, and to do this satisfactorily within the limits of an admission department is a very difficult matter. The problem, like most mental hospital ones, is both medical and administrative, and the difficulties are, of course, greatly enhanced when, as in our case, the total numbers are small and the accommodation correspondingly limited, though the variety is liable to remain very great."

Barnwood House Hospital.—The average number of patients resident in the Hospital during the year 1925 was 142 and 37 patients were admitted. The recovery-rate, calculated on the net admissions, was 48%. Dr. Townsend draws attention to the perennial difficulty in deciding when a patient is to be discharged recovered, as against relieved—a difficulty, that it seems, can never be completely overcome, but one which hopelessly vitiates all existing statistical work on this subject.

Although many will agree with Dr. Townsend that some general practitioners are entirely unequipped mentally for the onerous duty of certification in cases of mental disease, many may not agree with the remedy he suggests. In the present state of affairs, in many districts it is impracticable.

" The Report of the Royal Commission on Lunacy and Mental Disorder will be issued at no distant date, and it will be interesting to see what its recommendations are. One matter which I hope will have received attention is with regard to the certification of patients which, in the light of recent changes and events, appears to me to be a point of special importance. It is doubtful whether certification should be left to the discretion of medical practitioners, as in many instances it now is, for few of them can have had much experience of mental disorders, and I am of opinion that no case should be certified unless one of the medical certificates is given by an expert ; also that medical practitioners specially qualified should be appointed in various areas who would be called in to all cases where there was any question of certification, and that a certificate should be given by one of these. Such a course would certainly offer protection to both the public and the medical profession."

Four female nurses passed the final examination of the Royal Medico-Psychological Association, and of these three gained distinction, and the satisfactory proportion of 41% of the staff hold

this certificate; the difficult position of this certificate in relation to registration is one to be deplored, as there appears little difference between the standard required for it and that required by the General Nursing Council examination.

An achievement of great value to the institution is the establishment by the Governors of the Hospital of a non-contributory pension scheme for officers, nurses and employees on a generous basis.

The Lawn, Lincoln.—The most noteworthy event of the year 1925 is the resignation of Dr. A. P. Russell after forty-seven years of devoted work to this institution and its patients, which is recorded by the Governors with full appreciation of the value of his work during this long period, "and as a natural expression of their gratitude they invite Dr. Russell to become a vice-president of the Institution," and thus ensure to the hospital a continuance of his valuable help and experience. We are sure it is the wish of this Association to echo the sentiments of the Governors and the Board of Control in wishing him many years of happiness and leisure.

As to the appointment of his successor the Board report as follows :

"In the appointment to the vacancy there was no hesitation or difficulty. Since the number of the female patients had been for a long time largely in excess of that of the male patients, and since this proportion seemed likely to continue, or even to increase, the Governors decided to appoint a Lady Medical Superintendent. Dr. Shortt, by her six years' service as Assistant to Dr. Russell, had secured the entire confidence of all; and she was unanimously appointed. The change has been made with very little disturbance, for the guiding principle throughout was the true interest of the patients. Six months' experience of Dr. Shortt's administration has shown that no mistake was made; and the Governors have every hope and confidence that, under her direction, The Lawn will maintain and even increase its past tradition and reputation as a real home for the mentally afflicted."

There remained in the Hospital at the end of the year 60 patients (males 15, females 45), or one less than at the beginning of the year. The recovery-rate was 38% and the death-rate for the year 6%. There were admitted during the year 15 voluntary boarders.

The cost of maintenance is £4, and over 46% of the patients pay more. A few patients are received and cared for gratuitously. This figure does not, however, include laundry, for which the modest sum of 30s. per quarter is charged.

The nucleus of a pension scheme for the staff has been formed which will no doubt add considerably to stability and efficiency, and it is suggested that in the near future this hospital should limit its services to ladies only.

St. Andrew's Hospital.—This Hospital ended the year 1925 with a total of 427 certified patients and 28 voluntary boarders as against 417 and 25 at the beginning of the year. The recovery-rate on

the direct admissions was 36% and the death-rate 6·4%. Of the 81 certified cases admitted, 10 were diagnosed as primary dementia, 13 as recent melancholia and 14 as systematized delusional insanity, and of these admissions alcohol was considered to be an ætiological factor in 3 cases, the puerperal state (not septic) in 8 cases, and prolonged mental stress in 19 cases; heredity was ascertained in only 4 cases.

It is to be regretted that owing to unavoidable delays in the building trade, the new reception hospital was not completed and occupied at the date of this report as was anticipated. The Committee of management have also under consideration plans for a new nursing home, which, as Dr. Rambaut points out, will add greatly to the comfort and stability of the staff.

The average weekly cost of maintenance for the year was £4 14s. 8½d., but nearly a quarter of the patients are cared for gratuitously, and a large proportion pay less than the actual cost.

BURMA MENTAL HOSPITALS.

As a step in advance, it is pleasing to note that the former "lunatic asylums" in this province are now officially designated "mental hospitals."

The total available accommodation for mental patients is 933 beds (523 males and 272 females in Rangoon, and 138 males at Minbu), and this includes the new buildings at Tadagale (Rangoon) designed for female patients, but now temporarily occupied by male patients.

In the report of Col. Fenton, the Inspector-General of Civil Hospitals, Burma, it is recorded that the admissions for the year 1925 were 203 (males 166, females 37), and the recovery-rate was approximately 39% calculated on the admissions while the percentage of recoveries among the admissions of the year was 11·33. As much as 73% of the female patients and 50% of the male patients admitted during the year were from Rangoon town. The difficulties of sanitation in this part of the world are well illustrated by the following passage from the report:

"Sanitation and conservancy.—The cells, cottages and dormitories are washed daily with saponified cresol both in Rangoon and Minbu and steps are taken to keep them free from insects and vermin. Bedding and clothing are exposed to air and dried in the sun every day, and precautions are taken against body-lice or pediculi. The hair of the inmates is cropped and nails clipped to keep them clean and tidy.

"Coal-tar and crude oil were freely used in latrines. Flooring of buildings and pillars were coal-tarred. Rubbish was collected in bins kept in suitable places. In Rangoon the Corporation Conservancy Department removed the night-soil as in previous years. In Minbu the latrines, which are of the aerobic filter type, were always kept clean and free from smell by covering the faecal matter with dry sand and removing it thrice daily. Seats are scraped and smeared with crude oil weekly."

The chief occupations of patients were, besides ordinary assistance in the wards, gardening, weaving, tailoring, paddy grinding,

laundry, kitchen work, masonry and carpentry. They are encouraged to work by daily issue of tobacco, fortnightly stipends, and occasional distribution of special food, sweets, fruit, etc.

The provision of mental hospitals in British India—an area about as large as Europe (excluding Russia), with a population of about 400,000,000 of some forty odd different races—is as follows : Assam 1, Bihar and Orissa 2, Bengal 2, Bombay 5, Burma 2, Central Provinces 1, Madras 3, Punjab 1, and the United Provinces 3. Of these mental hospitals, usually one in each group is termed a "central" mental hospital, and this frequently provides for both European and Indian cases, and is in charge of a medical superintendent, who has had special experience in mental disease, either in England or elsewhere. The other mental hospitals are "collateral charges" and generally held by civil surgeons.

ROYAL EASTERN COUNTIES' INSTITUTION.

The report is for the year 1925, and shows that there were 51 more patients resident at the end of the year than there were at the beginning. The admissions were 122, or 82 less than in the previous year, and 68 of these admissions were either medium or high-grade cases, capable of a considerable degree of development under suitable training. Forty-three patients were discharged during the year; 5 of these after a more or less prolonged leave of absence were placed under guardianship and have done well. It is under conditions like this that guardianship performs its best function to the community; as Dr. Turner points out, guardianship without a preliminary period of study and training in an institution such as this is frequently foredoomed to failure.

Dr. Turner makes some very sound remarks on the much-vexed question of "sterilization of the unfit," that short cut to Utopia clamoured for by an ignorant public, and the ultra-crepidarian of the medical profession, and exposes without much difficulty the *non sequitur* upon which the proposal is chiefly based.

The institution has had the misfortune to be visited by two epidemic diseases, namely diphtheria and colitis, which have been a source of great anxiety, though kept in control by vigorous precautionary measures.

This institution, with its central establishment and subsidiary homes and schools, is an excellent example of the correct evolution on a sound classification basis of an institution for mental defectives, and although much remains to be done, as pointed out by Dr. Turner, it is clear that Colchester Institution is doing great and valuable work in the service of the community. The whole report shows that Dr. Turner and his staff are in agreement with the dictum of a well-known expert, that in the education and development of the mental defective, the essential thing is "happiness first, happiness second, and happiness all the time."

CRAIG COLONY, NEW YORK STATE.

This colony, which is situate forty miles almost due south of Rochester, is the only public institution in the State for the treatment of epileptics who show no marked mental symptoms. It has now been in existence some thirty years, and the report is for the year ending June, 1925. It is a colony in the true sense of the word, and has a capacity of 1,500 patients, but it is obvious from the report of the Medical Superintendent that it has not only already outgrown a good deal of its administrative equipment, but also is in need of further accommodation for patients.

Referring to the epilepsies, Dr. Shanahan states that the laws of heredity are not sufficiently well established to warrant the positive assertion that epilepsy is frequently transmitted. So far as investigations go, the seeming transmission of a tendency to an epileptic reaction occurs in only a comparatively limited number, and in the majority of cases the origin appears to be post-conceptive in point of time.

"There is no specific treatment for epilepsy. The fundamental principles are therapeutic talks, nourishing diet, sufficient exercise out of doors, congenial occupation, well-balanced by suitable recreation, regular amount of sleep in a well-ventilated room, avoidance of undue excitement or worry, a minimum of medication and surgery, and careful attention given to secure active functioning of all organs of elimination. The seizures, present mental state and probable original mental endowment must be considered in making the prognosis. Seizures may be controlled, but a mind, which never has been, or one definitely deteriorated, cannot be restored.

"The use of luminal has been continued at the Colony, with material benefit to the majority of those patients receiving it."

A considerable amount of valuable education is carried out at the Colony under special teachers assigned from the Geneseo State Normal School faculty, of whom there are six with a Principal attached to the school.

The Colony laboratory shows a large record of routine work, and of special investigations.

Protein hypersensitivity was found to be considerably higher in epileptic groups as compared with non-epileptic groups in the proportion of 4.7 to 1. Luminal was clearly shown to be a palliative rather than a curative drug.

An investigation on the velocity of sinking of red blood-corpuscles is still in progress, together with further observations on the calcium content of the blood in epilepsy.

Part IV.—Notes and News.

THE ROYAL MEDICO-PSYCHOLOGICAL ASSOCIATION.

A SPECIAL MEETING of the Association to hear an address by Dr. Alfred Adler, of Vienna, on "The Causes and Prevention of Neurosis," took place in the Great Hall of the British Medical Association, Tavistock Square, on Monday, November 15, 1926, under the presidency of Lieut.-Colonel J. R. LORD, C.B.E., M.D., F.R.C.P. Edin.

THE LATE PROFESSOR EMIL KRAEPELIN, OF MUNICH.

The PRESIDENT said that before calling upon Dr. Adler to address the meeting there was one matter which called for mention, namely, the sad intelligence received of the death on October 7 of Prof. Emil Kraepelin, an hon. member of the Association since 1909.

Kraepelin, his life, his work, his death—what a subject for a thesis! What an occasion for oratory!

It was fitting that a reference to his passing should be made at this representative gathering of British psychiatrists and neurologists.

Time being limited on this occasion, he would need to be contented with the reflection that though it might be that all found "beyond the silent night an endless day," yet few attained an earthly immortality in the esteem, admiration, affection and gratitude of their fellow countrymen, and still fewer of the whole civilized world. To name all the immortals in their sphere of science would be beyond him, and to mention only a few might be invidious, but on that roll would for ever be inscribed the name of Emil Kraepelin.

Though Kraepelin had left a special legacy to German psychiatry to continue and expand his research work, and had founded in that country a noble institution to this end, yet his life-work was both a lesson and a pattern to all those who sought to alleviate or cure nervous and mental disorders. Such a life taught that progress in psychological medicine could only follow careful observation and experiment, and the accurate recording of clinico-pathological data thus obtained, and it bade workers be patient, undaunted by failure, and to keep in mind the great object they had in view. Only in these ways could a psychiatric millennium be reached.

Regarding Kraepelin, with Horace, one could say, "*Mors et fugacem persequitor virum*" (Death pursues the man as he flees from it), for he had still many ambitions for psychiatry which at the time of his death were unsatisfied. He fought manfully against the inroads of a painful and fatal disease, and he only ceased his labours with the last call.

The meeting remained standing for a period as an expression of grief at the event.

The PRESIDENT, in introducing the lecturer, said that no one could progress far in the study of modern abnormal psychology without meeting with the name of Dr. Alfred Adler, of Vienna. Though a voluminous writer, Dr. Adler was, above all, a practical physician, with an immense experience of functional nervous disorders, and it was upon that great experience that his teachings were founded, rather than upon any *à priori* psychological conceptions or hypotheses. Though all those present were more or less familiar with his views and found in them much illumination, few had previously had the opportunity of meeting Dr. Adler in the flesh. It was one thing to know a great teacher through his writings, but quite another to sit at his feet and hear him speak, to know him and feel something of his personality. That was, however, to be the privilege and pleasure of those now gathered in the Hall, and, on behalf of the Royal Medico-Psychological Association and its guests, he extended to Dr. Adler a hearty welcome.

Dr. ADLER then delivered his address (*vide p. 1*), which was listened to with great attention and interest, and loudly applauded at its conclusion.

The PRESIDENT said he did not doubt that the audience would like to express to Dr. Adler very hearty thanks for his very able address. Those present

would agree with him that to deliver such an address without a note, in a foreign language, was, in itself, a wonderful feat. He had always felt very grateful to Dr. Adler for many very helpful ideas in regard to abnormal mental mechanisms. This feeling of inferiority, based probably on physical shortcomings, and the difficulty of overcoming it, the continual worrying and striving for, at least, equality with others, if not superiority, and the morbid over-compensation which often followed, must account for much of the neurosis met with in psychiatric practice.

He proposed a very cordial vote of thanks to Dr. Adler.

Dr. W. A. PORRS (Birmingham) said it was a very great pleasure to him to have the opportunity of seconding the vote of thanks to Dr. Adler; first because he was a distinguished foreign psychiatrist, whom all present had for many years admired, at a distance. It was, therefore, a particular kindness on the part of Dr. Adler to have reduced that distance to the absolute minimum. He was sorry to have to confess to Dr. Adler that he had made it perfectly clear to him that he was suffering from a severe guilt complex. When he was a little boy, the first thing he began to study was Dr. Adler's native language, and he would have liked to second the vote of thanks in that tongue, and in as eloquent a way as Dr. Adler had spoken in English. But he had so little facility for learning foreign languages that he could not reply in that appropriate manner.

Comparatively recently he had the pleasure of reading Dr. Adler's extremely interesting book, and he found it gave him a degree of insight into many of the problems and difficulties of life that he had not been able to derive from any other source. He had looked forward to this occasion with much pleasurable anticipation after reading that book, and the address had proved to be even better than he expected it to be. He did not know which to compliment Dr. Adler on most—the extraordinary facility with which he spoke the English language, or the extremely lucid way in which he made clear his psychological views on life; the latter threw a flood of light on neurological and psychological cases. If each member of the audience had derived as much help and information from the address as he had, the total volume of appreciation must be very great indeed.

The resolution was carried by acclamation.

After a brief acknowledgment by Dr. Adler the meeting terminated.

Invitations had been issued by the President to all neurologists and psychiatrists and senior medical students, to which there was an excellent response as evidenced by a large attendance.

THE ROYAL MEDICO-PSYCHOLOGICAL ASSOCIATION.

THE usual quarterly meeting of the Association was held on Tuesday, November 16, 1926, at Horton Mental Hospital, and, later, at West Park Mental Hospital and the Manor Institution for Mental Defectives, all at Epsom (by the kind permission of the London County Mental Hospitals Committee). The chair was occupied by the President, Lieut.-Colonel J. R. Lord, *C.B.E.*, M.D., F.R.C.P. Edin.

The Parliamentary and Educational Committees and the Special Committee on Journal matters met on the previous day at the British Medical Association House, in London.

THE MINUTES.

THE PRESIDENT said members would wish to see the clinical demonstration on chronic epidemic encephalitis at West Park, therefore time would need to be economized at this meeting. The minutes of the last meeting had already appeared in the Journal, therefore members had had the opportunity of studying them. Unless there was any point for inquiry or discussion, perhaps they could be accepted as read.

The minutes were taken as read, were approved and signed by the President.

OBITUARY.

The late Professor Emil Kraepelin.

THE PRESIDENT said that one of the sorrowful tasks appertaining to the occupancy of the chair was from time to time to announce the deaths of members.

The first death he had to refer to was that of an Honorary Member of world-wide

repute, namely, Prof. Emil Kraepelin, which occurred on October 7, 1926—one who had conferred on psychiatry signal benefit.

He had paid his small tribute to the memory of the deceased professor at the special meeting on the previous day, and he would now ask Prof. G. M. Robertson to say something more on the subject. Few had such a close knowledge of Kraepelin's work as had Prof. Robertson.

Prof. G. M. ROBERTSON said the fact that Prof. Emil Kraepelin was elected an Honorary Member of this Association spoke most strongly in favour of the high opinion its members entertained concerning him, and in a way that no words of the speaker's could enhance. The late professor was an accurate and painstaking observer of the symptoms of mental disease; he kept careful and voluminous records, and as a result of a study of these he had been able to differentiate many forms of mental disorder, and to evolve a classification which represented a great advance on anything of the kind that had ever before been accomplished. This classification, or a modification of it, had now been adopted in practically every centre of mental science in the world. No one could accept it in every respect, and it did not represent finality, but it was the most efficient and successful attempt up to the present time. Many members were present on the previous day at the special meeting in London, when the President made an eloquent reference to the life and work of Prof. Kraepelin, and that made it unnecessary for him, Prof. Robertson, to add anything further, except to invite members to show, in the usual way, their sense of loss and appreciation of his work.

Members expressed their sorrow by standing.

The late Dr. Robert H. Cole.

Another sad passing which the PRESIDENT had to refer to was that of Dr. R. H. Cole. He would only make a brief reference to the melancholy event, as every member present knew him well, and there had appeared in the *Journal* a very good appreciation from the pen of Dr. James. The death of Dr. Cole, the President continued, was a domestic tragedy, and in some respects a misfortune for the Association. His decease came at a time when his activities in his chosen branch of medicine were very full. He held hospital appointments; his assistance was sought by public authorities; and he held several public appointments of importance; as a consultant in mental disorders his advice was much sought. He was a keen observer of mental disorders, and many of his personal views were embodied in his text-book. In addition Dr. Cole was a very ardent worker for this Association, and held at his death the important post of Chairman of its Parliamentary Committee. The efficient and tactful way in which he did that work, as shown by the important reports that came from that committee, and especially the last, the *précis* of evidence submitted to the Royal Commission—one of the finest pronouncements on the needs of modern psychiatry presented—was something for which members could not be too grateful. He was a staunch friend and, to those who knew him well, an affectionate personality. Dr. Cole was one of the favourite pupils of Maudsley, consequently he could tell some good stories of that great man. In Dr. Cole's library were several books annotated and given to him by Maudsley. Certainly the passing of Robert Cole meant a loss to the Association and psychiatry, and to many patients who came to him for advice and treatment.

Members showed their feelings again by rising in their places.

The late Dr. John J. Gasperine.

The PRESIDENT said another member also had died since the last meeting. Dr. Gasperine was a promising medical officer with many scientific attainments. He had had an extraordinary and roving career. He was a very clever man, but one with a restless spirit, perhaps rendered more so by war experiences, and his death came tragically while he was bathing in America. The President believed that in course of time Dr. Gasperine would have settled down to steady work for psychiatry, which he undoubtedly would have some day adorned.

This death members also recognized in the same way.

MATTERS ARISING OUT OF THE COUNCIL MEETING.

The PRESIDENT said there had been a very interesting Council meeting that morning, and several matters of importance had been discussed there.

A Fee for the Assistant Librarian.

The first matter it was necessary to report was that the Council had suggested £30 as the annual fee for the Association's assistant librarian. The home of the Association having now been transferred to the House of the British Medical Association, it had been necessary to find a substitute for Mr. Bethell, who had acted as assistant librarian when the Association occupied rooms at the Medical Society of London. This had been done. It was hoped to extend the circulating section of the Library, and they were grateful for the lively interest Dr. Whitwell was taking in the general administration of the Library.

The meeting unanimously approved the grant.

A Ribbon with the Mental Nursing Medal.

Another matter discussed, and at some length, a unanimous decision being finally reached, was that a distinctive ribbon should be issued with the Association's nursing medal, so that nurses could wear a piece of the ribbon alone when the wearing of the medal was inconvenient, subject, of course, in the case of institution nurses, to the sanction of the hospital authority. The colour selected was that which had always been associated with the Presidential insignia, namely a deep royal blue.

This also was agreed to.

A New Book-Plate.

Owing to the issue by the College of Heralds of a Coat of Arms for the Royal Medico-Psychological Association, it became possible, the President explained, to have a proper book-plate. The matter had been carefully gone into by him, with the object of creating one which in itself would be of value as a work of art and worthy of the many valuable books the Association possessed. The copper plate used could also be of service for ceremonial documents of various kinds. The fee for the artistic production selected and approved of by the Council was £35. This was not by any means extravagant expenditure, and the copper plate would always have an intrinsic value of its own.

The expenditure was approved.

A RESEARCH AND CLINICAL PSYCHIATRY COMMITTEE, DIVISIONAL CLINICAL COMMITTEES, ETC.

The PRESIDENT said the next business consisted of a series of resolutions which appeared on the agenda and arose out of the Presidential address, published as a special number of the Journal in August. Accordingly it did not seem necessary to occupy much of the time of the present meeting in advocating these resolutions. He would limit his remarks chiefly to the first. All of them had been tabulated at his request. He would ask the indulgence of the meeting, for strictly speaking he was out of order.

One great ambition he had in respect of the Association, particularly latterly, was that every one of its members should either have direct interest in some of its activities, or should be actually engaged in some branch of its work. Owing to the great pressure of the parliamentary and educational business in the recent years—and he was not in any way decrying these activities, as they were most beneficial and necessary—the research and clinical side had fallen somewhat into the background. It must be remembered that the first care of the Association should be the junior medical officers and younger psychiatrists who in the future would be the masters of psychiatry. In due course, they would succeed the older members, and upon them would fall the duty of maintaining the high traditions of the Association and of the practice of psychiatry. In order to provide both for their immediate interests and future welfare, and bearing in mind that as a result of the Royal Commission on Mental Disorder, the parliamentary work of the Association would probably for some years at least fade away, and further that the educational work would also probably be much less, it was most desirable that the research and clinical side of the Association's activities should resume its premier position. Looking back on the Association's history, he found that a somewhat parallel

period was encountered after the passing of the Lunacy Act of 1845. During the late sixties, the work of the Association had so far fallen in abeyance that 18 months had passed without even a Council meeting. The advent of Dr. W. H. O. Sankey as President in 1868 roused matters up somewhat, but a remarkable renaissance followed the appearance as President in the following year of Prof. Laycock, of Edinburgh—a truly stimulating personality—who saw the possibility of the disintegration of the Association. In fact there was then a proposal under discussion to merge the Association with the Royal Medico-Chirurgical Society of London. Prof. Laycock therefore made the proposal that standing committees of the Association should be formed. These included one for mental pathology and therapeutics. The effect of all this was to give an impulse to the clinical side of the Association's work.

According to the revised bye-laws, the old Research Committee, with its limited reference, had now been replaced by one with an extended reference, embracing clinical psychiatry in a very wide sense. At next year's annual meeting it would be for members to see that the bye-law in regard to this was put into force and that there would be established a standing Research and Clinical Psychiatry Committee. There was but little opportunity in the course of any one President's time for him to do much. A President started his career with many ambitions, few of which he could possibly see carried out during his year of office. Just as he arrived at the full tide of his activities his term came to an end, and someone else, perhaps with a different outlook, took his place. He therefore decided not to let any grass grow under his feet before getting to work—hence the propositions on the agenda.

There were two sub-committees of the Research and Clinical Psychiatry Committee it was desirable to appoint as soon as possible, namely, one on the malarial treatment of general paralysis, and the other on the endocrine treatment of mental and nervous disorders. Another still would be very helpful to keep in touch with the new actino-therapeutic treatment.

It was the men who were actually in close association with special lines of work who knew best where and how help was needed. So the initiative as regards grants, etc., he thought, should come from the sub-committees.

Another matter was the compilation of a psychiatric glossary; one in regard to psycho-analytical terms was already available to students and writers.

He had addressed a circular letter to 97 members, inviting them to join the proposed provisional Committee, from which the President then read the following extracts:

I think this Committee should be composed mainly of those medical officers actually engaged in research and higher scientific psychiatry, with the addition of representative teachers in psychiatry, clinicians of note and standing, psychologists, sociologists and some interested in statistics.

Again the Committee should be a large one, to permit of good attendances at meetings and the devolvement of sections of work on Special Sub-Committees, say for aetiology; symptomatology; treatment; classification, records and statistics; literature and publications, etc.

I would point out that there will be much interesting work for members who can rarely attend meetings, and their collaboration will be very valuable, if only for reference.

In only 10 (3 being resident abroad) instances had no reply been received, and 7 had refused for various reasons. The remainder of the replies were favourable and many of them enthusiastic, especially from junior members, which had heartened him considerably. He regretted he had not time to read a long reply from Dr. M. J. Nolan, who vied with the junior men in keenness.

Dr. DONALD ROSS then proposed the following resolutions:

(1) *That a Special Committee on Research and Clinical Psychiatry be formed as a preliminary to the appointment—in accordance with the Bye-laws dated July 13, 1926—of a Standing Research and Clinical Committee at the next Annual Meeting, to consider the most profitable lines on which the Reference to the latter Committee can be carried out.*

(2) *That each Division be requested to consider the establishment of a Divisional Clinical Committee to organize regular Meetings in the Division at convenient centres, devoted solely to the clinical aspects of psychological medicine, and to be administered on such lines as to encourage attendance thereat primarily of assistant medical officers as defined in Bye-law 112.*

(3) *That the medical superintendents of mental hospitals and other psychiatric institutions be urged—*

(A) *To afford facilities for the meetings contemplated by Resolution (2).*

(B) *To encourage the attendance of assistant medical officers at such meetings.*

(C) *To approach the Committees of Management concerned with a view to granting travelling and other reasonable expenses in furtherance of resolutions (2) and (3).*

He felt sure it was generally agreed that what was suggested by them was very desirable. In Scotland there was an unofficial Clinical Committee which met as far as possible in various mental hospitals, and their meetings were most successful. The General Board of Control for Scotland had urged that District Boards should authorize the payment of medical officers' expenses on these occasions, and in most instances the District Boards had agreed most readily. That would be a good plan to adopt in England also.

Dr. HAMILTON C. MARR, in seconding, said that the suggestion that the travelling expenses incurred by both medical superintendents and medical officers in attending those meetings should be paid, as Dr. Donald Ross had just said, came from the General Board of Control for Scotland, but he would like to add that the initiative came from the Chairman of that Board, who was a layman.

The resolutions were passed unanimously.

ELECTION OF NEW MEMBERS.

The PRESIDENT nominated as scrutineers for the ballot Dr. Rambaut and Dr. Marr.

The following candidates were unanimously elected ordinary members :

MARGARET SCORESBY-JACKSON, M.D., B.S.Durh., Clinical Assistant, Neurological Department, Guy's Hospital, S.E.; Bethlem Royal Hospital Out-patient Department for Mental Deficiency. Address: 28, Weymouth Street, Portland Place, W.

Proposed by Drs. J. G. Porter-Phillips, A. F. Tredgold and Thomas Beaton. GEOFFREY TALBOT, B.Sc.(Hons.), M.B., Ch.B.Manch., Assistant Medical Officer, County Mental Hospital, Prestwich, Manchester.

Proposed by Drs. David Blair, D. M. Cassidy and F. C. Logan.

KENNARD SNELL HARVIE, M.B., B.S., M.R.C.S., L.R.C.P.Lond., D.P.H., Medical Officer, Prison Medical Service, H.M. Prison, Wandsworth, S.W. 18.

Proposed by Drs. R. Fitzroy Jarrett, J. J. Landers and R. Worth.

MURIEL L. M. NORTHCOTE, M.B., B.Sc., M.R.C.S., L.R.C.P.Lond., House Surgeon, Royal Free Hospital; House Physician, Lady Chichester Hospital, Hove. Address: Lady Chichester Hospital, Hove.

Proposed by Drs. A. Helen Boyle, R. Whittington and Norah A. Crow.

THE CONFERENCE OF FRENCH-SPEAKING PSYCHIATRISTS AT GENEVA.

Dr. DONALD ROSS said he wished to thank the Council of the Association for having sent him, as its representative, to the Annual Congress of the French Medico-Psychological Association at Geneva. That was not the first time he had attended this Congress, and each time he was more impressed by it. It was a Congress of French and French-speaking psychiatrists from France, Switzerland and Belgium, and representatives were present at it from every nation in Europe, as well as from America. It was very desirable to continue the British representation, as the French were very appreciative of the friendship thus extended to them. The final session was a wonderful gathering, being the centenary of Pinel. Visits were paid by him to several of the Swiss mental hospitals, some being models of what such institutions ought to be. The hospitality extended to him, as always, was generous. Members of the Congress had said each time he visited, that they would like to attend the Annual Meeting of this Association. It would be a good thing, he thought, if the Secretary were to send invitations to the Secretaries of the French, Belgian, Swiss, Spanish, Dutch and Portuguese Psychological Societies to this Association's Annual Meeting, and he begged, with the meeting's permission, to propose that this should be done.

The PRESIDENT said he felt sure the meeting would accord that permission. (Agreed.)

Prof. ROBERTSON seconded, with great pleasure, the proposal of Dr. Donald Ross that invitations be extended to foreign psychiatrists to attend the Association's annual meetings. That was especially desirable seeing that the League of Nations was doing its utmost to heal the differences caused by the war. He would like to add to the motion the suggestion that the Association should vote funds which would enable the travelling expenses of the French delegates to be met, the offer being naturally made as tactfully as possible, and perhaps some members would help to entertain them while they remained here. He suggested a small sum to meet the case.

The PRESIDENT said the additional proposition would receive sympathetic consideration by the Council, but the money could not be voted that afternoon. The proposal by Dr. Ross was agreed to unanimously and that of Prof. Robertson's referred to the next Council meeting.

THE FEBRUARY QUARTERLY MEETING.

The PRESIDENT said that the Association had received a very cordial invitation from Dr. Dove Cormac to hold the February meeting of next year at Macclesfield. The Association's May meeting was largely devoted to the Maudsley Lecture and must be held in London. Macclesfield was centrally situated for both Northern and Southern members and thus a very convenient meeting-place.

THE PRESIDENT-ELECT.

The PRESIDENT said that his successor in the Presidency would be Dr. Hamilton C. Marr, a member of the General Board of Control for Scotland, and there could be no more worthy representative of Scottish psychiatry, especially on its administrative side. He was sure the Association's welfare would be safe in his hands. His career since he first joined the medical staff at Woodilee Mental Hospital had been full of good works for psychiatry, and since 1896 he had been a very active member of the Association, and for some time did much work for the Journal.

It was proposed to hold the Annual Meeting next year at Edinburgh, in conjunction with the British Medical Association meetings. Full particulars would be announced at the May quarterly meeting.

This concluded the business part of the meeting.

CLINICAL MEETING AT WEST PARK MENTAL HOSPITAL.

A large number of members then proceeded to West Park Mental Hospital for the clinical meeting.

The President resumed the chair.

Dr. NORCLIFFE ROBERTS, the Medical Superintendent, extended a cordial welcome to members, and remarked that he would have wished the visit had been paid at a later date, as the buildings would then have been completed. He went on to explain that the hospital had lately become a treatment centre for cases of chronic epidemic encephalitis, drawn from London and extra-Metropolitan areas, who were certified under the Lunacy Acts.

He asked for some indulgence for Dr. McCowan, who was not very well, having only just left a bed of sickness.

PAPER.

On Chronic Epidemic Encephalitis, by Drs. P. K. McCOWAN and J. S. HARRIS (*vide p. 40*).

Following the reading of the paper by Dr. McCowan, Dr. Harris demonstrated about 30 of the 58 cases of the disease in various stages and of both sexes. It was a truly remarkable demonstration. Cases in clinical groups passed slowly in front of members, each group more or less exhibiting a cardinal feature of the disease. A short clinical summary was given of each case.

The PRESIDENT, in closing the meeting, congratulated Dr. Roberts on its success, and thanked the authors for the paper they had heard and for the fine demonstration they had seen.

Afterwards Dr. and Mrs. Norcliffe Roberts entertained members to tea.

VISIT TO THE MANOR CERTIFIED INSTITUTION.

During the afternoon about 30 members visited the Manor Certified Institution and were received and shown round by the Medical Superintendent, Dr. E. S. Litteljohn.

Members expressed themselves as having been much interested and instructed by all they had seen and heard, and congratulated Dr. Litteljohn on the high pitch of excellence that had been reached, both as regards the clinical work and the social and industrial side of the institution.

Members afterwards took tea with Dr. Litteljohn.

ENTERTAINMENT AT HORTON.

During the whole of the day the Horton Mental Hospital was entirely thrown open to members. The "order of the day" to all officers and nurses and other employees had been to afford every facility and information to the visitors. This was faithfully done. No department and but few of the wards escaped visitation, and members were everywhere made welcome.

A demonstration in regard to malarial research by Col. S. P. James and Mr. Shute, at the special hospital for the treatment of general paralysis, was well attended. Microscopes were loaned by Hawksley.

THE LUNCHEON.

At the kind invitation of the President about 150 members sat down to lunch in the Recreation Hall soon after 1 p.m. Selections of music were played by the Horton String Orchestra, under the leadership of Mr. R. H. Young.

At its conclusion the senior ex-President present, Dr. R. Percy Smith, proposed the health of the President, and in felicitous terms referred to the great services that gentleman had rendered to the Association.

After the toast had been duly honoured the President, in thanking those present for the compliment they had just paid him, said that all their quarterly meetings should as far as possible be held at one of the mental hospitals or mental deficiency institutions. They could thereby learn a good deal, even if it was only what to avoid doing. They were very welcome that day at Horton, and he trusted they would derive both pleasure and profit from their visit.

He presented the apologies of the Chairman of the Mental Hospitals Committee, Mrs. Dunn Gardiner, *J.P.*, and of the Chairman of Horton Mental Hospital, Mr. H. J. Greenwood, *D.L., J.P.*, for their absence. The hospital was very proud of its Chairman, who, with the speaker as Medical Superintendent, entered on his duties in the same year, 1907. He thought this was a unique record. (Applause.) There was present, however, representing the hospital sub-committee, the Hon. Eleanor Ritchie—(Applause)—who devoted much of her time to that and other London mental hospitals.

Members were entertained to tea by the Matron, Miss M. Thorburn, *R.R.C.*

SOUTH-EASTERN DIVISION.

THE AUTUMN MEETING of the South-Eastern Division was held, by the courtesy of Dr. Colin McDowall and Col. C. M. Hayes Newington, at Ticehurst House, Ticehurst, Sussex, on Thursday, October 7, 1926.

There was a large attendance of members and their families, also a number of visitors.

The members were shown round the Hospital and the beautiful grounds, and were then entertained hospitably to luncheon, at the conclusion of which the President (Lt.-Col. J. R. Lord) proposed a hearty vote of thanks to the hosts.

The meeting was held at 2 p.m., the President presiding.

The minutes of the last meeting, having appeared in the Journal, were taken as read, and confirmed and signed by the Chairman.

The PRESIDENT then referred in feeling terms to the death of Dr. R. H. Cole,

and the members present expressed their deep regret at his passing by rising and standing in silence.

The following candidates were balloted for and unanimously elected ordinary members :

WILLIAM JOSEPH COYNE, M.B., B.Ch., N.U.I., D.P.M., Assistant Physician, Chiswick House, Chiswick, W. I.

Proposed by Drs. D. W. Macaulay, Colin McDowall, and Noel Sergeant.

ARCHIBALD GLEN DUNCAN, M.D., B.S., M.R.C.S., L.R.C.P.Lond., Assistant Medical Officer, Severalls Mental Hospital, Colchester.

Proposed by Drs. R. C. Turnbull, A. F. Grimbly and F. Kiddle.

It was left to the Secretary to arrange the Spring Meeting, 1927, the President suggesting that it be at an institution for mental defectives if possible.

Dr. COLIN McDOWALL read a paper on "Voluntary Boarders," which was discussed by Drs. H. BAIRD, HELEN BOYLE, G. W. B. JAMES, H. WOLSELEY-LEWIS, J. R. LORD, H. J. NORMAN, D. ODLUM, W. ROBINSON, W. J. T. KIMBER, NOEL SERGEANT and Mr. W. H. GATTIE, of Camberwell House.

The members later had tea, and thus ended a most enjoyable and instructive meeting.

SOUTH-WESTERN DIVISION.

THE AUTUMN MEETING of the Division was held, by kind invitation of Dr. J. Grimmond Smith and the Committee of Visitors, at the City and County Mental Hospital, Burghill, Hereford, on Thursday, October 28, 1926.

Fourteen members and two visitors were present. The very unfavourable weather was responsible for the absence of several members, and letters of apology were received from the President (Lt.-Col. J. R. Lord), Drs. W. F. Nelis, J. D. Thomas and others.

Dr. J. G. Soutar was voted to the Chair, and the minutes of the last meeting, having appeared in the Journal, were taken as read, and confirmed and signed by the Chairman.

A letter from the Hon. General Secretary was read with reference to a resolution passed at the last meeting of the Division, also letters of acknowledgment from relatives of two late members, to whom messages of condolence had been sent.

A letter from Dr. A. A. D. Townsend, *re* the Association's nursing examinations, was read and discussed.

Dr. W. Starkey was nominated as Hon. Divisional Secretary, and Drs. R. Eager and J. G. Soutar as Representative Members of Council.

The following candidates were balloted for and unanimously elected ordinary members of the Association :

DUNCAN MENZIES, L.M.S.S.A., Assistant Medical Officer, Somerset and Bath Mental Hospital, Wells.

Proposed by Drs. J. McGarvey, W. Starkey and H. B. Wilkinson.

WALTER LOUIS ESSON, M.A., M.B., Ch.B.Aberd., Assistant Medical Officer, Devon County Mental Hospital, Exminster.

Proposed by Drs. R. Eager, J. W. Murdoch and W. Starkey.

The date of the next meeting was fixed for Thursday, April 28, 1927, the Hon. Divisional Secretary to arrange place of meeting.

The CHAIRMAN raised the question as to whether the Representative Members of Council should be *ex-officio* members of the Committee of Management, and also sought the opinion of the meeting on matters in the Agenda of the next meeting of the Council.

Dr. R. EAGER then introduced a discussion on the Report of the Royal Commission on Lunacy and Mental Disorder, and in an able analysis of that document touched on most of the important findings and recommendations. A discussion ensued in which most of those present took part.

Owing to the lateness of the hour, Dr. Fleming's paper on "Introverted and Extroverted Tendencies of Schizoid and Syntonic States as Manifested by Vocation," had to be postponed.

A hearty vote of thanks to Dr. Smith and the Committee closed the proceedings.

During the morning members were conducted round the Hospital by the resident medical staff and were most hospitably entertained to lunch and tea.

NORTHERN AND MIDLAND DIVISION.

THE AUTUMN MEETING of the Division was held at Cheadle Royal, Cheshire, on Thursday, October 28, 1926, by the courtesy of Dr. J. A. C. Roy.

During the forenoon the hospital and grounds were inspected, after which Dr. Roy entertained the members to lunch.

Dr. Roy occupied the Chair at the meeting and there was a large attendance of members.

The minutes of the last meeting were read, confirmed and signed by the Chairman.

Drs. Adair, E. C. Mould and Bedford Pierce were re-elected members of the Divisional Committee.

The following candidates were balloted for and duly elected Ordinary Members of the Association :

JOSEPH BRAITHWAITE, M.B., Ch.B.Edin., Assistant Medical Officer, City Mental Hospital, Gosforth, Newcastle-on-Tyne.

Proposed by Drs. H. D. MacPhail, C. Gray and J. Gilmour.

GWENVRON MARY GRIFFITHS, M.D., M.R.C.P.Lond., Assistant Medical Officer, County Mental Hospital, Cheddleton, Staffs.

Proposed by Drs. W. F. Menzies, W. D. Wilkins and J. Gilmour.

PHYLLIS MARY HORTON, M.R.C.S., L.R.C.P.Lond., Assistant Medical Officer, Wye House, Buxton.

Proposed by Drs. W. W. Horton, A. H. Boyle and J. Gilmour.

Dr. K. K. DRURY read a paper entitled "Ultra-Violet Therapy in Mental Hospital Practice." This led to an interesting discussion.

Dr. L. C. F. CHEVENS gave "Some Impressions of Psychiatry in the U.S.A."

The tendency in the Eastern States is to stress the importance of the *prevention* of insanity. In Massachusetts a problem child can be cared for by means of habit clinics for children of pre-school age, supported by the State, and by child guidance clinics, notably the Judge Baker Foundation in Boston, until it reaches adult life. Adults can be sent for observation and treatment, before certification, to the Boston Psychopathic Hospital, and similar institutions in other States. Often commitment to State hospitals, of which our county mental hospitals are the prototypes, is thus rendered unnecessary. Much useful work is done by the out-patient departments of psychopathic hospitals.

This preventive work is rendered possible by highly organized social service agencies. Social service attracts an extremely well-educated type of worker. Education of the family of a patient in the right method of dealing with him, interviewing employers to induce a sympathetic attitude, collection of salient facts about a case from all sources for the use of the psychiatrist, arranging for suitable living quarters for a patient, keeping him "up to scratch" in the matter of attendance at hospital and similar activities testify to the usefulness of social workers. The hospital or clinic is enabled, through them, to make its influence felt in the daily life of the patient.

Child guidance clinics deal principally with delinquent children, many of whom are sent by juvenile courts. The delinquency is a mere incident. The important factor, in their view, is the state of mind of the child brought about by the interaction of its personality with the environment. Often the environment has to be changed, and the utility of the work of the clinic in the life of the community is rendered possible by the number of agencies, including, in Massachusetts, the State Placing Board, whose function is to place the child in a suitable foster home. Thus many children, who would otherwise be sent to industrial schools or reformatories, develop (in healthy surroundings) into useful citizens. The establishment of these clinics has probably been hastened by realization of the extent of the problem of the juvenile delinquent, brought about by the mixture of races and the large number of Southern Europeans of poor stock found in the eastern cities.

The actual State hospitals were somewhat disappointing, but that may be because too much was expected after what may be termed the "show-places" had been seen. A good point appeared to be the extensive use made of prolonged baths. Routine vaccination and inoculation against typhoid of each patient, and, in many institutions where young patients are admitted, routine use of the Schick test, indicate the attention paid to general health. Stenographic assistance

for the assistant medical officers and the case folder system of note-keeping seemed of value.

The complete separation of administrative from clinical duties seen in several institutions was of interest.

The great use made of the services of psychiatrists and psychologists in varied spheres of the life of the community point to the realization in America of the necessity for mental hygiene.

Dr. G. G. PARKIN read a paper on "Some Observations on the Study of Blood-pressure in the Insane."

Altogether 1,338 observations were made on 115 male and 114 female patients, and for purposes of comparison included 174 on 27 attendants and 31 nurses.

Examples of most of the recognized forms of mental disorder were represented.

The main feature of the results was that whatever the form of mental disorder, there was an immediate but usually transient rise in the systolic pressure in response to excitement or agitation.

Long-continued excitement or agitation tended to cause the systolic pressure to fall lower than it was in the quiet states.

Among other points of interest it was found—

That in cases of melancholia (where neither the history nor observation when in the hospital indicated any period of excitement) there was a higher systolic pressure as compared with cases in the depressed stage of manic-depressive insanity.

In two cases of melancholia with stupor the high systolic pressure readings of melancholia were raised still higher.

In all groups the diastolic pressure varied within much narrower limits than the systolic pressure.

The observations furnished no evidence of any necessary connection between blood-pressure and insanity, or that insanity caused a change in blood-pressure.

Both papers led to a very interesting discussion, in which several members took part.

A very cordial vote of thanks to Dr. Roy for his hospitality and for a most interesting day's programme was unanimously carried.

This concluded the meeting.

SCOTTISH DIVISION.

THE AUTUMN MEETING of the Scottish Division was held at Gartloch Mental Hospital, Gartcosh, on Friday, November 19, 1926.

There were 34 members present.

Dr. Hamilton C. Marr, the President-Elect, was called to the Chair.

The minutes of last Divisional Meeting were read and approved, and signed by the Chairman.

The SECRETARY submitted letters from Dr. Kate Fraser and Lady Mott, thanking the Division for its kind letters of sympathy.

A letter was submitted from Dr. J. Keay regretting his inability to accept the additional office of Divisional Chairman. Dr. R. D. Hotchkis was unanimously elected Chairman of the Division for the remainder of the year, and at this point took the Chair.

The Business Committee was appointed, consisting of the nominated member of Council, the two representative members of Council, the Chairman of the Division, Dr. Crichtlow and the Divisional Secretary.

Dr. R. B. Campbell and Dr. Neil T. Kerr were nominated representative members of Council, and Dr. Wm. M. Buchanan Divisional Secretary.

The following candidates, after ballot, were unanimously elected ordinary members of the Association:

THOMAS TENNENT, M.B., Ch.B.Glasg., D.P.H., Assistant Medical Officer, Renfrew District Asylum, Dykebar, Paisley.

Proposed by Drs. R. D. Hotchkis, N. T. Kerr and W. M. Buchanan.

ALEXANDER REID MARTIN, M.B., B.Ch.Belf., D.P.M., Assistant Medical Officer, Gartloch Mental Hospital, Gartcosh.

Proposed by Drs. A. M. Dryden, M. Brown and W. M. Buchanan.

GORDON JOHN SMITH, M.B., Ch.B.Aberd., Assistant Physician, Royal Hospital, Morningside, Edinburgh.

Proposed by Prof. G. M. Robertson, Drs. W. M. McAlister and T. M. Davie.

The **DIVISIONAL SECRETARY** intimated that the revised arrangements for the **Final Examination in Mental Nursing** of the **General Nursing Council for Scotland** were working smoothly.

There was nothing further to report regarding the **Asylum Officers' Super-annuation Act Amendments**.

Dr. MALCOLM BROWN read a paper on "The Age-Incidence of Syphilis in Asylum Practice," which was discussed by **Dr. HAMILTON C. MARR** and **Dr. D. K. HENDERSON**.

Members then broke up into groups and were shown over the hospital by **Dr. Dryden** and his assistants.

Members were entertained to lunch, after which **Dr. HOTCHKIS** expressed the cordial thanks of the Division to the **Glasgow District Board of Control** and to **Dr. Dryden** for the arrangements made in regard to the meeting and for their kind hospitality.

On the meeting resuming **Dr. A. R. MARTIN** and **Dr. MALCOLM BROWN** communicated a paper, read by **Dr. Martin**, on "The Treatment of General Paralysis by Tryparsamide," and **Dr. T. M. DAVIE** read a short paper on "Tryparsamide Therapy in General Paralysis." These papers were discussed by **Drs. DOUGLAS McRAE, D. K. HENDERSON, RAE GIBSON** and **McALISTER**.

Dr. MARTIN presented a case of general paralysis showing improvement following treatment by tryparsamide, and a case of general paralysis with focal symptoms. **Dr. ROBB** presented a case of encephalitis lethargica with the lesions more marked on one side.

A vote of thanks to the Chairman terminated the meeting, after which members were kindly entertained to tea.

IRISH DIVISION.

THE **AUTUMN MEETING** of the **Irish Division** was held in the **College of Physicians of Ireland**, by the kind permission of the **President** and **fellows**, on **November 4, 1926**.

Dr. D. L. Kelly, **Inspector of the Free State Mental Hospitals**, presided.

The minutes of the previous meeting were read, approved and read by the **Chairman**.

The meeting proceeded to consider the report of the deputation to the **Minister for Local Government** re **Representation upon the General Nursing Council**.

The members of the deputation, **Dr. D. L. Kelly**, **Dr. J. O'C. Donelan** and **Dr. R. R. Leeper**, **Hon. Sec.**, reported that they had been received by the **Minister for Local Government** and had urged the claims for representatives of the **Division on the General Nursing Council**. The **Deputation** had been received in a friendly spirit, and the **Minister** had recognized the justice of the claims, and had promised, when the occasion arose, to meet them.

The meeting then discussed the position of mental nursing in the **Free State**, and the **Advisory Committee** appointed by the **Division** to tender their services to the **General Nursing Council** were authorized to express the views of the **Division** fully to the **General Nursing Council** at their meeting, which was summoned for the following day, **November 5, 1926**.

It appeared that the arrangements for the holding of examinations in the **Free State** for the **Certificate of the General Nursing Council** had not been completed, and that no examinations for mental nurses had, as yet, been held.

The meeting next heard a paper by **Dr. ROBERT THOMPSON** on "The **Ætiology, Psychopathology and Treatment of Exhaustion and Paranoid States**."

Dr. Thompson's paper gave rise to an interesting discussion.

Dr. J. O'CONNOR DONELAN agreed with the statement of **Dr. Thompson** regarding the physical origin of many of the psychoses, and believed that further research would reveal other physical causes at present unknown. He did not agree with **Dr. Thompson** that the bromides were of such therapeutic value as suggested. In his experience the bromides, though often reducing restlessness, seemed to aggravate the depression and retard recovery. He still believed that there was a useful sphere for the administration of sulphonal. Years ago he had experimented with this drug and had found all round good results. It was slow in action, but induced prolonged sleep and had a soothing effect. He always, however, prescribed each dose separately as required, and did not approve of continuous

administration. He believed that, above and beyond all these measures, the best routine treatment in dealing with acute cases was the immediate clearing out and antisepticizing of the alimentary canal, and he had seen great improvement follow this course. He usually ordered calomel, together with other intestinal antiseptics. As regards paranoia he looked upon it as an inborn defect, and he held out very little hope for these patients. He knew of many cases that were able to conceal their delusions and were thus able to effect their discharge. In one remarkable case, where no symptoms could be discovered for six months, the patient wrote a long letter, full of the most exalted and paranoid delusions, to the head attendant the day following his discharge.

Dr. J. MILLS believed that something more than physical treatment was required to effect a cure in exhaustion cases. He had often seen patients with a remarkable physical improvement—the result of the clearing out of the bowels and the administration of good food and tonics—show no sign of mental improvement until some chance psychological stimulation seemed to arouse them. Favourable results, he did not think, would be obtained in exhaustion cases by tonic treatment alone, but it acted as a very useful basis. He considered that paraldehyde was a most valuable and harmless agent for inducing sleep, and he regarded sulphonal as a wholly unsatisfactory drug. He had seen a series of severe epileptiform fits follow its use, and had noted physical and mental deterioration to result from its prolonged administration, but he considered chloralamide not to be depressing or injurious in any way. He regarded influenza as the most potential causative toxin in exhaustion psychoses, and stated that, many years ago, he heard Sir Thomas Clouston state that influenza was the most potent nerve poison known to civilization. As regards paranoia, his experience, perhaps, had been unfortunate, but he held a most pessimistic view of these patients. They were, to believe the poets, "*nascitur non fit.*"

Dr. L. G. stated that he had worked in a hospital, many years ago, where a wholesale administration of sedative drugs was practised in every case, and the results were, in his opinion, entirely unsatisfactory. He could not share the author's appreciation of bromides. Several patients had begged him to stop their bromide on account of the marked depression it was producing. He believed, with Dr. Mappson, that the main line of attack in these cases should be psychotherapy combined with the administration of tonics, such as iron and arsenic. He also agreed with Dr. Thompson that one should, if possible, try other forms of treatment before certifying paranoid patients. He thought that many such patients at present in mental hospitals and suffering from harmless delusions might be capable of useful work under the supervision of friends in the outside world.

Dr. H. R. C. RUTHERFORD discussed the psychogenic and physiogenic factors in the aetiology of mental disease, and stated that both were, probably, always present, though varying in proportion in each case. One physiogenic factor he thought of great importance was the defective functioning of the ductless glands. By means of small doses of thyroid one could activate the adrenals and thus reach the sympathetic nervous system, which, in his opinion, was probably always involved in mental disturbances. He regarded this treatment as a most useful line of attack in cases of paranoia. He believed in the efficacy of small doses of bromide, and considered that a search should be made for septic foci in every case.

Dr. G. H. KEENE said that in the year 1902 he had worked with the late Dr. Conolly Norman, who placed very little confidence in drugs, but relied upon good nursing. After this he went over to England and worked in a hospital where sedatives, such as sulphonal, were constantly administered. He then went to Buda Pesth, where hydrotherapy was in full swing. As regards the practical results, he had never been able to see very much difference in these three forms of treatment. He had seen some marvellous instances of spontaneous cures in long-standing and apparently hopeless cases, and he remembered one dangerous paranoiac who recovered completely for several months while suffering from a carbuncle, but relapsed immediately this was cured.

The CHAIRMAN stated that he had been greatly interested both by the paper and the discussion. He was not now actively engaged in the medical treatment of the insane and he had to view this work from an administrative standpoint. He had recently visited the continent, and was satisfied that there were as good clinical psychiatrists in Ireland as in any centre he had visited. He was greatly

pleased with the work that was being done in the Free State mental hospitals. He wished to state that, in the case of medical vacancies in the Service, the names of selected candidates for these appointments now went before the Minister for Local Government, and that he, Dr. Kelly, in his advisory capacity would always advocate the claims of those who had proved themselves to be active and capable clinical workers.

Dr. THOMPSON having replied, the proceedings terminated.

EDUCATIONAL NOTES.

The Maudsley Hospital, Denmark Hill, S.E. 5 (University of London).—Lectures and Practical Courses of Instruction for a Diploma in Psychological Medicine, Course X, 1927.

Part I commences on January 4, 1927.

(1) Twelve lectures on the Physiology and Anatomy of the Nervous System. By F. Golla, M.D., F.R.C.P.

Practical Instruction and Demonstrations: Physiological Chemistry. Demonstrator, S. A. Mann, B.Sc.Lond., F.I.C.

Anatomy of the Central Nervous System. Demonstrator, Charles Geary.

Methods of Physiological Psychology. By F. Golla, M.D., F.R.C.P.

(2) Four lectures on the Histology of the Nervous System and the Endocrine Organs. By C. da Fano, M.D. Followed by Practical Instruction in Histological Methods.

(3) Eight lectures on Psychology. By Henry Devine, M.D., F.R.C.P. Followed by Course of Practical Instruction.

Part II will follow in March, 1927, and will include lectures and demonstrations on the following subjects. (A detailed time-table will be issued later.)

(1) Eight lectures on the Psychoneuroses. By Bernard Hart, M.D., F.R.C.P.

(2) Eight lectures on Morbid Psychology. By Edward Mapother, M.D., F.R.C.S., M.R.C.P.

(3) Four lectures on the Pathology of Mental Diseases. By F. Golla, M.D., F.R.C.P. Followed by four demonstrations in Pathological Anatomy, by Charles Geary.

(4) Two lectures on the Legal Relationships of Insanity and Treatment. By C. Hubert Bond, D.Sc., M.D., F.R.C.P.

(5) Six lectures on the Practical Aspect of Mental Deficiency. By F. C. Shrub-sall, M.D., F.R.C.P.

(4) Four lectures on Crime and Insanity. By W. Norwood East, M.D.

(6) Three lectures on Therapeutics. By A. A. W. Petrie, M.D., F.R.C.S., M.R.C.P., D.P.M.

(8) Six demonstrations in Clinical Psychiatry. By Edward Mapother, M.D., F.R.C.S., M.R.C.P.

(9) Twelve Clinical Demonstrations in Neurology. By F. Golla, M.D., F.R.C.P., and F. M. R. Walshe, D.Sc., M.D., F.R.C.P.

(10) Two lectures on Abnormalities of the Fundus Oculi. By R. Foster Moore, M.A., F.R.C.S.

(11) Four demonstrations with Practical Instruction in Laboratory Methods. By S. A. Mann, B.Sc.Lond., F.I.C.

Posts as voluntary clinical assistants at the Maudsley Hospital may be granted without fee to practitioners of both sexes specializing in Psychological Medicine. These appointments can be either for whole or part-time work in wards, out-patient department or laboratories as desired. They can be held in conjunction with attendance at either part of the course for the Diploma in Psychological Medicine. Such an appointment will satisfy the requirements of the various examining bodies in respect of clinical experience of mental disorders for the Diploma in Psychological Medicine or for the M.D. in Psychological Medicine; its necessary duration depends on whether it is whole or part time. There are various other opportunities for clinical study, also without fee, to all attending the course. Applications and inquiries regarding these clinical facilities should be made to the Medical Superintendent of the Hospital.

Fees: For the whole course of Parts I and II, £15 15s.; for Part I separately, £10 10s.; for Part II separately, £10 10s.; for a single series of lectures in Part I, £4 4s.; for a single series of lectures in Part II, £2 2s.; for a single series of demonstrations only, £1 1s.

Inquiries as to Lectures, etc., should be addressed to "The Director of the Central Pathological Laboratory," Maudsley Hospital, Denmark Hill, S.E. 5.

Tavistock Clinic for Functional Nerve Cases, 51, Tavistock Square, W.C. 1.—A Short Course of Lectures on Functional Nerve Disorder for practitioners and students will be given at the Tavistock Clinic, beginning February 14, by W. Langdon Brown, M.D., F.R.C.P., J. R. Rees, M.A., M.D., S. Roodhouse Gloyne, M.D., D.P.H., James Young, M.D., and H. Crichton-Miller, M.A., M.D. For further particulars apply to the Hon. Lecture Secretary at the Clinic.

MENTAL HYGIENE: AN ADDRESS.

By the Rt. Hon. H. P. MACMILLAN, K.C., LL.D.

[Delivered at a Public Meeting of the National Council for Mental Hygiene at the House of the Royal Society of Medicine on November 17, 1926, the Rt. Hon. Lord Southborough, G.C.B., presiding.]

MY LORD, LADIES AND GENTLEMEN,—I am fully sensible that my only title to address you this afternoon lies in the fact that for two years past I have been a humble inquirer in regions in which so many of my audience this afternoon are practised experts. One thing which has been borne in upon me is that it is much easier to seek for truth than to find it, and another is that it is much easier to find it than to expound it when you have found it. (Laughter.) But I am also embarrassed by another circumstance, which is that the Report of the Royal Commission—the authorship of which I share with my fellow Commissioners—already contains all the best things I can say upon this subject, and therefore it is somewhat difficult to address you upon matters upon which we have already delivered ourselves at such length. In the two hundred pages of that Report we have covered to the best of our ability all the topics to which our attention was drawn. I can scarcely hope that even at the figure of 3s. 6d., at which the Treasury values our labours, our Report can become one of the best sellers of the season, but at least it does represent an honest endeavour to grapple with the problems which I know everyone in this room has so much at heart. (Applause.)

Your Chairman has referred in flattering terms to the labours of the Royal Commission. I notice, however, that in the printed report of your Council it is referred to with a little more reserve. It is stated, with a caution which appears to be almost Scottish, that "In so far as the recommendations of the Royal Commission fall short of the views expressed by the Council, it will be its duty to secure modification by appeals both to the Legislature and to the central and local lunacy authorities. As far as these recommendations satisfy the aspirations of the Council, the latter will need to supply its quota of the stimulus which will undoubtedly be necessary before the Legislature can be persuaded to adopt them." Speaking for myself, and my colleagues, I am glad to have even that qualified measure of approval from so august a body as the National Council for Mental Hygiene, but you are perfectly right, if I may say so, to observe a critical attitude, and you are perfectly right to recognize that we have not been able, in every one of the matters placed before us in your valuable contribution to our investigation, to adopt every one of your suggestions. Reformers must always be idealists. Their aspirations inevitably outstrip at the moment what can be within the realm of practical achievement. I have no sense of grievance at all that the National Council expresses itself in this way. It will be left for my successor in some subsequent investigation, no doubt, to express all that you desire.

What is to me so gratifying is to find myself this afternoon among those who are devoting their energies to carrying into practical effect projects of which I fear I can only regard myself as a theoretical exponent. The aims and objects of your Council are of a practical character. The Report of the Royal Commission

or any other body of investigators is of no value if it is merely put in a pigeon-hole. The task now passes from the hands of the investigators into the hands of those who, if they are so minded, will put our recommendations into effect, and the National Council can do valuable work in stimulating the Legislature to address itself to the task of carrying out our recommendations, at least in so far as they commend themselves to the National Council. (Laughter.)

I should like on this occasion to address myself quite briefly to two main topics, and I am encouraged to do so by the fact that they are both matters which you place in the very forefront of the objects of your Society. The first of these two topics is the preventive aspect of your work. It was borne in upon us in the course of our inquiry, almost from the outset, that in this great department of social service prevention seemed to be the last thing thought of, and the passage which your Chairman has read from our Report puts in succinct form our view upon that matter.

It is contrary to the canons of modern remedial science that you should wait until misfortune and disaster have done their worst before you proceed to apply the remedy. Such a course carries its own condemnation, and I am happy to find that your Council has recognized that reform is more generally required along these lines than in any other direction. The matter is not merely one of preventive medicine in its ordinary acceptation. The prevention of mental disease is a matter of far-reaching scope. It involves not merely the medical man, but also the social worker. The causes of mental illness are still obscure, but if we are to tackle the problem we must do so not merely in the mental hospital, not merely even, may I say, in the clinic, but it must be tackled at an earlier stage still. The law hitherto has provided only crude implements with which to deal with so difficult a subject. It is incapable of recognizing fine shades, and has contented itself with drawing an unscientific distinction between the sane and the insane. Human nature and human experience do not fit themselves to any such precise division. It may be well enough for the lawyer and for the Courts to rest upon distinctions of that sort—indeed they must do so—but on the other hand, those of you who have studied these problems know how infinitely subtle are the gradations which mark the passage from complete mental health to complete mental breakdown, and all of us have, I think, marked the distressing and unhappy symptoms of mental ill-health falling short of certifiability, and yet productive of much misery, and possibly leading ultimately to disaster.

I take it that your Council is concerned, therefore, not merely with the medical aspect of this matter, but also with its widest social aspect, and that you address yourselves to the problems of the mental ill-health of the community from the very outset as a problem of public health. You are desirous of investigating the cases in their homes, of studying the circumstances under which these cases occur, and of collating the results of those studies with a view to attaining your main object—an improvement of the mental health of the community.

The prevention of national mental ill-health may be approached in various ways. It may be approached educationally, and when I say educationally I think of two points of view. There is, first of all, the professional point of view. There, again, I find myself in sympathy with one of your aims. It is a strange thing that the study of mental instability and mental disorder should for so long have occupied in the medical curriculum the position of a Cinderella. None know better than you do how crowded are the five or six years of the medical student's curriculum, and how much he has to undertake during that period. But surely there must be something wrong with the system which launches into the world doctors who have to deal with these problems of mind with practically no preparation in some instances, in other instances with an inadequate preparation, to enable them to diagnose and to cope with that most distressing of all forms of illness. I think I would sacrifice—I may be talking heresy—but I think I would sacrifice a little of the botany and zoology in favour of a little more knowledge of mind. (Applause.) Far be it from me to belittle these subjects, but I would rather be attended in my hours of mental distress by a doctor who knew about psychology and psychiatry than by one who knew about the habits of the tadpole, or had an intimate knowledge of the flora of his native land. (Laughter.) I feel, therefore, that you do well to put in the foreground of your case the importance of the teaching of this subject. You will do well, I think, to urge in season and out of season that the medical curriculum ought to make

provision for this great branch of study in a way it has not done in the past, even should it involve the sacrifice of certain other studies which at present find their place there.

That is the academic side, but there is a much wider aspect of the problem; you have to educate the people of this country. It is only within recent times that we have been passing out of what I might call the dark ages in regard to this subject. Whether it is due to a certain natural repugnance which mental disorder induces in the healthy, or whether it is due to lingering superstitions of the past, for some reason or another those who have been mentally afflicted have always been set apart from their fellows, and have undoubtedly suffered from a stigma which is as cruel as it is unjustified. (Applause.) I cannot see why a person whose misfortune it is to be ill in mind should suffer a stigma, and the person who is ill in his appendix incurs no such stigma. (Applause.) But you have an uphill task, because the old traditions linger, and the inculcation of a proper attitude to mental disorder in all its forms is a task well worthy of your Council's best efforts. It is a matter on which you can educate the people of this country.

Now that is, in a sense, a branch of prevention, because you must, first of all, bring about knowledge of the disease, knowledge of the causes of mental ill-health; you must bring about a proper public attitude to these matters before you can address yourselves specifically to particular reforms designed to eliminate, so far as you can, the causes of mental disorder from our midst.

There are other matters more purely scientific where again the stimulus of your Council ought to be directed. The whole subject of psychological medicine is really still on the threshold of discovery, and we have learnt within the last few years that the new spirit which has animated the medical profession in this matter, and particularly those who have devoted their lives to it, has already been productive of immense advantage.

We are now realizing that this branch of medical science requires all the apparatus of the laboratory, all the investigating apparatus which is at the disposal of other branches of medicine, and fruitful results have already been attained through the development of inquiry along these new lines. We want to see the scientific side developed by the institution of more laboratories where research work can be carried on, but we want also to see the clinical side developed by the institution of clinics where mental ailments may be studied in the same way as other ailments are studied. We want to get the whole subject removed from the atmosphere of suspicion and distaste which invests it—we want a new and sane outlook upon the whole problem. (Applause.)

There is, as I say, the educative side of prevention; there is the treatment side of prevention; but there is a further side, there is what I would venture to call the "social side." You want to investigate the conditions of the people; you want to find why cases arise; in almost every instance there is some social circumstance which, could it be discovered by the inquirer, would throw a flood of light upon the cause in any particular case. You want to see what are the conditions in our modern life which lead to mental disorder. Why have we in our midst over 133,000 people who are certified lunatics, and as many more I fear who, although not certified, are mentally afflicted, and cause unhappiness not only to themselves, but to those around them? Those people impede the efficiency of the nation, and there is no study more worthy of the philanthropist than the study of the circumstances out of which mental ill-health arises.

All of us know from our own experience how readily and how easily this wondrous structure, the human mind, may be upset. There are all manner of causes; we classify them roughly as physical and mental. You may have grief and distress and anxiety; you may have overwork; you may have unhappy surroundings; you may have mere physical disabilities; insufficient food; want of privacy in your life—all manner of conditions may unhappily reflect themselves in mental disturbance. We want these social conditions to be studied; we want your society to carry out a work of investigation along these lines, because I am satisfied that if the general condition of the people can be improved, and if these causes can be, if not eliminated, at least modified, we would find a remarkable result in the improvement of the mental health of the nation. (Applause.)

One of the matters for which I may, perhaps, claim a little originality in our Report is related to what I have been saying. We found ourselves on the

Commission—which I may say was a most happily unanimous Commission—all in favour of the provision of early treatment. (Applause.) Whenever the earliest symptoms of mental ailment are seen they ought to be treated and dealt with just as you deal with the earliest symptoms of any other illness, and we thought that if it were possible to remove the deterrents which at the present moment prevent people in mental distress from going at once for help, we should do a good piece of work. The tendency is to hush up these matters. Ladies and Gentlemen, we do not hush it up when we have a cold in the head. (Laughter.) We generally make it unpleasantly prominent, not only to our relatives, but to all our friends. (Renewed laughter.) Why is it, then, when a so much more dangerous ailment is threatening there should be a tendency to pretend that things are what they are not—to hush up things as if a mental complaint were some form of disgrace? That is entirely a wrong outlook. These matters should be dealt with by early treatment and without the menace of certification in the background. (Applause.) I do not say that our recommendations are perfect, but they are the best we could propound. They will operate in two directions. We contemplate the great development of voluntary treatment. A great many cases of mental disorder are not truly cases of insanity at all. People are able to realize often that they are mentally ill, just as they are able to realize that they are physically ill, and such people ought to be able to resort to the best possible treatment without the necessity, first of all, of allowing their disease to progress so far that they become certifiable. Not only so, but we think that even in those cases where a certain measure of control is unhappily required, it should still be possible for persons who are really recoverable to escape certification, and the scheme we have proposed in our Report is designed to achieve these ends. I do not say our recommendations are perfect, but along these lines it may be possible in the future to enable many cases where a measure of control is required, and where the law has to be invoked, to avoid certification, to avoid the situation which is brought about now when a person who for a brief period only is under detention—a purely transitory case—must for all the rest of his life labour under the stigma of having been a certified lunatic, with all that that entails.

Now the other matter on which I wish say to a word or two—again a matter intimately within your province—is this: it is the preservation of contact with the outer world in the case of patients in our mental hospitals. All of us know the admirable work that is done in our general hospitals by visitors from without. I am sure many a patient has been grateful for the kindnesses received at the hands of hospital visitors. Philanthropy has always done a great deal for the patients in our general hospitals—little attentions of all sorts, so welcome when one is feeling down and out, such as entertainments, means of communication with the outside, little services of one sort or another. You cannot over-estimate the importance of those things to a sick person.

Now why is it that in the case of our mental hospitals so little has been done in this direction? Why is it that the general public take so little interest in what goes on inside the walls of our mental hospitals? I am afraid again it is just a relic of that age-long feeling of repulsion and aversion from those who are mentally afflicted. It is right to say that it is not everyone's work; it is work, perhaps, of a more difficult character than the pleasant task of going round the wards of a children's hospital. It is most difficult work, and calls for greater qualities of mind and, perhaps, a deeper sympathy with human misfortune, but I would very strongly impress upon you the desirability of encouraging the visitation of our mental hospitals by unofficial persons from the outside. It is intensely interesting to visit these places, and no one can visit them without seeing how welcome are visitors from the outside.

A large part of the population of the mental hospitals of this country consists of people who, notwithstanding the fact that they are suffering from some form of mental aberration, are still very largely able to appreciate kindness, and are susceptible to the pleasures of a visit from a sympathetic friend. Many of them are anxious about the state of their home affairs, and their anxieties can be relieved and a more contented frame of mind induced by the news brought them by friends from outside. We took note in our Report of the admirable work that had been done at Claybury Hospital by a lady visitor there, but I am happy this afternoon to be able to make good an omission from that Report. I fear we failed to do justice to one who, after all, has been truly the pioneer in this work; I refer to

your Honorary Secretary, Lt.-Col. Lord. (Applause.) It was really through his instrumentality that the first lady visitor was introduced into Horton Hospital, and since then, I believe, in the case of no fewer than seven out of the nine London County Council Hospitals there is a lady visitor, who makes it her business, her pleasure, her vocation, to go in and out among the patients, to render to them just those forms of service of which I have spoken. Col. Lord could tell you very much better than I can of the value of that service. It is a form of contact between the outer world and the patient which is of inestimable value. The most distressing thing to many patients is the feeling that they are cut off from the world, that the world no longer cares for them, and that they are a people set apart as if some strange curse had fallen upon them.

Now a visitor from outside can do an immense amount to help in that respect, and I think lady visitors are perhaps the best. Why is it we like and admire hospital nurses so much—(Laughter)—and why is it that Dr. Robertson has recognized how important it is to have women nurses to as large an extent as possible in mental hospitals? It is because of the sympathy and the refining influences which they can bring to bear that their services are so intensely appreciated in all circumstances of sorrow and distress, and therefore it is to the woman who may be disposed to take up that branch of work that I make a special appeal on this occasion. And it is a rewarding form of work, it seems to me. Sometimes it is distasteful, sometimes depressing, sometimes discouraging, but all who choose to take it up will find an exceeding great reward in the gratitude of those to whom they minister. They are also able to contribute something to the medical side, because by getting in touch with the homes of the sufferers they are able to find out many facts which can be communicated to the medical officers, and thus often facilitate the diagnosis of cases which might otherwise seem obscure. This organization of mental hospital visitors which is springing up ought to be as little official as possible. We do not want the lady visitor to be an official in the ordinary sense. The patient prefers to see someone who is not stamped with officialdom. It should be rather a labour of love than any official duty, and I would commend that form of social activity as perhaps one of the most valuable contributions to the treatment of the mentally afflicted which your Council might stimulate. (Applause.)

Now, I must not detain you further; I cannot over-estimate the value of services which a Council such as yours may render to society. After all, the Collect with which we are so familiar seems to me to rank human afflictions in their true order. You remember how we are exhorted to bear in mind those who are afflicted or distressed in mind, body or estate. I am, perhaps, more conversant with those who are afflicted in their estates—(laughter)—and you can be very seriously afflicted in your estates, particularly in these days. But affliction in your estate is as nothing to affliction in your body, and many of us have come through experiences when we would gladly have given up all our estate merely to secure comfort of body. But the Collect puts them in their right order. Surely affliction or distress of the mind is the worst of all. Distress of the body may sometimes be conquered by human will, but distress of the mind goes to the very citadel of the soul, and seems to me to be above all things worthy of every endeavour which can be made to remedy it or to alleviate it. Illness of the mind upsets the whole human fabric, and by its attack upon the reason of the human being, renders him truly an object of commiseration. Any society which devotes itself to the elimination or the alleviation of afflictions of the mind seems to me to be addressing itself to one of the greatest possible forms of social service.

I like the title of your Council; you are devoted to the promotion of mental health—*mens sana*—and I would venture to call it a branch of public health. Let us have it dissociated from Poor Law—(applause)—and all the degrading elements which come from that association. Your efforts to promote the mental health of the community—and the lessons I myself have learned during the past two years lead me to say it—God-speed you in your labours! (Loud applause.)

THE NATIONAL COUNCIL FOR MENTAL HYGIENE.

ANNUAL REPORT, 1925-1926.

[An Extract.]

BEFORE summarizing the work of the Council during the past year, mention must be made of some matters of general interest, the most important being the resignation of its first Chairman, Sir Courtauld Thomson, *K.B.E., C.B.*, in February, 1926.

As one of the founders of the Council he naturally had its welfare at heart, and it was only because of pressing private affairs that he most reluctantly vacated the Chair. His resignation was received with the greatest regret. It will be the duty of the Committee elected for 1926-27 to find a successor. At the request of the Committee, Lord Southborough has kindly consented, *pro tempore*, to occupy the Chair.

The Committee also much regretted that Dr. J. L. Birley, *C.B.E.*, found himself unable to continue as Joint Honorary Secretary owing to private affairs. A successor has not been elected, and the work of this post has devolved entirely upon the remaining Hon. Secretary, Lt.-Col. J. R. Lord, *C.B.E.*, during the past year.

The Committee and several of its Sub-Committees have felt very keenly the absence from their meetings, owing to a severe and dangerous illness, of Dr. A. Helen Boyle, who was a constant attendant. It is hoped that her health will soon permit of her full resumption of the work she has so closely at heart.

Report of the Royal Commission on Lunacy and Mental Disorder.—This important and historic document, which was looked forward to with a lively interest, and not a little anxiety, has now been made available to the public.

It cannot be denied that public support has been withheld in some measure pending the conclusion of the Royal Commission's deliberations owing to a misconception that the main aim and object of the Council was the reform of the lunacy administration. A reference to these shows this not to be a fact, but public misconceptions die hard.

The Report of the Royal Commission very largely supports the policy of the National Council as expressed in its *Précis of Evidence*. It was not to be expected, however, that all the Council's views and ideals would receive the approbation of the Commission, and the close examination of its recommendations will be the first duty of the newly elected Committee and Sub-Committees.

The Report shows the existence of the Council to be completely justified as far as its interest in lunacy reform is concerned. The steps foreshadowed as being necessary before recommendations of the Commission can be brought about call for the fullest support being given to the Council as the most representative body concerned with the wide interests involved, both by donations and increase of membership. The education of public opinion in all those problems grouped under the generic term of "mental hygiene" is one of the principal functions of the Council, and it is obvious from the terms of the Report that this is a necessary preliminary to the materialization of the views and recommendations of the Commission.

In so far as the recommendations of the Royal Commission fall short of the views expressed by the Council, it will be the duty of the latter to secure modifications by appeals both to the Legislature and to the central and local authorities. As far as these recommendations satisfy the aspirations of the Council, it will need to supply its quota of the stimulus which will undoubtedly be necessary before the Legislature can be persuaded to adopt them.

Procedure in important questions.—The Council is slowly building up a policy in regard to each of its many aims and objects. The Committee refers problems to the Sub-Committees, and the latter bodies of their own initiative take up the consideration of various aspects of subjects in their terms of reference. The results of the deliberations of the Sub-Committees are reported to the Committee—a copy being sent to the Executive Committee for information and, if necessary, their observations for the consideration of the Committee. On the reports being considered by the Committee they are either (i) referred back, (ii) modified or (iii) adopted, and, if not referred back, expressed in the form of resolutions. These become the policy of the Council for the information and guidance of its executive officers, the members of the Council and the public.

It is obvious that if the considered views and policies of the Council are to have their proper effect the publication of them is absolutely necessary and the establishment of a journal or bulletin urgently needed. Such a journal or bulletin would be the life-blood of the Council, and, if the means were forthcoming to initiate it, the value of its contents and the response to its propaganda would go far to secure its financial success. A large donation for this object would therefore be very welcome to the Council.

Psycho-analysis.—At a meeting of the Committee on January 6, 1926, Lord Riddell drew attention to a leading article in *The Times* on psycho-analysis, and commented on this and some letters which had subsequently appeared addressed to the Editor of that paper, the whole being mainly condemnatory of the practice of psycho-analysis in the treatment of nervous and mental disorders, and proclaiming the matter to be urgently in need of inquiry. In fact, *The Times* went so far as to say that—"This weapon, whether truly forged or not, is capable of inflicting terrible injuries, etc." It subsequently transpired that the case of suicide which gave rise to this publicity had not been subjected to psycho-analysis at all and the agitation soon died down. It has, however, since been revived at a recent meeting of the British Medical Association, but on much firmer grounds, and there is apparently *prima facie* evidence for consideration and inquiry.

The Committee discussed as to whether the Council should take any action, and if so what that action should be. It was pointed out that psycho-analysis as a method of treatment of nervous and mental diseases at the hands of the skilled psychiatrist was a matter primarily of medical concern, and responsibility and the Council was not a body competent to settle a medical dispute. Others urged that the public were badly informed on the subject and needed enlightenment—a position of affairs which was reflected in the attitude of the lay press, and no harm, and possibly much good, might come from a report which limited itself strictly to facts and was both informative and educative. The public might thus be enabled to distinguish between genuine psycho-analysis, which might or might not be a satisfactory and successful form of psycho-therapy, and undesirable and even harmful practices, based upon Freudian teaching, mostly at lay hands, no doubt in some cases well-intentioned, but in others clearly mercenary. Furthermore, psycho-therapy in any form, when not directed by competent persons, was clearly to be condemned, even that affected by educationalists of position and repute.

The upshot in the end was a letter to *The Times*, on January 21, 1926, signed by the Chairman, pointing out that, short of a Government inquiry, and in the event of there being a general demand for a special inquiry, the Council would be a satisfactory tribunal for this purpose. In the meantime the subject stood referred to the appropriate sub-committee for report, and a public pronouncement was promised in due course. As will be seen from the report of Sub-Committee, it has not been found possible for that sub-committee to arrive at a decision.

Delinquency in young people.—During a recent tour in America Mrs. St. Loe Strachey made a study of the splendid work being done there under the aegis of the Commonwealth Fund in regard to child welfare and juvenile delinquency. She gathered it was possible that this Fund might, under certain conditions, be persuaded to give its support to similar work in this country, which might take the form of a demonstration psychiatric clinic for juvenile offenders. She therefore put herself in communication with certain bodies likely to be interested, one of which was the Council. Following a letter addressed to the Honorary Secretary she was invited to attend a meeting of the Executive Committee on March 2, 1926. Subsequently a preliminary meeting was held at her house on March 24, 1926, at which representatives of the Council, the Central Association for Mental Welfare, the Howard League for Penal Reform and the Magistrates' Association attended. They formed a Committee to deal with this matter (which meets as occasion requires, and is presided over by Mrs. St. Loe Strachey), the Council's representatives being Lord Southborough, Lt.-Col. J. R. Lord, and Dr. W. A. Potts.

In response to an invitation from this Committee, the Commonwealth Fund, at its own expense, sent over in June last a representative (Miss Mildred C. Scoville, the Executive Assistant to the Fund) to examine the situation and discuss the project with the members of the Committee. On Miss Scoville's return to America intimation was received that the Commonwealth Fund would need to receive concrete proposals from England before it could come to a decision on the matter.

At a meeting of this Committee on July 20, 1926, it was decided to draw up a

memorandum putting forward suggestions for a demonstration clinic for training, service and research in regard to delinquent, difficult or "problem" children, with a wide scope so as to include prophylaxis, and attached to one of the Universities.

Psychiatry and the medical curriculum.—The position of psychiatry in the medical curriculum and the necessity for the general practitioner to be equipped with a deeper and wider knowledge of psychological medicine has occupied the attention of the Committee, and correspondence with the General Council of Medical Education had taken place.

This urgent need is commented upon in the Report of the Royal Commission on Lunacy and Mental Disorder, and the President of the Royal Medico-Psychological Association (Lt.-Col. J. R. Lord), in his Presidential Address this year in regard to this need, said :

"How much better equipped would he (the general practitioner) be to meet those baffling problems of human character and conduct which he constantly encounters in daily practice were some of that grounding in natural sciences or advanced anatomy and physiology replaced by a sound course of modern psychology, with its many view-points—subjective, objective, phylogenic, ontogenic, industrial, etc.!"

The Council recognizes the difficulty of prolonging or enlarging the scope of the medical curriculum, and that some cut seems essential if psychiatry is to take its rightful place in the education of the medical student. It views the matter as being of so much importance to the mental hygiene of the community that it will continue to urge that this deficiency in the education of the medical practitioner shall be made good. The first essential to its materialization is undoubtedly the greater development of in- and out-patient psychiatric clinics of those general hospitals attached to the medical schools. It is the clinical rather than the theoretical teaching of psychiatry which is deficient in this country.

Degrees and diplomas in psychiatry.—The policy of the Council in regard to the psychiatric training of the medical officers in mental institutions is declared in the following resolution adopted by the Committee :

"The Committee have no doubt that a special knowledge of psychological medicine is necessary for medical officers in mental hospitals, and that there should be definite evidence of it from authoritative sources before they can be considered qualified for the senior posts. They realize that at present this view is not universally practicable, and they feel that a system of study-leave is necessary for its realization."

Occupational therapy and systematic physical training for mental patients.—Similarly the Council has declared its policy in the above matters in the following resolution adopted by the Committee :

"The information of the Committee is that at the present time patients are very largely employed in mental hospitals, especially in ward duties, farming and laundry and needlework, but that special occupational therapy in acute cases is a form of treatment in its infancy in these hospitals and is deserving of every encouragement.

"Where a special occupational officer or a handicraft officer is appointed, he (or she) should be a permanent official of the hospital.

"We also consider that there are many patients in mental hospitals who would greatly benefit by systematic training."

Meetings.—The Third Ordinary General Meeting of the Council was held in the Robert Barnes Hall of the Royal Society of Medicine, on Monday, November 2, 1925, at 4 p.m., Sir Courtauld Thomson in the Chair, following which a public meeting was held to hear an address by the Rt. Hon. the Earl of Birkenhead (Secretary of State for India).

The Committee at its first meeting decided not to re-elect a Propaganda Committee, feeling that its work could be better carried out by the Executive Committee.

Dr. A. Helen Boyle has addressed several meetings during the year on behalf of the Council, among others being the Bradford Frœbel Society; the Society of the Crown of Our Lord, London; the Soroptomist Club of Greater London; the Guild of Health, Bristol; the Public Health Institute, London; and the Frœbel Society, Eastbourne.

Dr. Doris M. Odum has addressed meetings as follows: The Kent Voluntary Association for Mental Welfare at Maidstone; the Preventive and Rescue Work

Conference at Liverpool; the Preventive and Rescue Association at Farnham, Surrey; the National Council of Women, Haslemere; the National Council of Women, Parkstone, Dorset; the National Council of Women, Highcliffe, Hants.

Lt.-Col. J. R. Lord addressed the annual meeting of the Surrey Voluntary Association for Mental and Physical Welfare on Wednesday, June 9, 1926, on "Mental Hospitals and the Public—The Need for Closer Co-operation."

Miss Ethel D. Vickers addressed the Annual Meeting of the Guardianship Society, Brighton, on Friday, June 25, 1926, on behalf of the Council on "The Aspect of the Mental After-Care Association's Work."

Local Branches of the Council.—Lt.-Col. Edwin Goodall, C.B.E., having intimated to the Executive Committee that there were good prospects of a local branch of the Council being formed at Cardiff, letters appointing him Regional Delegate for Cardiff and District were issued by the Executive Committee.

The Lord Mayor of Cardiff presided over the inaugural meeting at the City Hall on April 16, 1926, at which the speaker was Sir Maurice Craig, the purpose of the meeting being to draw attention to the need of a local branch of the National Council at Cardiff. At the close of the meeting Dr. Thomas Wallace moved that a branch of the National Council for Mental Hygiene be formed for Cardiff and district, and this was seconded by Sir Herbert D. W. Lewis, and carried unanimously. Dr. Edwin Goodall, the Regional Delegate of the Council, also spoke.

On April 15 Sir Maurice Craig addressed a meeting of medical men of Cardiff and district, and on the evening of the 16th he spoke at a meeting of teachers, which was well attended, the Lord Mayor in the Chair.

The formation of a local branch for Liverpool and District has met with unexpected difficulties, but Dr. W. Johnson is still continuing his efforts in this direction.

Mental hygiene as an international movement.—The Council endeavours to keep in touch with the mental hygiene movement in other lands, especially in the Overseas Dominions and Colonies, by correspondence and exchanges of literature. Each country has its own problems to face, the chief difference being the varying extent to which mental hygiene work is undertaken by the State. Although the scope of work in the United States is hardly comparable with that in this country, the correspondence with Mr. Clifford Beers, an honorary member of the Council, has been especially helpful. An effort is being made to establish committees for mental hygiene in Australia and New Zealand, the movers of which are anxious to work in close relationship with the Council.

The projected international congress has not been abandoned, but merely delayed.

The treatment of young offenders.—In the report for last year was published as an appendix a memorandum on "Criminal Assaults on Young Persons," by Dr. W. A. Potts. The evidence he submitted on behalf of the Council to the Home Office Committee on "The Treatment of Young Offenders" is now published as an appendix.

A scheme for the scientific investigation of the causes of mental defect.—Sub-Committee No. 3 have had under consideration schemes prepared by Dr. Neill Hobhouse and Dr. H. Freize Stephens for the scientific investigation of the causes of mental defect, and their report will shortly be considered by the Committee.

From a practical point of view it might be possible for it to be incorporated with the projected clinic in regard to various morbid aspects of child life envisaged by Mrs. St. Loe Strachey's Committee.

The causation of mental disorders.—Pursuant to their extended reference, sanctioned at the meeting of the Committee held on January 6, 1926, Sub-Committee No. 3 have been making preliminary investigations as to the causation of mental disorders. This is a big subject and one without finality, and it is not proposed to attempt a comprehensive report. It will rather be a matter of reporting from time to time such definite facts as may come to light during their inquiries. Meanwhile a general survey of the subject, chiefly from a medico-sociological point of view, is to be issued for the public enlightenment.

The need for further financial support.—The Council has carried on its work with difficulty owing to the poor financial support it has so far received, having regard to the high importance of its mission. Only by the strictest economy does it manage to survive. Despite this, the year has by no means been unfruitful. Many, however, of its projects are held up for want of funds, the most important being:

(a) The appointment of a paid medical director. (b) The publication of a monthly bulletin. (c) The broadcasting of mental hygiene literature. (d) The organization of popular lectures on mental hygiene. (e) The holding of special meetings of the Council to hear papers and discussions. (f) The preliminary financing of local branches. (g) The organization of research work, especially as regards the causes of mental deficiency.

Donations can be earmarked for any special purpose within the aims and objects of the Council.

We trust that during the coming year a special effort will be made to initiate more of these projects, for which we make an earnest appeal for help.

Changes in membership.—At the beginning of the year there were 188 full members and 37 associate members. During the year 39 full members and 7 associate members joined the Council.

The Council lost by resignation 5 full members and 1 associate member. Dr. Henry Head was obliged to resign from all Committees on account of ill-health.

The Council, in common with all bodies interested in the mental health of the community, and especially in the cause, prevention and treatment of mental disorder and defect, learned of the death with deep regret of Sir F. W. Mott, who was one of its most valuable members. He was most regular in his attendance at the meetings of the Committee and of Sub-Committee No. 1. The loss of his sage counsel, from vast experience and intimate knowledge of the subjects embraced by the aims and objects of the Council, will be keenly felt.

SOUTHBOROUGH, *Chairman.*

JOHN R. LORD, *Hon. Secretary.*

[Full copies of the Report, which contains several important appendices, can be obtained on application to the Secretary to the Council, Room 118, Windsor House, Victoria Street, Westminster.]

THE BOARD OF CONTROL (ENGLAND AND WALES).

In "Occasional Notes" we have commented on the retirement of Dr. Branthwaite, a Commissioner of the Board of Control, and some interest has centred on the matter of the selection of a successor in view of the findings of the Royal Commission and the evidence tendered before it by the Association on the re-constitution of the Board. By error the General Press, in announcing the appointment of Dr. R. Cunningham-Brown, *C.B.E.*, as succeeding to Dr. Branthwaite, omitted to mention that his appointment was of a temporary nature.

We understand that the Board, in any new legislation, will endeavour to insert a provision whereby a Commissioner, if appointed from the medical service of a local authority, shall carry with him his pension rights under the local authority—in other words that when he comes to retire, his whole public service will be aggregative for pension purposes.

CORRESPONDENCE.

THE DISCUSSION ON PSYCHO-ANALYSIS REVIEWED BY SIR BRYAN DONKIN.

To the Editors of the JOURNAL OF MENTAL SCIENCE.

SIRS,—Having studied, in the Journal for October, 1926, the report of the discussion on "Psycho-Analysis and its Developments," which took place at the London meeting of the Association in July, I take advantage of your kind permission to make some comments thereon; and further to venture a suggestion of the possible utility of supplementing the discussion in some future pages of the Journal. I believe that this debate, organized by the President of the Royal Medico-Psychological Association, stands alone as the first in this country which has been started with the sole object of attaining a fair and thorough consideration

of this subject in its various aspects and from all sides ; and I am sure, having heard it, that it was carried out, both as to matter and manner, in the spirit that led the President to plan it.

I make the following remarks merely as "*obiter dicta*" on the main points which have struck me in my study of the report ; not by any means as a consecutive or adequate criticism on its subject-matter.

(1) I noted throughout the opening speech of Dr. Potts that while giving an account of the Freudian and other methods of what is now generally understood as "psycho-analysis" or the "new psychology," and pointing out how greatly some of these methods differ *inter se*, he assumes the notion of "the unconscious" or the "unconscious mind" as common to all of them ; and assumes it as a postulate requiring neither defence nor explanation. In describing these various methods, and stating his own preference of the views and practice of Jung, he makes no attempt to argue on the fundamental principles which lie at the root of the new practice of "psycho-analysis." The position thus taken by the opener had, probably, a great influence on the course of the debate, the main trend of which bore on the psycho-analytic practice as a new and dominant form of *psychotherapy*, *i.e.*, the treatment of mental disorders ; and became to a great extent an exchange of different opinions on the value of its variant methods. At the end of his remarks Dr. Potts says : "Analysis is both a form of therapy and the basis of a philosophy. The two do not necessarily go together. It is sometimes erroneously stated that analysis entails the special investigation indicated and the acceptance of the theory. As a form of therapy the only question is whether analysis works." Whether the majority of psycho-analysts endorse this statement or not, it justifies at least my remarks on several of the speeches which followed that by Dr. Potts.

Ever since I first studied the doctrines set forth by Freud and others, and the practice resulting therefrom, it has seemed clear to me that the psycho-analytic idea of "the unconscious" is nothing but a pure assumption based on several other assumptions similarly postulated, the chief of which is the asserted validity of the Freudian "interpretation of dreams." Without the verification of either of these assumptions neither of these hypotheses can stand.

Dr. A. Wohlgenuth, D.Sc., speaking early in the debate, addressed himself to questioning the fundamentals of the Freudian hypotheses, and dealt mainly with Freud's method of penetrating the unconscious by his method of dream-interpretation. In the course of a necessarily brief paper Dr. Wohlgenuth set forth clearly his criticisms on the five points adduced by Freud in proof of his own hypothesis as to the nature and origin of dreams. These criticisms were more fully detailed in Wohlgenuth's *Examination of Psycho-Analysis*, published in 1923, but have not as yet been countered or even fully and fairly considered in any important publication in Great Britain. Neither was there any attempt to reply directly to anything said by Dr. Wohlgenuth in the course of the discussion under notice.

It is not, of course, within the scope of my comments to dwell longer on the fundamental points at issue in a duly comprehensive discussion of psycho-analysis. The following quotation, however, from Dr. Joseph Breuer, made by Dr. Wohlgenuth in vol. v, Part 2, 1925, of the *British Journal of Medical Psychology*, may serve to illustrate much that might be said further on Freud's and others' conceptions of "the unconscious" : "All too easily one gets into the habit of thought of assuming behind a substantive a substance ; of gradually understanding by 'consciousness' an 'entity.' If thus one has become used to employing local relations metaphorically, as, *e.g.*, 'subconscious,' an idea, as one goes on, will naturally develop in which the metaphor has been forgotten and is easily manipulated as a material thing. Then mythology is complete." (From Breuer and Freud, "*Studien über Hysterie*").

(2) The general drift of the widely comprehensive pronouncements in the speech by Dr. Hamblin-Smith implies the arraignment and condemnation of all scientific method in the investigation of what are known as mental phenomena, and contains a very strong though uncritical and indefinitely expressed endorsement of Freud's opinion of his own "discovery"—which term apparently indicates the "dream-interpretation."

The speech of Dr. Mapother showed clearly his scepticism concerning both the theory and practice of Freudianism, and I think there were several among the

audience who wished that he had been a little more discursive. Dr. Crichton-Miller, who disagreed with him, warmly defended the importance of the "unconscious" factor, while leaving very doubtful his attitude towards psycho-analysis generally. But Prof. G. M. Robertson "spoke out loud and bold" when he said that he regarded Freud "as one of the greatest psychologists and discoverers in the realm of knowledge who had ever lived." He added, however, a little later his agreement with Dr. Mapother that not one method of investigation alone should be adopted in psycho-therapy. Every method, he said, should be adopted.

In the course of the speech by Dr. T. A. Ross, which was the last of the actual debate, several criticisms of much value were made on the Freudian teaching. Dr. Ross used the word "psycho-analysis" in a sense which differed much from that usually attributed to it now by those who either advocate or oppose the new psycho-analytic doctrines. "Neither Freud, nor anyone else," he said, "should be allowed to say that he alone had the method of psycho-analysis. . . . What was wanted more than anything else was that somebody should be psycho-analysed who had never read a word on the subject, and by somebody who had not himself been psycho-analysed." And, later, he declared that the Freudian analysis was "largely history-taking; that history-taking was not an analysis; that analysis was made by the analyst, not by the patient; and that one ought to be frank about that." I venture to state my own opinion that this speech by Dr. Ross was one of the most important in the whole discussion.

In the absence from the discussion of much direct criticism of those who deny the validity of the basis of Freud's hypotheses, some speakers confined themselves to reiterating the contention that no one could reasonably argue about the teaching of "psycho-analysis" without practising it and being themselves psycho-analysed. This position implies the necessity of an initial tendency towards or an actual formation of a will to believe, and also the introduction of "suggestion," at the outset of the inquiry. It is, I believe, admitted by psycho-analysts generally that a preliminary conviction or even a bias in favour of a conclusion adverse to the value of the procedure in question would render the experiments nugatory. At any rate this position involves a preconceived belief in a given result of an experiment not made, and ignores the very grammar of scientific investigation.

With reference to remarks made by some speakers on the reasons why, in their opinion, some adverse critics of Freudianism urge their objections, e.g., moral, religious, or philosophical, or indeed merely sentimental, such as disgust, fear of practical results, or other "complexes," there is scarcely need of serious discussion. Doubtless several combatants on both sides of this much-contested subject have often quite failed to observe the plain difference that exists between the question of the soundness of a theory (especially when it has relation to medical treatment) and that of the practical issues to which it may lead. In my judgment these two questions can and ought to be kept apart, especially in this particular instance where the practice of psycho-analysts deals mainly with a large and widely-comprehensive group of patients, who may be treated successfully or unsuccessfully by countless different methods at the hands of almost any kind of medical practitioners or of unprofessional persons. I, therefore, deem it just as unworthy of serious debate on the hypotheses upon which the Freudian psycho-analysis is founded that an advocate for them should urge, as some do, as a counter-argument, that scientific opposition to them involves the question of the relation between body and mind, as it would be for a psychologist who adheres to the scientific method of inquiry to question the soundness of the Freudian hypotheses on the ground of the moral and physical harm and other dangers which may result from their application in practice.

May it not be possible that some further calm and logical consideration of certain points, raised but not cleared up in the discussion of last year, might result in the letting in of more light upon this still-vexed subject ?

I am, Sirs,

Yours obediently,

H. BRYAN DONKIN.

December, 1926.

OBITUARY.*

HENRY MORTON BAKER, M.B., C.M.Edin.

Ordinary Member since 1878.

[THE sad news of the death of Dr. Henry Morton Baker has only just reached us.—Eds.]

Born on January 2, 1855, Dr. Baker received his medical education at the University of Edinburgh, and took his degrees at the age of 22 years.

He was for a few months a clinical assistant at the West Riding Asylum, Wakefield, following which he was appointed Assistant Medical Officer at the City Mental Hospital, Humberstone, Leicester, where for the long period of 32 years he rendered devoted service.

Dr. Baker retired on a well-earned pension in June, 1910, which he continued to enjoy until his death in May, 1925, at the age of 70 years.

He was respected by all with whom he came into contact. His high character and personal charm created a true affection for him.

Dr. Baker was a bachelor, and devoted himself entirely to the duties of his office. He always gave unsparingly of his best, whether to patients or staff, never counting the cost in time or trouble.

The interment took place in Highgate Cemetery amid many manifestations of regret.

C. H. GIBSON LYALL.

PETER McLUSKIE, M.B., Ch.B.Glasg., D.P.M.

Ordinary Member since 1922.

THE death of Dr. Peter McLuskie on March 28, 1926, at the age of 33, cut short a promising career, and robbed the Association of one who showed every likelihood of becoming a distinguished member.

Dr. McLuskie was a native of Paisley and received his medical education at Glasgow University. His studies were interrupted by the outbreak of the war (throughout which he served as a combatant officer) and by illness, but in spite of these handicaps he graduated in 1920. He joined the Mental Hospitals Service of the London County Council in 1921, and took up the study of psychological medicine seriously and obtained the D.P.M. in 1922.

His sterling qualities received recognition in steady promotion in the service he had joined, and at the time of his death he had reached a position of some responsibility at Cane Hill Mental Hospital.

The outstanding feature of Dr. McLuskie's personality was his thoroughness. Whatever he found himself engaged upon, from a branch of clinical research to a game of football, he did with all his might; and this characteristic, combined with considerable personal charm, made him a popular and prominent figure both in his student and post-graduate days.

He died after an acute illness of only a week's duration, leaving a widow and infant son, with whom much sympathy is felt.

O. P. NAPIER PEARN.

NOTICES BY THE REGISTRAR.

The Gaskell Prize and Medal.

(Value not less than £30.)

REGULATIONS.

The Examination must be held in England according to the terms of the Trust.
(1) Candidates must produce evidence—

- (a) Of having attained the age of 23.
- (b) Of having been qualified Medical Officers in one or more Mental Hospitals or Clinics in Psychiatry in the United Kingdom or elsewhere in the British Empire for at least two years.

* Notifications of the death of members should reach the Editors without delay if these notices are to form a complete and up-to-date record. When possible they should be accompanied by Press references.—Eds.

- (c) Of possessing the Certificate in Psychological Medicine of this Association or a Degree or Diploma in Psychological Medicine of Universities and Examining Boards having the power to grant medical qualifications registrable in the British Isles or elsewhere in the British Empire.
- (2) Candidates will be examined in—
- (a) Psychology.
 - (b) Anatomy, Histology and Physiology of the Nervous System, Reproductive and Endocrine Glands, Pathology of the above, especially in relation to Mental Disorders.
 - (c) The Diagnosis, Prognosis, Treatment and Legal Relations of Mental Disorders.
 - (d) Clinical Cases.
- (3) A thesis based on original research, if of sufficient merit, may be accepted by the examiners in place of either the written or the clinical examination or both.

The date of the next examination will be announced shortly.

Bronze Medal and Prize for 1927.

Essays for the Bronze Medal and Prize of the Association must be sent to the Registrar not later than June, 1927. A *nom-de-plume* must head the essay, and the author's name enclosed in a separate and sealed envelope with the *nom-de-plume* written on the outside.

Divisional Prizes.

For the regulations see the October number of the Journal, 1926. Candidates are reminded that only papers handed in to the Secretary of the Division at the meeting at which they are read can be considered in the competition.

NOTICE OF MEETINGS.

The *Annual General Meeting* for 1927 will be held at Edinburgh during the week commencing July 18, in conjunction with the Annual Meeting of the British Medical Association (Section of Mental Diseases).

Members proposing to attend should at once take steps to secure accommodation or communicate with Dr. W. M. Buchanan, Secretary, Scottish Division, Kirklands Mental Hospital, Bothwell, Lanarkshire.

Quarterly General Meeting.—February 15 and 16, 1927, at the Cheshire County Mental Hospital, Parkside, Macclesfield.

South-Western Division.—April 28, 1927.

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LETTERS PATENT RE COAT OF ARMS.

Photographs of the above will shortly be available for purchase by members.

CENTENARY OF PINEL.

CELEBRATIONS IN PARIS, MAY 30—JUNE 1, 1927.

A century has passed since the death of Pinel, and the Congress of Alienists and Neurologists of France, and of countries speaking the French language, held at Geneva, August 2, 1926, devoted to his memory the inaugural meeting of its 30th session. The Medico-Psychological Society desires in its turn to render its homage to the illustrious physician of Bicêtre and Salpêtrière, and relying on the support of other medical societies has decided to organize a gathering commemorative of his great reforms.

The movement has the high patronage of the President of the French Republic.

Those who desire to attend these celebrations should write to Dr. Henri Colin, 22, Rue Gay-Lussac, Paris 5^e, for full particulars.

The following Mental Hospital Reports for the years 1925 and 1926 have been received :

Aberdeen Royal.
Derby Borough.
Edinburgh Royal.
Glengall (Ayr).
Inverness.
London County.

Also the following Reports, Reprints, etc.

Egypt : Lunacy Division Reports for 1924 and 1925.

American Association for the Study of the Feeble-Minded, Proceedings, 1926.

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Made and printed in Great Britain.

UNIV. OF
CALIFORNIA



TO THE
ASSOCIATION

To all and singular to whom these Presents shall come Sir Henry Farnham Burke, Knight Commander of the Royal Victorian Order, Companion of the Most Honourable Order of the Bath, Garter Principal King of Arms, Gordon Ambrose de Lisle Lee Esquire, Companion of the Most Honourable Order of Arms, and Arthur William Stewart Cochrane Esquire, Member of the Royal Victorian Order, and Arthur William Stewart Cochrane Esquire, Member of the Royal Victorian Order, **President Elect of the Royal Medico-Psychological Association hath represented unto** Norroy King of Arms, **Send Greeting.** Whereas **John Robert Sobel, President Elect of the Royal Victorian Order, Companion of the** Edmund Bernard, Viscount FitzAlan of Derwent, Knight of the Most Noble Order of the Garter, **Knights Grand Cross of the Royal Victorian Order, Companion of the Distinguished Service Order, One of His Majesty's Most Honourable Privy Council, and Deputy to The Most Noble Bernard Marmaduke Duke of Norfolk, Earl Marshal and Hereditary Marshal of England, that in the year One thousand eight hundred and forty-one an unincorporated Association known as the Medico Psychological Association of Great Britain and Ireland was formed for the promotion and cultivation of science in relation to mental disorder and the care and treatment of the insane That on the ninth day of September One thousand nine hundred and twenty-five His Majesty was graciously pleased to grant to the said Association permission to use the prefix "Royal" and commanded that the said Association should thenceforth be known as The Royal Medico-Psychological Association "That by Letters Patent under His Majesty's Royal Sign Manual bearing date the Thirteenth day of March last it was ordained that the persons then being members of the said Voluntary Association known as The Royal Medico-Psychological Association and all persons who should thereafter become Members of the Body Corporate thereby constituted pursuant to or by virtue of the powers granted by the said Letters Patent, and their Successors should for ever thereafter (so long as they should continue to be such members) be, by virtue of the said Letters Patent, one Body Corporate and Politic by the name of The Royal Medico-Psychological Association," and by the same name should have perpetual succession and a Common Seal with power to break, alter and make anew the said Seal from time to time at their will and pleasure and otherwise act as a Body Corporate That the Association should have a President, a President Elect, and Ex-President, a Treasurer and a General Secretary and such other Officers as the Bye Laws of the Association should prescribe and the Council of the Association should from time to time appoint And further regulations were made with regard to the Government of the Association and the election of Officers That being desirous that the Common Seal to be used by the said Royal Medico-Psychological Association in its corporate capacity should contain fit and proper Armorial Bearings and Supporters to be assigned under lawful authority, he therefore on behalf of the Officers and Members of the Royal Medico-Psychological Association requested the favour of His Lordship's Warrant for Our granting and assigning such Armorial Ensigns, and in the same Patent such Supporters as may be proper to be borne and used by them and their successors in their corporate capacity on Seals Shields Banners or otherwise according to the Laws of Arms And forasmuch as His Lordship did by Warrant under his hand and the Seal of the Earl Marshal bearing date the tenth day of September last authorize and direct Us to grant and assign such Armorial Ensign and such Supporters accordingly **Know ye therefore that We the** said Garter Clarenceux and Norroy in pursuance of His Lordship's Warrant and by virtue of the Letters Patent of Our several Offices to each of Us respectively granted do by these Presents grant and assign unto the Officers and Members of the Royal Medico-Psychological Association the Arms following that is to say:—**Or, a Staff of Asclepius Bules within a borderwise Sable charged with four Buttes of the field. And for the Crest, on a Wreath of the Colours a Hooped cross Or, between two wings Sable as the same are in the margin hereof more plainly depicted And by the Authority aforesaid I the said Garter Principal King of Arms do grant and assign unto the Officers and Members of the Royal Medico-Psychological Association the Supporters following that is to say.—On either side A Serpent Or langued Bules, as the same are also in the margin hereof more plainly depicted the whole to be borne and used for ever hereafter by the Officers and Members of the Royal Medico-Psychological Association and their successors in their corporate capacity on Seals Shields Banners or otherwise according to the Laws of Arms. In witness whereof We the said Garter Clarenceux and Norroy Kings of Arms have to these Presents subscribed Our names and affixed the Seals of Our several Offices, this Twelfth day of October in the Seventeenth year of the Reign of Our Sovereign Lord George the Fifth by the Grace of God of the United Kingdom of Great Britain and Ireland and of the British Dominions beyond the Seas King Defender of the Faith etc and in the year of Our Lord One thousand nine hundred and twenty six.****

H Farnham Burke (SEAL) Garter G Ambrose Lee (SEAL) Clarenceux Arthur Cochrane (SEAL) Norroy.

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THE JOURNAL OF MENTAL SCIENCE

[Published by Authority of the Royal Medico-Psychological
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No. 265.] APRIL, 1927. VOL. LXXIII.

Part I.—Original Articles.

*Recent Investigations on Visual Imagery, with Special Reference to Hallucinations.** By T. H. PEAR, M.A., B.Sc., Professor of Psychology in the University of Manchester.

It is difficult to give this lecture as a whole, for it is in two halves, the first dealing with normal experimental psychology, the second with psycho-pathology. I have seen few writings which bridge the gap between these two aspects of imagery. It is because this gulf may be spanned in the future that I chose visual imagery as a subject related to the interests of this Association.

During the last ten years we have learnt more of recent work in Germany. I wish to speak about one phase of that work to-day. For much of the impetus to thought about this subject has come from Prof. E. R. Jaensch⁽¹⁾ of Marburg, and his co-workers. A very good summary of his work has been given by Dr. G. W. Allport⁽²⁾, of Cambridge.

I will try to relate our present knowledge of normal visual imagery and of certain types of hallucination. Some years ago there was a tendency (by no means obsolete nowadays) to regard visual imagery as a unitary subject. One described a person as a visualizer or "visile" simply as one talks about him as able to see. But visualizers can be divided into many sub-classes. Their imagery may be separately classed according to its clearness, vividness, obtrusiveness, relevance, readiness, utility, etc. So to call a person a visualizer or non-visualizer implies a very crude classification.

These important divisions are necessary to classify true visual images of events which have occurred more than (say) a day ago.

(*) A paper and lantern demonstration before the Royal Medico-Psychological Association at the Quarterly Meeting held at Macclesfield on February 16, 1927.

Such images, to use a modern expression, show distinct "structuration" around a nucleus of interest. My visual image of St. Paul's Cathedral and yours are certain to be different, for my interest in that building and yours cannot possibly take identical directions.

For the clinician there is another important criterion of difference between images. You may be visualizers, able to picture things in detail, to make for yourself and to use mental diagrams or maps. Yet seldom or never have you mistaken one of these visual images for reality. But in the hospitals you will have met people who do. To the ordinary man this is not puzzling. He simply puts such visualizers into different categories. For him the man who mistakes images for reality is insane, and he who does not is sane—at least in that respect. Exactly what sane and insane mean in this connection he does not ask.

But this is not a satisfactory scientific division. For under certain conditions, many of us mistake our visual images for reality. We usually do so when we dream, though it is possible to recognize an image as such in a dream.

One class of normal image, while still seeming to us a product of our own mind, is apparently projected outside ourselves. Some persons, before going to sleep, see such images of quite a different type from the ordinary visual images of the day. They are called hypnagogic images. And it is important for any theory of the function of imagery that such hypnagogic images sometimes appear to be unconnected with the person's everyday life. That is, they seem irrelevant. Whether the psycho-analyst would regard them as irrelevant I am inclined to doubt.

An important psychiatric question is why in everyday life there is a very clear-cut distinction between visual perception and visual imagery. The solution of that problem is even more important for you than for the laboratory psychologist.

We will attempt to see some of the phenomena which illustrate the complexity of the relations between perception and imagery. In everyday life, though we make a very clear distinction between our percepts (our awareness of objects present to sense) and our images, they are interdependent.

In the *illusion*, or false perception, present and past experience are intermingled. Here is an example of a visual illusion. (Slide.)

The man looks bigger than the boy. Factors in this particular illusion are exaggerated perspective, making the man appear farther away, and knowledge that men are bigger than boys. Yet the visual angles subtended at the retina by the man and boy respectively are the same.

In Slide 2 the mind supplies from your past experience many details which are not present. Unless you were looking at this picture analytically, you would not notice the large number of omitted features.

But our visual perceptions are often interfered with, not by past knowledge, but by actual sensations resulting from recent experiences. When a passing motorist forgets to switch off his headlights, we who are driving in the opposite direction find that our perception of the road is interfered with by after-sensations from the dazzling glare. As with images, recent research has shown these after-sensations to be more numerous and varied than was formerly supposed. But it is important to remember that the after-sensation of vision is a real sensation, not an image. Underlying processes are going on in the retina as well as in the brain. The eye is still working, like a flywheel which continues to revolve after external power has been shut off.

A host of problems arise concerning a form of visual memory which is neither after-sensation nor ordinary visual image. It is called the eidetic image (?). It is a special kind of memory of an object, which some people experience after the object has been removed. It is not ordinary memory, for details which were not observed during perception are said to appear after the object has been removed.

Lastly there are the hallucination (an image of memory mistaken for a percept), and the true memory image. While the after-sensation and the eidetic image are bridges between perception and memory, in the true memory image there is often a striking selection and working-up of the details originally seen.

The eidetic image is related, in ways probably unappreciated at present, to the pseudo-hallucination. This latter is quite different from the true hallucination met with in the psychoses. A patient will describe the pseudo-hallucinations as vivid and worrying, but will insist, "I know they are not real; I know my mind is making them." His general attitude towards them is very different from that of the psychotic towards his hallucinations.

I will now endeavour to show examples of the phenomena which have been described. (The negative after-sensation of a simple geometrical coloured shape upon a background of different colour was then obtained.)

When, instead of simple geometrical figures, slightly more detailed objects are used (a black-and-white representation of a skull was shown), some people can see the details fairly well in the negative after-sensation, while for others they are blurred. Probably nobody could see as a negative after-sensation the manifold details

in the next slide shown (a silhouette containing ostrich feathers and other shapes with a multiplicity of minute detail.) Persons are found, however, who, after it had been exposed for about thirty seconds, could see such a picture not only in detail, but in its original colours or shading, *i.e.*, as a positive image. These "eidetic" images differ from after-sensations, even from positive after-sensations, in the complexity of the detail with which they appear. Yet this detail shows less structuration or grouping according to the observer's interests, than in the true memory image. Eidetic images are projected in space, *i.e.*, are truly seen. Often they fit the slanting or curved background upon which they have been projected. They may persist for long periods and return. But most interesting of all is that they frequently reproduce material which can have little intelligibility for the observer. Allport found, for instance, that a number of children were able to spell out correctly or almost correctly from their image the German word *Gartenwirtschaft*, which formed a part of this picture. The exposure of thirty-five seconds was insufficient to admit of learning of the word, especially since the picture was so rich in incident and lively detail, which the child had also to describe.

Miss Margaret Drummond (\$), of Edinburgh, picked out from 34 training college students one or two who seemed to have the eidetic power in a marked degree. She showed them various pictures, including a Bernard Partridge cartoon from *Punch*. These persons showed eidetic powers to a remarkable extent.

What is the significance of eidetic imagery for psychological medicine? In Germany it was first found in school-children, and is comparatively rare in the normal adult person, educated under present conditions. In America the adult people who had eidetic imagery were often described by others as "queer." In children after 14 this tendency recedes. There is no doubt that the eidetic image exists, that it is associated with childhood, and that it occurs in adults who have retained a peculiarity of mind from childhood.

Many questions arise which have not yet been solved, *e.g.*, how far it is affected by race, age, occupation and systems of education.

The relation of eidetic imagery to the pseudo-hallucination is important. A patient who came under my observation for some time was greatly troubled by a complex and persistent pseudo-hallucination. It was so clear that he said, "If I look there, the picture begins there," indicating a point on the left, "and stops there," indicating one on the right.

It is interesting to notice that in his own conversation there were details which would have suggested eidetic imagery if one had known

of it at the time. He was anxious to understand his hallucination by familiarizing himself with the psychology of the matter. He was lent Galton's *Inquiries into Human Faculty*. The morning after he had read it he said that when he was in bed he saw a very big image in the darkness, of the chapter with its ornamental initial letter. At another time, when he was in charge of someone else, the doctor, during an interview, became annoyed; his face became red, and a blue vein on his bald head became prominent. The patient said, that long afterwards he could see that blue vein on the bald head. At one time, in explaining the functions of the brain to him, I had drawn a sketch showing the fissures and the various areas in an elementary way. When at night, during a sleepless bout, the eidetic (?) image of the brain-diagram was seen against the darkness, it reassured him as it had done in the day, and he went to sleep.

Eventually one of his complex pseudo-hallucinations was analysed along Freudian lines. Its constituents came from three different times of his life—when he was a small child, during youth, and during the war. Its scenery and furniture came from different parts of the world; in fact the whole hallucination was made up precisely in the same way as a dream. After analysis, which took three hours, the hallucination vanished.

Other problems which arise are whether the difference between the pseudo-hallucination of the psycho-neurotic and the complete hallucination of the psychotic is greater than was formerly thought. These eidetic images may occur when the mind regresses to a more childish state, and it may be that in the production of our dreams and of the images we see before sleeping, our mind has reverted in this way.

I can only here mention the problem of how far our modern systems of education and culture have educated us out of eidetic habits. It may be that the artist, the poet and the seer are seeing reality, not so much in a new way, as in a development of old ways which our particular type of civilization has discouraged.

(1) *Die Eidetik und die Typologische Forschungsmethode*, Leipzig, 1927.—(2) "Eidetic Images," *British Journal of Psychology*, October, 1924.—(3) "The Nature of Images," *ibid.*, July, 1926.

*Ultra-violet Radiation in Mental Hospital Practice: A Preliminary Survey.** By K. K. DRURY, M.C., M.D., D.P.M., Deputy Medical Superintendent, County Mental Hospital, Stafford.

THE subject of artificial heliotherapy is at present attracting much attention in both scientific and lay worlds. The Board of Control report for 1925 states that there were only five installations in mental hospitals at that time, but doubtless there are more now. I venture therefore to place before you some notes on ultra-violet therapy in the hope that they may be of interest to those thinking of taking up this line of work; and that by their criticisms and observations I may learn from those who have already done so.

Radiant energy was studied by the ancients—the fact of the photo-chemical action of light was noted by Aristotle in 350 B.C. It was not, however, until Newton in 1666, by his epoch-making discovery, showed that white light is composed of the various colours forming the spectrum, that rapid progress was achieved, especially in the nineteenth century by men such as Bunsen and Roscoe.

The first great step after Newton's discovery was made ten years later by Römer, a Dane, who proved that light had a definite velocity. Early as this discovery was made, and inadequate as instruments were in those days, his estimate was only about 3% different from that accepted to-day as accurate, *viz.*, 186,300 miles, or 300 million metres per second. This was an observation of the first magnitude, and governs our calculations in the whole realm of radiation.

Perhaps the greatest mind, so far, in the sphere of theoretical physics was that of Clerk Maxwell (1868), for he showed the way for the practical work of Hertz, Marconi and others on the infra-red or long wave side of the visible spectrum, and for that of Röntgen on the ultra-violet side, though the former was known to the elder Herschel in 1800, and the latter to Ritter in 1801.

Before the advent of practical electricity, the sun was the only known source of ultra-violet radiation at our disposal, and it is hardly necessary to draw attention to the fact that it was only during the past century that mankind has again begun to appreciate the value of sunlight as a curative as well as a preventive agent. The ancients knew and appreciated this power, but our more immediate ancestors did their best to forget it.

* A Paper read at the Quarterly Meeting held at Macclesfield, February 16, 1927.

Light falling at right angles to the surface exerts its maximum activity which diminishes as the angle becomes less than a right angle. In our latitude, therefore, and also on account of the absorption of the shorter and, therapeutically, more active waves by fog, smoke or other extraneous matter, sunlight in this country is unreliable and often unobtainable. Our attention, perforce, is directed to the production by artificial means of a source of radiation giving wave bands similar or even more useful, therapeutically, than those from the sun. Electric arcs provide the source of such radiations conveniently and economically.

There are three main types in use to-day. They are (1) the carbon arc, (2) the tungsten arc, (3) the mercury vapour arc.

These lamps all give the needed rays in varying intensities, and their spectra have been recorded by means of suitable spectroscopes.

The carbon arc.—This was the first artificial means employed to produce ultra-violet rays, and was introduced by Finsen in 1893, and is almost exclusively used at the Finsen Institute in Copenhagen. The therapeutic value of the arc is said to have been first noticed by a man suffering from rheumatism, who had to work for a long period in the direct rays of a powerful arc and found his himself much benefited thereby. Carbon arcs are much used for the general irradiation of large areas and several patients may be treated at once, but to be adapted for local treatment they must be water-cooled. Carbon arcs are expensive both in prime cost as well as running expenses, and they need a great deal of attention from an electrical standpoint.

The tungsten arc.—This arc is struck between rods of pure compressed tungsten and occasionally between carbon rods cored with tungsten. It is apt to splutter and burn unevenly and needs a good deal of attention. To my mind it is not a very suitable type for our purpose.

Other arcs of the air-burning type include those with iron electrodes. Sir Henry Gauvain (1) reports that he has found these to be of considerable value at Alton.

Mercury vapour lamps.—The mercury must be held in a container that is both able to transmit the higher frequencies as well as to withstand the great heat of the arc. The container generally used in medical work is a tube made of fused quartz of the best quality. The lamp is made in three chief types, namely: (1) The vacuum tube type, (a) air-cooled, and (b) water-cooled; (2) the atmospheric type, air-cooled.

The vacuum type has several disadvantages. Firstly, air gradually enters the tube where the electrodes have been sealed in. Secondly,

the mercury lies free in the vacuum and "hammers" if moved, and breaks the quartz tube. Thirdly, the inside of the tube becomes dirty with use, and it is an expensive and troublesome process to break the vacuum, clean the tube and mercury and re-establish the vacuum. Finally, in this type of lamp it is often difficult to break the arc.

Water-cooled mercury vapour lamps are only useful for purely local work, and are therefore not of much interest from the mental hospital standpoint.

This leaves the third or atmospheric air-cooled type, which many authorities find the simplest, cheapest and, in the long run, the most convenient type for general or fairly local application. It appears to be the choice of those who are doing the greatest amount of both practical and research work, and in every way seems best suited to the needs of a mental hospital. It is said to be less productive of malaise than carbon arcs in those who are very sensitive to light, though they may not react by marked erythema.

The mercury in the tube being at atmospheric pressure no "hammer" action takes place, and the tube may be easily cleaned inside by even inexpert people.

The breaking of the arc is automatically performed in the lamp of this type chosen for use at Stafford, the makers being Messrs. Kelvin, Bottomly & Baird, of London.

There are no noxious fumes, spluttering or great heat. The quartz tube must be cleaned daily with a little Sp. vini rect., must not be touched with the fingers, and needs to be protected from dust as far as possible.

Treatment is carried out in a small room some 15 ft. square, with access from a similar dressing-room through a wide curtained opening. Both rooms are close to the centre block, which facilitates treatment to either male or female patients. The æsthetic effect of both rooms is helped by restful wall decoration, coloured curtains, thick cork lino floor covering, and bright electric radiators in each room.

Accessories consist of wall thermometer, time-exposure alarm clock, slip drawers for patients, measuring rods (20, 30 and 40 in. long), and goggles for patients as well as operators. These protective devices are essential for all, as eye-strain with conjunctivitis is a very real danger.

In addition to goggles, a pair of "Crookes" glasses, type A2, fitted in strong spectacle frames provided with side shields, are useful for the operator when attending the meters, clock or day-book. These glasses give adequate protection from indirect rays reflected from walls and other objects, as they only transmit a

minimum of ultra-violet rays, as well as cutting off some 22% of the incident total light chiefly at the red end of the spectrum. A day-book records the patient's name, part exposed, time of exposure and distance from the lamp.

What actually are we attempting to do when we expose patients to ultra-violet rays? We know by experience that we ultimately benefit their general physical condition, while incidentally increasing the bactericidal power (2) of the blood and improving the calcium metabolism of the body.

Other phenomena are indefinite, including the psychological effect, a feeling of well-being and an increased intellectual output.(3) Certain phenomena are known to take place *in vitro*, amongst which are the lethal effects on infusoria, the power of re-creating the vitamine content in sterilized milk, the increased fertility of seeds exposed to the rays, and their photo-chemical power.

I do not propose to discuss the theories advanced to show how the rays are absorbed into the body. There are two theories—one that the action is vibratory, the other photo-chemical.

The whole subject of dosage and skin reaction is paradoxical.

The skin exposed to the rays reacts apparently to protect itself from them by desquamation and pigmentation, gradually becoming nearly immune, and unless the skin is rested, or the dose is greatly increased, no effect is produced so far as we can see. And yet we know the rays do good. Why, then, does the skin act as it does? So far, experimenters have found that the best results are got by exposures causing a definite but mild erythema of the skin.(4)

The Copenhagen school advocate total exposure to large and increasing doses. The recent work of Eidinow (5) tends to show that his technique achieves more economically the increased bactericidal power of the blood. He exposes parts of the body in turn, producing on each a definite mild erythema, and then allowing sufficient rest to restore the skin to its former sensitivity. The patient is exposed three times a week, only approximately one-quarter being exposed at a time; each part then gets nine or ten days' rest for recovery, this, in practice, proving ample. Much time and expense is saved, and so far he shows positive results.

Such a procedure is also advocated by Peacock (6), and, if adopted in mental hospital work, would allow a much larger number of patients to gain the undoubted benefit of exposure to the rays, and incidentally save the time of the nursing staff and medical officers.

In gauging the time for exposure, the known factors are :

1. The distance from the source of the light. The intensity varies as the inverse square of the distance. (This law is

repudiated by some (7), but strong proof to the contrary will be necessary before the old theory is given up.)

2. The angle of incidence of the rays. Rays falling at right angles are more intense than those at an acute angle; the ratio complies with the Cosine Law.

3. The temperature of the skin. The use of rays from carbon filament incandescent lamps suitably directed on the parts to be exposed to the arc is advocated. The room temperature must be constant and comfortably high.

Taking the emission of the lamp to be constant (and Walters (8) has shown that the mercury vapour lamp requires a preliminary time of 15 minutes before its emission becomes steady), the variable factor is the idiosyncrasy of the patient. This is best investigated by means of the "spot" test. Small areas of the skin, the size of a florin, at some usually covered place—*i.e.*, abdomen or upper arm—are exposed at a known distance from the rays for definite periods, and the result noted some 12 hours later, the exact therapeutic dose being then easily calculated.

In general, females are said to react more than males, blondes more than those dark-complexioned, clear-skinned more than greasy. An easily bruised white, thin skin reacts most readily.

An easy way of detecting light sensitiveness is by transillumination of the air sinuses or skin. A very brilliant "red reflex" on ophthalmoscopic examination often signifies sensitiveness to light.(9)

The spot test is also usefully employed to gauge the sensitivity of various areas of the body. McKenzie and King (10) state that the order of sensitivity is: (1) Inner surface of the thighs, (2) dorsal aspect of the trunk, (3) outer surfaces of thighs, legs, arms, hands, feet, and lastly scalp.

Before exposing any patient, the physical condition must not be overlooked. Heart disease, phthisis, low blood-pressure or raised temperature are conditions that call for the greatest caution before deciding on exposure.

When making an exposure, the patient lies on a couch or reclines in a deck chair, assuming a position from the lamp as measured by one of the rods already mentioned. Insensitive parts may be a little nearer than those less so. Deck chairs are very convenient for general exposures, the body naturally taking up an easy curve, the lamp being placed somewhat nearer the feet than the chest.

Confidence in treatment, so valuable psychologically, is easily obtained. The feeling of well-being is so strong that all patients evince a desire for further treatment after the first exposure. I

have noticed acute maniacs, so commonly insensible to their surroundings and comfort, lie back quietly and exclaim how comforting they find the rays.

For local treatment the patient is arranged as is most convenient, but I believe that general treatment should always be given as well.

Before actual exposures are made with a new lamp, the intensity of its emission should be tested. As the emission drops with the age (hours of use) of the lamp, the tests must be repeated at intervals and the results noted. Increased doses will be necessary to compensate for the drop, and, later, cleaning of the mercury and the inside of the quartz container will have to be undertaken. As mentioned before, the tube must be kept scrupulously clean and not touched, or else greasy finger-marks and dirt will be burnt into the quartz. Such marks form an impassable barrier to the rays, and, if numerous, may necessitate a new burner.

There are various methods available for testing the emission, and they are described in detail in any good text-book.

I will mention only two, the most and least expensive. The former is a light-sensitive cell used in conjunction with an electro-scope (11), the apparatus costing ten guineas. The cheapest is supplied by Arnolds, of London, using the Levy-West ultra-violet pastilles (12). These pastilles change colour when exposed to ultra-violet rays, the depth of darkening being compared with a tint card supplied. The outfit costs fifteen shillings. I have used both, and the less expensive apparatus appears sufficiently sensitive for ordinary use.

A simple experiment, yielding curious results that require further investigation, was carried out as follows: Twenty-five nurses, a similar number of attendants, together with 25 patients of each sex, volunteered for a "spot" test. Each normal was paired with an apparently healthy patient, chosen for similarity of coloration, texture and type of skin. Conditions were identical for all, but many patients were found to possess a markedly greater degree of sensitivity to the rays than the normals. In detail the results were:

18 patients, or 36%, showed in an equal degree of reaction with the paired normal.

5 patients, or 10%, showed in a definite degree less reaction than the paired normal.

27 patients, or 54%, showed in a definite degree more reaction than the paired normal.

These results came as a surprise to me. I had imagined the opposite to be true. Until further research has been done I do not

venture any explanation, though it may well lie in a disturbance of the sympathetic nervous system.

Occupation and outdoor life are not the causes of the discrepancy, for the biggest differences in reaction took place between attendants who work chiefly outside and patients who had an exceptionally active outdoor life. The results between normals themselves as well as between patients show most marked variances. Apart from all other considerations, the experiment serves to emphasize the need for the greatest caution when exposing anyone for the first time, and the desirability of a preliminary "spot" test in all cases.

I think it will be agreed that most mental cases have a greater chance of recovery when their physical condition is good, and I firmly believe that in ultra-violet radiations we have a powerful aid to this end. Nevertheless the more usual therapeutic aids must on no account be omitted.

Since the lamp was installed I have given all suitable new admissions, and some previous but recent cases, a thorough course of light-baths. The cases treated embrace examples of the principal mental diseases.

The results to date are promising, with three exceptions. The exceptions are agitated melancholics, acute maniacs and epileptics. These classes do not benefit mentally—in fact appear to become worse. The maniacs and cases presenting maniacal features become quieter during exposure, but immediately afterwards become more and more restless and noisy. It is questionable if it is even desirable to expose those cases where the mental state is causing severe physical exhaustion.

Cases of epilepsy improve physically, but the fits are increased in number and the patients appear to recognize this and blame the lamp. Cases so far treated over a period of one month show increases varying from 20 to 150% in the number of fits over the previous month.

The physical condition of the precocious demented shows improvement from radiation, in particular the catatonic cyanosed cases. So far as I have observed, there is no concurrent mental amelioration, though some become more talkative and exhibit more body movement than before.

Quiet delusional cases have shown little mental change, but the irritable type are more amenable.

The large class of admissions comprising the simple melancholias, manic-depressives and confused cases appear to benefit from ultra-violet radiation. It is difficult to assess the benefit of any line of treatment, but it is a pleasure to watch these cases gaining health

in a steady manner and looking forward to their treatment. The physical condition of this type of patient is usually bad, and it is on this account I feel that the ultra-violet rays are so useful. It is not possible to say definitely if the rays are as serviceable as they appear to be until statistics have shown if the average length of stay in hospital is shortened or the recovery-rate improved.

So far, no cases of general paralysis have been radiated.

In general, these results agree closely with those published by Dr. Cormac of Parkside, in the Board of Control's Report for 1925.

The case of an elderly melancholic with high blood-pressure is a good example of the mental outlook of patients to treatment. At first he bemoaned his fate and the uselessness of any treatment. Later he said he felt no worse, and eventually he admitted he felt better, and certainly his demeanour had greatly improved; his blood-pressure fell from 230 to 190 mm. Hg. in 14 exposures spread over six weeks.

The lists of physical ailments said to be cured, or at least benefited by ultra-violet radiation, rival those in the Sunday papers by vendors of patent medicines. The Russells, in their book, give a list of 143 separate diseases in which good results have been claimed by various workers. I have already treated a good many conditions with a large measure of success. Rheumatism, chronic bronchitis and asthma, alopecia, acneform eruptions, eczema, indolent ulcers and tubercular glands have all yielded with gratifying results. A pre-tubercular melancholic, with chronic eczema of his legs, who was rapidly going downhill, has regained his health to a remarkable degree; his mental state has also improved. Two cases of psoriasis have so far been treated, but without definite change: many observers have reported cures from ultra-violet treatment, but it is well to remember that this surprising disease has yielded to treatments so diverse as milk diet and psycho-analysis!

Perhaps the most interesting case of all from a clinical standpoint was one of pellagra:

Towards the end of August this case (admitted on March 8, 1926, suffering from mania) was rapidly nearing her end. Severe terminal diarrhoea had set in and there was most pronounced debility and wasting. The typical skin-lesions were marked, and in general the epidermis was hard, brittle and shrunken. Mentally she was nearly comatose. On August 26 treatment was commenced rather as a forlorn hope. On September 3, after four exposures, the diarrhoea had ceased, and the skin was more supple with the lesions less marked. On September 10 she could stand unaided and answered simple questions. Treatment with improvement continued until October 12, when she had had 19 exposures. Unfortunately, she suffered from heart disease (mitral stenosis), and on October 14 she died rather suddenly from this complaint. She had eaten a good dinner about half an hour previously and was sitting up in bed talking when the end came. The improvement in this case was very marked. She had put on weight, the skin had become soft and pliable while the lesions had completely faded. The *post-mortem* findings,

apart from the heart, showed chiefly an old-standing inflammation of the mucosa of the whole gut. A macroscopic examination of the brain showed some sclerosis of the white matter.

Radiation appears to have a very definite power of restoring the deficiency. This result is in line with the latest research work in vitamins and ultra-violet rays.

No account of ultra-violet therapy in mental hospital work would be complete without mention of a new glazing material called Lamplough's "vitaglass." Ordinary window-glass cuts off the majority of the ultra-violet rays in sunlight, but they pass freely through vitaglass. The daily press has given accounts of the benefits derived from its use in the London Zoological Gardens. The Chief School Medical Officer of Birmingham reports favourably on its use in schools in his area. It is being extensively used in new factories and on pedigree stock farms; one gentleman has lately ordered 1000 ft. super. to glaze sheds for his pedigree prize cows. Unfortunately its cost is high, but I certainly think it should be used for all verandahs and admission wards in our hospitals.

I think that it is desirable that accurate records of weight, pulse, blood-pressure, hæmoglobin content and white cell differential count should be made in all cases undergoing general treatment. I know this entails a formidable amount of work, but in the interests of science it should be done. With co-operation, it should not be too difficult a task for the medical officers of a mental hospital to carry out.

With regard to the operation of the lamp and supervision of treatment, I think the preliminary tests and first treatment of any patient should be carried out by the medical officer concerned, but that subsequent treatments could be satisfactorily done by a trained nurse under the general supervision of the medical officer.

In conclusion, I believe that, with the exception of agitated melancholics and acute maniacs and epileptics, the majority of mental cases (treatment not being contra-indicated by the physical state), will benefit by radiation, the mental gain being due to the improved physical state.

I have to thank Dr. Shaw, Medical Superintendent of the County Mental Hospital, Stafford, for his permission to publish these notes, as well as for help and advice in the selection and treatment of the patients.

References.—(1) Gauvain, *Lancet*, ii, 1925, p. 11.—(2) L. Hill, Eidinow and Colebrook, *Brit. Journ. Exper. Path.*, 1924, v, p. 54.—(3) *Med. Ann.*, 1925, p. 515.—(4) Eidinow, *Lancet*, 1925, ii, p. 320.—(5) *Idem*, *ibid.*, 1926, ii, p. 645.—(6) Peacock, *ibid.*, 1925, ii, p. 396.—(7) *Idem*, *ibid.*, ii, 1925, p. 396.—(8) Walters, *ibid.*, 1925, ii, p. 1183.—(9) Eidinow, *ibid.*, 1925, ii, p. 320.—(10) McKenzie and King, *Practical Ultra-violet Light Therapy*.—(11) Griffith and Taylor, *Lancet*, 1925, ii, p. 1205.—(12) *Ibid.*, 1926, ii, p. 838.

[A summary of the clinical form in use at Parkside Mental Hospital, Macclesfield, in regard to ultra-violet treatment is added by kind permission of Dr. Dove Cormac :

Name	Sex	Age
Date	Height	Mental condition
Blood-pressure (3 lines—left): (1) at commencement, (2) at end of 4th week, (3) at end of 8th week.		
Basal metabolic rate (same 3 lines—right): (1) at commencement, (2) at end of 4th week, (3) at end of 8th week.		
Bodily disease (1 line).		
General condition (2 lines).		
Blood-count (6 lines—left). Weight (right), 1st, 2nd, 3rd and 4th weeks.		
Date.	Period of exposure.	Date. Period of exposure. Condition. Pigmentation. Mental state.
Weekly notes on— (20 lines.)		
Blood-count at end of 4th week (6 lines).—Eds.]		

The Care and Management of Induced Malaria. By W. D. NICOL, M.R.C.S., L.R.C.P., D.P.M. Assistant Medical Officer, Horton Mental Hospital.

FOR the treatment of general paralysis of the insane by induced malaria, the Board of Control, in consultation with the Ministry of Health, decided, at the end of 1924, to make an official arrangement by which a pure strain of the benign tertian malaria parasite would be cultivated in mosquitoes, and would be made available for inoculation by mosquito-bites instead of by the direct inoculation of blood from other patients. In consultation with the Mental Hospitals Department of the London County Council, the Horton Mental Hospital was selected for the work of preparing and maintaining the strain of malaria in mosquitoes, and Col. J. R. Lord, C.B.E., Medical Superintendent of the Hospital, undertook the necessary arrangements in collaboration with Col. S. P. James, of the Medical Staff of the Ministry of Health. An isolated villa in the hospital grounds was selected as a treatment-block and laboratory; the Horton Mental Hospital authorities caused it to be mosquito-proofed and furnished, and the Ministry of Health supplied the scientific equipment of the laboratory. The Ministry also arranged that the routine laboratory work should be done by one of their laboratory assistants, Mr. P. G. Shute, under Col. James's supervision. I undertook the selection of cases suitable for treatment and their clinical care and management. The arrangements were completed in April, 1925, and since that month 33 batches of infected mosquitoes have been prepared and utilized for the inoculation of more than 300 patients in 69 hospitals in England, Wales and Scotland.

In 1926 the treatment block and laboratory were visited by

professors and doctors from France, Italy, Germany and Holland, and by post-graduate students from the London School of Hygiene and Tropical Medicine, as well as, on two occasions, by members of the Royal Medico-Psychological Association. During these visits various details relative to the selection and management of patients were discussed.

In this paper I propose to describe the procedure at Horton relative to those items of the therapeutic measure, supplemented in some respects from notes kindly placed at my disposal by Col. James from his experience of the treatment in other hospitals.

THE SELECTION OF CASES.

At Horton the attack of malaria is invariably induced in the natural way by the bites of infected mosquitoes instead of by the direct inoculation of blood from other patients. Though not essential to obtain evidence of antecedent syphilitic infection in the patients to be treated, nevertheless every case is confirmed to be a general paralytic by serological examination of the blood and cerebro-spinal fluid. The matter which is considered to be of most importance in the selection of cases is the patient's physical condition from the point of view of his ability to stand the strain of the malarial course. It is held that the prolonged and severe attack of malaria which is essential for the success of the treatment is a serious illness which, even with the greatest care, involves a risk to life. The relatives of the patients are always informed of this risk. In a series of 310 cases inoculated successfully by mosquitoes supplied from Horton to different hospitals in England and Wales, the fatality-rate during or immediately following the malarial course has been approximately 6%. The period of the course at which there appears to be most risk of a fatal issue is during the first twelve hours after quinine has been begun.

The earlier the diagnosis, the better the prospect of recovery, but the treatment is not reserved for early cases only; advanced cases are also given the benefit of it, provided that their physical health appears from thorough clinical examination (particularly of the circulatory and renal systems) to warrant that they will stand the course. On more than one occasion a fairly advanced case, after open-air treatment and special nursing and management, has recovered sufficiently in physical health to justify being given a malaria course, and the final result has been discharge from the hospital as cured.

Infecting the patient.—To infect the patient four or five infective mosquitoes are transferred to a small glass jar, the mouth of which

is closed with mosquito netting. The mouth of the jar is placed against the patient's thigh while he lies in bed. The mosquitoes bite through the netting which covers the mouth of the jar. The skin should be thoroughly cleaned before the mosquitoes are applied. After the mosquitoes have bitten, the marks are painted with iodine (which allays the irritation) and bandaged to prevent the patient from scratching them.

The incubation period.—The period that elapses between the date of inoculation and the first malarial rise of temperature is usually 12 days, but it is often only 10 days, or it may be as long as 24 days. At Horton, patients receive special nursing and attention from the date of infection. As a rule they are not allowed up during the incubation period. The reasons are: (1) Warmth favours the development of the infection; (2) rest in bed prevents to some extent the irregular non-specific rises of temperature observed in many cases of general paralysis; (3) as the onset of malaria in a person infected by mosquitoes cannot be prevented by quinine or other known means, it is important that no untoward event should happen during the incubation period. On one occasion at Horton a female patient during the incubation period had an accident resulting in a severe fracture, which made it advisable to endeavour to prevent or to postpone the expected malarial attack. With that object she was given 30 gr. of quinine (10 gr. *t.d.s.*) on two following days, namely, on the fourth and fifth days after having been infected. It had no effect in preventing or postponing the attack. Other modes of quinine administration during the incubation period, as well as other drugs have been tried without success on other patients in whom it has been considered advisable to prevent the onset of the attack.

In order that the initial febrile manifestations of the attack may not be missed, all patients are put on a four-hourly temperature chart from the seventh day after infection. Routine daily blood examination is commenced from the day on which the first febrile temperature is noted.

THE ATTACK.

From the day of the first rise of temperature the instructions for taking temperatures are as follows: (1) Note the hour of the day or night at which the rise of temperature occurred on the first day. (2) On the next day, about an hour before that time, begin to take temperatures every half-hour. (3) As soon as a rise above normal is observed, take the temperature every fifteen minutes, and continue to do so throughout the febrile paroxysm until it has fallen to normal. (4) Then resume the four-hourly rule until the

next rise. This is the only plan by which a correct chart of temperatures during the attack can be obtained, and by which "anticipation" or "retardation" of the daily paroxysms can be accurately ascertained and recorded.

In a primary attack of benign tertian malaria three stages are recognized—the initial stage, the developed stage and the terminal stage. The initial stage begins as a gradually increasing fever which at first is sub-continuous or irregularly remittent. On the third or fourth day it becomes intermittent, and the termination of this stage is often indicated by an intermission lasting twenty-four or forty-eight hours. The following is an example of a usual chart during this stage :

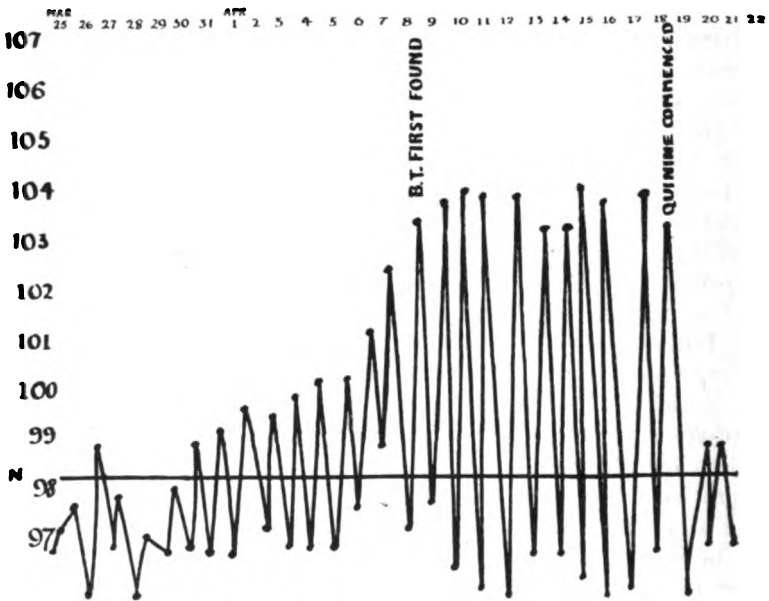


CHART I.

The symptoms during the initial stage resemble somewhat those of a commencing attack of typhoid fever, but the spiky nature of the temperature is more apparent. There is seldom or never a obvious "rigor" during this stage, though the patient may complain of feeling "chilly." It is a period of the malaria course which is liable to be entirely unobserved if it is the practice to take temperatures only morning and evening, or to watch only for the occurrence of the first "shivering." Parasites can seldom be found even by the "thick-drop" method until the second or third day of the initial stage.

In the developed stage the temperature becomes definitely

intermittent. There is nearly always an attack of fever every day—not every other day, as is often expected. The height of the temperature reached in each paroxysm rises daily during the first three or four days and the duration of each febrile paroxysm lengthens. Parasites can now be easily found in thin films of blood, and their number increases from day to day during the first two or three days of this stage. Then a balance is established between the infection and the patient's resisting power, and usually the parasites remain moderate in number and the fever moderate in degree. It often happens during this stage that the maximum temperatures reached during the paroxysms are equal on alternate days, and that they are lower on the first, third, fifth, etc., days than on the second, fourth, sixth, etc. This indicates that the fever in the developed stage of a primary attack is of "double tertian" type, but it is seldom easy to correlate the course of the temperature with the stages of growth of the parasites. The temperature chart shows two separate febrile attacks, each of them occurring on its own day, but blood examination shows parasites in nearly all stages of development.

In the management of the case during the developed stage two points are of particular importance, namely, (1) the temperature, while the paroxysm lasts, must be taken every fifteen minutes in order that the nursing staff may adopt appropriate measures to prevent hyperpyrexia; (2) blood examination must be made at least once a day in order to ascertain that the number of parasites is not increasing beyond a safe limit. On the first point the practice at Horton is to begin cold-sponging when the temperature reaches 105° F., and to repeat it as often as may be necessary to keep it at or below 105° while the paroxysm lasts. This is illustrated in Chart 2, which shows the duration of the paroxysm (usually about ten to twelve hours), and the importance of taking temperatures frequently during the paroxysm.

As regards the second point, a thin blood-film stained with Leishman's stain is examined daily, the parasites being counted in relation to the leucocytes or to a stated number of fields of the microscope. Using a $\frac{1}{4}$ -inch oil-immersion objective and No. 2 eye-piece twenty-five fields are usually passed in review. If thirty-five or more parasites are found at this examination (*i.e.*, more than one parasite in every field), it is considered an indication that the fever should be stopped. Account is also taken of the clinical condition of the patient, the duration of the paroxysms, the maximum temperature reached, and whether there is a paroxysm every day or every other day. Persistent vomiting, faintness or collapse during the paroxysm, cyanosis, seizures, undue restlessness,

TEMPERATURES DURING THE MALARIAL PAROXYSM.
DURATION 14 HOURS.

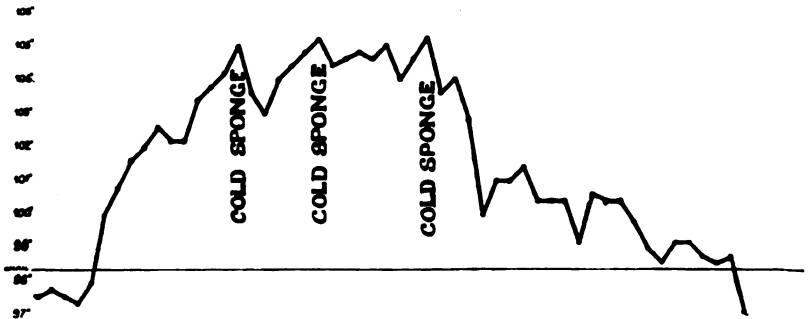


CHART 2.

albuminuria and the earliest suggestion of jaundice are regarded as signals that the course should be terminated.

Temporary interruption of the course.—In some of the above conditions it is our practice, where the patient has not completed a sufficient number of febrile attacks, to abort the malaria attack instead of curing it outright. This is effected by giving the patient only one dose of 5 gr. of quinine. The result usually is cessation of fever and almost complete disappearance of parasites from the peripheral blood, to be followed in from ten to twenty days by a recrudescence. During this interval of temporary recovery the patient's physical condition improves and some degree of resistance to the malarial toxin is developed, the result being that the recrudescence is usually of tertian instead of quotidian type, and less severe than the original attack. The following chart illustrates this procedure :

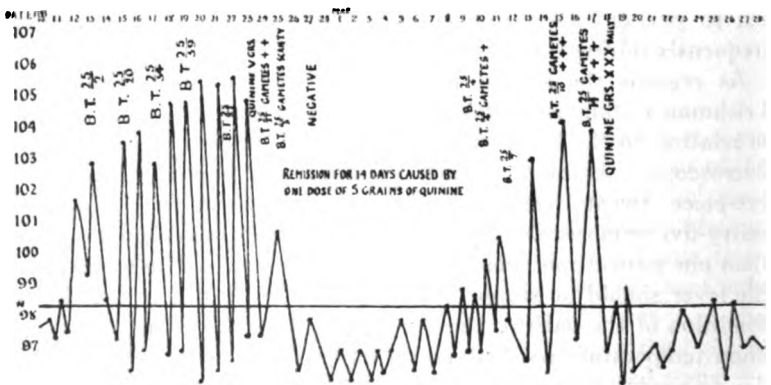


CHART 3.

The terminal stage, in patients who are allowed to continue the course uninterruptedly, is characterized by the fever changing from quotidian to tertian type, and by a gradually diminishing severity of the fever attacks. In some cases the attacks get milder day by day until they fail to recur (so-called "spontaneous recovery"), but in these cases parasites usually persist in the peripheral blood for some time after the cessation of fever.

Management during the paroxysms.—The time of day at which the paroxysm begins is known, and care is therefore taken that the patient is comfortable in a warm blanket-bed before the actual attack of shivering begins. Hot-water bottles are put into the bed in good time, and a cup of hot broth or tea is given as soon as the patient begins to feel cold. The instructions regarding taking the temperature every fifteen minutes from that time have already been mentioned, and the necessity of cold-sponging when the temperature rises above 105°. During the hot stage the patient should be allowed to drink as much fluid as he will—preferably barley-water, soda-water or other alkaline drinks. For nausea or vomiting a full dose of gentian with soda, repeated at intervals, is sometimes useful. Nothing should be done which may delay the onset of the sweating stage, in which the patient gets almost immediate relief. Shortly after the onset of this stage the patient's wet clothing is changed and a stimulant drink is given.

Management between the paroxysms.—Care is taken to maintain the patient's strength as much as possible by nourishing diet and to keep the digestive functions in good order. Constipation is the rule, and usually has to be corrected by a daily enema. In addition a dose of aperient water may be required each morning throughout the course. The urine is examined daily. Albuminuria is often only temporary, but is regarded as a serious complication, necessitating abandonment of the course. A careful watch is kept on the working of the heart, and the patient's strength is supported by heart stimulants when necessary. Tenderness of the spleen is not often noted, and no useful object is served by endeavouring to detect enlargement of that organ by deep palpation. *Herpes labialis* is fairly common and sometimes severe.

Treatment to stop the attack.—Two plans of quinine treatment for stopping the attack are practised at Horton, namely (1) 10 gr. of quinine three times a day for five days, or (2) 5 gr. of quinine three times a day for ten days. The quinine is given in solution by the mouth. With either treatment the fever invariably ceases within forty-eight hours, and the parasites usually disappear by the third day. As regards their immediate effect, either plan is equally good.

Several preparations reputed to be effective remedies for malaria have been tried (including "Plasmoquin," "Harmine," "Harmaline" and "Toxotropin"), but none of them is the equal of quinine.

Treatment during convalescence.—At the end of the course patients are profoundly anæmic and much exhausted. Every endeavour is made to improve their general health as quickly as possible, chiefly by nourishing food, fresh air and medical comforts, including a moderate allowance of stout. Many patients during convalescence develop an abnormal appetite and quickly put on weight. Drugs which have a tonic action are not greatly relied upon, but it is a usual practice to give Fellows' syrup (3ss *t.d.s.*) for a few weeks.

As an aid to the cure of general paralysis, an anti-syphilitic course of one of the organic arsenical compounds is prescribed after complete recovery from the malarial attack.

MALARIAL RELAPSES.

In about 50% of cases a relapse of the malarial attack occurs. It may happen either at a short interval (twenty days to six weeks) after cure of the attack or at a long interval (eight to ten months). No known method of quinine treatment either during or after the attack is effective in preventing these relapses, but they are very easily cured by 5 gr. of quinine three times a day for two or three days. All that is necessary is that the medical attendant of a patient discharged from hospital should be informed of the possibility of their occurrence, in order that the diagnosis may be confirmed and treatment be given at an early stage.

GENERAL NOTES.

The importance of attending to the patient's physical health before the attack has already been mentioned. Septic foci in one part of the body or another are common in patients suffering from general paralysis, and they are dealt with as far as possible before the malarial course is begun. It is important to correct any disorder of the alimentary system, particularly constipation, and to ascertain that the patient's urine is normal and that there is no serious disorder of the circulatory or respiratory systems.

The number of febrile attacks allowed varies in each case with the patient's condition, but in most cases ten to twelve paroxysms are permitted. A second course has been given to several patients whose physical condition is good, but whose mental state has not improved within two or three months. A relapse has sometimes

served as a second course of treatment, and as a general rule it is mild in character, with a tendency to "spontaneous recovery."

From a limited number of results collected at Horton, it appears that the percentage of "cures" of general paralysis in cases inoculated by mosquito-bites is considerably higher than the percentage in cases infected by direct blood inoculation.

I wish to express my thanks to Col. Lord for his kind permission in allowing me to refer to cases and charts.

*Tryparsamide Therapy in General Paralysis of the Insane.**

By T. M. DAVIE, M.C., M.D., Assistant Physician, The Royal Hospital, Morningside, Edinburgh.

TRYPARSAMIDE, the sodium salt of N-phenylglycineamid-p-aronic acid, was first prepared by Jacobs and Heidelberger in 1915 in the laboratories of the Rockefeller Institute. Following on the excellent reports of its efficacy in the treatment of neuro-syphilis in America, it was distributed to various research centres in this country through the agency of the Medical Research Council prior to its liberation for general use.

Of the twelve cases to be described in which tryparsamide was administered, six were treated at the request of the Medical Research Council, to whom we were indebted for the supply of the drug. The results were sufficiently encouraging to lead us to pursue the same method of treatment subsequently in the other six cases.

The laboratory experiments of Brown and Pearce, and of others, on animals had shown the very definite effect of tryparsamide upon infections by the *Treponema pallidum*. It seemed that ordinarily the organisms were not destroyed by the drug, and that beneficial results were to be explained not by its treponemacidal action, but by its capacity of increasing the resistance of the tissues to the spirochæte.

Later, clinical experiments by Lorenz and others (1) gave particularly good results. These observers comment on the marked tonic effect of this drug as one of its characteristics.

SELECTION OF CASES.

The number of cases under tryparsamide treatment was twelve. The number might have been larger, but it was deemed advisable not to interfere with those cases of general paralysis which had been

(*) Read at a Scottish Divisional meeting held at Gartloch Mental Hospital, November 16, 1926.

previously treated (or were being treated) by the malaria method, owing to the difficulty of assessing the relative values of the different modes of treatment. In addition, several cases were disqualified because of the presence of pallor of the optic discs and other conditions indicating disease of the optic tract, in which untoward results have been reported as following treatment. As far as possible untreated cases were chosen, but two (Nos. 3 and 8) had previously undergone a course of injections with N.A.B. without, however, deriving any appreciable benefit.

DIAGNOSIS.

The diagnosis of general paralysis clinically rests on a triple basis—neurological signs, mental state and laboratory tests of the blood and the cerebro-spinal fluid; nor can it be properly diagnosed except from this threefold aspect. The neurological signs do not require description here. As regards the mental state, it is generally admitted that the classic delusions of great power, wealth and grandeur are less frequently observed than formerly; and a progressive "dilapidation" or dementia may be considered as more typical. In a few cases there remains the problem as to whether the particular mental disorder seen in a case where the physical signs of general paralysis are present is a direct result of the disease, and not simply a concomitant psychosis. Especially does this question arise in such cases as the melancholic types of general paralysis, where the possibility of a melancholia accompanying the disease, but not necessarily forming an integral part of it, should not be overlooked. As regards the laboratory tests, the presence of a positive Wassermann in the cerebro-spinal fluid is indicative only of a syphilitic infection of the nervous system, and has to be correlated with the other findings, such as the colloidal gold test and the sigma test, etc. Even so, a definite discriminative diagnosis cannot always be made, there remaining a residuum of cases which appear to be midway between cerebro-spinal syphilis and general paralysis.

All the cases to be reported here will, I think, be accepted as coming under the category of general paralysis or tabo-paresis, with the possible exception of one (No. 5) who was admitted as an undoubted case of general paralysis with positive Wassermann in blood and cerebro-spinal fluid, who had several severe seizures shortly after admission, and who now in a grossly demented state shows a consistently negative Wassermann reaction in the cerebro-spinal fluid, although the blood reaction is and always has been strongly positive.

DESCRIPTION OF THE CASES.

CASE 1.—Male, admitted November, 1923, æt. 41. From a decent hard-working man, had become lax in morals, careless and indifferent about his work. Untidy, full of extravagant notions of his abilities and markedly euphoric. The physical signs were well marked—Argyll-Robertson pupils, tremor of tongue and muscles of face, mask-like countenance, speech slurring, gait unaffected. Wassermann reaction strongly positive in blood and cerebro-spinal fluid.

CASE 2.—Male, admitted July, 1921, æt. 39, in an acute stage of general paralysis. Without treatment an almost complete remission of the symptoms had set in, there having been no signs of mental disorder for about 1 year beyond a very mild dementia. Physical signs were unaltered. Pupillary reaction very sluggish to light. Tremor of tongue and facial muscles. Speech slurred. Blood and cerebro-spinal fluid Wassermann reaction strongly positive, but curiously, the colloidal gold and benzoin tests were negative.

CASE 3.—Male, admitted July, 1923, æt. 47. Had contracted syphilis 20 years before. Just previous to his admission had been under treatment in hospital, when acute mental symptoms of a melancholic type developed. Pupillary reaction very sluggish; tremor of tongue and facial muscles. Exaggerated knee-jerks. No speech disorder. Gait normal. Blood and cerebro-spinal fluid Wassermann reaction both strongly positive.

CASE 4.—Male, admitted 1920, æt. 50, showing definite signs of general paralysis and of paralysis agitans. Steady deterioration and enfeeblement had ensued. He died of an intercurrent pneumonia 6 weeks after commencement of treatment. *Post-mortem*: Signs of general paralysis were well marked. Sections of the cortex and the lenticular nucleus stained by Levaditi method showed abundant *Treponema pallida*.

CASE 5.—Male, admitted July, 1917, æt. 41, with well-marked physical signs of general paralysis, and blood and cerebro-spinal fluid both strongly positive. Shortly after admission had several severe seizures and was comatose for a week. Progressive gross dementia set in, but the cerebro-spinal fluid has never given a positive Wassermann reaction since admission, although blood has always remained positive.

CASE 6.—Male, admitted July, 1913, æt. 29. Had been an exceptionally clever and hard-working clerk. About a year previously he had become careless in his work, very forgetful, and his writing had deteriorated. Just before admission he had become very grandiose, claimed to be a millionaire, and was markedly euphoric and excited. Later he gradually lapsed into a childish, demented state. Pupils regular but sluggish to light. Tremor of tongue. Knee-jerks unequal. Speech indistinct. Blood negative Wassermann reaction, but cerebro-spinal fluid very strongly positive.

CASE 7.—Male, admitted June, 1924, æt. 44, in a state of extreme excitement; boasted of being Samson and saying he owned the world. Pupils, very sluggish reaction. Tremor of tongue. Speech not affected. Blood and cerebro-spinal fluid strongly positive Wassermann reaction.

CASE 8.—Male, admitted February, 1925, æt. 49. Syphilis contracted 23 years ago. Had recently become very worried and morose, and later excited and confused. Pupils unequal, sluggish to light and very small excursion. Tongue tremulous. Spastic paraplegia. Blood and cerebro-spinal fluid strongly positive Wassermann reaction.

CASE 9.—Male, admitted April, 1924, æt. 49. Had contracted syphilis in 1900. Spastic paraplegia since 1906. Well marked delusions of grandeur: claimed to be Lord High Admiral of the Fleet, and a multi-millionaire. Argyll-Robertson pupils. Speech hardly affected. Blood and cerebro-spinal fluid reactions both strongly positive.

CASE 10.—Male, admitted February, 1925, æt. 49. Contracted syphilis in 1917. In 1923 "developed delusions": said he was God and the Trinity. Excited. Argyll-Robertson pupils. Demented. Unequal knee-jerks. Speech slightly slurring. Blood and cerebro-spinal fluid Wassermann reactions both strongly positive.

CASE 11.—Male, admitted March, 1925, æt. 49. Excited, restless and voluble. Very exalted ideas of his business capability and many impossible

schemes. Argyll-Robertson pupils, tremor of tongue and facial muscles. Speech slurring, ataxic gait. Blood and cerebro-spinal fluid strongly positive.

CASE 12.—Male, admitted March, 1924, æt. 49. His illness was said to have started six months previously. Slight twitchings of his face had been observed, and he had become absent-minded. Shortly before admission whilst at breakfast he had "a sort of shock"; his head was turned convulsively to the side, and his face twitching. Vomiting ensued. This attack left him confused and with a much impaired memory. Examination showed small stationary pupils, absent knee-jerks, tremor of tongue. There was marked disorientation and recent amnesia. No Rombergism or ataxia. Paramnesia. He was exceedingly irascible and restless. Blood negative, but cerebro-spinal fluid strongly positive Wassermann reaction.

METHOD OF ADMINISTRATION.

Three grm. was selected as the dose. The tryparsamide was dissolved in 10 c.c. of freshly distilled water, and the solution allowed to become perfectly clear. In every case the intravenous route was chosen. No other form of treatment was used in conjunction with tryparsamide, although mercury is said to intensify its beneficial action. In the first six cases, eight weekly injections were given (except in Case 4, whose extreme debility necessitated discontinuance of treatment). In the second six cases six weekly injections were given, all of 3 grm. dosage.

Prior to administration a careful physical, mental and serological examination had been made.

During the course of injections, and at varying times thereafter, specimens of blood and cerebro-spinal fluid were collected for serological examination. Temperature records of all cases were kept, and in the first set of six cases leucocyte counts were made daily.

OBSERVATIONS REGARDING TEMPERATURE AND LEUCOCYTE COUNTS.

There were in some instances occasional rises of temperature, generally about twenty-four hours after the first injection, and in two cases an unexplained rise of temperature to 100° occurred midway in the course of treatment.

These pyrexias quickly disappeared. In addition pyrexia associated with hæmaturia and lasting three days is recorded below in one case.

Regarding the leucocyte counts, one does not wish to infer too much; but a high leucocytosis (10,000 to 15,000) was found in several cases on the morning following the initial injection.

UNTOWARD EFFECTS.

There is no record of the occurrence of giddiness, jaundice, rigors or transitory œdemas, nor did any case develop seizures. Amblyopia was noted in one case (No. 8), but this quickly passed

off. The only other complication to be reported was that of the occurrence of hæmaturia with pyrexia, lasting almost three days (Case No. 9). This occurred two days after the second injection. A week was allowed to elapse before resumption of treatment, and there was no further recurrence.

SEROLOGICAL CHANGES.

Blood Wassermann reaction.—Ten of the cases before treatment had a strong positive reaction. After treatment, all still yielded a positive reaction, but two had become weakly positive. In one case (No. 11) this change occurred after the third injection. In the other (No. 3) the change did not occur until seven months after the completion of treatment. Of the two cases which were negative before treatment, no change is recorded.

Cerebro-spinal fluid Wassermann reaction.—Eleven of the twelve cases gave a strong positive reaction before treatment. After treatment two of them became negative. No. 6, after five injections had been given, gave a negative reaction, and the cerebro-spinal fluid has remained consistently negative since (*i.e.*, for two years). No. 1, a year after treatment, still yielded a strongly positive reaction, but six months later (*i.e.*, eighteen months since completion of treatment) showed a negative reaction, and that without any repetition of the injections or any other treatment in the interim. Another (No. 12) had become weakly positive after completion of treatment. In the case where the reaction before treatment was negative there was no change.

Noguchi test.—Only four cases gave a positive Noguchi reaction before treatment. Two of these became negative after treatment. Of the eight cases negative before treatment, six remained negative and two had become positive.

Little stress can be laid on the importance of this test, which, as a test for globulin alone, does not indicate accurately the degree of pathological variation in the protein elements.(2)

The Lange (colloidal gold) test.—Six cases gave a paretic curve in this test before treatment. One of them (No. 12) became negative after the third injection, but this change did not endure, and later luetic and modified paretic curves appeared.

Two of them became weakly luetic, almost negative. This change was brought about in Case 1 only eighteen months after completion of treatment. Indeed, in his case the curve was still paretic one year after treatment. In Case 7 the change occurred in one month.

Two (Nos. 3 and 9) showed reduction of the curve to that of the

modified parietic type. The one which remained unchanged (No. 4) was the case which died some weeks after the commencement of treatment.

Of the remaining six cases, four were negative before treatment, three of which remained negative after treatment and one (No. 8) became weakly luetic. The other two, yielding before treatment luetic and weakly luetic curves respectively, showed no change after treatment.

The colloidal benzoin test.—The results were very similar to those obtained with the colloidal gold reactions. In Case 12 above quoted, the changes in the benzoin reaction coincided closely with those of the Lange test. In the cases originally negative no change took place.

Cell-count.—Only one case showed a moderate pleocytosis before treatment (30 cells per c.mm.). The count gradually fell, to become 2 per c.mm. in six months.

In the other cases pleocytosis was slight, ranging from five to ten cells. The number was reduced after treatment to from one to four cells.

PROGRESS OF CASES.

CASE 1.—At the end of a course of 8 weekly injections had already become alert, walked briskly, became particular about his clothes, worked in the ward, and was generally toned up. Grandiose ideas and euphoria disappeared. Is still a little childish. This marked improvement has now lasted 2 years. No change in physical signs. Cerebro-spinal fluid Wassermann strongly positive for a year after treatment; became negative 18 months after, and the other tests practically negative. To be discharged.

CASE 2.—In a state of remission before treatment. 8 weekly injections. On completion became more vigorous and more alert mentally. Discharged and now works as a shopkeeper. Good progress maintained for 2 years. No change in physical signs or serologically.

CASE 3.—On completion of course of 8 injections there was no change. Improvement commenced 3 months later. Skin became clear; decided gain in weight became alert; depression vanished. No neurological change. Blood Wassermann had become weakly positive 6 months after treatment. Discharged 9 months after treatment. Now, 2 years after, is reported to be "doing excellently well."

CASE 4.—Very enfeebled at outset. Died of an intercurrent pneumonia a fortnight after completion of curtailed treatment.

CASE 5.—8 weekly injections. Since completion of treatment 2 years ago has improved in bodily health. Mentally no improvement. Grossly demented. Physical signs and reactions unaltered.

CASE 6.—8 weekly injections. Present condition (2 years since treatment): Is much improved physically. Toned up. Formerly took no interest in anything, and now works well in ward, but still very childish and considerably demented. Cerebro-spinal fluid had become negative; neurological signs unaltered.

CASE 7.—6 injections. Became much quieter and more manageable. Gained in weight; bodily condition improved. No real improvement mentally. No neurological change. Wassermann reactions unaltered. Since transferred to another hospital.

CASE 8.—6 injections. Decided bodily and mental improvement on completion of treatment. Disappearance of confusion and excitement. Discharged 2 months later. No neurological or serological change.

CASE 9.—6 injections. At first only change was disappearance of previous constant excitement and destructiveness. No mental improvement during ensuing 6 months, but now the ideas of grandeur recur only from time to time, and insight is being regained.

CASE 10.—6 injections. Improvement in bodily state. Mental improvement shown by his now working in the ward and dancing and playing billiards. Still childish, very deluded and enfeebled mentally.

CASE 11.—6 injections. No change in bodily health or mental state. Blood Wassermann reaction had become weak positive.

CASE 12.—6 injections. Marked improvement in bodily state. Disappearance of former extreme irascibility. Memory improved. Cerebro-spinal fluid from strong positive changed to weak positive Wassermann. To be discharged.

It is conspicuous that the least improvement has been shown in the long-standing cases, presumably with marked brain damage.

It may be mentioned that in four of the first set of six cases, a period of two years has elapsed since treatment by tryparsamide was carried out. It is of especial interest to note that in one of these cases, the change in the Wassermann reaction in the cerebro-spinal fluid from positive to negative occurred as late as eighteen months after. A year after treatment this reaction had still been strongly positive and the gold sol curve parietic, whilst in a further six months without any intermediate treatment, the Wassermann became negative and the gold sol reaction almost negative.

In regard to the second set of six cases, almost a year has elapsed since treatment was carried out, and it is possible that a similar late improvement may show itself.

One was content to leave alone cases which were progressing favourably although slowly, and it appeared wisest from the point of view of collecting exact data not to resume too soon the course of injections which have now been repeated.

Decided clinical improvement need not be accompanied by serological improvement. The fact that the three cases discharged still yielded a positive Wassermann reaction both in the blood and cerebro-spinal fluid bears this out. Other observers have commented on this fact, notably Wile and Wieder⁽³⁾, in their account of eighty-five cases of neuro-syphilis treated by tryparsamide.

Quite apart from the question of the value of tryparsamide therapy, one highly interesting feature in the above-quoted cases is that one (Case 2) in which although the Wassermann reaction in the cerebro-spinal fluid was always strongly positive, the colloidal gold and benzoin tests were consistently negative.

The significance of this feature is outside the scope of the present investigation, but is of interest in regard to the relative diagnostic values of these tests.

Results.—Of 12 cases treated, 3 have been discharged, all leading active lives and doing well; 2 are about to be discharged; 1 died of intercurrent pneumonia; 9 showed marked bodily improvement;

7 showed distinct mental improvement. No blood Wassermann was changed to negative. Two cerebro-spinal fluid Wassermans became negative.

FURTHER OBSERVATIONS.

It will be noticed from the above account that only one course of injections of tryparsamide had been given. Notwithstanding this, the results have been good, although often long delayed; and it is surely an advantage to know, in the case of administering a drug which causes at times untoward effects, the minimum number of injections required to produce a real and lasting benefit.

Since these observations were made, a further course of injections has been given to those cases still resident. The results have been most encouraging. Case 1 on completion of his second course now shows a weakly positive blood Wassermann, and all tests of the cerebro-spinal fluid have been consistently negative. Case 10 has shown striking improvement in his bodily health, is mentally more alert, and both blood and cerebro-spinal fluid are now weakly positive, whilst the other tests have become negative. Case 12 continues to improve. In his case the colloidal gold and benzoin reactions have become negative and the cerebro-spinal fluid more weakly positive.

It is of interest here to mention a further early case of general paralysis recently admitted, to whom 8 tryparsamide injections were given, and whose reactions were changed as follows:

	Before.	After 8 injections.
Blood	Negative .	Negative.
Cerebro-spinal fluid Was- sermann	Strongly positive .	"
Cerebro-spinal fluid cell count	90 per c.mm. .	6 per cmm.
Cerebro-spinal fluid col- loidal gold	555,541,000,000 .	101,220,000,000
Cerebro-spinal fluid ben- zoin	344,216,220,000,000,0 .	222,100,000,000,000,0

CONCLUSIONS.

Tryparsamide is undoubtedly a most valuable therapeutic agent in general paralysis, and in allied neuro-syphilitic infections.

Its marked tonic effect is unique and is produced early in the course of treatment.

Tryparsamide arrests the progress of dementia and prevents paralysis. Mental improvement of some degree may be expected in almost every case. Decided mental improvement may occur long after treatment (*e.g.*, six months).

Serological improvement may occur a long time after the completion of treatment. In one case the cerebro-spinal fluid only became negative eighteen months later.

Serological improvement need not accompany clinical improvement. (Three cases discharged showed no improvement serologically).

There seems no reason to expect untoward effects of a serious nature with weekly 3-grm. doses of this drug. It must be observed

that these cases did not include any with disease of the optic tract, the presence of which is generally regarded as a contra-indication to this mode of therapy.

I am particularly indebted to Prof. G. M. Robertson for his help and for permission to publish these notes.

I also desire to acknowledge most gratefully the assistance of Col. W. Glen Liston and Dr. W. O. Kermack, of the Royal College of Physicians Laboratory, Edinburgh, for carrying out the serological tests.

References.—(1) W. F. Lorenz, A. S. Loevenhart, W. J. Bleckwenn and F. J. Hodges, *Journ. Amer. Med. Assoc.*, May 26, 1923.—(2) J. Godwin Greenfield and E. Arnold Carmichael, *The Cerebro-spinal Fluid in Clinical Diagnosis*, p. 62.—(3) U. J. Wile and L. M. Wieder, *Journ. Amer. Med. Assoc.*, June 6, 1925, p. 1710.

*The Treatment of General Paralysis by Tryparsamide.** By M. BROWN, M.B., Ch.B., Assistant Medical Officer and Pathologist to Gartloch Mental Hospital, and A. R. MARTIN, M.B., B.Ch., D.P.M.Lond., Assistant Medical Officer, Gartloch Mental Hospital.

IN spite of the inability of organic arsenical compounds to stem the course of general paralysis, nevertheless, as each new member of this group appears it is given a trial in the hope that it may do good. This has been done in many cases in the absence of evidence supporting the use of the drug, and where the only justification for its use appears to have been its relation to salvarsan. The results have always proved discouraging, and indeed in many cases the dissolution process has actually been hastened.

Therefore when we came to consider tryparsamide, we felt that it was necessary to obtain somewhat stronger evidence before we were justified in using it even upon a small scale.

The history of the drug showed that each step from its synthesis to its application had proceeded as a logical development based at first on pure experimental evidence and later on clinical experience.

Strictly speaking tryparsamide is not a new drug. Adopting Ehrlich's procedure in his preparation of salvarsan, it was first synthesized by Jacobs and Heidelberger at the Rockefeller Institute in 1915. It is the sodium salt of n-phenylglycineamide-p-arsonic acid, a pentavalent arsenical compound containing 25.4% of arsenic. Its action on various organisms was studied by Brown and Pearce,

* A paper read at a meeting of the Scottish Division held at Gartloch Mental Hospital, November 16, 1926.

who state that in their series of 243 arsenicals there was no other substance that combined so many favourable therapeutic qualities. It remained for five years at the experimental stage, and was exhaustively studied in relation to animal infections due to *Trypanosoma Brucei*, *Gambiense* and *equinum*, and to infections due to *Spirochæta Obermeieri* and *Spirochæta pallida*.

It was first used clinically by Louise Pearce in 1920 in cases of African sleeping-sickness with outstanding results, which have since been confirmed. Smillie used it with success in the *mal de caderas* of horses, and Tyzzer reported favourably on its use in Black-head in turkeys.

As a result of these extensive investigations certain facts emerged which aroused interest in its use in syphilis, particularly syphilis involving the central nervous system. Below we summarize these important facts. (For references see appended bibliography.)

- (1) The drug possesses a marked affinity for the tissues of the central nervous system.
- (2) There is no known substance with an equal degree of spirochæticidal action that possesses the same high power of penetrability. Expressed in other words, there is no other substance capable of developing a comparable measure of parasiticidal action in those parts of the body where it is most needed.
- (3) The drug has a remarkable stimulating effect upon animal economy. With the exception of cattle, animals not only bear large doses, but appear to thrive on it. It is capable of reinforcing the natural processes of resistance and promoting recuperation.
- (4) This stimulus to the defensive mechanism is shown by its action in rabbits infected with *Spirochæta pallida*. Here, small doses augment and hasten spontaneous recovery and induce resolution and healing of syphilitic lesions even in the presence of actively motile spirochætes.
- (5) In rats and mice infected with *Spirochæta Obermeieri* the course of the infection could be influenced and spontaneous recovery hastened, although again it was noted that sterilization of the blood-stream was impossible.
- (6) The drug yielded wonderful results in rabbits with trypanosomiasis, in which disease there is a distribution of organisms and of lesions in the central nervous system comparable to those of cerebral syphilis in man.
- (7) Its value did not depend upon parasiticidal action *per se*, and it was not advocated in the early stages of syphilis, but its value depended on its power of developing spirochæticidal action in hitherto inaccessible foci, and of stimulating the processes of natural resistance.

It is interesting to note at this stage that, according to some observers, the reinforcing of the body's defence mechanism is the rationale for the present malarial treatment of general paralysis.

The first publication on the use of tryparsamide in neuro-syphilis did not appear until May 26, 1923, when Lorenz, Loewenhardt and co-workers reported very favourably on a series of 180 neuro-syphilitics that had been under treatment for two years. They stated that it was more effective than any other form of treatment and that clinical and serological improvement was striking. Further reports appeared to confirm these results.

At this critical stage, and when the drug was about to be released

for distribution, the widespread interest in the malarial treatment of paresis tended to direct attention from the arsenical compounds, with the result that further literature was slow in forthcoming, and it would appear that extensive and prolonged investigation has still to be carried out.

We have made a careful analysis of all available literature on the subject, and find that up to April, 1926, about 2,000 cases of neurosyphilis had been treated by tryparsamide and reported. Most of this work was carried out in America. The great balance of opinion favoured tryparsamide, and there was clinical improvement in about 30% of cases and serological improvement in about 75% of all cases.

Owing to the difficulty in obtaining the drug investigations have been somewhat restricted in this country, and proper interest was not aroused until recently, but work is now being carried out in various hospitals and reports are eagerly awaited. So far British workers have not reported as favourably as American workers, but on the other hand the latter have had more experience.

In October, 1925, we commenced investigations at Gartloch Mental Hospital, and below we give a short account of our experience with tryparsamide therapy.

Seventeen cases of general paralysis were placed under treatment. We regarded as general paralytics these cases which, in addition to the usual physical and mental signs, gave the following readings on examination of the cerebro-spinal fluid.

- (1) Positive Wassermann with 0.1 c.c. fluid.
- (2) Paretic colloidal gold curve.
- (3) Positive Ross-Jones and Pandy tests.
- (4) Marked lymphocytosis.

We also regarded a strongly positive serum Wassermann as additional evidence, as it is rarely that the blood in paresis gives a negative reaction. Although contra-indicated by some authorities, we included in the seventeen cases patients in all stages of the disease, among whom were three bed cases showing marked mental and physical deterioration.

We commenced with six 1-grm. doses of tryparsamide, given at weekly intervals; fifteen cases were treated by the intravenous route and two intra-muscularly. During this period one patient was transferred to another hospital and one patient died. The latter had been regarded as a slowly dementing paretic of the facile type. He had been here for three years, his physical condition was good, and he showed slight mental deterioration with no other psychotic symptoms. A week after his sixth injection he complained of feeling unwell. He developed a marked rise in temperature followed by severe congestive seizures, and he died in

a few days. *Post-mortem* showed typical brain changes with marked congestion, but there was no excess of cerebro-spinal fluid and no spirochætes could be found by dark ground microscopy. The liver, kidneys and spleen were somewhat congested, but otherwise normal.

This unfortunate "neuro-relapse," which has already been observed by other workers, was the only outstanding feature of this preliminary trial. There were no eye complications, nausea, vertigo, or other manifestations of toxic disturbance even among the bed cases. We felt justified in increasing the dose. Each patient now received eight 2-grm. injections at weekly intervals, half to one hour after the mid-day meal. No other drug was administered in conjunction with the tryparsamide, as we did not wish to obscure any results that might be forthcoming. For the same reason no alteration was made in the diet or environment of the patients during the treatment.

Two deaths occurred before the course was completed, and in both instances the patients were of the slowly dementing, apathetic type with no other psychotic symptoms; one was more advanced than the other and confined to bed. Death was similar to that mentioned above, and followed a period of severe congestive seizures accompanied by pyrexia. A *post-mortem* was refused in one case, and in the other the *post-mortem* findings were typical. These appeared to be cases of what American workers call "neuro-relapse." On the other hand, the form of paresis present in these cases nearly always proves to be most progressive, most resistive, and the least likely to remit, whereas it is the expansive active, psychotic type which provides the greater number of stationary and protracted forms and appears to be less resistive. Our subsequent results bear this out to a certain extent.

The number of cases under observation was now limited to thirteen. After conclusion of the treatment we allowed two months to pass and then carried out further clinical and laboratory investigations.

CLINICAL FINDINGS.

(1) Improvement first showed itself during the months of January and February, and in all cases this improvement has held up to the time of writing.

(2) Only two cases failed to benefit (Nos. 12 and 13 in the accompanying list).

(3) Speech, tremor and gait all improved, more especially the latter, and this was one of the first changes to be manifested.

- (4) Argyll-Roberston pupils, when present, were unaffected.
- (5) Five cases (Nos. 1, 2, 3, 4 and 5) have shown marked remission of mental and physical symptoms and are exceptionally well. They are very steady and useful workers. Nos. 1, 2 and 3 have been granted parole, and Nos. 4 and 5 are being discharged to care of friends.
- (6) Three cases (Nos. 6, 7 and 8), previously unemployable and inclined to be dull, listless and foolish, are now willing workers with some degree of initiative.
- (7) Two bed cases (Nos. 9 and 10) recovered sufficiently to be up and capable of doing light ward work.
- (8) One case, No. 11, a paretic of four years' standing, has remained stationary mentally, but is improving physically.
- (9) Case 12 showed no change whatever.
- (10) In Case 13, a tabo-paretic with an alcoholic history, the physical condition gradually became worse. He developed bladder complications and broncho-pneumonia and died two months after the course was finished. Throughout he was wonderfully clear mentally. An interesting feature of this case was the development of an optic atrophy. *Post-mortem* showed nothing of particular interest.
- (11) Changes were most marked in the expansive type of paretic (Nos. 1, 2, 3, 5, 9), and in the depressed, agitated type.
- (12) The slowly dementing, facile and apathetic form showed least change.
- (13) Although mental deterioration is still present in a varying degree in all cases there is a marked absence of the psychotic symptoms.
- (14) Of the early paretics treated (Nos. 3, 6 and 7), No. 3 improved most. All our other cases were of long standing.
- (15) Since the commencement of treatment in October, 1925, there has been a total absence of congestive seizures in the 13 cases cases listed below.
- (16) All the patients gained weight with the exception of Nos. 12 and 13. Increase varied from 7 lb. to 28 lb.

TOXIC DISTURBANCES.

The cases of so-called neuro-relapse which proved fatal might be regarded as toxic, but on the other hand this occurrence is quite compatible with the progressive nature of the disease. Recent reports, however, incline us to the former view.

Although amblyopia is a very common development in cases treated with tryparsamide and is the one serious complication to

be avoided, the optic atrophy which occurred in Case 13, we regarded as a tabetic development.

LABORATORY FINDINGS.

The following table shows the results of tests carried out with blood-serum and cerebro-spinal fluid of thirteen cases of general paralysis, before and after treatment by tryparsamide.

Patient.	Wassermann.		Colloidal gold.	Pandy.	Ross-Jones.	Cell count.
	Blood.	C.S.F.				
1. Before	++++	++++	55554300	+	+	28
After	++--	++--	540000	+	+	18
2. Before	++++	++++	555543	+	+	150
After	+---	++++	00000	±	±	21
3. Before	++++	++++	555542	+	+	55
After	++++	++--	5333	+	+	42
4.* Before	++++	..	..	..	..	..
After	++++	+++--	0000	+	+	12
5. Before	++++	++++	555540	+	+	18
After	+---	+--	0000	++	++	12
6. Before	++++	++++	555540	+	+	55
After	++++	++++	553333	+	+	48
7. Before	++++	++++	5555530	+	+	28
After	++++	++++	55554	+	+	19
8. Before	++++	++++	55554	+	+	82
After	+++--	++++	555543	+	+	81
9. Before	++++	++++	555554	+	+	28
After	++++	+++--	33322	±	±	37
10. Before	++++	++++	5555543	+	+	29
After	++±--	++++	554433	+	+	18
11. Before	++++	++++	5555543	+	+	55
After	++++	+++--	555543	+	+	25
12. Before	++++	++++	555543	+	+	12
After	++++	N-----	00000	—	—	18
13. Before	+++--	++++	555554	+	+	14
After	N-----	+++--	43	+	+	12
Positive control (repeated)	++++	++++	5555543	+	+	58
Negative control (repeated)	N-----	N-----	0000	—	—	3

* Too resistive to submit to lumbar puncture.

In cases of general paralysis undergoing no specific treatment the laboratory findings may show extreme variations, and in rare instances during remissions the pathological findings in the serum and the cerebro-spinal fluid are negligible. For these reasons the results of treatment are difficult to gauge. As a rule, however,

the Wassermann and the colloidal gold reactions remain constant and are extremely resistant to arsenical treatment.

In view of this it is interesting to note that in over 50% of the above cases alterations took place in the colloidal gold curve and in the Wassermann reaction. The paretic curve shows a tendency to disappear, with complete absence in four instances, while the Wassermann reaction in both cerebro-spinal fluid and blood-serum shows a tendency to become weaker. These changes were most marked in those expansive and active paretics who had undergone marked mental and physical improvement. In Cases 1, 2, 3, 4, 5 and 9 the laboratory and clinical findings closely coincide.

CONCLUSION.

In dealing with the treatment of general paralytics, there are certain factors always to be borne in mind which obscure results and lead to misinterpretation. These are: (1) The possible tonic effect of arsenic, resulting in temporary improvement. (2) The beneficial effect of arsenic in certain meningeal complications which frequently accompany paresis. (3) The possibility of paretic serum and cerebro-spinal fluid undergoing in themselves marked variation. (4) The tendency to remissions.

Taking these facts into consideration, and in view of the limited number of cases which we had under observation, it is extremely difficult to come to any definite conclusion. As, however, only one course of treatment has been tried, and as the improvement which took place in the majority of cases has now held for over six months, we consider these clinical results together with the coincidental laboratory findings of sufficient import to justify further investigations along similar lines.

The most significant features in our series of cases were:

- (a) Disappearance of the psychoses.*
- (b) Increase in weight.
- (c) Absence of seizures.
- (d) The conversion of listless, dull patients into useful units.

When it is remembered that the successful treatment of ordinary syphilis by arsenic can only be brought about after a three years' course, it would appear in view of the above results that prolonged administration of tryparsamide in general paralysis is at least worthy of a trial, particularly in the expansive, psychotic forms.

* Exception may be taken to this use of the word "psychoses." In using it, however, we have in mind the method of classification of general paralysis adopted by Ebaugh and Dickson: (A) the organic group, (B) organic reactions with functional colouring, (C) transitory psychoses without signs of deterioration.

We are unable to compare tryparsamide therapy with the Wagner-Jauregg treatment as we have had no experience of the latter, but Kirby and Bunker have stated that malaria is the more satisfactory treatment, although serological results are, at times, better with tryparsamide. O'Leary and Baker, at the Mayo Clinic, have treated over 207 cases with tryparsamide and are of the same opinion, but state that it is available for those not suited to the risk of the malaria treatment. Silverston, of Preston, has combined the two, but his results are so far not conclusive.

In view of the general consensus of opinion, it would appear that a preliminary course of tryparsamide followed by malarial injection is at present the most rational method of treatment, particularly in the debilitated type of early parietic.

Technique.

(a) Serum Wassermann.

Four-tube method using decreasing amounts of serum down to 0.012 c.c. Strong positive controls (++++) and weak positive (++) were used throughout, also negative controls.

(b) Cerebro-spinal fluid Wassermann.

Four-tube method as above, using decreasing amounts of fluid to 0.1 c.c. Fluid was tested as soon after withdrawal as possible.

(c) Colloidal gold reaction.

After three years' experience we fully realize that the reliability of this test depends to a great extent upon the colloidal solution. Using triple distilled water we were successful in obtaining solutions of exceptional clarity, of known pH, standardized by the method advocated by Cruikshank and others, and which gave a constant reading in a known case of paresis, but showed no precipitation greater than in a known negative control.

The actual test was a modification of the Lange method advocated by E. R. Stitt. All fluids were tested twice.

Permission to carry out these investigations was readily granted by Dr. A. M. Dryden, the Medical Superintendent of Gartloch Mental Hospital. In the laboratory we were ably assisted by Mr. L. Winkworth, whose experience, especially in connection with colloidal gold technique, proved invaluable. The supplies of tryparsamide used were manufactured by Messrs. May & Baker, Ltd., by arrangement with the Rockefeller Institute.

BIBLIOGRAPHY.

1. *Experimental and Early Clinical Reports.*

- (1) Jacobs and Heidelberger, *Journ. Amer. Chem. Soc.*, Oct., 1919, xli, p. 1587; *Journ. Exp. Med.*, 1919, xxx, p. 411.—(2) Brown and Pearce, *ibid.*, 1919, xxx, pp. 417, 437, 455, 483; *ibid.*, 1921, xxxiii, p. 193; *ibid.*, 1921, xxxiv, No. 6, Supp. No. 1 (Pearce); *Journ. Amer. Med. Assoc.*, 1924, lxxii, p. 5; *N. Y. State Journ. Med.*, 1924, xxiv, No. 16.—(3) Smillie, *Journ. Amer. Vet. Med. Assoc.*, Sept., 1923.—(4) Tyzzer, *Journ. Exp. Med.*, 1923, xxxvii, p. 851.—(5) Cherterman, *Trans. Roy. Soc. Trop. Med. and Hyg.*, Jan., 1923, xvi, No. 7, p. 394; *ibid.*, June, 1924, xviii, No. 3.—(6) Voegtlin and Dyer, *Public Health Repts.*, May, 1923, No. 835.

p. 1003.—(7) Mehrtens, Kolos and Marshall, *Arch. New. Psych.*, 1924, xii, p. 67.—(8) Young and Muehlberger, *Journ. Pharm. and Exp. Ther.*, 1924, xxiii, p. 461.—(9) Fordyce, Rosen and Myers, *Amer. Journ. Syph.*, 1924, viii, p. 254; *ibid.*, 1924, viii, p. 377.—(10) Van den Branden and Van Hoof, *Bull. Soc. Path. Exol.*, 1923, xvi, p. 606.

2. Tryparsamide and Neurosyphilis.

(1) Lorenz, *Wis. Med. Journ.*, 1922, xx, p. 336.—(2) *Idem.*, Loewenhardt and others, *Journ. Amer. Med. Assoc.*, 1923, lxxx, p. 1497; *Amer. Journ. Med. Sci.*, 1924, xcii, p. 850.—(3) Cheinisse, *Presse Med.*, 1923, xxxi, p. 81; *ibid.*, 1924, xxxii, p. 886; *ibid.*, Nov., 1924, xxxii, p. 886; *ibid.*, 1924, xxxii, p. 303.—(4) Mott, *Brit. Med. Journ.*, 1923, ii, p. 24.—(5) Hanschell, *ibid.*, 1923, ii, p. 87.—(6) Moore, Robinson and others, *Journ. Amer. Med. Assoc.*, 1924, lxxxii, p. 528; *ibid.*, 1924, lxxxiii, p. 888.—(7) Solomon, *Journ. Nerv. and Ment. Dis.*, 1924, lxi, p. 299.—(8) Solomon and Viets, *Journ. Amer. Med. Assoc.*, 1924, lxxxiii, p. 891; *ibid.*, Aug., 1925, lxxxv, p. 329.—(9) Viner, *Can. Med. Assoc. Journ.*, 1924, xiv, p. 719; *ibid.*, Aug., 1924, xiv, p. 719.—(10) Hindman, *Ohio State Med. Journ.*, Aug., 1924.—(11) Ebaugh and Dickson, *Journ. Amer. Med. Assoc.*, 1924, lxxxiii, p. 803.—(12) Lillie, *ibid.*, 1924, lxxxiii, p. 809.—(13) Guillain and Girod, *Bull. Acad. Med.*, 1924, xcii, p. 850.—(14) Claude and Targowla, *Comp. Soc. Biol.*, 1924, xci, p. 527.—(15) Stokes and Wilhelm, *Arch. Derm. and Syph.*, 1924, x.—(16) Wile and Wieder, *Journ. Amer. Med. Assoc.*, Dec. 6, 1924, lxxxiii, p. 1824; *ibid.*, 1925, lxxxiv, p. 1710.—(17) Editorial, *Brit. Med. Journ.*, 1924, l, p. 537.—(18) Ley, *Journ. Amer. Med. Assoc.*, 1924, lxxxiii, p. 702.—(19) Secard and Hagnenan, *Medicine*, Nov., 1924, vi, p. 141.—(20) Blair, *Southern Med. Journ.*, Dec., 1924, xvii, p. 933.—(21) Bluemel and Greig, *Colorado Med.*, Jan., 1925.—(22) Crawford, *Canadian Med. Assoc. Journ.*, 1925, xv, p. 46.—(23) Schwab and Cady, *Arch. Neur. and Psych.*, 1925, xiii, p. 80.—(24) Kennedy and Davis, *ibid.*, 1925, xiii, p. 86.—(25) Menninger, *Med. Journ. and Record*, 1925, cxxii, p. 318.—(26) Hyder, *ibid.*, Apr. 15, 1925, cxxi, p. 475; May 6, 1925, cxxi, p. 117; May 10, 1925, cxxi, p. 613.—(27) Smith, *Journ. Indiana Med. Assoc.*, April 15, 1925, xviii, p. 125.—(28) Parsons, *U.S. Naval Med. Bull.*, May, 1925, xxii, p. 526.—(29) Dawson, *Lancet*, May 23, 1925, p. 1072.—(30) Cocke, *Journ. Tennessee Med. Assoc.*, May, 1925, xviii, p. 7.—(31) Schwab, *Med. Clinics of N. America*, July, 1925, ix, p. 143.—(32) Lees, *Brit. Med. Journ.*, July, 1925.—(33) Wolfsohn and Leiva, *Journ. Amer. Med. Assoc.*, Aug., 1925, lxxxv, p. 494.—(34) Skoog, *Journ. Missouri State Med. Assoc.*, Oct., 1925, xxii, p. 387.—(35) O'Leary and Becker, *Med. Journ. and Record*, March 3, 1926.—(36) Silverston, *Lancet*, Oct. 2, 1926.

*Introverted and Extroverted Tendencies of Schizoid and Syntonic States as Manifested by Vocation.** By G. W. T. H. FLEMING, M.R.C.S., L.R.C.P., D.P.M., Deputy Medical Superintendent, Dorset County Mental Hospital, Dorchester.

INTRODUCTION.

It is to Jung, of Zurich, that we are indebted for the attempted division of attitudes of mind into the introverted and the extroverted types. In his *Analytical Psychology* (1) he gives us a chapter on types, and in 1924 appeared his large work on *Psychological Types* (2). According to Jung (1), the introverted type of individual is

* A paper presented at a meeting of the South-Western Division, held at Hereford on October 28, 1926.

characterized by the fact that his libido is turned towards his own personality to a certain extent—he finds within himself the unconditioned value. The extroverted type has his libido to a certain extent externally—he finds the unconditioned value outside himself.

These two attitudes are extremes, and we meet with all gradations from the extreme introverted mind to the extreme extroverted. A considerable number of normal people occupy the middle zone, the "ambiverted" type, or what one might call the level-headed practical type. In these people both introversion and extroversion are more or less evenly balanced.

Conklin (3) defines extroversion as a more or less prolonged condition in which attention is controlled by the objective conditions of attention more than by the subjective, and in which the content of the subjective conditions is most closely related to the objective. In the same way he defines introversion as a more or less prolonged condition in which attention is controlled more by the subjective than by the objective conditions, and in which the content of the subjective conditions is of a more abstract nature, and not so intimately related to the objective conditions. Ambiversion, then, is simply a condition in which extroversion and introversion are more or less evenly balanced: at one time the person may be introverted, and at another time extroverted.

Conklin goes a step further than most writers, and defines hyper-introversion and hyper-extroversion as chronic conditions in which persons who, normally having much less introversion or extroversion, are unable automatically or voluntarily to return to that condition. He also postulates a para-extroversion and para-introversion in which the conditions of attention are distorted or abnormally limited in content, or both.

Freyd (4), who takes a very broad view, defines an introvert as "an individual in whom exists an exaggeration of the thought processes in relation to directly observable social behaviour, with an accompanying tendency to withdraw from social contacts." An extrovert he defines as an individual in whom exists a diminution of the thought processes in relation to directly observable social behaviour, with an accompanying tendency to make social contacts.

MacDougall (5) says: "The well-marked extroverts are those whose emotions flow out easily into bodily expression and action. They are vivid, vivacious, active persons who charm us by their ease and freedom of expression, their frankness, their quick sympathetic response." The introvert, he says, "is slow and reserved in the expression of his emotions. He has difficulty in adequately expressing himself. His nervous and mental energies, instead of flowing out freely to meet and play upon the outer world, seem apt

to turn inward, determining him to brooding, reflection and deliberation before action."

Allport defines the extroverted person as one whose mental images, thoughts and problems find ready expression in overt behaviour. The introvert dwells largely in a realm of imagination, creating inwardly a more desirable ideal world rather than adjusting himself outwardly to the real one.

White (6) looks at the subject from a different angle, somewhat as Freud does, and regards introversion as a pathological reaction to a great extent—a regression to a more infantile way of thinking, an autistic withdrawal. He qualifies his view by saying that introversion, "at least when pathological," tends to bring about a retracing of the stages along which the psyche has come.

Tansley (7), on the other hand, maintains that extroversion is the primitive biological function of the mind.

Bingham defines introversion as the tendency of interest to shift from the object to the subject. There are exaggerated tendencies to delay response, to inhibit overt emotional expression and to withdraw from social contacts.

We are all familiar with the fussy man who must always be in the limelight; who is always to the fore in any meeting, always pressing his opinions on others and playing for effect. At the same time he hates to sit down and "do a think"—he hates his own company. This is the marked extrovert. On the other hand, we all know the so-called "strong, silent man," who reserves his opinions until they are asked for, hates advertising himself, and is quite happy with his own company. He maybe seeks solitude—is a scholar, a thinker. He is the introvert.

These two classes of individuals correspond more or less closely with James's tender-minded and tough-minded, and with Ostwald's classicists and romanticists.

The consensus of opinion appears to be that these characteristics are inherited—Tansley, McDougall and Hinkle all agree in this. There is no doubt that both characteristics in varying degrees are easily recognized in the child, and a proper balance of the two tendencies must be made then. After puberty the balance is much more difficult to adjust, and there would appear to be scope for preventive psychiatry in this direction.

TWO GREAT GROUPS OF THE BIOGENIC PSYCHOSES.

When we come to compare the two great groups of the biogenic psychoses, the syntonics or cycloids and schizoids, or the cyclothymes and the schizothymes, we find marked resemblances

between the syntonio or cycloid states and extroversion on the one hand and the schizoid or schizothyme states and introversion on the other.

In the syntonio or cycloid group there is, according to Bleuler, a tendency for a fixity or persistence of a definite emotional reaction with a consequent limitation of development of the personality, but without its dissolution.

Lundholm defines the cycloid type as having an innate disposition for moodiness and oscillations of mood between elation and melancholia.

In the schizoid group there is a tendency for the personality to disintegrate with secondary delusional and hallucinatory developments. Lundholm defines the schizoid types as those cases which have an innate disposition to split in the psychiatric sense of the word.

When we consider the neuroses we find a similar state of affairs: the hysterics correspond to the extroverts, and neurasthenics to the introverts. So that we have the syntonio group of manic-depressive insanity and hysteria on the extrovert side, and the schizoid group of schizophrenia (so-called dementia præcox) and neurasthenia on the other side.

MacDougall puts forward the interesting opinion that the position of any subject in the scale of introversion-extroversion is due to some chemical influence of the nature of a hormone or some complex chemical resultant of the general metabolism. He supports this view by the fact that the introvert can be temporarily changed into an extrovert by the influence of alcohol, and that the condition of introversion can be more or less imitated by morphia and kindred drugs. He points out that the brain of the extrovert is in a state of dissociation, *i.e.*, it is normally in the state that the introvert brain attains under the intoxication.

That the schizophrenic is introverted is a fact familiar to all. Bleuler's autistic withdrawal from reality is more or less a commonplace expression. The schizophrenic's libido is turned inwards upon himself. He is intensely occupied with himself, he lives in a dream-world of phantasy of his own construction, where all his wishes are fulfilled, and where every little command of his is carried out at once. The schizophrenic wants to be away from the crowd; we are all familiar with the simple hebephrenic standing in a corner of the garden, behind bushes for hours, doing nothing except dream. When we consider manic-depressive insanity or abnormal exaltation and depression, we find in the manic phase that the whole of the symptoms consist of display and an intense desire for social contacts. The melancholic bases his

symptoms largely on his relations with society; he has poisoned the world, everyone is being shot because of his wickedness, etc.

RELATION OF INTROVERSION AND EXTROVERSION TO VOCATION.

Max Freyd considers the introverted mind as mechanically inclined and the extroverted mind as socially inclined. He found that the socially inclined excelled the mechanically inclined in excitability, self-confidence, open-heartedness, present-mindedness, good nature, adaptability, talkativeness, neatness in dress and quickness to make friends. The mechanically inclined were more self-conscious, conceited and careful of details in their work, and were capable of making finer co-ordinations. Poe, Darwin and Woodrow Wilson are fine examples of marked introverts. It has been noted that individuals who are introverted are more often found in vocations which deal with concrete objects, with mechanisms, ideas, symbols, etc. Accountants, statisticians, inventors, engineers, scientists, etc., are often introverted. On the other hand, we find the extroverted types more often among vocations requiring skill in making and sustaining social contacts, as politics, management. The successful business man is usually a marked extrovert.

RESULTS.

The case-records of the Dorset County Mental Hospital during the last forty years have been carefully examined. Considerable difficulty was found at different periods in deciding on a diagnosis. Diagnosis nowadays is a very different matter from what it was some years ago, and in many cases obvious schizophrenics were labelled "mania," for more attention was paid to obvious symptoms than to the basic nature of the disease. Where possible, especially among the younger members, the diagnosis has been corrected. This it is recognized increases the possible source of error, due to the personal factor, but it was felt that it was wiser to correct the diagnosis as far as the symptoms given and course of the disease would allow. Col. Lord, in his presidential address for 1926, wisely refers to this source of error in so many of the earlier papers, and an effort has been made to keep to cases of schizophrenia on the one hand and manic-depressive insanity on the other, these two disorders, as we have seen, corresponding to the introverted and extroverted type respectively. No attempt has been made to delimit mixed states of syntonic-schizoid character.

There is a factor which one has to bear very much in mind, and that is that all men have not a free choice of occupation in

their young days. In many cases their vocation is determined by that of their father, in others by the main industry of the district. Dorset is, of course, largely a farming county, but a few of the private patients come from other counties. We find that there is a marked tendency in certain vocations towards one or other of these psychoses, and that those vocations which are regarded as being introverted in character have a large percentage of cases in the schizoid group, whilst those regarded as being extroverted in character have a large percentage in the syntonio group.

INTROVERTED GROUP.

Engineering.—We find that amongst engineers and fitters, 53 belong to the schizoid group and 16 to the syntonio group.

Students.—This group supplies the most striking figures, there being 30 in the schizoid against 2 in the syntonio group.

Clerks.—There are 41 in the schizoid group against 13 in the syntonio group.

Doctors, surgeons, dentists.—In this group 28 belong to the schizoid group and 8 to the syntonio group.

Chemists, druggists.—In this group there are 14 in the schizoid group to 2 in the syntonio group.

Carpenters.—In this group there are 44 in the schizoid group and 22 in the syntonio.

Soldiers, officers and men.—There are 90 in the schizoid group against 18 in the syntonio group. For officers alone there are 16 against 3, and for men alone 73 against 15.

Stonemasons.—There are 20 in the schizoid group against 5 in the syntonio group.

Labourers.—There are 333 in the schizoid group against 270 in the syntonio group.

Solicitors.—There are 16 in the schizoid group against 5 in the syntonio group.

Bricklayers.—There are 18 in the schizoid group and 8 in the syntonio group.

EXTROVERTED GROUP.

Farmers.—There are 68 in the syntonio group against 32 in the schizoid group.

Blacksmiths.—There are 22 in the syntonio group against 11 in the schizoid group.

Shopkeepers, grocers, bakers, butchers, drapers, ironmongers, fishmongers confectioners, florists, newsagents.—There are 61 in the syntonio group against 39 in the schizoid group.

Policemen.—There are 8 in the syntonio group against 2 in the schizoid group.

Railwaymen.—There are 8 in the syntonio group against none in the schizoid group.

Publican, potman or others.—There are 16 in the syntonio group against 11 in the schizoid group.

Shepherd, hind, cowmen or thatchers.—There are 22 in the syntonio group against none in the schizoid group.

Managers, directors, brewers, merchants.—There are 26 in the syntonio group against 11 in the schizoid group.

In the introverted group we quite expect to find a majority in favour of the schizoid psychoses amongst engineers, students, clerks, chemists, carpenters, stonemasons and bricklayers. These are all vocations requiring mechanical ability or the handling of concrete objects. In a way one is surprised to find members of the medical profession in this group, as they undoubtedly deal largely with social contacts; on the other hand, as much of their

work is scientific, and, in the case of surgeons, mechanical, it is not so surprising that they should appear in this group. The presence of such a large proportion of soldiers in this group is perhaps to be explained by the fact that pre-war so many men who were markedly introverted and not a great success in anything were pushed into the army. Of all men, surely officers deal with social contacts, yet there is a heavy majority against the social psychosis.

Solicitors, whose whole work is made up of social contacts, have a big majority in the introverted group—perhaps because so many of the concepts they deal with are abstract!

When we come to consider the extroverted groupings, it is difficult to explain why farmers, shepherds, etc., and blacksmiths should come into this group as they all deal with concrete things and little with social contacts.

From the complete table one or two surprising things may be noticed in addition to the above. One would have expected to find a majority of teachers in the extroverted group, yet the numbers are equal in the two groups. In the same way the numbers of commercial travellers is the same in each group, but the small incidence perhaps accounts for this. In most other cases where the numbers appear to be the wrong way round, in all probability the small incidence of the particular vocations accounts for this.

CONCLUSIONS.

1. An attempt has been made to indicate the relation between vocation and the type of biogenic psychosis developing in any particular man.

2. It is quite realized that many of the results shown are of little use until much larger figures are obtainable, but it is hoped that from this beginning others will follow up what is, if nothing else, an interesting sidelight on psychiatry from the point of view of vocational psychology—a comparatively new branch of knowledge.

3. Much of the reliability of the results is marred by inaccurate and incomplete diagnosis.

My thanks are due to Dr. P. W. Bedford for permission to make use of the hospital case-books.

References.—(1) Jung, C. G., *Analytical Psychology*, 1916.—(2) *Idem.*, *Psychological Types*, 1924.—(3) Conklin, E. S., *Journ. of Abnml. and Soc. Psychol.*, 1923.—(4) Freyd, M., *Psychol. Rev.*, 1924.—(5) MacDougall, W., *An Outline of Abnormal Psychology*, 1926.—(6) White, W. A., *Mechanisms of Character Formation*, 1916.—(7) Tansley, A. G., *The New Psychology*, 1920.

*Some Observations on the Study of the Blood-pressure in the Insane.**

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THIS paper is based upon observations taken on patients at Parkside Mental Hospital, Macclesfield.

Martin's modification of a Riva-Rocci sphygmomanometer was used. The systolic pressure (S.P.) was taken at the point on the scale when the first audible click was heard through the stethoscope on decompression following obliteration of the left brachial artery, and the diastolic pressure (D.P.) at the point when the loud thuds suddenly became dull (the end of the third and beginning of the fourth phase).

Readings were always taken a second time, and, if the second tallied with the first, they were accepted as correct; if not, further readings were taken. The patients, unless bedridden, were in a sitting posture.

Cole's classification of mental diseases was adopted with some modifications. One was that a distinction was made between melancholics who had melancholia and mania intermittently and melancholics who never showed any sign of mania, either according to their history or whilst under observation. Some omissions also were necessary, because examples of every form of mental disease were not obtained.

After a considerable number of observations had been made it was found that most of the varying mental states in which patients were observed could be described as states of quiescence (including temporary and permanent improvement), excitement, depression, agitation or confusion.

In manic-depressive insanity and dementia præcox the term "stupor" was used instead of "confusion."

In deciding as to which division a particular observation should be assigned, the determining factor was the dominant mood of the patient at the time of the observation.

The object of the investigation was to see what results would be obtained from an examination of the blood-pressure of the insane if the observations were classified in a more detailed manner than those of other writers on the subject.

There was no attempt at selection, the patients being observed in the ordinary course of routine duty either on admission to the hospital or in the wards. No effort was made to examine the same

* A paper read at a meeting of the Northern and Midland Division held at Cheadle Royal Hospital, October 28, 1926.

patient at the same time of day, as one of the desired objects was to obtain records of the blood-pressure in the varying mental states of the same individual.

The total number of observations made was 1,338, of which 679 were on 115 male patients, 485 were on 114 female patients, 81 were on 27 male nurses, and 93 were on 31 female nurses, the last two sets of observations being for purposes of comparison.

Classified according to forms of mental disease the numbers of patients examined were: Manic-depressive insanity 28, melancholia 33, senile melancholia 7, confusional insanity 16, delusional insanity 21, imbecility 11, imbecility with epilepsy 11, dementia præcox 36, terminal or secondary dementia 6, senile dementia 10, general paralysis of the insane 33, insanity with epilepsy 17.

Taken as a whole the observations indicated that in all forms of mental disease, recent emotional reaction was the main cause of increases of the S.P.; the sooner the observation was made after the commencement of the excitement or agitation the more marked the rise, which, however, was transient; if the excitement or agitation were prolonged there would be a fall in the S.P.

Illustrative cases:

A case of manic-depressive insanity showed a S.P. of 164 five minutes after the beginning of excitement, and after a half-hour's quietness it fell to 144. On two occasions after excitement had lasted 4 to 5 days respectively, the S.P. was 118. In an improved state the S.P. was 124.

A case of melancholia during depressed states showed S.Ps. of 138. Soon after periods of agitation began the S.Ps. were 164, 180, and 162. After two periods of agitation lasting 2 to 3 weeks, the S.Ps. were 126 and 128 respectively. In an improved state the S.P. was 128.

A case of melancholia, suffering from arterio-sclerosis, on three occasions during depressed periods showed S.Ps. of 142, 150 and 150. After periods of recent agitation the S.Ps. were 192, 192 and 194. One and a half hours after the last reading, when the patient had become more composed, the S.P. had fallen to 160.

A case of secondary dementia suffering from myocardial degeneration showed a S.P. of 120, which fell gradually in 6 months to 106. After an outburst of excitement it rose to 138. Another reading 1 month later showed the S.P. to be 104. The systolic pressure in the depressed state of melancholia was higher than in the depressed state of manic-depressive insanity. This was a reason for regarding melancholia as a separate form of mental disease.

When depression increased, the S.P. was raised. A case of melancholia in the depressed state showed a S.P. of 120, and when the depression increased at different times, the S.Ps. were 138, 142 and 150.

In 2 cases of melancholia with stupor the S.P. readings of melancholia were raised still higher. A male in stupor showed S.P. 193, in depressed state 177, in improved state 162. A female in stupor showed S.P. 182, in depressed state 142. No reading was obtained in an improved state.

In all the groups the D.P. varied within much narrower limits than the S.P.

The following tables illustrate the procedure followed in each form of mental disease, and give particulars of the observations in manic-depressive insanity and in melancholia, showing the variations of S.P. and D.P. in the different mental states; also the further variations when recent excitement and agitation were neglected and

Manic-Depressive Insanity.

	Patients.		Observations.		States.							
					Quietness and improvement.		Excitement.		Depression.		Stupor.	
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
Average S.P.	10	18	62	83	16	29	39	29	7	17	0	8
" D.P.	131.2	130.3	133.8	130.6	118	139.6	..	134.2
" P.P.	80	89.1	88.1	87.7	83.1	90.4	..	85.5
" P.	50.6	41.2	45.4	41.5	33.4	49.1	..	48.7
Eliminating cases of recent excitement and recent agitation	69	83.3	78.2	91.2	68.2	85.6	..	82
Average S.P.	51	66	16	29	28	22	7	7	..	8
" D.P.	131.2	130.3	124.7	122.9	118	120.2	..	134.2
" P.P.	80	89.1	85	84.6	83.1	89.4	..	85.5
" P.	50.6	41.2	39.3	36.4	33.4	36.8	..	48.7
Eliminating cases of cardio-vascular degeneration	69	83.3	74.6	90.2	68.2	84.8	..	82
Average S.P.	8	17	44	60	14	27	27	20	3	5	..	8
" D.P.	127.1	120.8	124.1	120.8	118	121.6	..	134.2
" P.P.	77.4	88.6	84.5	83.4	90	88.4	..	85.5
" P.	49	41.1	39.5	35.4	28	33.2	..	48.7
" P.	68.2	82.9	73.8	89.8	72.6	89.2	..	82

Ages of males, 22-65 years; females, 28-61 years. Average age, males, 47.9; females, 41.8.

Melancholia.

	Patients.		Observations.		States.							
					Quietness and Improvement.		Depression.		Agitation.		Confusion.	
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
Average S.P.	15	18	67	83	23	16	29	29	15	32	..	6
D.P.	123.6	125	140.6	139	136.8	138.1	..	114.3
" P.P.	84.7	89.6	96.2	93	94.2	96	..	91
" P.	38.8	35.3	42	46	42.5	42.5	..	23.3
Eliminating cases of recent agitation	77.3	77.7	78	85.6	88.5	90	..	84.6
Average S.P.	7	11	..	..	..	..	..	..	..	..
D.P.	115	121.1	..	..
" P.P.	89	86.8	..	..
" P.	26	34.7	..	..
Eliminating cases of renal disease and cardiovascular degeneration	84.7	84.3	..	..
Average S.P.	44	63	20	15	18	23	6	20	..	5
D.P.	121	123.8	131.8	138.3	111	120.4	..	112.4
" P.P.	83.8	88.8	92.4	91.1	88.6	86.7	..	90
" P.	37.6	34.8	39.4	34.8	22.3	34.2	..	22.4
Average S.P.	74.1	78.1	76.1	83.8	78	84.4	..	87.2

Ages of males, 21-57 years; females, 27-58 years. Average age, males, 45.8; females, 45.3.

Dementia Præcox.

Patients.	Observations.		Quietness and improvement.		Hebephrenia.				Katatonia.						Dementia paranoides.	
	M.	F.	M.	F.	Mental depression.	Motor restlessness.	Stupor.		Excitement.		Depression.		M.	F.	M.	F.
M. 17	89	75	17	11	M. 4	F. 1	M. 33	F. 11	M. 29	F. 22	M. 6	F. 6	M. ..	F. 9	M. ..	F. 15
Average S.P.	120	117.4	128.5	150	128.3	135.4	118.2	115.4	127	121.6	..	101.3	..	120.8
" D.P.	82.7	86.9	82	100	90.6	85.8	88.3	85.6	85.6	89	..	79.7	..	88.2
" P.P.	37.3	30.5	46.5	50	37.4	38	30	29.6	41.3	32.6	..	21.5	..	32.5
" P.	80	85.5	72.7	96	84.5	95.2	73.8	90.5	94	80.6	..	75.2	..	82.8

Eliminating two readings in a hebephrenic (F.) with recent agitation, and three readings where the blood showed a positive Wassermann in a hebephrenic (F.)

Average S.P.	..	..	..	..	..	..	116.3	..	..	..	..	..	..	..	..	..
" D.P.	..	..	..	..	..	..	86.6	..	..	..	..	..	..	..	..	..
" P.P.	..	..	..	..	..	..	20.6	..	..	..	..	..	..	..	..	..
" P.	..	..	..	..	..	..	82.6	..	..	..	..	..	..	..	..	..

Taking the different classes as a whole, and again excluding the five readings mentioned, the figures were as follows :

Patients.	Observations.		Quietness and improvement.		Hebephrenia.		Katatonia.		Dementia paranoides.	
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
M. 17	89	70	17	11	M. 37	F. 7	M. 35	F. 37	M. ..	F. 15
Average S.P.	120	117.4	128.3	121.1	119.7	113	..	120.8
" D.P.	82.7	86.9	89.6	88.5	87.8	84.8	..	88.2
" P.P.	37.3	30.5	38.3	32.5	31.9	28.1	..	32.5
" P.	80	85.5	83.3	84.5	77.2	85.2	..	82.8

Ages of males, 18-39 years; females, 18-41 years. Average age, males, 25.2; females, 28.4.

cardio-vascular and renal cases were eliminated. In the former table it will be noticed that the average pulse-rate in the different states showed little variation even in excitement.

Amongst the points noticed in other forms of mental disease were the following :

A comparison of the results obtained here in dementia præcox with those of Gibson and of Dawson quoted by Mott and Hutton (*British Medical Journal*, July 21, 1923) showed approximate agreement in the S.Ps. There was, however, a considerable divergence in the D.Ps. found by Dawson, which were stated to have been between 55 and 65 mm. in all cases, whereas our average D.P. in these figures was much higher.

The preceding table gives the particulars of the observations relating to dementia præcox. In classifying the observations in this group some change in the method was necessary owing to the clinical varieties into which dementia præcox is usually divided, but where possible the same terms were used for describing mental states.

In katatonia, 2 males and 1 female showed a rise in the S.P., sometimes slight, but always definite when the katatonic rigidity became more pronounced.

In general paralysis readings taken shortly after convulsions showed the S.P. to be raised. In 1 male the S.P. in a quiet state was 146, and after a restless period of 6 days, 132. Twenty minutes after a convulsion the S.P. was 170, in 1 hour 40 minutes after the convulsion it had fallen to 150, and in 2 hours 50 minutes to 130, the D.P. reading in the meantime falling between the first and last observation after the convulsion from 110 to 78.

In general paralysis 60 observations were made on patients undergoing malarial treatment for the disease. The readings showed that when there was a rise in temperature there was a fall in both the S.P. and D.P., and the fall continued as the temperature rose. If a rigor accompanied a rise in temperature it was found the S.P. was raised considerably while the D.P. varied little as a rule. The following figures all relating to the same patient illustrate this :

No rigor	T. 104.4°	S.P. 110	D.P. 68
Ten minutes after a rigor	T. 104.4°	S.P. 158	D.P. 88
After a restless period . . . . .	. . . . .	S.P. 126	D.P. 92

In the observations on nurses, male and female, taken for purposes of comparison, the tendency for emotional reaction at the time of observation to cause a rise in S.P. was shown in some instances.

The S.P. of 6 male nurses and 5 female nurses on all-night duty in a ward showed a slight but definite rise at the midnight reading

(after 4 to 5 hours on duty) as compared with the first reading, and then a fall at the time of leaving duty (7.30 a.m.) to a level near the first reading or slightly below it.

Three other male nurses and one female nurse who visited different wards during the night showed a slight decrease in the S.P. at midnight.

The following table affords a comparison between the average systolic and diastolic pressures of male nurses and those of patients (in improved states) suffering from certain forms of insanity:

	S.P.	D.P.	Average age.
Day male nurses . . .	124·8	85·9	37·8
Night male nurses . . .	127·5	87·4	37·6
Delusional insanity . . .	128·2	89·1	47·0
Melancholia . . .	121	83·8	42·7
Manic-depressive insanity . . .	127·1	77·4	42·2

Bibliography.—Allbutt, Sir Clifford, *Diseases of the Arteries, including Angina Pectoris*, vols. i and ii.—Dally, J. F. Halls, *High Blood-pressure, its Variations and Control*, 1923.—Hawley, M. C., *Archives of Internal Medicine*, Nov. 15, 1913.—Cole, R. H., *Mental Diseases*, 2nd ed.—Stoddart, W. H. B., *Mind and its Disorders*, 4th ed.—Craig, Sir Maurice, Article on "Blood-Pressure in the Insane," *Lancet*, June 25, 1898.—Pilcz, Alexander, "Ueber einige Ergebnisse von Blutdruckmessungen bei Geisteskranken," *Wien. klin. Wochenschr.*, No. 12, 1900.—Naudascher, M. G., "La pression artérielle habituelle dans les états dépressifs," *L'Encéph.*, Sept.—Oct., 1923.—Mott, Sir Frederick W., and I. M. Hutton, "Normal and Morbid Conditions of the Adrenals in 100 Hospital and Asylum Cases," *Brit. Med. Journ.*, July 21, 1923.—Turner, John, "Observations on the Blood-Pressure and Vascular Disease in the Female Insane," *Journ. Ment. Sci.*, July, 1909.—Clarke, Sidney, "The Blood-Pressure in Mental Disorders," *ibid.*, January, 1910.—Cannon, W. B., *Bodily Changes in Pain, Hunger, Fear and Rage*, 1915.—Brown, W. Langdon, *The Sympathetic Nervous System in Disease*, 2nd ed.—Vincent, Swale, "Critical Examination of Current Views on Internal Secretion," *Lancet*, August 12, 1922.—Brockbank, E. M., "High Blood-Pressure," *ibid.*, October 20, 1923.

The Hæmoclastic Crisis in Mental Defectives. (From the Laboratory of the Rampton State Institution.) By W. REES THOMAS, M.D., M.R.C.P., D.P.M., Medical Superintendent, Rampton State Institution; and W. J. LASCELLES, M.B., B.Ch., D.P.M.,* Assistant Medical Officer, Cane Hill Mental Hospital, Coulsdon, Surrey.

THE ingestion of a pint of milk by a normal fasting individual is followed by certain blood changes, the most important of which are an increase in the leucocyte count and a slight rise of blood-pressure. In the condition known as anaphylaxis, or protein shock, the general symptoms are accompanied by a fall in the number of

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blood leucocytes, a reversal of the differential count, and a lowering of the blood-pressure.

Dr. Robertson, working at the Maudsley Hospital, found a leucopenia accompanied by the other changes which constitute the hæmoclastic crisis after ingestion of milk by a fasting subject in 94% of patients suffering from dementia præcox, in 85% of melancholias, in 75% of chronic manias, and in over 60% of early psychotic and neurotic cases. If these results are confirmed the hæmoclastic crisis should become an important diagnostic and prognostic factor in early psychotic disorders.

Our study of 300 unselected mental defectives at the Rampton State Institution was begun in the hope of offering some proof as to the existence of mental characteristics which were common to them and to those suffering from ordinary psychoses. The considerable number of cases in which a positive reaction was obtained offers evidence of at least one common factor. The tests were carried out between 9 a.m. and midday, the conditions on all occasions being similar. In a large number of cases the test was repeated several times in order to satisfy ourselves as to the uniformity of the results obtained. Excepting 10 patients who at the first test gave indeterminate results, there was on no occasion any variation in the character of the curve although the intensity of the reaction was not always constant. After repeated tests and after an interval of two months, 6 of the 10 indeterminates reacted by a leucopenia, 3 by a slight leucocytosis, while 1 remained persistently indeterminate. This last case was grouped with the positives.

Of 300 cases examined, 163 gave a relative leucopenia (positive reaction) and 127 gave a leucocytosis (negative reaction). A leucocytosis was accompanied by no change or a slight rise in the sphygmomanometer readings. Of the 163 positive cases, 127 (78%) showed a slight fall, 30 (18.4%) no change, and 6 (3.6%) a slight rise of systolic blood-pressure. The maximal fall was 10 mm. of mercury, but the systolic and diastolic pressures at the 40-minute period were commonly only 2 mm. below the initial figure. Films were taken and a differential blood-count was carried out in 68 positive cases, the comparison being made between the initial blood-film and that taken at the point of observed maximal leucopenia. The changes consisted of an absolute and relative decrease in the polynuclear leucocytes, a tendency to an absolute and relative increase of the mononuclears, and a relative increase with an absolute decrease of the lymphocytes. In a few cases the lymphocyte change was great enough to produce an absolute increase. Although eosinophiles and transitional cells were not counted, it should be

noted that a tendency to an increase in the eosinophiles was observed.

The following results are taken at random from the series. In Table I are given the results in 6 positive cases, and in Table II the results in 6 negative cases.

TABLE I.

No.	Initial count.	20 min.	40 min.	60 min.	First B.P.	B.P. at 40 min.	Polymorphs.	Mono-nuclears.	Lymphocytes.
1	9,400	6,400	6,000	7,400	130/82	128/80	79% : 68%	3% : 5%	18% : 27%
2	8,000	6,800	5,400	11,800	106/64	102/60	68% : 61%	4% : 4%	28% : 35%
3	9,800	4,000	5,600	8,800	128/82	122/80	70% : 62%	7% : 8%	23% : 30%
4	9,200	5,000	7,400	9,000	120/72	118/70	63% : 59%	6% : 7%	31% : 34%
5	6,400	4,400	3,600	7,000	124/78	120/74	70% : 59%	1% : 2%	29% : 39%
6	5,200	4,400	5,000	6,200	122/78	120/74	70% : 65%	5% : 4%	25% : 31%

TABLE II.

No.	Initial count.	20 min.	40 min.	60 min.	B.P. at 1st.	B.P. at 40 min.
1	10,200	12,800	13,000	11,000	130/82	134/84
2	9,400	12,000	13,800	10,000	146/94	150/100
3	7,400	12,600	8,200	11,200	130/80	132/86
4	6,200	8,400	8,800	6,200	120/78	124/80
5	6,800	7,600	9,200	7,000	142/90	142/90
6	8,600	10,800	9,000	8,000	126/78	130/84

A physical examination of each patient was made with the object of discovering some factor which might account for the occurrence of an abnormal reaction to milk. Of 15 patients suffering from morbus cordis without loss of compensation 8 were positive and 7 negative. In one case each of rheumatoid arthritis and congenital syphilis a positive reaction was obtained. One patient suffering from blood syphilis, and who had been given neo-salvarsan two months previously, reacted normally. Of 4 cases of hemiplegia and paresis, 2 were positive and 2 negative; in no case was the affection of recent origin. Nephritis was found to be present in 2 cases, one of whom gave a positive reaction. Chronic gastritis occurring in 6 patients was in each case associated with leucopenia (positive reaction). Four cases suffering from the sequelæ of encephalitis lethargica were examined, 3 being positive and 1 negative. Thirty-one epileptics were included in the series, 17 of whom (55%) showed a typical hæmoclastic crisis, the other 14 (45%) being negative. Thus a positive reaction is not in all cases associated

with true epilepsy, and the test cannot therefore be used to differentiate essential epilepsy from conditions which simulate it.

It is noted that while Wilson obtained a positive reaction in 18 out of 19 epileptics, only 50% of those examined by Tudoran gave an abnormal reaction, and Feinblatt obtained hæmoclasia in 2 of only 3 cases recorded by him.

The influence of mental age, as determined by mental tests, on the character of the reaction to milk was examined in 158 cases. The results are shown below :

Mental age.	Positive reaction.	Negative reaction.	Total.
7 and under	23	21	44
8	16	16	32
9	20	24	44
10 and over	19	19	38
Totals	78	80	158

There appears to be no special tendency towards an abnormal reaction at any particular mental age.

Another classification of our 300 cases was made on the basis of mental condition. In a previous paper one of us has pointed out the occurrence of mental disorders in defectives as a factor in anti-social conduct, and that psychoses and psychoneuroses commonly occur in high-grade defectives of dangerous and violent propensities. Of the 300 cases in our series, 200 were considered to be of the psychotic type. It is noteworthy that 63% of the psychopathic patients showed a leucopenia following the ingestion of milk. Their further classification is given in the following table :

Type of mental disorder.	Positive.		Negative.		Totals.
	No.	Per cent.	No.	Per cent.	
Dementia præcox	66	74	23	26	89
Manic-depressive psychosis	18	60	12	40	30
Delusional and persecutory types	16	60	11	40	27
Confusional states	17	49	18	51	35
Dementia, secondary	9	56	7	44	16
Anxiety states	1	33	2	66	3
Totals	127		73		200

The results as tabulated suggest that certain factors have an important influence on the production of hæmoclasia. The frequent association of chronic gastritis with liver insufficiency

will account for the uniformly positive results given in these cases. On the other hand, the mental state of the patient appears to be significant. The psychotic types of defectives tend to give an inversion of the normal formula, so that when mental disorder supervenes on mental deficiency, there is a corresponding increased tendency towards a positive reaction. In this respect there is a measure of agreement with the results obtained by Dr. Robertson, at the Maudsley Hospital, with early psychotics. In both cases the difficulty of definite and differential diagnosis is very great, but on the whole the results indicate that the hæmoclastic crisis test may be a valuable aid to diagnosis providing it is used solely in confirmation of clinical findings.

The classification by mental ages shows that increasing degrees of mental defect are not associated with an increase in the proportion of positive reactions.

It is obvious that a mental disorder arising at an early age, especially when of the dementia præcox type, will tend to produce early dementia with consequent lowering of the intelligence level. Thus, psychotics tend to become demented, and on test will show an intelligence quotient far below that of the pre-psychotic period. If it can be said with Dr. Robertson that the hæmoclastic crisis is closely associated with mental disorder—and, indeed, many of our own results show this—the even proportion of positive reactions at all mental ages demonstrates that the tendency to psychoses is greater at the higher mental levels. If this is true, it would appear to disprove the widespread belief that psychoses are more common at the lower mental age-levels.

In the 4 cases suffering from sequelæ of encephalitis lethargica the period subsequent to the attack was 9 years, 6 years, 5 years and 2 years respectively. The first case (9 years after his attack) was negative and the others positive. No physical condition of the intestinal tract suggesting hepatic dysfunction was discovered in any of them. One of the positive cases still shows a marked Parkinsonian syndrome with cranial nerve involvement, inversion of sleep-rhythm and alteration of the cardio-respiratory ratio. In 10 cases of post-encephalitic complications Xavier found the test negative in 4, slightly positive (or the normal reaction retarded) in 4, and clearly positive in 2 cases. Of these 2, 1 concerned a man who had tabes dorsalis in addition to encephalitis, and who had undergone treatment with neo-salvarsan. It has been frequently noted that injections of neo-salvarsan have been followed by a positive hæmoclastic crisis, probably because arsenical preparations cause hepatic lesions which are demonstrable by means of Widal's test. In this particular case a further test was carried

out after an interval of 3 weeks without treatment, with a negative result (leucocytosis). The other case concerned a pregnant woman, and the pregnancy itself may be assumed to have caused hepatic insufficiency, thus accounting for the positive reaction.

In the cases which yielded weakly positive results the reaction was attributed to the previous intravenous injections of cerebro-spinal fluid. There was no proof that the hæmoclasia was due to the encephalitis. Xavier concluded that no demonstrable relation exists between the liver and the striate body in these cases, and that the parallel involvement of a portion of the brain and the liver, such as occurs in Wilson's lenticular degeneration, cannot be shown. In our own cases, apart from the fact of a previous attack of encephalitis, with consequent moral degeneration and transient and indefinite signs of mental disorder, no reason for the inversion of the normal blood formula can be suggested unless it be due to functional or organic changes in the central nervous or vaso-motor systems.

During our experiments it was noticed that initial counts taken later in the morning were usually higher than those taken an hour and a half earlier, but it was found that the absolute value of the leucocyte count did not in any way affect the character or intensity of the blood reaction. Counts were, however, made to determine the variations occurring in fasting patients over the period during which our tests were normally carried out—from 9 a.m. to 12 midday. In 10 fasting patients, whose reactions had been previously ascertained, and of whom 5 were positive and 5 negative, blood was taken every 20 minutes for 2 hours and the leucocytes counted. It should, perhaps, be added that their normal dining hour was 12 midday.

In each case a slow but steady relative increase of the blood-leucocytes occurred. This leucocytosis occurring in the absence of any digestive reaction has been found by many workers, and probably accounts for some of the adverse opinions on the value of Widal's test. But as in our own cases the variation did not include leucopenia, and did not in any way affect the character of the reaction to milk, we cannot agree that the hæmoclastic crisis is of no value. To our mind it rather tends to show that the changes occurring in a normal fasting subject are always profoundly modified by the ingestion of protein. We also cannot agree with the statements of other workers that there is no variation in the leucocytic curve over 1 hour—the time required to carry out the ordinary Widal test.

The hunger curve, at least during the 2 hours preceding a meal, shows a definite leucocytic rise, but we find that the character of

the reaction to milk is not altered by the position in the curve at the moment of the initial count. It is, however, extremely important that no interval be allowed between the initial count and the administration of the test-meal. We have found a constant leucopenia occur in a patient whose initial counts have shown as great a variation as 75%.

In order to determine whether the leucopenia following ingestion of milk in positive cases was merely a peripheral reaction, parallel counts were made with flowing blood taken from the median basilic vein and from the finger capillaries. Blood from the vein was taken with a wide-bored needle. Initial counts were made at 30- and 60-minute intervals. A leucopenia in the capillary blood was always accompanied by a corresponding change in the leucocytes of the venous blood and the parallel changes were maintained during 1 hour. Examples are given below.

Comparison between Venous and Capillary Counts after Milk in 2 Positive Cases.

No.	Initial count.		30 min.		60 min.	
	Venous.	Capillary.	Venous.	Capillary.	Venous.	Capillary.
1	5,000	4,800	3,600	4,600	8,200	7,600
2	7,000	6,400	6,200	5,400	9,000	9,600

The hypodermic injection of 2 minims of a 1 : 1000 solution of adrenalin chloride prior to the ingestion of milk reversed the reaction in positive cases, a leucopenia being converted into a leucocytosis. It seemed probable that this reaction was the result of changes in the peripheral blood-vessels, due to the action of adrenalin on their muscular structure. Parallel venous and capillary counts were made in 6 people who had previously given a positive reaction. The capillary leucocytosis which occurred after the test-meal was accompanied by a venous leucocytosis, the time of maximal intensity of the reaction being the same in most cases. A few sample results are given below :

No.	Initial count.		30 min.		40 min.		60 min.	
	Venous.	Capillary.	Venous.	Capillary.	Venous.	Capillary.	Venous.	Capillary.
1	7,200	7,600	8,000	13,600	8,600	8,400	8,000	8,600
2	5,200	7,400	11,800	12,200	8,800	9,800	6,000	8,200

It is therefore probable that the effect of adrenalin is not purely peripheral. It is, however, true that local heat, cold and pressure do produce alterations in the leucocytic count, probably due to peripheral vascular effects. In negative cases adrenalin does not alter the character of the milk curve. Thus a patient reacting to milk with a leucocytosis will also give an increased white cell-count after adrenalin and milk.

The modifying effect on the blood reaction of thyroid gland extract was next determined in 5 subjects who had previously given a positive hæmoclastic crisis. 30 gr. of dried thyroid extract were given daily for 3 days, after which the tests were carried out. In each case a reversal of reaction occurred, a leucopenia being replaced by a leucocytosis. The effect of atropine and adrenalin on the hunger curve was investigated in 10 patients. Both adrenalin (ᄁij) and atropine sulphate (gr. $\frac{1}{100}$) cause a leucocytosis, the latter being somewhat irregular in character. With both drugs, however, the blood curves at the end of 1 hour appeared to take on the character of the normal hunger curve, this being maintained up to the end of the second hour. In all three the initial count was much lower than the final one.

There is a very extensive literature on the subject of hæmoclasis, and although the results obtained by different authors show great variation, it seems that there is a balance of opinion in favour of the occurrence of a hæmoclastic crisis in hepatic or associated disorders, and also in cases where there is evidence of emotional disturbance and vagotonia or psychic disorder. It is possible that we are dealing with two different functions, one referring to the failure of the liver to prevent the products of digestion, especially of protein digestion, from entering the general circulation, and the other due to the disturbing effect on vaso-motor balance of the act of digestion, and being in the nature of an anaphylactic shock either of central nervous or vasomotor origin. It is quite possible that the chemical products of a cerebral infection or of actual cellular degeneration may be accompanied by the pouring into the blood-stream of obnoxious protein products which sensitize the system and so prepare the ground for anaphylactic phenomena.

CONCLUSIONS.⁽¹⁾

A. *General.*

1. The almost constant numerical and differential blood changes and the uniformity of results in the same patient show that the hæmoclastic crisis is a real blood change and is not accidental.

2. In the present state of our knowledge it may be said that the test can be used in confirmation of the clinical diagnosis, but is not sufficiently constant to justify its adoption as a separate diagnostic test.

3. The leucocytic count during two hours of physiological rest is not constant, but tends to show a gradual rise, which has, however, no influence on the character of the reaction.

4. It is evident that reference to liver function does not afford an explanation of the blood phenomena in our series. The reaction is a general one and is not confined to the capillaries.

5. The effect of the administration of adrenalin and thyroid was to cause a reversal of the action with milk in cases which previously gave a marked leucopenia. No such reversal occurred with these drugs in cases which had given a leucocytosis after milk. Atropine caused a leucocytosis 10 minutes after injection in 10 patients who previously gave an abnormal reaction to milk. This leucocytosis quickly fell to normal, and the remainder of the curve over 2 hours followed fairly closely the normal hunger curve.

B. *Mental Defectives and Hæmoclasia.*

1. In a series of 300 mental defectives of dangerous and violent propensities a typical hæmoclastic crisis occurred in 163 cases (54%). The degree of mental defect does not appear to influence the result, the number of positive cases being about the same at all mental age-levels. In patients showing mental disorder (200) supervening on mental deficiency the correlation was higher in dementia præcox (74%), manic-depressive psychosis (60%), delusional and persecutory types (60%). Six cases of chronic gastritis in the series were positive. In 4 patients who had suffered from encephalitis lethargica 3 gave a positive hæmoclastic crisis and 1 was negative. Of 31 epileptics, 17, or 55%, gave a positive reaction.

2. In 3 cases of a psychopathic type with a marked anxiety component, only one gave a positive hæmoclastic crisis. This suggests that anxiety states do not necessarily cause a reversal of the blood formula after ingestion of milk.

3. It is probable that psychic disorder is accompanied by a reversal of the normal reaction to milk, and that this is quite independent of the proteopexic function of the liver.

(¹) For the literature on this subject the reader is referred to papers by Robertson in numbers of this Journal for July, 1925, and July, 1926.

A Biochemical Study of the Blood and Urine in Mental Disorders.

By B. REID, M.B., Ch.B., Assistant Medical Officer, Whittingham County Mental Hospital.

THIS work has been undertaken with the object of disclosing metabolic deviations which might aid in the ætiology or diagnosis of the psychoses, especially in cases of dementia præcox, epilepsy, melancholia and secondary dementia.

That departures from the normal body chemistry may give rise to abnormal mental states is well known. This is evident in the increased nervous irritability, the excitement and sometimes depression characteristic of hyperthyroidism. It is thus reasonable to suppose that disturbances of metabolism may result in an auto-intoxication and so bring about mental symptoms. An attempt has been made therefore to examine conditions, *e.g.*, latent jaundice, abnormal nitrogen metabolism, etc., which in their extreme forms do cause mental changes, and, by means of suitable laboratory tests, to determine any variations from the healthy state.

In a paper on "Blood Chemistry in Mental Diseases," Bowman (1) concluded that the average findings for blood non-protein nitrogen, dextrose, uric acid and chlorides were normal for all types of mental diseases except psychoses with cardio-renal disease and general paralysis. On the other hand, Loney (2), in a study of the nitrogenous constituents of the blood, found that in the depressed groups, represented by the retarded phase of manic-depressive insanity, the simple deteriorating *præcox* cases and the involution melancholias there is an appreciable increase in the undetermined nitrogen. In the present investigations the purpose has been to include as many of those function tests which are now so extensively used in general hospital practice.

Latent jaundice.—The Van den Bergh and the Fouchet tests of the blood-serum have been relied on to detect latent jaundice. The Fouchet test is particularly delicate, and gives a positive reaction with a dilution of 1 in 60,000 bilirubin in the blood. Pathological amounts of urobilinogen have been tested for in the urine by means of Ehrlich's aldehyde reaction. These tests have been done on 36 cases of epilepsy, 39 cases of dementia *præcox*, 18 cases of melancholia, 18 cases of secondary dementia, and 5 cases of imbecility or other deficiency. In no case was a positive result given to the blood test, and although a few patients showed abnormal amounts of urobilinogen in the urine, for all practical purposes these can be discounted. There would thus appear to be nothing in the nature of a poisoning of the system by bilirubin pigments.

Fat metabolism.—The fats are decomposed in the liver before their consumption in the tissues, the process being one of desaturation of the fatty acid molecule. As a result of the incomplete metabolism of fats by the liver, β -oxybutyric acid is produced, which diminishes the alkalinity of the blood and tissues—to a condition of acidosis. The adipopexic power of the liver is got by means of the lipase test of Lowenhart. This depends on

the fact that in liver disease the power of the blood to split up ethyl butyrate is increased. McNee is satisfied as to the value of this test of liver function, and it has been carried out in the cases under investigation. The result of this examination has been to show that there is no apparent abnormality in the fat metabolism—the normal value lies between .2 and .3.

Sugar metabolism.—The blood-sugar has been estimated in each case by Folin and Wu's method, and sugar was also tested for in the urine. The dextrose examinations have been made in the fasting state only, the blood being taken in the morning before breakfast. In 39 cases of dementia præcox the fasting levels varied from 66 mgrm. to 130 mgrm.; in 36 epileptics from 69 mgrm. to 113 mgrm.; in 18 melancholics from 75 mgrm. to 145 mgrm.; in 18 cases of secondary dementia from 81 to 105 mgrm. The averages are as follows: Melancholia 99, dementia præcox 89, epilepsy 85, secondary dementia 90.

The large majority of cases showed normal findings.

Protein metabolism.—The blood-urea by McLean's method and the blood non-protein nitrogen by the method of Folin and Wu, are both calculated in mgrm. per 100 c.c. The average results have been as follows:

	Non-protein nitrogen.	Urea.
Epilepsy. . . .	29	12
Dementia præcox . . .	30	14
Secondary dementia . . .	25	15
Imbecility	36	13.5
Delusional insanity. . . .	27	12
Melancholia	43	13

The normal figures are non-protein nitrogen 25–35 mgrm. per 100 c.c. and urea 10–15. It will thus be seen that normal readings obtain except in the melancholics. 18 cases of melancholia were examined, and the non-protein nitrogen estimations were found to be higher than the normal in 14. This is in keeping with the work of Loney, who reported similar findings, and who put forward the theory that an unknown toxic amine might be present in the circulation of markedly depressed patients. In the cases I examined the urea content of the blood was found to be normal, and Loney in his series of cases found that all the known nitrogens of the blood were normal, the excess presumably being due to some undetermined nitrogenous constituent. Absolute proof that such toxic amines are the cause of depression cannot of course be given until some method is found for isolating them quantitatively. That there may be some

relation between melancholia and amines is a possibility that is suggested by results at present.

Intestinal stasis.—Coincident with intestinal stasis there is an increase in intestinal fermentation. Routine tests for this condition are few. Excess of indican suggests increased intestinal fermentation, and therefore this test has also been carried out. A small proportion of cases showed an excess of indican in the urine. Since in most of the cases examined special attention is given to ensure a regular action of the bowel, it is, as the results showed, unlikely that intestinal stasis would be prominent.

In each case the blood and urine specimens were taken before breakfast.

CONCLUSIONS.

1. No abnormality in the results of the Van den Bergh test, the fasting blood-sugar, the lipase test or the indican test of the urine were found such as might suggest an auto-intoxication from metabolic disorder.

2. In the depressed patients an increase of the non-protein nitrogen content of the blood was found, which might support the theory of Loney that there exists a relationship between certain toxic amines and melancholia.

Details of the examination of individual cases are omitted for reasons of space, but they may be had on application to the author.

I am indebted to Dr. R. M. Clark, Medical Superintendent, for permission to publish these results, and to Mr. A. H. Fann, Chief Laboratory Assistant, for his valuable help.

References.—(1) Bowman, K. M., *Amer. Journ. of Psychiat.*, ii, No. 3, January, 1923.—(2) Loney, J. M., *ibid.*, iv, No. 1, July, 1924.

*An Investigation into the Fragility and Solubility of the Red Blood-cells in Mental Disease.** By MARGARET SCORESBY-JACKSON, M.D.Durh.

[ABRIDGED.]

INTRODUCTION.

THE objects of this investigation were to find out in what respect the resistance to hæmolysis of the red blood-corpuscles differs in mental disease from the normal, and to make a contribution towards the elucidation of pathological mental states and their relationship to pathological states of organs of the body other than the brain.

* A thesis accepted for the degree of Doctor of Medicine of the Durham University.

The term *fragility* is used in the sense of the strength of the sodium chloride solution at which the red blood-cells begin to hæmolyse.

It has been ascertained by the experiments of many workers that the red blood-cells, when immersed in hypotonic saline, do not all dissolve at the same osmotic tension; that is to say, some cells show a weaker and some a stronger resistance, and, therefore, that there is a maximum as well as a minimum point of hæmolysis, the former being the point or rather the strength of the saline solution at which all the cells are hæmolysed, and the latter the strength of the solution at which hæmolysis is seen to commence.

Examinations by various observers have shown that normal blood begins, on the average, to hæmolyse at from 0.4% to 0.375% sodium chloride, and that hæmolysis is usually complete at 0.35%.

Now it has been observed that the fragility of the red blood-cells is increased in certain diseases and diminished in others.

For instance, increased fragility has been noticed in acholuric jaundice, streptococcal infections and some anæmias; while diminished fragility is to be observed in obstructive jaundice and after splenectomy.

An investigation of the solubility of red blood-cells in sodium taurocholate solution was carried out contemporaneously with the experiments on the effect of hypotonic saline.

METHODS.

Blood was obtained from the ear from some 70 cases in the wards of Bethlem Royal Hospital, and from normal individuals as controls.

The lower lobe of the ear was pierced with a sterilized needle after well cleansing with absolute alcohol, and 0.5 c.c. of blood was allowed to drop without pressure into a graduated centrifuge tube containing 4.5 c.c. normal saline (*i.e.*, 0.9% sodium chloride), thus making a 1 in 10 dilution of red cells. The tube was carefully inverted from time to time to prevent clotting.

In the laboratory a row of eight small non-calibrated tubes was set up, and the dilutions of sodium chloride, as shown in the following table, accurately prepared by means of a graduated 1 c.c. pipette with rubber bulb. Each tube was then carefully inverted several times to mix the contents thoroughly.

Freshly prepared saline solutions of 1% and 0.9% respectively and freshly distilled water were used and kept stoppered between each repetition of the experiment. The tubes were sterilized and dried before use on each occasion.

The dilutions employed were as follows :

TABLE I.

Tube	1	2	3	4	5	6	7	8
1% NaCl . . .	0.6 c.c.	0.7 c.c.	0.8 c.c.	0.9 c.c.	1.0 c.c.	1.1 c.c.	1.2 c.c.	1.3 c.c.
Distilled H ₂ O . . .	1.4	1.3	1.2	1.1	1.0	0.9	0.8	0.7
Resulting saline content . . .	0.3%	0.35%	0.4%	0.45%	0.5%	0.55%	0.6%	0.65%

Of red blood-cells 0.1 c.c. was added to each tube by means of a 0.1 c.c. graduated pipette with rubber bulb and well mixed by inversion of the tube.

The resulting hæmolysis was expressed as follows: +++ for complete hæmolysis (fluid in tube quite clear and red); ++ for partial hæmolysis ($\frac{1}{2}$ remaining corpuscles showing as a cloud and colourless precipitate); + for commencing hæmolysis ($\frac{2}{3}$ remaining corpuscles showing as a cloud and colourless precipitate).

For purposes of comparison the point of commencing hæmolysis of normal blood was taken to be from 0.4% to 0.375% saline solution. Hæmolysis generally took place at once or well within 5 minutes. The temperature of the laboratory varied little from 65° F.

After the first test the red blood-cells were brought up again to a 1 in 10 dilution with 0.9% saline and centrifuged. The resulting supernatant fluid was pipetted off and discarded, and the cells washed with 0.9% saline in a 1 in 10 dilution, and again tested for hæmolysis as before.

These washings were repeated several times in many of the cases in order to test the effect of the removal of adherent serum on cell fragility.

In observations on unwashed cells the presence of adherent serum is a complication and therefore repeated washing becomes a point of great importance.

Repeated washings nearly always resulted in a more rapid rate of hæmolysis and an increased fragility of the red blood-cells until a constant was reached, after which neither the time-rate nor fragility varied, as is shown in the following table:

TABLE II.—*Blood from a Normal Healthy Subject.*

Tube	1	2	3	4
% Saline . . .	0.3	0.35	0.4	0.45
Normal unwashed cells	+++	+	..	..
1st washing . . .	+++	++	..	..
2nd „ . . .	+++	++	+	..
3rd „ . . .	+++	+++	+	..
4th „ . . .	..	Not tested.		
5th „ . . .	+++	+++	++	..
6th „ . . .	+++	+++	++	..
7th „ . . .	+++	+++	++	..

Hæmolysis: +++, complete; ++, partial; +, commencing.

A further question arises out of this observation, namely, whether the result (*i.e.*, the constant) is obtained by the removal of serum only, or whether a new factor is introduced by extraction of water-soluble constituents from the cell or cell envelope.

Now Brinkman (who, however, used a special solution of NaCl containing NaHCO₃, KCl, CaCl₂ and CO₂ in certain proportions), quoted by Ponder in *The Erythrocyte and the Action of Simple Hæmolysins*, pp. 100–103, states that the fragility of the red cells was greatly increased by washing. This he attributed to the removal of lipoids from the surface of the cell (the chief of those being lecithin and cholesterol), the lecithin, in his opinion, promoting hæmolysis, while cholesterol retards it, the resistance depending on the balance of the two.

Method for the Test of Solubility of the Red Blood-cells in Sodium Taurocholate.

The blood was collected as for the fragility test. A solution of sodium taurocholate of 1% in 0.9% NaCl was used and diluted with 0.9% NaCl as follows, using centrifuge tubes for each dilution, and carefully mixing the contents of each tube.

TABLE III.

Centrifuge tube	1	2	3	4	5	6
	0.1 c.c.	0.1 c.c.	0.1 c.c.	0.1 c.c.	0.1 c.c.	0.1 c.c.
	NaT	NaT	NaT	NaT	NaT	NaT
	0.9 c.c.	1.9 c.c.	2.4 c.c.	2.9 c.c.	3.9 c.c.	4.9 c.c.
	NaCl	NaCl	NaCl	NaCl	NaCl	NaCl
Dilution	1 in 1000	1 in 2000	1 in 2500	1 in 3000	1 in 4000	1 in 5000

A row of small non-calibrated tubes was set up behind the centrifuge tubes on the same stand containing the various dilutions, and into each of these, by means of a graduated 1 c.c. pipette with rubber bulb, was put 1 c.c. of the dilution of sodium taurocholate in the corresponding centrifuge tube.

Thereafter 0.1 c.c. of the red blood-cells was added, by means of a graduated 0.1 c.c. pipette with rubber bulb, to each 1 c.c. tube and mixed with the dilution. Solubility was expressed as + and non-solubility was expressed as –.

A time-limit of 30 minutes was taken as giving the best average of solubility, though some of the experiments were observed for an hour. In all cases the time-limit of solubility for the various dilutions was noted, and ranged from *statim* to 30 minutes. The temperature of the laboratory was 65° F. approx.

The solution of sodium taurocholate was renewed daily as it did not keep well.

The red blood-cells were repeatedly washed and tested as in the fragility test, and it was noticed that the fragility increased markedly in most cases after washing.

For both tests repeated specimens of blood were taken from a selected number of cases at an interval of some weeks in order to note any change which might have taken place according as to whether the patient had improved or not under treatment.

THE WORK OF OTHERS.

The Difference in Resistance to Hæmolysis of the Red Blood-corpuscle in Mental Disease.

McNeil (1), in an interesting and exhaustive essay on the variation of resistance of the red blood-corpuscle to certain hæmolytic agents in health and disease, alludes to the early investigations of Maragliano (1887), who noted that the disintegration of the blood took place at different rates in different diseases, and also the effect of various destructive agents, such as heat, drying, etc., on the red blood-cells; of Buffa (1901), who measured the electrical resistance of the blood; of Chanel (1886), who noted an increased resistance of the red blood-cells in obstructive jaundice; and of Jannosky (1888), who stated that resistance was increased in infectious fevers, especially in typhus.

But it was not till 1907 that Chauffard found that resistance was diminished in acholuric family jaundice—a fact which was confirmed by other French writers. These early investigations and discoveries have since been extended to the resistance of the red blood-cell in mental disease—a subject which still affords a large field for exploration.

Joseph M. Looney (2) states that, after many attempts, “results on the whole have not indicated any definite agreement between the psychosis of the patient and the chemical analysis.”

Raphael and Potter (3) say: “The question of erythrocyte fragility in psychopathic conditions suggested itself as of peculiar interest (particularly in view of the apparent occurrence of certain other blood changes in such states, notably in dementia præcox and manic-depressive insanity). . . . A certain added interest is lent to this question through indications in dementia præcox and manic-depressive insanity of the definite occurrence of fundamental metabolic changes as reported by numerous workers, and recently emphasized through blood-sugar studies by Kooy, Lorenz, and Raphael and Parsons; and, additionally, through histopathologic studies by Mott in dementia præcox, suggesting the strong probability in this disorder of underlying systemic hypo-oxidation. The only finding available in the literature specifically as regards erythrocyte resistance, in psychiatric disorder to various saline strengths as here employed, is the report of one case of general paresis by Butler in which no apparent change was determinable. . . .

“*Result in dementia præcox.*—Analysis of the results as tabulated indicates definite deviation from the fragility norm in each of the psychotic groups, slight to moderate in degree, and in both directions; thus in the dementia præcox groups this deviation may be determined in 47 cases (or 50·6%), 37·8% showing apparent decrease in red cell resistance, and 12·6% an increase, affecting, seemingly, in the case of the latter, younger individuals in whom the psychosis was of but short duration. No characteristic change, however, was noted as regards the specific types of dementia præcox.

“*Manic-depressive insanity.*—*Depressed phase*, 14 cases. Total deviation of 28·4%, equally divided in point of positive and negative variation. *Manic phase*, 21 cases; total deviation of 38%; 23·8% showing increased fragility and 14·2% showing a decrease.

“*General paralysis.*—A total change of 40·7%, 36·7% showing a tendency to increased fragility.

“*Feeble-minded persons.*—27 cases. Total deviation 33·3% = 18·5% increased fragility and 14·8% decreased fragility.

"*Epileptics*.—15 cases. 6 cases showed increased fragility. 2 cases showed decreased fragility.

"*Psycho-neurotic*.—8 cases. Group too small for definite valid induction, but, on the whole, showed only slight change. Age and sex showed no characteristic change.

"The significance of these findings . . . is by no means clear. It is conceivable, particularly in the dementia præcox and manic-depressive groups, that the fragility change may represent a secondary or reflected effect, dependent in some way upon basic metabolic or toxic disturbances—a conception borne out by previous reports . . . of the occurrence in these states of other blood changes and indicative of the possibility of underlying metabolic disorder."

Oxygenation of Blood.

With regard to this point Moses Keschner (4) states that "in acute anoxæmia . . . one encounters memory defects, poor attention and lack of judgment associated with marked emotional disturbances."

R. M. Ferry (5) states that "the equilibrium between oxygen and hæmoglobin is of unquestioned importance both from a physiological and from a purely chemical standpoint."

Whitehorn and Tillotson (6) state that "Basal metabolism is usually low in dementia præcox," and sum up their findings thus: "Persons with dementia præcox tend, as a rule, towards significantly slower rates of oxygen consumption under approximately 'basal' conditions than would normally be predicted, and that slow rates are quite persistent in individual cases."

Mechanisms.

In studying the literature on the fragility of the red blood-cell the writer has been much indebted to Ponder (7), of Edinburgh, for his work on *The Erythrocyte and the Action of Simple Hæmolysins*, and for his references to the work of many other observers, especially that of Brinkman, whose investigations on the repeated washing of the red blood-cells is of great importance as regards the constituents of the cell envelope, and the part they play in promoting or combating hæmolysis.

Gulland and Goodall (8) and Beaumont and Dodds (9) make useful references to the estimation of the fragility of the red blood-cell which have been of service in the technique employed.

The names of other writers on the mechanism of change in the resistance of the erythrocyte will be found in the bibliography at the end.

+ or - Resistance of the Red Blood-cell in Certain Diseases.

Allusion has already been made to McNeil's study of the red blood-cell in various diseases, such as obstructive jaundice, anæmias, diabetes, etc.

Another writer, G. G. Butler (10), gives a detailed account of his methods and findings under the headings of a great number of diseases, including one case of general paralysis. In the latter, however, he was unable to come to any definite conclusion as to the resistance of the red cells.

Solubility of the Red Cells in Sodium Taurocholate.

In this connection Ponder's work on *The Erythrocyte and the Action of Simple Hæmolysins* is of much value, especially the section on the action of the bile-salts on the cell and its stroma.

Lipoid Content of Cell Envelope.

Brinkman's experiments, quoted by Ponder, have already been alluded to, and Ponder himself gives some valuable results of his own work in this direction.

In *Comptes Rendus des Séances de la Société de Biologie* (11) it is remarked, *à propos* of the lipoid cholesterin, that the diminished resistance of the red cell in hæmolytic jaundice corresponds to a lowered cholesterin content, while the increased resistance noted in obstructive jaundice is related to a hypercholesterin content.

CASES.

Fragility.

Out of a total of 70 cases investigated for fragility by hypotonic sodium chloride solution, it was found that in 32 the results lay within normal limits, in 12 cases fragility was increased and in 26 cases fragility was decreased.

The age and sex of the patient has apparently no influence.

Hæmolysis.

Normal (0.4%–0.35%).—Manic-depressive insanity 3, dementia præcox 6, late involuntional insanity (secondary toxic factors) 4, dementia (arteriopathic) 1, dementia paranoides 2, anxiety and depression 12, epilepsy 1, amentia 2, toxic (alcohol) 2, hysteria 2, tabo-paresis 1.

Increased (0.5%–0.45%).—Manic-depressive insanity 2, dementia præcox 3, melancholia 1, anxiety and depression 2, presbyophrenia 1, hysteria 1, encephalitis 1.

Decreased (0.35%–0.3%).—Dementia præcox 1, late involuntional insanity (depression) 3, dementia 1, anxiety and depression 10, epilepsy 1, toxic (alcohol) 2, puerperal insanity 1, encephalitis 1.

No hæmolysis at 0.3%.—Alcoholic psychosis 1, involuntional depression 1, resistive stupor 1.

Repeatedly Washed Red Blood-cells.

In most of the cases the cells were washed from three to five times. Almost invariably a constant was reached at the fourth or fifth washing (see Table II).

In all cases washing promoted an increased fragility of the cells, and a more rapid rate of hæmolysis occurred as soon as the cells were mixed with saline.

The Influence of Drugs on Fragility.

Out of 70 cases 11 had no drugs and in 14 cases the drugs were not ascertained. Drugs made little or no difference in those cases which had them. The drugs and combinations of drugs used were: Bromide and sulphonal; bromide and paraldehyde; bromide only; bromide, paraldehyde, sulphonal; sulphonal only; bromide and luminal; bromide, medinal, occasionally paraldehyde; bromide sulphonal, opium, paraldehyde; paraldehyde and sulphonal.

Second Specimens.

Alterations in fragility: Examples.—(1) *Mania*: Excitement, beginning hæmolysis 0.5%; six weeks later, depression, beginning

hæmolysis 0.35%. (2) *Depressed stupor*: Beginning hæmolysis 0.5%; seven weeks later, considerable improvement, beginning hæmolysis 0.35%. (3) *Presbyophrenia*: Beginning hæmolysis 0.45%; two weeks later, improved, beginning hæmolysis 0.35%.

Comparison with Normal Blood.

A series of 16 specimens was obtained from the medical and nursing staff at the hospital. In 7 cases hæmolysis began at 0.4% and was complete at 0.35%; in 4 cases hæmolysis began at 0.375% and was complete at 0.3% (except one case at 0.35%); in 4 cases hæmolysis began at 0.35% and was complete at 0.3%; in 1 case hæmolysis began at 0.3%.

The results of washing were (1) increased fragility and (2) increased rate of hæmolysis as to time in all the cases.

Solubility of the Red Blood-cells in Sodium Taurocholate.

64 cases were tested, of which 34 showed solubility at 1 in 1000; 24 showed increased solubility; 6 were not soluble at 1 in 1000.

Comparing these with the solubility of normal blood, 24 cases alone showed marked deviation from the normal.

CONCLUSIONS.

Fragility of the Red Blood-cells in Sodium Chloride Solutions.

1. 55% of cases gave results which are outside normal limits.
2. Cases in which the hæmolytic point was markedly raised or lowered presented no sign of any definite physical lesion.
3. There was no marked difference in the ratio of fragility between cases having drugs and those having none.

Solubility of the Red Blood-cells in Sodium Taurocholate.

Out of 64 cases tested, 40 were approximately normal, while 24 showed increased solubility.

In view of the findings of other observers as to the association between the characteristics of the red blood-cell and general metabolic disturbance, the high percentage of abnormal results indicates strongly the general association of mental disease with fundamental physiological changes throughout the organism.

The thanks of the writer are due to Dr. Porter-Phillips and the Governors of Bethlem Royal Hospital for their kindness in providing facilities and opportunities for observation and research.

REFERENCES.

- (1) McNeil, C., "The Resistance of Human Red Blood-corpules in Health and Disease to Hæmolysis by Saponin, with a Comparison of Saponin and Hypotonic Salt Solution Hæmolysis," *Journ. of Path. and Bact.*, 1910, xv, p. 56.—(2) Looney, J., "A Biochemical Study of the Blood in Mental Disorders," *Amer. Journ. of Psychiat.*, 1925, vol. iv.—(3) Raphael, T., and Potter, F. C., "Blood Fragility Studies in Certain Psychopathic States," *ibid.*, 1922-23, ii, p. 409.—(4) Keschner, M., "Neuro-Psychiatric Complications in Diseases of the Blood," *Internat. Clin.*, i, 33rd series.—(5) Ferry, R. M., "Method for the Study of the Equilibrium between Oxygen and Hæmoglobin," *Journ. of Biol. Chem.*, 1924, lix, p. 295.—(6) Whitehorn, J. C., and Tillotson, K. J., "Oxygen Consumption and Dementia Præcox," *Bost. Med. and Surg. Journ.*, 1925, cxcii, p. 1254.—(7) Ponder, E., *The Erythrocyte and the Action of Simple Hæmolysins*, 1924.—(8) Gulland and Goodall, *The Blood: A Guide to Its Examination, etc.*, 1925, p. 47.—(9) Beaumont and Dodds, *Recent Advances in Medicine*, 1925.—(10) Butler, G. G., "The Fragility of the Red Blood-corpules," *Quart. Journ. Med.*, 1912, vi, p. 145.—(11) *Comptes Rendus des Séances de la Société de Biologie*, April 3, 1925, xcii, p. 935.

The Blood-Sugar Curve in Cases of Dementia Præcox. By
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In the last ten years, since the technique of blood-sugar estimations has been simplified, numerous investigations have been carried out of blood-sugar curves in the various types of mental disorder.

Kooy (1919) (1) found a constant hyperglycæmic curve in ten cases of dementia præcox. Raphael and Parsons (1921) (2), investigating the same disease, found an initial low fasting level with a slower return to normal after the ingestion of glucose in ten acute cases. Bowman, Eidson and Burladge (1922) (3) also described a tendency to a sustained blood-sugar curve in a further ten cases of dementia præcox. Lorenz (1922) (4) stated that active cases of catatonic dementia præcox responded to glucose feeding with hyperglycæmia. Some cases had a normal response, but in deteriorating dementia præcox the curves resembled those found in dyspituitarism. Barret and Spirre (1924) (5) found variations in the sugar curve in 30 cases, but drew no definite conclusions from their work. Drury and Farran-Ridge (1925) (6) recorded observations on the types of blood-sugar curve found in different forms of insanity, and concluded from a study of 18 cases of dementia præcox that acute cases gave high and rather broad curves, and that such curves tended to be higher in the female than in the male. In chronic cases they found a tendency to low curves, and in the male again they tended to be lower than in the female. Mann (1925) (7) investigated 152 cases of early mental disorder admitted to

the Maudsley Hospital. His main finding was the frequency of an abnormally sustained hyperglycæmia following glucose ingestion. Langfeldt (1926) (8), working on the endocrine glands and autonomic system in dementia præcox, reported clinical and experimental investigations. He quoted the results of numerous carbohydrate tolerance tests, some of which were normal, some showed an apparent increase of carbohydrate tolerance and others a decrease. The latest recorded investigations appear to be those of Kasinin (1926) (9), who, after recording his own findings in 33 cases of dementia præcox, collected most of the cases from the literature. He stated that in psychogenic stupors a decreased sugar tolerance was common. This appears to have been confirmed by most workers. Eleven of his cases of dementia præcox had normal curves, and he thought that the prognosis appeared to be better when such a result was obtained. Seven of his cases had low sugar curves, but they were not associated with any special clinical picture.

It is apparent from the records of these workers that in mental disease, and especially in dementia præcox, all degrees of sugar tolerance may be found. In some cases the curves are normal, others show a decreased sugar tolerance, whilst three observers have described a low curve. In this paper we give the results of sugar tolerance tests in 10 adolescents, all of whom were diagnosed as cases of dementia præcox and were under the care of Dr. Stilwell, of Beckenham.

The technique used in this investigation was that of Maclean (1924) (10). The patients were allowed no food after 8 p.m. on the previous night; the fasting blood-sugar level was obtained at 9 a.m. the following day, and 50 grm. of glucose dissolved in 100 c.c. of water were then given. Blood-sugar estimations were made half hourly for a period of 1½ or 2 hours. The results are as follows :

TABLE I.—*Showing the Blood-sugar Curves in Ten Cases of Dementia Præcox.*

Case No.	Blood-sugar per cent.					
	Fasting.	½ hour.	1 hour.	1½ hours.	2 hours.	
1.	·102	·109	·109	·119	..	
2.	·063	·109	·102	·063	·071	
3.	·063	..	·081	·082	·087	
4.	·065	·104	·106	·087	·088	
5.	·077	·104	·120	·094	·087	
6.	·063	·106	·106	·100	..	
7.	·077	·109	·106	·093	..	
8.	·081	·096	..	..	..
9.	·072	·086	·096	·095	·095	
10.	·072	·133	·081	·072	·085	

It will be seen that the average fasting level in these patients is low. In only one case was a reading of 100 mgrm. obtained whereas three patients showed a fasting level as low as 63 mgrm. The highest readings obtained were 120 mgrm. in Case 5 and 133 mgrm. in Case 10 within an hour after taking the glucose, and there was no tendency to any prolongation of the curve. At first sight the low curve in our cases may suggest a failure of absorption. We are not willing without further investigation to accept this explanation, for in other cases with similar low curves after 50 gm. of glucose, we have been able to show by examination of the respiratory quotient and the urine that the sugar has been absorbed. We must admit, however, that we are unable to offer any interpretation of these curves.

Whilst making these investigations of the sugar tolerance in cases of dementia præcox we were also allowed, for control purposes, to make similar investigations in 7 cases of mental disorder other than dementia præcox, living in the same institution and under the same conditions. These results represent a series of normal curves, and are as follows :

TABLE II.—*Showing the Blood-sugar Curves obtained in Seven Cases of Mental Disorder other than Dementia Præcox.*

Case No.	Blood-sugar per cent.					
	Fasting.	½ hour.	1 hour.	1½ hours.	2 hours.	3 hours.
1.	·077	·177	·129	·116	·106	..
2.	·089	·152	·188	·137	..	..
3.	·073	·104	·144	·133	..	..
4.	·098	·157	·102	·093	..	..
5.	·093	·170	·138	·102	..	..
6.	·102	·150	·122	·108	..	..
7.	·102	·164	·152	·134	..	..

It has long been held that there is some relationship between endocrine disorder and dementia præcox. Dercum and Ellis (1913) (11) described *post-mortem* changes in the thyroid and adrenals in this disease. Tucker (1918) (12) suggested that some of the psychoses of adolescence were related to pituitary disturbance. Mott's (13) work on the relation of the gonads to dementia præcox is well known, and in 1921 he suggested that the disease was "the result of an inborn germinal deficiency of productive energy on the part of the reproductive organs associated with a progressive deterioration of physical energy," and from time to time he laid stress on the histological changes found in the testes. Hayes (1924) (14) considered that dementia præcox was a deficiency disease of the endocrine glands. Lately, Kretschmer, quoted by

Weil (1924)(15), has pointed out how closely the psychic changes in dementia præcox are associated with constitutional anomalies, and how frequently (in almost half the cases) the asthenic habit so common in eunuchoidism is found. The position is perhaps best summed up by Mapother (1926)(16), who states that structural changes in the endocrine glands in dementia præcox are possibly concurrent manifestations of the same morbid tendency which affects the nervous system.

Studied from the endocrine point of view our cases showed no constant changes. There was, however, evidence in the majority—8—of some constitutional anomaly either in the form of abnormal growth or habitus, obesity or excessive leanness, or puberty, which preceded by a short time only the onset of mental symptoms. In 5 of these patients the period of growth was prolonged, and their stature ultimately exceeded 6 ft. The secondary sexual characteristics tended to appear early—at the age of ten or eleven. In one patient only was there pronounced lack of growth with infantilism, and in this case the secondary sexual characteristics were imperfectly developed at the age of seventeen, when the symptoms of dementia præcox appeared.

In view of these observations it was thought justifiable to try small doses of thyroid and whole gland pituitary extracts by the mouth to see if they would influence the physical condition and the sugar-tolerance curves of our patients. Table III shows the effect on the curves two months after starting this administration:

TABLE III.—*Showing the Improvement in the Blood-sugar Curve in Seven Cases after Administration of Thyroid and Whole Gland Pituitary Extracts.*

Case No.	Blood-sugar per cent.				
	Fasting.	¼ hour.	1 hour.	1½ hours.	2 hours.
1. Before	·102	·109	·109	·119	..
After	·085	·137	·129	·085	·080
2. Before	·063	·109	·102	·063	·071
After	·087	·146	·117	·079	..
3. Before	·063	..	·081	·082	·087
After	·097	·129	·102	·092	..
4. Before	·065	·104	·106	·087	·088
After	·087	·135	·116	·089	..
5. Before	·077	·104	·120	·094	·087
After	·091	·137	·116	·087	..
6. Before	·063	·106	·106	·100	·109
After	·102	·150	·133	·129	..
7. Before	·077	·109	·106	·093	..
After	·081	·137	·117	·081	..

It can be seen that a general improvement has occurred in the curves. A similar improvement was noticed in the circulation

and general metabolism of these cases, and weight was gained. There was no corresponding improvement, however, in the mental state.

The conclusions to be drawn are that the blood-sugar curves in ten cases of dementia præcox were found to be low, and the administration of thyroid and pituitary extracts had the effect of heightening the curve.

References.—(1) Kooy, F. H., *Brain*, 1919, xlii, p. 214.—(2) Raphael, T., and Parsons, J. P., *Arch. of Neur. and Psychiat.*, 1921, v, p. 687.—(3) Bowman, K. M., Eidson, J. P., and Burladge, S. P., *Boston Med. and Surg. Journ.*, 1922, clxxxvii, p. 358.—(4) Lorenz, W. F., *Arch. of Neur. and Psychiat.*, 1922, viii, p. 184.—(5) Barret, T. B., and Spirre, P., *Journ. of Nerv. and Ment. Dis.*, 1924, lix, p. 561.—(6) Drury, K., and Farran-Ridge, C., *Journ. Ment. Sci.*, 1925, lxxi, p. 8.—(7) Mann, S. A., *ibid.*, 1925, lxxi, p. 443.—(8) Langfeldt, G., *K. Hanssen's Publications*, 1926, vi.—(9) Kasinin, J., *Arch. of Neur. and Psychiat.*, 1926, xvi, p. 414.—(10) Maclean, H., *Glycosuria and Diabetes*, London, 3rd edition.—(11) Dercum, F. X., and Ellis, A. G., *Journ. of Nerv. and Ment. Dis.*, 1913, xl, p. 73.—(12) Tucker, B. R., *Journ. Amer. Med. Assoc.*, 1918, lxxi, p. 330.—(13) Mott, F. W., *Journ. Ment. Sci.*, 1921, lxvii, p. 279.—(14) Hayes, H. D., *ibid.*, 1924, lxx, p. 208.—(15) Weil, A., *Internal Secretions*, trans. by Jacob Gutmann. George Allen & Unwin, Ltd., London, 1924.—(16) Mapother, E., *Lancet*, 1926, Extra numbers, No. 2.

On the Therapeutic Effects of the Subcutaneous Injection of Ringer-Locke's Solution in Various Forms of Mental Disease. By Dr. T. MOROWOKA,* Department of Mental Diseases, The Imperial University of Kyushu, Japan.

SINCE May, 1915, I have habitually used the Cantani injection in moribund cases of general paralysis, and I have been impressed on many occasions by the remarkable effects produced, in that the life of the patient has been prolonged generally for several days and often for a matter of weeks or months. I had been taught that nearly all forms of mental disease were practically incurable, and that general paralysis in particular was not only incurable, but invariably fatal. In view of my experience, however, I determined to try and improve the method. In taking up the investigation I was largely influenced by the fact that if the method of treatment were successful it would have the strong practical advantage of keeping the patients alive until relatives residing at long distances could reach them and so be present at the death-bed.

Using a subcutaneous injection of 1,000 c.c. of 0.9% physiological salt solution I commenced with terminal cases only, repeating the

* A corresponding member since 1922.

treatment once or twice a week. Then I selected cases at earlier stages, and subsequently I adopted the method in all cases immediately after admission. Ultimately I substituted the Ringer-Locke solution, which I used 1 or 2 degrees above the body temperature, namely, at 38° or 39° C. At that time I had not read Halliburton's address on the cerebro-spinal fluid, but I improved on my original technique after referring to some previous papers written on the subject, especially those by Ilberg (1892) and Donath (1903).

In April, 1916, at the fifteenth annual meeting of the Japanese Neurological Association, held at Tokyo University, I published some results of my experiences in psychoses with the Ringer-Locke's solution. At that time I had dealt with only 12 cases of general paralysis. The diagnosis had been carefully made and the diseased condition of the patients was fairly well advanced; positive results to both the Nonne-Apelt and Wassermann tests were recorded in the cerebro-spinal fluids, and in the bloods, and the somatic and the mental symptoms were quite obvious.

The Ringer-Locke's solution was prepared as follows :

NaCl	9·0
KCl	0·42
CaCl ₂	0·24
NaHCO ₃	0·1
Glucose (Merck)	0·1
Aqua destillata	1000·0

After treatment the patients slept better, and passed plenty of urine. The consciousness cleared, behaviour became more orderly, and habits improved in cleanliness. The seizures became less severe and less frequent, and often disappeared altogether. The appetite improved from the first injection and the body-weight increased gradually. Even the Argyll-Robertson phenomenon often improved, while the Nonne-Apelt test became weaker, and, in a few instances, almost negative. Generally speaking, the mental symptoms improved more rapidly than the somatic, the latter requiring a long course of injections of considerable quantities of Ringer-Locke's solution before much change was observed. Tremor of hands and feet and speech disturbances were the first physical signs to improve, while the Argyll-Robertson pupil and the Wassermann and Nonne-Apelt tests persisted. One male patient, 40 years of age, had a good remission, and was discharged with symptoms very much improved both mentally and physically.

At the same meeting Dr. Y. Hayashi published the results of his study on trypsin and antitrypsin in the cerebro-spinal fluid in

cases of psychosis, and found that the antitrypsin reaction was very weak or nearly zero in my patients treated with the Ringer-Locke's solution in the manner above-mentioned.

Prof. N. Ishida, of Nagasaki Medical College, also recorded at that meeting good results in dementia præcox with intravenous injections of the physiological salt solution (0.9%). Prof. Horiuch, his colleague, estimated the Cl content in the blood of 5 cases of catatonia and found a certain degree of deficiency (0.199–0.220 to 0.262–0.285%). This fact is very interesting in regard to Buscaino's so-called *black* reaction, which is more recently interpreted as a test of Cl deficiency in the urine of the catatonic groups and other acute symptomatic psychoses.

In the following year (1917) before the sixteenth meeting of the Japanese Neurological Association held at Tokyo, I read a second report, dealing with 30 cases of psychoses under my care. In these cases I had much improved the technique of the method. I had constructed a large sterilizing boiler for the preparation of Ringer-Locke's fluid, under high pressure, in order to prevent decomposition of the sodium bicarbonate. The boiler was furnished also with an oxygenating apparatus.

The most important results observed were those in general paralysis. Out of 8 patients, 6 males and 2 females, I observed 3 good remissions, 2 males and 1 female. Three other patients were still under treatment, 2 males and 1 female. Two men died notwithstanding repeated injections of large volume. Speaking generally, the mental symptoms improved much sooner and better than the somatic manifestations. At once a good diuresis appeared and the bowels were more frequently moved. The appetite was stimulated and the sleep improved. The consciousness and the sensory fields became clearer, and the general behaviour more orderly and clean. The bodily weight gradually and steadily improved. The seizures became milder and fewer, and often disappeared altogether. The most persistent of all the signs were the pupil disturbances and the Wassermann and the Nonne-Apelt tests. Even these improved remarkably. Of the further progress of the cases I may add that one patient, a town clerk of 40 years of age, remitted and was discharged after half a year's treatment, but after six months he relapsed and was readmitted. He was cured and discharged again. He lives at present a tolerably well-ordered life. I have another female paralytic who was cured and who is now living a fairly normal life, although slightly deteriorated. Another case remitted, but relapsed after a while, and died of general exhaustion in spite of further intensive treatment.

In the præcox group I had results which were, if anything, a little better than those of Prof. Ishida, with his intravenous injection of sodium chloride solution (0.9%). The patients became cleaner and more active. In contradistinction to the cases of general paralysis, these patients often showed some febrile reaction, even with apparently fresh Ringer-Locke's fluid, rarely, however, reaching 39° C. or 40° C. It was a noteworthy fact that the præcox patients, especially the catatonics, developed a rash spreading all over the body, or abscesses might appear over the buttocks and often in the scalp after repeated injections. There never occurred, however, abscesses at the site of injection, as very careful asepsis was practised, but these regions became more or less indurated, and the injected fluid was more slowly absorbed. In no case did any circumstance arise to interfere with the continuance of the treatment. The site of injection may be changed, for example, from the groins to the back or the flank. Thus the mental symptoms

and general behaviour of the catatonic patients improved remarkably, or completely cleared up as the eruptions appeared and were treated.

The most surprising effects were observed in cases of confusion in acute delirium. In this form of disease the patient often slept soundly after one injection, the delirium disappeared and the behaviour became quite orderly. The patient, at first weak in body and unable to get up from bed, made a good recovery after one or two months' careful nursing.

In senile insanity, also, I often observed good results with the Ringer-Locke's solution. The routine drugs were more efficacious and appeared to be less toxic—a finding which has been recorded by other workers who have been using the method of injection of physiological saline solution.

In cases of manic-depressive insanity it seemed that the course of the disease was shortened. We could use much larger doses of bromide, and even bromism could be dispersed very quickly by further injections.

In cases of neurasthenia I had very little experience at the time, as the clinic was not able to admit such slight cases, but the method seems very hopeful.

As regards epilepsy I had only one case and could not draw any definite conclusion.

In short, there is no apparent contra-indication in the psychoses and the neuroses against the use of the Ringer-Locke's injection therapy. It is certainly good for improving the general nourishment and for sedative purposes, especially in the recent and acute toxic psychoses. Here I would remark that the results obtained by using the Ringer-Locke solution undoubtedly surpass those recorded from the injection of common saline solution.

Since the first publication of my investigation the Ringer-Locke's injection method proposed by me has found a widespread use in Japan, especially in the private mental hospitals. I have found it advertized in the newspapers, and many drug-stores are stocking ampullas, usually of 500 c.c., of Ringer-Locke's solution sterilized, oxygenated, sealed and ready for use.

At the Neurological Association held in April, 1918, I published a third report on the effects of Ringer-Locke's solution in psychotic disorders.

General paralysis.—In this series of cases I combined the injection method with general anti-syphilitic treatment by inunctions of blue ointment and the internal administration of potassium iodide over periods of one year or more. In 1915 I had one remission out of 13 paralytic patients; in 1916, 5 remissions out of 18 patients; and in 1917, 6 remissions out of 11 paralytic cases.

The word "remission" means substantially "recovery," but in no prophetic sense. Thus in 1916 I treated a paralytic patient who had a remission of one year's duration; he was again admitted owing to relapse and died after half a year's treatment. All other discharged cases remained at home, and their relatives have not reported their death. The worst cases were greatly improved and their lives much prolonged; the grosser mental symptoms disappeared, and the patients behaved much more as if the malady were purely physical and not mental. Cases not able to undergo sufficient treatment were also discharged much improved.

The dementia præcox group.—In 1915 I had 3 recovered cases out of 18 præcox patients; in 1916, 6 recoveries out of 17 cases. The recovered cases were mainly those of the catatonic type—young, recent and acute. During the two years I administered to two catatonic patients small doses of calomel, with potassium iodide for a prolonged period, and both cases recovered.

Manic-depressive insanity.—In 1915 I had 7 recoveries out of 11 cases; in 1916, 10 recoveries out of 17 cases; and in 1917, 8 recoveries out of 10 cases. All other cases were discharged owing to some family circumstances or economic causes except one young student, who died. On the whole, the recoverable cases increased in numbers and unsuccessful discharges became very few, for the reason that the relatives of the patients had gained confidence and were more ready to submit the patients to treatment.

Acute confusional insanity.—In 1915 I had 1 acutely delirious case (German "amentia"), which recovered very quickly and completely. In 1916, 1 patient recovered and 1 was discharged without full treatment. In 1917, 1 was admitted and recovered very quickly and completely.

Chronic alcoholic insanity.—In 1915, 1 chronic drunkard was admitted and was treated successfully. In 1917, 3 chronic insane alcoholics were admitted, two of whom were treated successfully and one discharged before undergoing sufficient treatment.

Hysteria.—In 1916 I had 2 cases recover out of 3 hysterics admitted; 1 was discharged without sufficiently prolonged treatment with Ringer-Locke's injections. In 1918, 6 hysterical patients were admitted and all recovered.

Epilepsy.—This disease had a very bad prognosis in the earlier days of my practice. In 1915, 2 epileptics were treated with the Ringer-Locke's injection, but in vain. In 1916, 3 cases were treated but discharged without result. In 1917, I had 1 epileptic patient admitted and this case was discharged with a good recovery.

Latterly I have found, however, that I can do better for some forms of epilepsy by the continuous administration of large doses of calcium lactate for a year or more. It is better to administer an organic preparation of calcium than an inorganic, and mixed with some kind of cod-liver oil emulsion.

Senile insanity.—In 1915, 1 senile case was admitted but discharged without much improvement. In 1916, 2 seniles were admitted; 1 recovered but the other was discharged without any benefit. In 1917, 1 patient was admitted and recovered.

Chorea.—Once I was fortunate enough to have a girl, suffering from severe chorea, under my care, who could be treated with the Ringer-Locke's injection method. She was discharged recovered after repeated injections. She was a very early case on admission.

On the whole, there may be good prospects in acute delirium, alcoholism, hysteria and catatonia, besides general paralysis. Acute cases have a much better prognosis than chronic. In the most acute delirious case we can expect quite good results with only a few injections, but such patients require a long and carefully watched convalescence. In chronic cases, such as slowly advancing adolescent insanity, on the other hand, we can hardly expect a good result in a short time. In hebephrenia and degenerated psychopaths, we have a general breakdown in the mental life, and it requires a total re-education of the deranged personality.

Occasionally I had good results unexpectedly with injections of the Ringer-Locke's solution given for one or two years in conjunction with general treatment and careful dieting. It is my feeling that the mentally afflicted can be treated successfully only in a humanitarian atmosphere and the utmost patience is required.

It seems to me that there is no better mode of treatment than the method I have adopted for the acute toxic case which is exhausted, refusing food and completely disorganized mentally. In the effects

produced on the hysterics there was possibly some element of suggestion, as might be expected, but it is this so-called suggestion that is undoubtedly one of the best therapeutic agents in treating disease in general, and particularly mental disease. I believe that a strong conviction on the part of the physician on the one hand, and confidence on the part of the patient and his family on the other, are the essential factors not only for success in psychotherapy, but also for success in general medicine. Confidence is nothing but the vital principle of "suggestion."

In August, 1918, Dr. Sato and Dr. Morita published a paper entitled "On the Therapeutic Effects of Ringer-Locke's Fluid on Psychoses." Their observations were based on 14 cases of catatonia, 6 cases of general paralysis, 2 cases of hebephrenia, 1 case of senile insanity, 1 manic and 1 epileptic—altogether 25 cases of insanity. They did not obtain any marked effects on 9 cases of agitated catatonia, 5 cases of confusion, 6 cases of agitated paralytics, hallucinated epileptics, hebephrenics, and 1 case of senile hallucinations. They attributed my good results to suggestion associated with the new treatment and the repeated injection of so large a quantity of fluid. And they suggest that the recoveries might have occurred spontaneously, as does happen sometimes, had I waited long enough, as is the practice of some mental physicians. This argument, indeed, contains some truth. My contention is merely that so far as is known at present Ringer-Locke's fluid is the ideal medium for washing and nourishing living tissue, and especially that of the central nervous system. Halliburton has shown this to be the case, and the practical value of the solution—as an artificial cerebro-spinal fluid—has been indicated by its use by so many students of biology in the cultivation of nervous tissue *in vitro*.

In 1922, Dr. T. Ikeda, Superintendent of Tokyo Mental Sanatorium (Tokyo Hoyōin), published his extensive study on the therapeutic effects of Ringer-Locke's solution on psychoses. His conclusions were based on the results obtained in 148 cases of various forms of mental disease.

He arrived at the following conclusions :

Statistically, it has been observed that the various forms of insanity treated with the Ringer-Locke's solution have shown a much better prognosis than those treated in other ways but kept under the same conditions.

The treatment did not produce any effect until after the second injection in manic-depressive insanity, the ninth in catatonia, the sixth in hebephrenia and the fourth in general paralysis.

In the expansive phase irritability was diminished, the affective state was more stable, sleep and nourishment were improved, and the grandiose delusions often disappeared. In the depressive phase the patients became more tranquil, their

nourishment improved, while delusions and hallucinations disappeared. The catatonics became less irritable, slept better, were better nourished, and their delirious states and confusion cleared up when of slighter degree. The hebephrenics also were less irritable, better nourished, and often a hallucinosis cleared up. No effects were, however, observed on the paranoid dements.

In general paralysis the patients became quieter, better nourished and slept more soundly, illusions and delusions disappeared and often the memory was restored. One patient progressed to a state of good remission.

In neurasthenia, influenzal insanity, presenile insanity, and alcoholic dementia there were also some effects shown, but there were not enough cases from which any definite conclusions might be drawn.

It is possible that there might exist a certain relation between the prognosis and the chronicity of the diseases. In catatonia and hebephrenia a recovery is only possible when patients have been ill for not more than two years, and in general paralysis not more than seven months. However, there seem no such limitations existing in the manic-depressive cases.

The age of the patients appeared not to affect the issue.

In March, 1926, Dr. Ikeda published his second report on the effects of Ringer's intravenous injection on various forms of mental diseases.

The patients treated by him were 42 cases of mania, 20 depressives, 70 catatonics, 30 hebephrenics, 4 paranoid dements, 64 general paralytics, 6 influenzal psychotics, 5 neurasthenics, 4 alcoholics, 3 presenile dements and 1 epileptic psychotic. His principal conclusions were as follows :

As a control, numerous patients were simultaneously treated under precisely the same conditions except for the Ringer injection. The control cases consisted of 172 cases of mania, 51 cases of depression, 335 cases of catatonia, 241 cases of hebephrenia and 272 cases of general paralysis. Both groups of the patients treated with and without the injection were statistically compared as regards prognosis, and it was observed that there was apparently a much greater percentage of recoveries and remissions in the former than in the latter.

No notable effect was observed as resulting from the use of the Ringer solution until after 2 injections in manic-depressive insanity, after 6 in catatonia, after 4 in hebephrenia and after 3 in general paralysis.

In the expansive phases of manic-depressive insanity the patients became less irritable, they slept better and were better nourished, and often the grandiose delusions, faulty habits and refusal of food disappeared. In the depressive phase the patients became more tranquil, slept better and were better nourished, they lost their delusions and, particularly, their auditory hallucinations.

In catatonic dementia præcox irritability was diminished, sleep and nourishment improved, delusions, and especially auditory hallucinations, dispersed, while states of confusion and delirium of slight degree tended to clear up. In hebephrenia irritability was less and nourishment better, while hallucinations and illusions disappeared, and often the patients became capable of manual work. In the paranoid dements, however, no effects were observed.

In general paralysis the patients became less irritable, improved as regards sleep and appetite and consequently put on weight, while such symptoms as confusion were notably relieved. The patients no longer evinced destructive habits and the capacity for memory was markedly improved. Two cases made such progress as to reach a state of good remission. Ikeda, in corroboration of my results, also saw much better results in the classical expansive forms than in the purely dementing form. At the same time he often had good results in the depressive forms of general paralysis also.

In influenzal insanity, neurasthenia, alcoholic insanity, presenile insanity and

epileptic psychoses he had some excellent results, but the cases dealt with were not sufficiently numerous to allow him to draw any definite conclusions.

It seems there is a certain relationship between the chronicity and the prognosis of mental diseases. In catatonia a recovery is only hopeful when the patient has not been ill for more than two years, in hebephrenia for more than two years and in general paralysis for more than two years. In manic-depressive insanity the duration of the illness did not appear to affect the issue as regards the result of the injection method of treatment.

The age of the patient had no significance; old and young improved.

Generally speaking, says Ikeda in conclusion, it seems possible that the Ringer-Locke's solution dilutes and washes away the exogenous toxins as well as the endogenous waste-products present in the whole organism, it removes the irritating toxins from the cerebral hemispheres, and thus permits the general nourishment of the nervous system and all the other organs. Thus we see that irritability, hallucinations and illusions are cleared up, and consequently patients become less emotional and sleep and eat better as the general nourishment is gradually improved.

It is obvious, also for the same reason, that the Ringer-Locke's solution produces its most remarkable results in cases of the so-called exogenous intoxication-diseases. Thus Ikeda observed a markedly good result in influenzal insanity and delirium tremens after one injection only. It is very desirable that the method of treatment should be tried more extensively.

Other forms of mental disease in which organic changes are not marked, as, for example, manic-depressive insanity and neurasthenia, are the most likely to benefit. In such cases the prospect of recovery is good at any stage of the disease.

Where organic changes exist, as in dementia præcox and progressive general paralysis, the use of Ringer-Locke's solution still affords hope, provided the lesions have not progressed to any great extent.

It is absolutely necessary, also, to use large quantities of Ringer-Locke's solution, and to make many injections. Ikeda declares that Morita did not obtain good results, simply because he did not use enough solution.

Ikeda further studied the effects of salvarsan injections in general paralysis in comparison with those resulting from the use of the Ringer-Locke's solution, and he has arrived at the conclusion that the salvarsan injections also benefit the general paralytic, but only after repeated injections of rather small doses increased gradually. He, however, had much better results with the Ringer-Locke's solution than with the salvarsan, and if both methods of treatment were combined, he might have better still. He is now of opinion that general progressive paralysis of the insane is a disease due

rather to the toxins of the metabolic waste-products than to the presence of the pathogenic organism, the *Spirochæte pallida*, itself.

References (Japanese).—(1) Sakaki, Y., *Neurologia*, May, 1917, xvi, No. 5, pp. 346, 347.—(2) Ishida, N., *ibid.*, May, 1916, xv, No. 5, p. 259; *Amer. Journ. Insanity*, January, 1917, lxxiii, No. 3, pp. 541-547.—(3) Furusawa, Y., *Neurologia*, May, 1917, xvi, No. 5, pp. 295-297.—(4) Hayashi, Y., *ibid.*, May, 1916, xv, No. 5, pp. 257-258.—(5) Morowoka, T., *ibid.*, May, 1916, xv, No. 5, pp. 258-259.—(6) *Idem*, *ibid.*, May, 1917, xvi, No. 5, pp. 298-300.—(7) *Idem*, *ibid.*, pp. 301-302.—(8) *Idem*, *ibid.*, September, 1918, xvii, No. 9, pp. 559-563.—(9) Matsubara, S., discussion to Morowoka's report, 1917.—(10) Takayama, F., quoted by Furusawa, 1917.—(11) Sato, M., discussion to Morowoka's report, 1918.—(12) *Idem*, and Morita, M., *Neurologia*, August, 1918, xvii, No. 8, pp. 471-493.—(13) Kobayashi, G., *ibid.*, July, 1920, xx, No. 6, p. 332.—(14) Ikeda, Tak., *ibid.*, December, 1922, xxii, No. 5, pp. 265-283.—(15) *Idem*, *ibid.*, May, 1923, xxiii, No. 1, pp. 27-30.—(16) *Idem*, *ibid.*, March, 1926, xxvi, No. 4, pp. 200-246 (Hakushi-thesis).

Clinical Notes and Cases.

The Extensivity of a Pallidal Lesion, or "Disseminated Pseudo-Sclerosis": an Unusual Case. By P. LIONEL GOITEIN, B.S., M.B., D.P.M.Lond., Resident Clinical Assistant, Cardiff City Mental Hospital.

THIS seems to be a remarkable case of psychic disturbance coincident with a progressing disease of the paleo-striate system, and complicated by involvement of the pyramidal tracts. He exhibits a universality of clinical manifestations that is probably unique in a single patient; but this only serves to emphasize the diffuseness of the pathological process that involves corpus striatum lesions in general, and the extent to which it is capable of progressing in a particular subject. But his case is sufficiently atypical to be classed apart from any known disease-grouping, leaving us the alternative of two or more independent diseases affecting the same patient, or a gradual and extensive march of a morbid process that few victims of the pallidæ class live long enough to undergo. As we shall show, our case has points of comparison with the bilateral athetosis that Cecil Vogt described (1); with the progressive lenticular degeneration of Kinnier Wilson (2); with a lesion in the strio-rubral and strio-cerebellar paths (3) and more markedly with the Westphal-Strümpell "pseudo-sclerosis" syndrome (4).

Added to this are evidences of a bilateral internal capsule involvement, and an extending lower motor neuron lesion in the cord, judging from the asymmetrical bilateral results noted clinically. As is usual with these neo-striate groups, the mental and emotional disturbances are significant (perhaps indicative of some thalamic involvement)—indeed, in this case largely preceding the onset of other signs. Further, the vegetative nervous system also shows its expected hyperactivity (as instanced by most of the reported cases), possibly from an irritation of the subthalamic centres for the sympathetic. A few anomalous trophic disturbances complete the collective picture, of which, from its rarity, a detailed description may not be out of place.

The patient, a single man and an only son, was an upholsterer by trade, and came to us first in 1903, when aged 33, in good physical condition, and of fine muscular build, apparently with mental symptoms only (restlessness and an excited manner, with delusions of persecution in regard to his co-workers, and of grandeur in regard to his powers, and social standing—all with a religious colouring). His second mental breakdown was in 1908, and has lasted over 18 years. The onset of symptoms must have been very insidious, and unfortunately the old case-notes do not help us, except to point out in 1912 that he was beginning to "grimace" to himself. The knee-jerks were already slightly exaggerated early in 1925, but no paralysis noted, and in November, 1925, for the first time attention was called to his unsteadiness on his feet. One learns from his mother that this (the only) delivery was full-time and non-instrumental. He has had no previous illness except whooping-cough and scarlet fever, but so-called St. Vitus' dance as a child is of significance (there are no rheumatic residua to-day). Also no other member of the family is similarly affected. He denies syphilis and is a non-alcoholic. Of traumatic history we note he was in 1910 "kicked on the ground" by a patient, and he had a fall on the head without losing consciousness when aged 20.

These choreiform movements, in the absence of rheumatic fever, came on between 16 and 20, and took the form of awkward movements with the hands; the dropping or throwing about of plates, etc., and irregular movements of the face. They had continued, according to the patient, "more or less all the time" since the attack. About the same period he developed a weakness in the left hand; there was "some impeding," and he was unable to grasp things, e.g., in playing cricket, and later when at upholstery he noticed on some days the same difficulty, but it did not prevent him from working. Then came a feeling in the muscles "as if a tape-worm were working" (? fibrillary movements), and a paræsthesia starting in the legs (pins and needles and "coming over hot"). Otherwise he has been in good health.

When examining him neurologically in June, 1926, and at frequent intervals to the present time (he is now entirely bedridden), I observed chiefly the following facts:

Spasticity of marked degree affecting upper and lower limbs, and to a lesser degree the face, the abdominal muscles escaping. The body when patient is attempting to stand, and less so when at rest, is in position of flexion of all the larger joints, whose spasticity is aggravated by passive correction, but partially overcome by voluntary effort. The gait is markedly spastic, and at times swaying. There are no obvious tremors or choreic movements of the limbs, but there is a tendency slowly to revolve the head (collar-irritation movement) twenty times a minute, to break into spontaneous laughter while contorting and screwing up the face, wrinkling the brow, and showing the teeth and noisily hissing through them the while. The whole appears a laboured and painful effort, and is especially brought about under emotion or during the answering of questions. The habit has left deep facial creases over the musculature concerned. The head at rest is

in a partial left torticollis position, with chin drawn over to the right (but partially corrected by volition), caused by atrophy of the upper portion of the left sterno-mastoid, which is replaced by a fairly large lipomatous mass in the substance of the fibres. (A second lipoma is to be found in the right frontal muscle.)

In regard to the right side of the body, there is a supranuclear facial palsy (evidenced by the drooping mouth and the drag on showing teeth, some smoothing out of the facial folds, with some degree of wasting). Also to be noticed is a right hemifacial vaso-motor disturbance, e.g., excessive flushing, blanching with painful stimuli, excessive perspiration independent of emotion (and often of sharp demarcation), and hypersalivation. There is some degree of deafness on the right side, some blunting of sensation to pin-prick of the right half of tongue and palate, but no muscle-wasting, tremor or paresis. The speech is markedly affected ("hot potato"), thick, slow, laboured enunciation, jerky and almost explosive. This dysarthria seems "pseudo-bulbar" in type, and is accompanied by the characteristic forced laugh and flushing. No difficulty in swallowing, and no sensory disturbance over face. The right upper limb shows exaggeration of all deep reflexes, with no muscle tremors or wasting except an Aran-Duchenne palsy of the hand (the usual wasting in the interossei and thenar and hypothenar eminences). The abdominal superficial reflexes cannot be obtained under good conditions, but in the lower limb all deep reflexes are exaggerated; there is a marked ankle-clonus (and mild patellar clonus), while Babinski's sign is negative. No disturbance of sensation on this side.

In regard to the left side of body we notice a spastic smile of face independent of, or long outlasting the emotional cause. It is never mask-like. There is the aforementioned grimacing and forced laughter (more marked on this side), and the left-sided sterno-mastoid wasting. Also a wasting of some of the shoulder-girdle muscles (with R.D. and fibrillary tremors) of Erb-Duchenne type (i.e., supra- and infra-spinatus, levator angulæ scapulæ, upper trapezius, deltoid and pectorals). An osteo-arthritis of the shoulder (? trophic disturbance) prevents more than 45° abduction of humerus. Some thenar and hypothenar wasting is noticed in left hand. Abdominal reflexes are again not obtainable, but the knee-jerk is brisk, ankle-clonus marked and Babinski's and Oppenheim's signs are negative. The sphincters are unaffected. (Occasional bed-wetting is psychical.) No disturbed sense of position and no impairment of sensation. The limbs are difficult to mould owing to their spasticity. Neither sole shows any sweating, in contradistinction to the face.

In regard to the eyes, the pupils are small, concentric, equal, and react to light and accommodation. Left lateral nystagmus is at times evident. The sight, according to patient, is "getting blurred," and he is sometimes inclined "to see double" (a shadow above the original). There is no paresis, and the discs are both normal in appearance, and the intra-ocular tension is average. There is no abnormal pigmentation at corneal edge.

It only remains to point out certain movements that are occasionally manifested. He complains at such times of being keyed-up and stiff, of having painful spasms in limbs; while under examination, in addition to the grimacing, there may be in the left arm a slow, spastic, painful flexion of the smaller joints with excessive pronation and internal rotation through 360°, but no true athetosis is present.

Of the remaining points investigated, we may stress a hypothermia of skin (axillary 97° F. on right, against 98.7° on left), a diffuse resistive skin-rash of body and limbs, scabiform in type, but no dermatographia and no pigmentation. Systolic blood-pressure is 135 mm. Hg.; soft arterial walls. Heart and lungs appear healthy. There is no anæmia. Urine 1020, acid, and no abnormal constituent. The Wassermann in blood (cerebro-spinal fluid not obtained) is negative.

Mentally patient is mildly demented, irritable at times, but has good memory for past events, and had been able to work here at upholstery until 1½ years ago, though he noticed a distinct difference in his gait and grasp 1½ years before this.

We thus see the outstanding features of this case are the insidious and slow onset and advance, probably for over 30 years, of a laboured athetoid spastic arm-movement along with elaborate grimacing and forced laughter, a vaso-motor disturbance of the half-face, dysarthria, and a universal muscular spasticity,

complicated by a spastic paraplegia and well-marked emotional and psychic disturbance. And in the background is this widespread muscular atrophy of the right face, hand, the left shoulder, neck muscles and, to lesser degree, the left hand.

By way of differential diagnosis the investigations brought out the following clinical points of importance:

There is no tremor (at least at this stage) of head or hands, or choreic movements of a group of muscles. The disease has appeared primarily in a healthy subject, after the age of 20, and he survives at the age of 57. We cannot speak of its familial nature, as the patient is the only child. It is bilateral in extent. No dissociated anæsthesia is present and no intention tremor or staccato speech. The sweating of the face is in that half *opposite* to the shoulder-girdle wasting, though on rare occasions it is sharply defined on the ipsilateral side, while the lip and tongue muscles are unaffected. No ptosis or mydriasis is seen. The liver is not palpable or diminished in size, and there is no history of jaundice, anæmia, or endocrine upset. There is no active pyorrhœa, but the teeth are in rather poor condition with gingivitis. The sphincters are intact.

DISCUSSION.

On reviewing this case one is compelled to ask whether, after all, one is dealing with a number of disease-entities that chance has united in one patient, or whether a common pathological process, progressive in type, is responsible for the whole picture. The above negative findings rule out some of the more obvious explanations. Though, as is well recognized, the lenticular syndrome may be nebulous in the extreme from the diffuse nature of its involvement, the pyramidal tracts therewith as a rule are unaffected; and even if the disease be complicated by an upper motor neuron lesion, that of a *lower* motor in combination is exceedingly rare. Considering the insidious and slowly progressive nature and the condition of the patient, we are probably dealing with an extensive sclerosis, disseminative in type, whose patches are to be located in the cord (at upper thoracic and lower cervical levels), spreading to the palco-striatum but apparently avoiding the putamen (absence of chorea and tremor) on both sides, thence affecting their outgoing fibres to the cerebellum and Deiter's nucleus. The vaso-motor disturbance is not apparently of peripheral or psychic origin, and is probably attributable to disturbance in the vegetative synapses at the level of the optic thalamus, or at subthalamic levels; while a further extension from the striatum to the internal capsule on both sides is productive of

the spastic diplegia and double clonus, etc., though Babinski's sign is on most occasions negative. Lenticular disease at this age (57) is uncommon, though Wilson's disease has been known in a patient of sixty (5).

In other words we are probably witnessing in this case the phenomenon (1) of involvement of tonus fibres of the subcortico-spinal tracts which eventually reach the non-striated sarcoplasm of the muscles ; (2) of involvement of pyramidal tracts destined for striated muscles and responsible for their synergia and voluntary control, these being affected at two levels ; (3) of a mental disturbance coincident with the pallidal lesions, but not easily localizable ; though doubtless the superior ganglion-station for crude emotional reception and response (thalamus) is in part affected. No known toxic cause or focus is suspected here, there being no intestinal stasis or putrefaction and no pyorrhœa or sinus disturbance ; and we must believe it is a spontaneous abiotrophy, that (in the absence of atheromatosis or of chronic renal disease) has chosen this widespread affection chiefly of the large cells of the paleo-striate system, and the cortico-spinal tracts. The actual extent of involvement a *post-mortem* examination alone will show.

The case still awaits a disease title, for, as we have tried to show, this symptom-complex fits in with no known morbid entity. Against the diagnosis of pseudo-sclerosis is the absence of all bodily tremor or head tremor apart from its slow oscillation ; absence of epileptiform or apoplectiform attacks, absence of skin- and eye-pigmentation or diminution in liver size and function. In favour of this diagnosis, however, in the presence of other than extra-pyramidal findings, is the occasional occurrence of ankle-clonus in one stage of the disease ; it was found (as in our own) bilaterally in Fickler and Shütte's case, a positive Babinski was seen in Hosslin and Alzheimer's case, and (more comparable to ours) a spastic diplegic-like condition without extensor response, in a patient of Spiller, who, in his last paper, cites the above instances (6). A marked exaggeration of knee-jerks was discovered in 4 out of 25 cases reviewed by Bostroem from the literature, and at least two cases showed absence of abdominal superficial reflexes. Over half the instances failed similarly to show any dysphagic symptoms. Also, unlike Wilson's disease, the psychic symptoms in our patient are more prominent, and at all events not of the maniacal type. Granting the above pyramidal anomalies, the case, though unusual, might be classed with the pseudo-sclerosis of Westphal and Strümpell with significant variations on the older theme.

For the opportunity of investigating this case I have to thank

Lt.-Col. E. Goodall and Dr. Ivor Davies, of Cardiff Royal Infirmary, for his help and advice.

References.—(1) Vogt, *Journ. f. Psych. u. Neurol.*, 1917, xviii.—(2) Wilson, *Brain*, March, 1912; see also Hamilton, *Journ. of Nerv. and Ment. Dis.*, 1916, p. 297; and Sawyer, *Brain*, 1913, p. 223.—(3) Graham Brown, *Journ. Physiol.*, 1914, p. 203.—(4) Westphal, *Arch. f. Psychiat.*, 1913, p. 1.—(5) Sachs, "Proc. New York Neurol. Soc.," *Journ. of Nerv. and Ment. Dis.*, 1916.—(6) Spiller, *ibid.*, 1913, p. 529; 1908, p. 452; 1916, p. 23.

Medico-Legal Notes.

TESTAMENTARY CAPACITY AND CRIMINAL RESPONSIBILITY.

In the report of the appeal to the House of Lords in the case *Robins v. The National Trust Co., Ltd. and Others*, in the *Times* of February 8, 1927, certain dicta as to the onus of proof of incapacity enunciated in the judgment are in marked contrast to those followed in criminal procedure affecting the insane.

The judgment declares that "Those who propounded a will must show that the testator was a person of testamentary capacity . . . The moment the capacity was called in question, then at once the onus lay on those propounding the will to affirm positively the testamentary capacity. . . . Onus was always on a person who asserted a proposition or fact that was not self-evident." Thus, if the insanity of a testator is alleged, though not yet proved, the onus is laid on the propounders of the will to prove sanity, or that even though insane, nevertheless the testator had sufficient testamentary capacity to make a sensible will. If such testamentary capacity is proved, the mere fact of his insanity will not be allowed to invalidate the testator's will.⁽¹⁾

Now, mark the difference in criminal cases. When a person is charged with murder, and his counsel alleges his insanity and irresponsibility, no onus is thrown on the propounders of the theory that he is responsible (*i.e.*, the Crown prosecutors) to prove their case. Further, even if the prisoner is proved to be insane and his insanity is admitted by the prosecution, nevertheless the onus of proving responsibility is not thrown on the prosecution which alleges it. On the contrary, the onus of proving irresponsibility is laid on the prisoner's counsel, and Lord Justice Atkin's Committee⁽²⁾ opposed the proposal of the Royal Medico-Psychological Association

that the onus of proving that the insanity was not calculated to influence the commission of the crime should be thrown on the prosecution.

Surely what is sauce for the goose should be sauce for the gander; and if in testamentary cases those who allege capacity to make a will, in spite of the existence of insanity, are made to prove their allegation, similarly, in criminal cases, those who allege moral capacity in spite of proved insanity should be made to prove their allegation.

In view of the dictum that "onus was always on a person who asserted a proposition or fact which was not self-evident," it would seem logical to ask the prosecutors who allege that a person proved to be insane is nevertheless responsible for his acts, to prove their allegations. It is surely not self-evident that lunatics are responsible for their acts.

As the disagreement between the legal and medical views as to the responsibility of the insane in criminal cases might cease to have much effect in practice if criminal procedure were assimilated to that obtaining in testamentary cases as laid down in this and other recent judgments, it would be of value to learn why such different legal dicta govern the two cases. To the layman, indeed, it would appear that the very reverse would be more logical, *viz.*, to throw the onus of proof on the opposers of the will, and on the allegers of responsibility in criminal cases; for making a will may of itself be *primâ facie* a sign of sanity, while the murder or other violent act committed by a lunatic may of itself be *primâ facie* evidence of insanity.

It must be bewildering for a juryman to hear it laid down in a criminal case to-day that insanity does not imply incapacity to behave properly unless the contrary is proved, and to-morrow in a will case to be told the opposite. Perhaps some legal authority can enlighten us as to the reason for the apparent discrepancy.

J. W.

(1) *Vide* Cook's *Insanity and Mental Deficiency, etc.*, pp. 145 and 148.—(2) *Vide Report*, pp. 7 and 8.



LISTER

1827—1927

“THE CHIEF.”

His brow spreads large and placid, and his eye
Is deep and bright, with steady looks that still.
Soft lines of tranquil thought his face fulfil
His face at once benign and proud and shy.
If envy scout, if ignorance deny,
His faultless patience, his unyielding will,
Beautiful gentleness, and splendid skill,
Innumerable gratitudes reply.
His wise, rare smile is sweet with certainties,
And seems in all his patients to compel
Such love and faith as failure cannot quell.
We hold him for another Herakles
Battling with custom, prejudice, disease,
As once the son of Zeus with Death and Hell.

[We were unaware, when, by kind permission of the publishers, we published this and other extracts from 'A Book of Verses' by William Ernest Henley, in April, 1925, p. 304, that this verse referred to the immortal Lister.—Eds.]

Occasional Notes.

H.R.H. the Prince of Wales and the "After-Care" of Mental Cases.

(At a meeting of the Mental After-Care Association held at the Mansion House on March 31, 1927, His Royal Highness the Prince of Wales, the Patron, who presided, made a stirring appeal on behalf of the work of the Association to the generosity of the public.)

His Royal Highness said :

" Although this Association was formed nearly half a century back, it is probably only in the last ten years or so—in fact, since the Great War—that the general public has come to realize the great importance of its work. One of the terrible legacies left us by the war was the care of a large number of men whose health has been impaired, although not actually by wounds or by disease ; men, in fact, whose disability is not physical, but mental. The urgent need for helping such cases, which are often sadder than those of men who have actually lost a limb, has had two results. It has led the medical profession to speed up its study of mental infirmity generally, so that that particular branch of medical science has made very marked progress. And, further, it has brought home to all of us that mental trouble is, generally speaking, just as much a disease as any of the physical illnesses with which we are all familiar. (Cheers.) Moreover, it has taught us—I am speaking of the community generally—to think much more of that aspect of the mental problem, which has of recent years come into such prominence ; I mean the relation of mental disease to crime, and the consequent danger to the State and to the general public if mental patients are not properly helped to regain their normal health.

" Nobody knows better than I do the wonderful generosity which the public in this country always shows in contributing toward the tending and healing of the physically infirm. To-day, as Patron of the Association, I am asking that a similar measure of generosity be accorded to the mentally infirm. (Cheers.) For forty-eight years it has carried on its work under immense difficulties, and it is no exaggeration to say that, apart from its efforts, no organized attempt has been made to give a proper chance of convalescence to mental patients. On the other hand, many scores of such patients have been restored to normal health, when, but for the Association, they would probably have remained for ever a charge on their relations or on the State and led a life of acute suffering. (Cheers.)

" I should like to summarize briefly the objects for which this Association works. Firstly, it facilitates the discharge of patients by acting as an intermediary between the hospital and the patient's home, or by offering accommodation in one of the cottage homes when the friends of a patient are unable to receive him. Secondly, it consolidates recovery by giving convalescence at the seaside or in the country ; by helping to obtain suitable employment ; or by supplying tools or clothing when necessary. I need not emphasize the extreme importance of this side of the Association's work in finding a job in life for those who need it so desperately. (Cheers.) And, thirdly, it prevents relapse by personal supervision of individual patients, by helping them to see specialists, or by giving them such extra nourishment or surgical appliances as their circumstances require. (Cheers.) Further, the Association is often able, by giving "pre-care," as distinct from "after-care," to prevent threatened cases of mental infirmity, and to avert a breakdown which might result in a long and painful illness. (Cheers.)

" This is only a brief survey of what the Mental After-Care Association does. Its general object, however, if it is once realized, will surely obtain for it the support which it so obviously deserves. That object is to bring back health, happiness and efficiency to our countrymen and countrywomen who are afflicted by what is perhaps the saddest of all infirmities, and to refit them for making their own way in life without being a burden to others. (Cheers.) It is an object which has my very warmest sympathy, and I wish every success to the appeal which is now being made on its behalf to the British public." (Cheers.)

The Hume-Spry Case.

THIS case, in which Mr. Hume-Spry sued Dr. R. Percy Smith and Dr. A. H. Watson for alleged negligence in certifying him insane under the Lunacy Act, came to a sudden and dramatic conclusion on the fifteenth day of hearing, March 22, 1927. The jury stopped the case and returned a verdict for the defendants.

The Judge, Mr. Justice McCardie, in giving judgment for the defendants, said :

" I feel sure that the jury will agree with me when I say there is absolutely no basis for the suggestion of bad faith against either of these two defendants.

" Several names have been mentioned in connection with the case. I have gathered from the jury, as well as from Sir Henry Maddocks, that the honour of Mr. Chetham-Strode has been fully vindicated. In my view it also follows upon the verdict of the jury that the honour of Major Woods has been completely vindicated and I infer that the honour of Major Stodart-Walker had been vindicated. I think the jury would desire to express their regret at the careless and foolish letters he wrote.

"I, myself, infer, from the verdict of the jury, and I should hold it myself without the slightest hesitation, that there was not the faintest ground for suggesting that there was any conspiracy among the officials and doctors of the Ministry of Pensions wrongly to send the plaintiff to an asylum.

"Finally, on my own part, I shall retain the documents in the custody of the Court so that the Public Prosecutor may consider whether or not he should take criminal proceedings against the plaintiff for perjury or such other offence as he may think fit."

We desire, in union with the whole of the medical press, to offer the defendants, one of whom, Dr. R. Percy Smith, is a greatly honoured member of our Association, an ex-President, and once an Editor of this Journal, our hearty congratulations on the successful ending to a long and trying experience of nearly fifteen months' duration.

The defendants in January, 1926, made an application under Section 330, subsection (2) of the Lunacy Act, 1890, to a Master of the King's Bench Division to stay the proceedings which was granted and affirmed by the Judge in Chambers. The Court of Appeal, however, reversed this decision and so the case ultimately came to trial.

The case very adequately proves the necessity for increasing the measure of protection now afforded medical practitioners in carrying out the distasteful duty which falls to them under the Lunacy Act—a duty not only for the purpose of the effective treatment of many cases of mental disorder, but for the protection of patients so suffering, and of the public.

This urgent matter was pleaded by the Association in its evidence before the Royal Commission on Lunacy and Mental Disorder, when it urged "that the protection afforded by Section 330 of the Lunacy Act, 1890, to medical practitioners and to others engaged in pursuance of the Acts should be extended to stay proceedings at an earlier stage than at present, and that they should receive the same immunity as is given to witnesses in a court of law." The Royal Commission recommended amendments to the Act which would put the onus of proof of the alleged bad faith and lack of reasonable care upon the plaintiff, which would certainly place practitioners in these circumstances in a safer position, and yet allow of the Judge and Court to permit cases to go forward for trial where there were substantial grounds for such allegations and not merely *prima facie* evidence of neglect.

The case also raises the important question of how expert medical evidence can best be submitted, especially as such evidence may affect the honour and professional reputation of a brother practitioner of medicine. It is a matter we cannot enter into now, but it is one well worthy of the attention of the Association.

John Coakley Lettson and Psychiatry.

THE President of our Association was selected to reply to the toast of "The Guests" at the Anniversary Dinner of the Medical Society of London, held at the Grand Hotel, London, on March 9, 1927, Sir Humphry Rolleston, Bt., K.C.B., being in the Chair.

After complimenting the proposer of the toast on his speech, our President continued as follows :

"When your Secretary spoke to me on this matter, it at once occurred to me that to say something about John Coakley Lettson (1744-1815) would never be out of place at an assembly of the Medical Society of London. I shall never forget reading that really fine pen picture of Lettson by Sir StClair Thomson, which formed his Presidential Address for 1917.

I was immensely impressed by the depth and breadth of Lettson's personality. Though he was not a Lancastrian—for he was born in the West Indies—he migrated to Lancashire when six years old and received his early education at Penketh. He was afterwards apprenticed to a Settle practitioner, and departed for London at the age of twenty. Might not those keen business abilities which enabled him from the first to earn a large income and later to amass a considerable fortune have been inculcated in him by contact with the shrewd and hard-headed Lancastrians?

"I have often wondered as to the part Lettson took in the renaissance of psychiatry which commenced during his time. I feel he must have taken some active interest in it. That he was full of the milk of human kindness is shown by the fact that he was one of the pioneers in the abolition of slavery, in regard to which his sympathy and convictions were very tangibly shown when early in life (1763) he released fifty slaves he had inherited. The terrible conditions which prevailed in his days as regards the care and treatment of the mentally afflicted would be fully known to him, and he was not the man to stay his hand where there was good work to be done for the poor, the afflicted, and the down-trodden. Furthermore, he was ever intolerant of cruelty and injustice.

"What possible links then were there between Lettson and psychiatry?

"In the first place he was keenly interested in the questions of poverty, crime, prostitution, and wrote on these and a large range of other sociological subjects; so it seems undoubted that his interest and benevolence would extend to the mentally affected. He also wrote on criminal responsibility and testamentary capacity.

"Then he was a personal friend of John Howard, who was one of

the first to draw attention to the plight of the mentally afflicted he found housed in prisons. We celebrated the bi-centenary of the birth of this great philanthropist last year.

"Another of his personal friends was Dr. Benjamin Rush, one of the pioneers of scientific psychiatry in America. Lettsom wrote his recollections of Rush in 1815. Three years before this Rush published his *Diseases of the Mind*. Rush was a man many years in advance of his time. Another friend was Dr. William Perfect—a psychiatrist of great repute and originality, who practised at West Malling, in Kent, and who dedicated his principal work, *Select Cases of Insanity*, first published in 1787, to him. In the dedication occur the words, 'As a proof of private friendship, and a record of your own feelings, whenever humanity can be exercised or displayed.' Perfect was obviously inspired by Lettsom's genius and personality, and he may have been a Fellow of your Society.

"Again Lettsom, was a Quaker and must have known the Quaker William Tuke, who paved the way for enlightened psychiatry in England.

"Lettsom visited Edinburgh in 1791 and received the Fellowship of the Royal College of Physicians on December 1 of that year. Andrew Duncan was then busy rousing the Edinburgh City to establish at Morningside the Royal Asylum. It would not be surprising to find that Lettsom met Duncan and became interested in his stirring propaganda for the better treatment of the mentally afflicted in Scotland.

"It would be interesting, if I had time, to trace the links between Cullen, Howard, Pinel, Rush, Lettsom, Perfect, Duncan and Tuke, and speculate as to how far they influenced each other by their writings and personal contact. Howard was several times in Paris. Did Rush ever visit Paris and meet Pinel? Was he a link between Cullen and Pinel? Did either Duncan or Tuke ever visit Paris? Perfect almost certainly did.

"What a fine hospital administrator your principal Founder would have made. I have alluded to his business capacities. He must have been a keen judge of human character to pursue so successfully all his manifold interests. He knew all about games, diet, clothing, methods of cleanliness, agriculture, botany, natural history. He was kindness itself, and had an inborn sympathy for those sick. In the words of Sir StClair Thomson, 'His success in practice must have been due to his own personality, his sincerity, his industry, and his direct influence upon his patients.'

"His talents were business, literary, philosophical, philanthropic, sociological, medical—all bound up in a kindly, sympathetic,

generous, charming, and versatile personality, and the success of any hospital—either general or mental—and the welfare of its patients would have been assured in Lettsom's hands.

"Although your Society has the proud distinction of being the oldest medical society in London, having been founded in 1773—154 years ago—I gather that it has not had that number of presidents. I understand that one of your presidents, who hailed from Ireland, managed to occupy your chair for twenty-two years. Still, you, Sir, follow a long line of illustrious men, not least among them, from the point of view of the psychiatrist, being Dr. Brudenell Carter (1886). He was the first to make a real attempt to found in England a psychopathic hospital, as is shown by that famous report issued by the London County Council in 1890, 'On a Hospital for the Insane,' Brudenell Carter then being Chairman of the Sanitary and General Purposes Committee of that Council. The generosity of Henry Maudsley later enabled Brudenell Carter's ambitions to be realized to a large extent in the Maudsley Hospital.

"We have now a far wider ambition for psychiatry than was ever entertained by Brudenell Carter and Maudsley, namely, the close co-operation, in every-day practice, of psychiatry and general medicine. The policy of isolation, even the partial isolation of psychiatry, has been found wanting in the interests of both, and of suffering humanity.

"What is needed to bring this later ambition about is a man of Lettsom's capacity, vitality, and breadth of vision to head the movement for the cultivation by the medical schools and allied general hospitals of that sphere of physical and mental disease which is located in the public mental hospitals. Few realize what a heritage is there awaiting possession—a possession which will, in course of time, make its beneficial effect felt in the consulting-room of the general practitioner and by the bedside of the sick everywhere.

"It must be known to some of you that any obstacles there may have existed in the past to such a tenure are in the process of removal, or have been removed, and that, as between public mental hospitals on the one hand and general hospital and medical schools on the other, schemes of working affiliation and reciprocity are now practical propositions.

"Up to now the approaches made to this consummation have been almost entirely limited to psychiatry. If only the medical schools and general hospitals could be brought to realize what a fine field there is in these mental hospitals for medical education and interesting medical work, both as regards physical and mental diseases, I feel sure they would spare no effort to secure it."

The Association's Coat of Arms.

WE publish with this number a reproduction of the Coat-armour, together with the Letters Patent relating to it, recently granted the Association. For the official blazon of the arms, crest, and supporters, we refer our readers to the Letters Patent, but some account of their symbolism will also be of interest. The achievement from above downwards consists of crest, wreath, mantling, helmet, and shield; the latter being flanked by the supporters. The distinctive symbolism is conveyed in the crest, shield, and supporters.

Crest: This is composed of the looped cross, or symbol, or key of life, of the Egyptians, set between two wings. The looped cross (*Crux ansata*) was a divine mystery in ancient Egypt. Socrates Scholasticus and Rufinus refer to it as meaning "the life to come." It is found almost everywhere on the walls of sacred buildings, on ensigns, etc., and in the hands of many of the Egyptian gods.

It is thought by some to have been the prototype of the Celtic looped cross of Christian times through its adoption as an emblem by the early Egyptian Christians. This, however, is not likely, for the loop may have been for the prosaic purpose of carrying or holding the Egyptian cross, T. The latter, therefore, was most probably the real symbol. The looped cross of the Celtic Christians most likely had its origin in the "holed stones" which date from prehistoric times. The "circle" appears to have been universally used at one time as the female emblem of generation, or the transmission of life through the female sex, and to have been an older and purer ideal than that of the more debased veneration of the phallus. Some holed stones are flat; others are rude stone columns holed at the base, or centre, or near the top. The one at Ballycastle has roughly the formation of the cross, holed at the centre.

However much of all this may be true, the pillar or column, the cross, and the circle have always been, in some formation or other, emblematic of life and regeneration.

Shield: This has a bordure of sable, and, in the centre of the field, is found the staff of Æsculapius. In the bordure are four butterflies, the emblems of "Psyche." "Psyche" as used here should not be mistaken for the mythical personification of that name—"a nymph whom Cupid married and carried into a place of bliss, where he long enjoyed her company" (1), and who was afterwards granted immortality by Jupiter on being murdered by Venus, Cupid's mother.

Contrary to the much-criticized representation of "Psyche" in the flesh which appears on the old badge of the Association, the

emblem used in the achievement is that of "Psyche," the soul, which is the butterfly. We are told that "among the ancients, when a man had just expired, a butterfly appeared fluttering above, as if rising from the mouth of the deceased" (1). "Psyche" personified is depicted as wearing the wings of a butterfly to signify "lightness of soul," and which presumably has some connection with her immortality.

Supporters : The serpent as an emblem of the art of healing or medicine dates from very ancient times. Æsculapius was physician to the Argonauts, and received divine honours after death; and chief among a number of animals sacred to him were the cock and the serpent, especially the latter. The story is that Rome was cleared of a plague by his appearance embodied as a serpent. But long before this the serpent was used as a medicine. Æsculapius is usually depicted as holding in his hand a staff, around which is wreathed a serpent, and he is said to have lived about 1200 B.C. Five hundred years or so before this, Moses set up the brazen serpent in the wilderness, and those of the Chosen People suffering from snake-bites, who looked up to it, were healed.

The Message.

The symbolism of the achievement may therefore be read as *psychological medicine* (the butterflies and the staff of Æsculapius) supported by *general medicine* (the serpents), crowned by its lofty ideal, which is *life* (looped cross) in its fullest meaning—*healthy and vigorous activity of mind and body* (set between wings).

The verbal expression, *the motto*, "Let wisdom guide," completes the message, the full telling of which is only to be found written in many books, both ancient and modern.

The College of Arms have done their work well, and are to be congratulated not only on an artistic production, but on its symbolic fashioning, which truly conveys the highest ideal of the Association.

J. R. LORD.

(1) *Vide* Lempriere's *Classical Dictionary*.

Part II.—Reviews.

Twelfth Annual Report, General Board of Control for Scotland, 1925.

The report includes a review of 15 years of lunacy and mental deficiency, covering the years 1910 to 1924.

The proportion of registered lunatics per 100,000 of the population, 390 before the war, 374 during the war years, and 369 since the war, shows an apparent decrease in lunacy, but when the operations of the Mental Deficiency Act (Scotland) of 1913 are considered over the same periods, it appears that the number of persons suffering from mental disorder is really increasing. During the third quinquennium, the number of mentally defective persons on the register had risen from 1,236 to 2,308 by the end of 1924. These figures must be added to the lunacy figures, and the certification under the Mental Deficiency Act of mental defectives who had formerly been sent to asylums more than accounts for the diminished numbers of cases of mental disorder entering asylums.

Lunacy statistics.—On January 1, 1926, there were 18,537 insane persons (exclusive of those maintained at home)—an increase of 139 as compared with the previous year. During 1925, 3,180 certified patients were admitted to establishments—a decrease of 52. Of these, 481 were private patients—a decrease of 44—and 2,699 were rate-aided—a decrease of 8. During the year under review 482 voluntary patients were admitted. The death-rate for patients in establishments was 8·6 of the average number resident. 201 private patients and 951 rate-aided patients were discharged recovered. There were 144 escapes, and of these 27 were still absent on the expiry of 28 days from the date of their escape.

Mental deficiency statistics.—The Treasury instructions of 1921 limited the numbers of defectives in institutions eligible for the Imperial grant to 1,477. The grant was extended by £5,000 to provide accommodation for 200 additional cases under the Lanark, Paisley and Edinburgh District Boards of Control—the latter Board have also received the sanction of the Treasury to provide accommodation for a further 500 defectives.

The Mental Deficiency Act became operative in 1914, when there were 207 defectives located in 4 institutions under the supervision of the Board, whereas there are now 14 institutions accommodating 1,790 certified defectives; with the exception of 4, all these institutions are capable of unlimited extension. The most clamant needs for defectives are accommodation, educational facilities for the young, and extended means for supervising those over 16 years of age.

The Board ascertained by census that there were 12,969 mental defectives throughout Scotland, and of these, 1,709 are certified under the Lunacy Acts and placed in asylums. Apart from those mentally defective persons who are by statute under the control

of the Education Authorities, there are 742 under the age of 16 years, and 1,460 over 16 years of age who have not been certified, and do not therefore come under the statutory powers of the Board.

Early treatment.—The Board advocated the early treatment of mental disorder outside asylums in their first report in 1859. The Parish Council of Glasgow initiated the establishment of wards for the treatment of incipient mental disorder in 1890, to be followed by the Parish Councils of Govan, Paisley and Dundee. The main Glasgow wards are at the Stobhill Hospital, where 80 beds are set aside for these cases, with a maximum duration of residence of six months. By the introduction of these wards it is claimed that the erection of a third asylum for Glasgow has meantime been avoided. Less than 33% of the cases admitted required to be certified and sent to asylums.

There are also dispensaries for mental cases in Glasgow, and one is to be established in Edinburgh in connection with the Royal Infirmary.

Open-air Treatment.—Sanatoria or verandahs have been erected for the treatment of tubercular disease in all the institutions, and in consequence the number of these cases now approximates the level obtaining in ordinary hospitals.

Occupational therapy.—Twenty-two of the District asylums have farms attached to them, varying in extent from 1,056 to 56 acres. A minimum of 1 acre of farm and garden land is advocated for each male patient. Occupational therapy for the benefit of the relatively large number of patients who cannot be employed on the land has been largely extended.

Dental, light, and hydro-therapy.—Visiting dentists have been appointed to almost all the asylums. The larger institutions have initiated ultra-violet light, electrical and hydro-therapy treatment, and it is advocated that District Boards controlling smaller asylums might combine to provide central dispensaries or clinics grouped so as to be available for patients in the several districts, where also clinical laboratories might be established.

Encephalitis lethargica.—By an arrangement with the Board of Health, public authorities throughout Scotland can now send all cases of this disease associated with mental symptoms to the Stobhill General Hospital.

Psychological Healing: A Historical and Clinical Study. By PIERRE JANET. Translated from the French by EDEN and CEDAR PAUL. London: George Allen & Unwin, Ltd. New York: The Macmillan Company, 1925. Two volumes. Demy 8vo. Pp. 1265. Price 42s. net.

It is difficult to do justice in a short review to this monumental work, *Psychological Healing*, from the pen of such a master of his subject as is Pierre Janet. He covers the whole ground of the treatment of the mind from the early miraculous healing down

to the present day. Perhaps the most outstanding feature is the width of his viewpoint throughout. Janet has lived a long time, his experience of mental disorder is probably second to none, his personal knowledge of matters psychological and psychiatric is immense, and his book is only what could be expected to emerge from such a source.

For him the treatment of mental disorder is not only a matter for the comparatively narrow field of the practice of medicine, it involves a determination of the general social attitude, and is in turn modified and controlled as a reaction to the popular conception of the time. He shows clearly, as for example in the historical survey of hypnotism, how the rise and decline in the use of a method depended not only upon the strictly scientific considerations concerned, but to a great extent upon the popular attitude. It is as well that this fact should be appreciated, for of all medical matters, those appertaining to the mind are of the most lively interest to the general public, and of all ills those of the mind are certainly the most widespread. Too often these implications of psychological healing are omitted in the proper consideration and evaluation of any specific mode of treatment, and of its underlying scientific hypothesis, but Janet does not hesitate, and from his high position in the field of psycho-pathology he can see, perhaps more clearly than most, those influences which are unnoticed by the ardent supporter of this or that hypothesis who is still in the throes of contention.

To return to the actual business of review. Commencing with "Miraculous Healing," he passes to "Philosophical Methods of Treatment." Of the first, he summarizes his opinion in two sentences: "As long as the only available medicine was the medicine of miracle, men may have been well advised to risk the remnants of their health by taking tickets in this lottery. But to-day, surely, they might find something better to do." Of the second, after discussing at some length the practical implications of Christian Science, and then the more definitely professional but similar methods of Dubois of Berne and others who follow the same general principles, he says: "Psychotherapy by moralization contains the germ of a medicine of the mind just as the mediæval theriac contained the germ of the modern methods of drug treatment. A long time will elapse . . . before this germ will develop into a method of treatment which will be at once precise, practical and capable of being taught."

He includes the foregoing in the first part of the book, which he calls "The Search for Mental and Moral Action"; he commences the second part, "The Utilization of the Patient's Automatism," with the subject of "Suggestion" and "Hypnotism," which he introduces by a most interesting historical survey. The conflict between the School of the Salpêtrière and that of Nancy is carefully examined and enlivened by the author's own personal reminiscences. He remarks anent the final depreciation of hypnosis that "When patients grow weary of a method of treatment, doctors are always ready to admit that the treatment is open to many objections.

Before long they found it necessary to account for their change of front by circulating the fiction that hypnotism was immoral. The decline of hypnotism has no serious meaning. It is merely a temporary incident in the history of induced somnambulism."

Five chapters are devoted to the consideration of suggestion and the practical applications of methods which "utilize the patient's automatism." Janet takes the standpoint that suggestion is very much more than would be conveyed by McDougall's definition—the acceptance with conviction of a communicated proposition in the absence of any logical proof. For him the operation of suggestion is involved in all situations of the complex social life which is led by the human being at the present day. This is a point of considerable moment, and one that needs emphasis. To restrict the conception of suggestion to mental operations of a purely ideational level is a relic of the older academic psychology, and leads to considerable misinterpretation of the facts of mental life. The thesis is developed that hysteria and suggestibility are practically synonymous terms, and that the application of the method of suggestion in the hysterical patient is a rational therapy, which gives the method a definite place in the scientific weapons with which the physician attacks the manifestations of disease. Applied definitely to the restricted field of hysteria and not indiscriminately used, suggestion is no longer to be classed with the mystic and moral "theriacs" which preceded it, and which had no definite scientific basis.

The third part of the book is entitled "Psychological Economics." As Janet says, the failures and inadequacies of treatment by suggestion as applied to the whole scope of mental disorder have led to the establishment of many other methods of treatment. Such methods as he deals with here are treatment by rest, treatment by isolation and treatment by mental liquidation, under the last of which psycho-analysis is dealt with as a special problem.

The rationale of treatment by rest is derived from the fundamental notion of economizing action. Janet considers it a specific and valuable method, but that it should be modified to suit the case, and he insists that it cannot be turned to full account until a psychological analysis of the patient and a really accurate diagnosis has been made.

As regards treatment by isolation, he lays down that the method is based upon the fact that the chief difficulties of life, and those which are the most exhausting, arise in connection with social activities. After a fascinating historical survey, he discusses the common discordant tendencies of the individual and the matter of group relationships. It is useful to compare mental illness with plant-life. The visible foliage is the illness of the patient, but the roots lie in the immediate social environment. In connection with the question of treatment by isolation, Janet quotes largely from his own clinical experience, and indicates how the treatment of the patient can be expedited or hampered accordingly as the relatives and friends are handled by the physician, and that, short

of the complete isolation of the patient, much can be done to relieve the social stresses by paying attention to the environmental social situation.

The subject of "Mental Liquidation" is introduced by a survey of the study of "Traumatic Memories," in the development of which the author reminds the reader that he himself played some considerable part. He relates how, having satisfied himself that traumatic memories were in many cases causal factors in the determination of mental symptoms, he was led, by the difficulty experienced by the patients at times in recalling the actual event to consciousness, to consider such memories as fixed ideas persisting subconsciously, and only to be revealed by special means, such as hypnotism or dreaming, or under special circumstances, such as those of the hysterical paroxysm or fugue. The relation between the actual traumatic memory and the symptoms exhibited he states as being far from obvious, symptoms being added and intensified by accidental circumstances arising during the later life of the patient. In short, "that the symptoms are linked to the memory by the totality of the psychological and physiological laws which regulate the development and manipulation of the emotions."

He regarded the early work of Breuer and Freud as confirmatory of his own investigations into the subject, and fully agreed with the use of the method of mental catharsis, or disinfection, of subconscious fixed ideas or traumatic memories which had been rendered conscious by a psychological analysis. With the later evolution of the "medical and philosophical" system, which goes under the name of "psycho-analysis," he finds himself in considerable disagreement. As he says, there is nothing new to the experienced psychiatrist in the notion that sexual incidents play a large part in constituting the traumatic memories which underlie the mental illness. To him it was a commonplace long before Freud came into prominence. Such a viewpoint, however, is far from that which holds that in all neurosis sexual incidents are the causal factors, and Janet is a long way from admitting that the sexual experience is the cause in itself, even when it is evidently the starting-point, chronologically, of the mental disturbance. He feels that the psycho-analysts overlook every other consideration in their search for the hidden sexuality. They forget that such matters as the innate constitution need to be reckoned with. He looks upon them as detectives out to catch the criminal—an analogy which many psycho-analytic writers encourage, and that, by the aid of symbolic interpretation—an ingenious operation which he regards as fundamentally unsound—given time and sufficient persistence, they will make their catch somehow or other in every case. He concludes his criticism with the remarks that "In due time the over-strained generalizations and fanciful symbolism which to-day seem typical of psycho-analysis, and separate the doctrine from other scientific studies, will be forgotten. Only one thing will be remembered—that psycho-analysis has rendered great service to psychological analysis . . . by drawing attention to facts

which were little known, and were indeed neglected owing to our traditional reserve concerning such matters."

Janet brings this part of his book to a close with a discussion on the general relationship of the vital reserve of energy to the capacity for assimilation of experience, and deals with various methods which may be adopted to relieve emotional tension, to avoid extremes of vital force, whether above or below such a level as can be tolerated by the individual of neuropathic constitution.

Part IV composes the second volume of the book, and is entitled "Psychological Acquisitions." It opens with an interesting survey of the field of education and re-education. The author cites illustrative cases to show how the principles involved can be applied to the performance of a special act, such as the sexual act, or to the general attitude of mind as a whole. He concludes that, as with other methods of treatment, education has an important part to play.

A chapter on "Æthesiogenic Agents" follows, which deals with hypnosis and somnambulism, and this subject serves to lead up to the question of "Excitation."

Janet devotes a chapter to "Excitation," the sub-headings, such as "Impulses that take the Form of a Search for Excitation," "The Worth of Impulsive Actions," "The Problem of Excitation by Action" and "Therapeutic Results" indicate the lines along which his handling of the subject runs. The next chapter discusses "Psycho-physiological Methods of Treatment," and contains much useful clinical experience of the physiological and pathological disturbances associated with mental illness, including alcoholism and other drug states.

The final chapter is entitled "Moral Guidance." Here Janet examines the relationship between the leader and the led. He considers pathological demands for guidance, and interpolates an interesting examination of the "phenomena of influence," especially in relation to suggestion. He indicates the possibilities of the use of guidance in the treatment of the patient.

In summing up he deals with the problem of the economical administration of the energies of the mind. He looks forward to the day when the psychiatrist will be able to help his patients to turn their poor resources to good account by avoiding needless expenditure of energy, and by directing their efforts to the precise point where these efforts can best be utilized. He hopes that even more than this will be possible, and that "the physician will be able to teach his patients how to increase their resources, how to enrich their minds."

The book is supplied with a particularly full bibliography and an excellent index. The arrangement of the subject-matter is all that can be desired, and the translators have succeeded in making the book readable, without, however, losing the vigour of the author's style.

THOMAS BEATON.

An Introduction to Objective Psychopathology. By G. J. HAMILTON, M.D. London: Henry Kimpton, 1925. Medium 8vo. Pp. 354. Price 21s. net.

Dr. Hamilton is not an "objectivist" in the sense in which the term is used by the majority of those who belong to the behaviouristic school of thought. He rightly argues that the affective state and the conscious awareness of the individual are as much "objects" for the notice of the experimental psychologist as any other manifestations of mental activity. By so extending the scope of his investigations he has made his work much more interesting and of much more practical value from the clinical point of view.

It is interesting also to note that although he deals with mental activity as a complex of reflex responses, he avoids the pitfalls which beset the psychologist who insists upon the conception of "instincts." Modes of behaviour often are instinctive, but to attempt to define and delimit instincts is a hopeless task and one of no practical worth. Dr. Hamilton has probably recognized this, and he wisely speaks of "tendencies" which are differentiated solely by their aim and expression.

He has set himself to try and establish "some of the modes by which the human organism tends to respond to such stimulations as call for adjustments of the body as a whole to the outside world, and which evoke attending mental responses." His further aim was then to isolate a few of the more important types of situation to which the nervous patient is apt to respond abnormally and to observe the response of animals, children and normal individuals under similar circumstances. Any special reactive tendency which was isolated was then to be explored in regard to the principles which might govern its modification by experience.

The first part of the book is devoted to the brief description of two hundred cases which were sent to the author during a period of a year which he spent, for the purpose of the research, in a small city of thirty thousand inhabitants in the Mississippi Valley. The clinical material is well described symptomatically, the life situation succinctly summed up, and the course and issue of the illness is frankly given, whether favourable or otherwise, this last detail being noteworthy when the majority of present-day writings in this branch of medicine are considered.

The second part of the book deals with the "Principles of Objective Psychopathology," and contains a great deal of the experimental work in comparative behaviouristic responses in adults, children and animals, the chapter headings being "Reactions to Baffling Disadvantages," "Habit Formation," "Inhibition of Responsiveness," "Unsatisfied Major Cravings," "Reactions to Infirmary" and "Sexual Behaviour."

Throughout the author has maintained the attitude of the investigator who is observing facts, and the book is commendably free from theory. Such speculation as he permits himself is manifestly tentative, and he is careful to dissociate himself from the far-reaching implications of the psycho-analytic beliefs.

The headings of his chapters indicate the lines upon which his investigations have run and his presentation of the material is excellent. It is impossible in a brief review to deal with the points which are raised, but it is interesting to find him attacking the psycho-analytic concept of sublimation, which he says "by confusing direct responsiveness to cravings for all sorts of non-sexual satisfactions with indirect responsiveness to inhibited sexual urges, has encouraged literary opportunists who take their cues from psycho-analytic literature in stressing the all-importance of the sexual instinct and of sexual satisfactions, often, probably, because it is in line with their own inclinations, but in many cases because they have been misled." "If the uprising generation is told that thriftily saving money or defending the property rights of others, or inventing new things or attacking evil customs are mere sublimations of psychical energies which were initially directed towards obtaining the satisfactions derived from anal eroticism, imaginary father castrations, incestuous activities, demonstrations of sexual virility and finally achieved heterosexual successes, they will have, it seems to me, a very poor philosophic substitute for a truly biological outlook on life."

This review cannot better be concluded than with the words of Prof. Robert M. Yerkes, Professor of Psychology of Yale University, who contributes a foreword to the book: "Every physician, every teacher, everyone who deals with problems of personnel should read the book. May the work which Dr. Hamilton has so ably started be continued . . . to the dissipation of popular and professional ignorance concerning the nature, relations and control of reactive tendencies and their accompanying modes of consciousness."

THOMAS BEATON.

Epilepsy: A Functional Mental Illness. By R. G. Rows and W. E. BOND. London: H. K. Lewis & Co., Ltd., 1926. Demy 8vo. Pp. viii + 138. Price 8s.

This is a monograph in which an effort is made to throw fresh light on the pathogenesis of epilepsy. As Dr. Bond explains in the preface, the paper was complete "in the rough" at the time of the death of Dr. R. G. Rows, and had the latter been able to revise and rearrange the material, some changes might have been made. Under the circumstances the text has been left for the most part as Rows wrote it, and any theories which were Rows' own have been left unchanged, whether open to question or since disproved.

The thesis upon which the work is based is that the study of the various types of epileptic attack has demonstrated that some emotional state, involving a disturbance of consciousness, and some reaction to express the emotion have been found in every instance. In the authors' view also the similarity between the disturbances of consciousness in epilepsy and other functional nervous illness has not been sufficiently recognized. To quote their words: "The

revival of a memory depends on the activity of similar mechanisms, whether it gives rise to the aura of the epileptic seizure or occurs as what is termed a hallucination. A wild outbreak, whether it is seen in an epileptic, a maniac or a hysteric, results from the activity of similar mechanisms in each case. Fugues and dreamy states, whatever be the form of mental illness of which they form a part, have a similar origin. The epileptic is separated from the others only by the occurrence of the seizure, which, although the most dramatic, is by no means the most important part of the disturbance of consciousness." The authors therefore regard epilepsy as the prototype of every functional mental illness.

There may be a difference of opinion in many minds as to whether this idea leads to a greater clearness regarding the nature of epilepsy, but it brings into line certain phases of disturbed consciousness attributable to emotional causes, and reveals the difficulty in distinguishing clinically certain so-called hysterical reactions and some periodic psychical states of a temporary kind.

We think that the whole subject of the epileptic fit being the expression of an emotional state involving a disturbance of consciousness requires further examination. Is it possible to accept the view that even an intensified emotion is sufficient to give rise to that dramatic crisis—the major epileptic fit—which, with its profound loss of consciousness and its grave post-convulsive phase, may threaten even life itself? Assuming even that such a cause may in special cases determine an occasional major fit, is it also the cause of those numerous blanks, "absences," vertigos and *petit mal* attacks which are to many minds more characteristic of epilepsy than the classical fit?

Some evidence which the authors bring forward in support of their view is based on the benefit which their patients derived from psychotherapy, but there is reason to believe that the psycho-analytic method of treatment of epilepsy has not had that beneficial effect which its advocates had anticipated. Moreover, the patients on whom Rows' observations were made were mainly war cases, and we know, from other evidence, that the war neuroses stood on a somewhat different plane to those commonly met with in civil life.

In view of their hypothesis that all varieties of manifestations of disturbance of consciousness depend on the revival of a memory and its associated emotional state, it is not unnatural that the authors regard all other views of the pathogenesis of epilepsy as quite insufficient and unconvincing.

It is part of their thesis that no patch of sclerosis, no toxin, no altered endocrine function, no acid or alkaline state of the blood and no peculiar innate irritable condition of the brain can explain disturbances which range from vertigo or some slight disturbance of attention to the *status epilepticus*.

It seems to us that in this connection the authors disregard the well-known clinical facts that recurring convulsions of an epileptic kind stand in close relation to many internal medical diseases, to cardio-vascular disease, to cerebral tumour and cerebral trauma,

and to organic mental diseases. It is difficult to believe that in these definitely organic states the reactions will depend largely on the "store of past experiences and the emotional feeling attached thereto."

It would seem to be more in accordance with recent work on epilepsy and the knowledge derived from a study of many different varieties of epileptic reactions, to accept the view that there is no single clinical entity to which the term "epilepsy" may be applied. There are, on the other hand, many epilepsies, and there would appear to be accumulating evidence that the epileptic type of fit reaction may result from emotional as well as from physical causes. The work under review is an important contribution towards the study of the emotional factors which may contribute towards a psychogenic variety of epilepsy.

W. ALDREN TURNER.

Woman. By BERNHARD A. BAUER, M.D. Translated by E. S. JERDAN, LL.B., and NORMAN HAIRE, M.B., Ch.M. London: Jonathan Cape, 1927. Demy 8vo. Pp. 413. Price 25s. net.

This book is announced as a treatise on the anatomy, physiology, psychology and sexual life of woman. Such a subject does not lack comprehensiveness. We are told that the book will only be sold to "members of the medical and learned professions, or to adult students of psychology and sociology." The non-medical portion of these possible purchasers no doubt accounts for the inclusion of a brief historical introduction, in which the various theories which have been held as to fertilization are reviewed, and for an equally brief account of the male and female generative organs. Certain superstitious practices for the determination of sex are alluded to, and a discussion of their psychological meaning might have been added. The inclusion of a description of the normal act of coitus seems hardly necessary.

We then have a description of the gradual growth and development of woman, from infancy to old age, including an account of the process of parturition. Much highly disputable matter is contained in this part of the book. The author appears to assume that a woman necessarily feels ill during the menstrual periods. It is probable that such illness is largely due to the influence of suggestion. The woman expects to feel ill, consequently she is ill. Again, it is stated that neither man nor woman feels any sexual impulse at the menstrual time, and that sex connection at such a time may be harmful to both parties. Statements such as these are far too sweeping. There is no evidence that such injury occurs. Convention enters into this matter; there is, of course, a general objection to the practice on æsthetic grounds.

The psychological part of the book is unsatisfactory. It is, of course, no easy task to treat so vast a subject in so short a space. But the author quite ignores the work done by the psycho-analytic

school of thought. The account given of the gradual development of sexuality in the child, and the young girl, will not be accepted by all. It is stated that a child has no sexual feelings, in the ordinary sense of the word. Yet we are told in other places in the book that children, "even in their earliest years, are capable of sexual feeling," and that primary sexuality is "inborn." The treatment of masturbation is marked by wisdom. The author fully appreciates the harm which is done by the conflict produced by the sense of guilt on this subject. He accepts the modern view that masturbation is as common in women as in men. He avoids the common error of regarding the sex act as if it had only a physical side, and fully recognizes the important psychical components. But the manner in which certain points are dealt with is scanty. For example, there is a very brief reference to contraceptive practices in general; but there is no mention of *coitus interruptus*. That a gynæcologist should omit all reference to so general and so pernicious a practice is really astonishing.

Throughout the book it is necessary to pay attention to the difference between social conditions here and in Austria, the native country of the author. We are told that pre-marital intercourse is becoming more widespread. Is there any evidence for such a statement? And again, the author assumes that the vast majority of men have had pre-marital sex experience, going to the length of full connection. All the available scientific evidence is against this view, so far, at least, as the English-speaking races are concerned. And the point is of moment, for much harm is done by exaggerated statements on this head.

The erotic life of woman is adequately dealt with, as is also the development of the sexual impulse. The question of marriage is, of course, a vast one, and almost impossible to handle in so small a space. The author assumes, quite correctly, that there are men who make excessive physical demands upon their wives. He also recognizes that the converse of this position may occur—a fact which is often overlooked. Mercenary and "common-sense" marriages are rightly condemned as the frequent source of unhappiness and infidelity. But the real difficulty arises from the fact that the demands of either partner upon the other are not only very varied, but differ at progressive stages in their lives. That a very heavy toll has to be paid for permanent monogamous marriage is, we suppose, admitted by all. Dr. Bauer does not fail to indicate this. And if no striking suggestions for improvement are made, that no doubt arises from the nature of the case. All the systems yet proposed for alteration in our present marriage customs seem open to even more obvious objections. A very useful appendix on prostitution is given, and the futility of the licensing system is pointed out. The author's definition of prostitution is somewhat wider than that which is generally accepted. The appendix should be of present interest, for we hear that a committee is to be set up for the investigation of the existing law as to solicitation.

Quite the most satisfactory part of the book is the way in which the bi-sexuality of every individual is handled. This most important

subject is in need of much greater elaboration. It has very momentous practical applications. For example, it explains much that is condemned as "sex perversion."

There are grave faults in the book. There is a tendency to the personification of Nature, in the fairly frequent use of expressions such as "Nature's plan." There is an annoying practice of introducing topics, and then leaving them with the words, "We will take this up later." The author's personal complexes are far too obvious. The strong language which he uses against the Roman Catholic Church seems out of place. And he would seem to have a very poor opinion of woman: his sex bias constantly appears. But any book which tends to correct ignorance upon questions of sex is to be welcomed. And, with the exceptions which we have indicated, the present book may be taken as a fair, although a condensed summary of accepted knowledge on this subject. If we must confess to a slight feeling of disappointment after reading the book, it is, perhaps, mainly because every book on sex tends to produce that emotion. The perfect book on sex has not yet been, and possibly never will be produced.

M. HAMBLIN SMITH.

The Pathology, Diagnosis and Treatment of Functional Nervous Diseases. By PAUL BOUSFIELD, M.R.C.S., L.R.C.P. London: Wm. Heinemann, 1926. Crown 8vo. Pp. ix + 212. Price 6s.

After reading a promising preface, howbeit in one place marred by a prejudiced attitude to "lunatic asylums," an attitude emphasized in his final chapter, we must confess that we found parts of the book disappointing. The theory he advances and some of the statements he makes are open to great question. Some chapters will be helpful to the specialist, especially those which are purely clinical, but for the reason we have just mentioned, the book as a whole cannot be recommended for students.

The author advances a theory of psychic tension—a tension which he states is analogous to the chemical tension of all matter, whether organic or inorganic—a parallel condition in fact—which he draws upon throughout the book for many explanations in regard to physiological, psychological and psychopathological processes. On the whole it may be said that his "psychic tension," is a very inadequate substitute for the "urge" of protoplasm. As to a parallelism between nervous and psychic energy or force, the little we know of the former should make us chary of comparing it with the latter, about which we know less.

In the two chapters on conscious and unconscious processes which follow no evidence is adduced whatever that an "unconscious" in Freud's sense exists. There is a passing reference to the unconscious produced by hypnotism; but that unconscious is not at all the same concept as is the system Ucs. of Freud.

In the chapters on treatment, the placebo, the trick of manner, even the untrue statement (p. 60) are commended by him, though

after recommending the latter he makes an effort to explain : " This may sound as though one were pandering illogically to their distorted imagination, and, indeed, this is actually the case ; we are, however, concerned with curing the patient, not with gratifying our own desires for exactitude." Is a hysteric "cured" by having an obvious disability removed? Some do not think so. A true psycho-therapy will have as its aim not only the relief of the symptom, but the strengthening of the psyche of the patient so that he will be less liable to fall in the future ; and that is not to be accomplished by trickery or falsehood.

A chapter on psycho-analysis suffers much from condensation. The well-known statement that trivial but unpleasant happenings of daily life are forgotten, but pleasant ones remembered, is repeated. As the statement stands it is a doubtful one. Many people remember being whipped in childhood, but few remember exactly the reason for which the punishment was inflicted. It might, therefore, be more correct to say that where the element of shame comes in the incident tends to be forgotten. At any rate it is some emotion more specific and narrow than general unpleasantness which is potent in bringing about repression.

In the chapters dealing with the classification of common functional diseases, the Freudian classification is employed, and, as is usual, the author is rather puzzled over the diagnosis between anxiety hysteria and anxiety neurosis.

The best chapters are on disorders of menstruation, alcoholism, asthma, etc. One cannot but feel that the psycho-therapy of physical conditions offers Dr. Bousfield a field where he is more at home than in the mazes of psycho-pathology. The treatment of physical disease by psycho-therapy was put into a nutshell by Osler when he said that he combined a little *nux vomica* with a great deal of hope. Dr. Bousfield has expanded this view in a detailed way which is helpful.

Our author continues to call the public mental hospital a "lunatic asylum." It is apparently a place to be avoided by those mental sufferers who need psycho-therapeutic treatment. "It is, therefore, very important in certain cases to make a careful diagnosis of the borderland conditions, for it is frequently possible, on the one hand, that such patients may lose all chances of recovery if sent to an asylum, while, on the other hand, there is a risk of suicide or some other untimely event if the patients be left at large in order to obtain psycho-therapeutic treatment."

This is a quotation from the final chapter on "Functional Insanity," whatever that may mean. We always imagined that "insanity" was the creation of the law, and that everybody was sane until the law decreed him to be otherwise, however pronounced the mental disorder might be. True, we still talk loosely about delusional insanity, alcoholic insanity, etc., not always remembering that these are certifiable states of mind. How do patients come to "recover" in "asylums?"

Freudian psycho-analysis is not the only form of psycho-therapy.

Psycho-analysis in its widest sense enters into all forms of psycho-therapy and is as old as the hills.

We do not deny that the earliest stage of most mental ailment is often susceptible to treatment by Freudian psycho-analysis, but few experienced psychiatrists will agree with the author that cases of dementia præcox or paranoia respond.

It is such a prejudiced attitude to mental hospitals as that taken by Dr. Bousfield which causes early certifiable cases of the psychoses to run the risk of suicide, etc. When the law opens the doors of our public mental hospitals to them at an even earlier stage there will be no dearth of psycho-therapy, including psycho-analysis, awaiting them. But this is not all that requires to be done if the mass of slight and incipient cases is to be overtaken. Clinics and general hospitals and, above all, the general practitioner must get busy.

J. R. LORD.

The Study of the Personality of the Criminal. Moscow, 1925. Pp. 68.

Social and political events in Russia have occasioned so much interest, not to say consternation, that it is a relief to turn to a scientific publication emanating from that distressful country.

The medical inspector of Moscow prisons writes a foreword, in which he urges that we must regard the criminal as being the product of his individual development and his environment. The problem of crime has two sides: how to protect society from the criminal, and how to make the latter better adjusted to the world he lives in. This involves the creation of scientific institutions, in which experimental work may be carried out by expert psychiatrists and social psychologists, who will be able to give technical advice to those who are engaged in the administration of the law.

Prof. Gernet describes the Laboratory for the Study of Criminology, which he claims as the first institution of its kind, not only in Russia, but in the world. Without accepting the accuracy of this latter statement, the account of the work attempted is of interest. An inquiry is being conducted into the personality of the criminal, from the sociological and psycho-pathological aspects. An anthropological department will be added later. The investigation is conducted by workers in various branches of science, who are not necessarily connected with the official staff of the prisons. We are informed that the work is carried on "night and day." Intensive study of the individual is the object aimed at, and endeavour is being made to ascertain the character of the criminal, and the social and economic conditions which have made him what he is. The task is to elucidate the process, whereby an anti-social personality is developed, whether by sudden catastrophe, or by a gradual growth of anti-social impulses. The solving of this problem will give the key to the adoption of the measures needful for the protection of society. It is hoped that a system of classification of "social types" of criminal will result. A full inquiry has been made into 500 cases of "suicide and attempted suicide" occurring

in Moscow during six months in 1923-24. It is not clear how the personality of a successful suicide is investigated! Similar research into the causes of prostitution will follow. It is well said that success will result from the combined labours of workers in all schools of criminology, rather than from slavish adherence to one particular school.

Prof. Krasnuslin deals with the Bureau for the Study of Crime and the Criminal. The headquarters of this bureau are located at the small Arbatsky prison. We are rather quaintly informed that the clinic is "small but quite clean." Six clinical assistants are on duty in turn. An ambulatory inquiry is conducted in all the prisons of the Moscow province. More than 3,000 prisoners have been investigated. No results are given, but we learn that the number included 30 female murderers—a very high proportion when compared with the figures for this country.

We are told that the Russian ideal is to transform the prisons into reformatory and training institutions, with the minimal amount of restraint. With this it is probable that all will agree. Whether the Soviet state will achieve this aim remains to be seen. We hope that future publications will provide us with more detailed findings. For the performance of the laborious task of translating this pamphlet we are indebted to Dr. Ursula Cox, of the Carnegie Institute, Birmingham.

M. HAMBLIN SMITH.



Royal Commission on Lunacy and Mental Disorder: Minutes of Evidence. Parts I, II and III. London: His Majesty's Stationery Office, 1926. Paper: foolscap. Part I, pp. 1 to 505; Part II, pp. 506 to 937: price £1 1s. net each. Part III, pp. 938 to 1016: price 10s. 6d. net.

In our comments on the Report of the Commission we remarked that it could not be really appraised until the minutes of the evidence upon which it was based were examined, and that another body of persons, on studying the evidence, might come to quite different conclusions, though we had little doubt that the Report would, in the main, come out well in this ordeal (*vide Journ. Ment. Sci.*, October, 1926). We have been at some pains to examine the evidence to which we referred—a lengthy undertaking having regard to the fact that Parts I and II cover the replies to 21,659 questions, Part III being confined to the index and appendices; and we have no hesitation in stating that the Report reflects both fairly and reasonably the great bulk of the evidence submitted to the Commission.

It must be remembered, however, that in making their recommendations, the Commissioners very wisely had regard to what was immediately both possible and practicable (there is a subtle distinction between these "modifiers"), for a course of action may be possible and not at the moment practicable. But for this, no doubt the Commission would have felt justified, on the evidence

before them, in going much farther along the road to satisfy the aspiration of the psychiatrist, for it is to be noted for future guidance that they arrived at opinions and conclusions which do not by any means find complete expression in their recommendations to the Legislature. It is folly to ask for the impracticable, and should the Legislature give effect, as we sincerely hope it will, to the Commission's recommendations, we shall have enough to go on with, and by showing that they are both possible and practicable, make a strong bid for the fuller materialization of the psychiatric ideal, for which ample support is to be found in these volumes.

It follows, then, that to criticize in detail or attempt to give a *resumé* of the evidence here presented would amount very largely to a reproduction of the Report, which would serve no useful purpose, and in the end be but a poor substitute for that admirably phrased and tersely written summary of the Commission's labours.

We think, however, that a description of their contents is due to our readers, without a knowledge of which few will feel disposed to incur the expenditure of £2 12s. 6d. involved by their purchase. Such will also guide members who, short of acquiring all three volumes, may be attracted to buy the one containing the information of most interest to them, for it may be at once said that they all contain a mass of information of real value to lawyer and sociologist and psychiatrist, which it would be difficult to find elsewhere—far more than it was possible to touch upon in a necessarily brief and businesslike summary like the Report.

Part I contains the minutes of evidence taken on twenty days between October 7, 1924, and February 10, 1925. The questions and their replies are numbered. This volume comprises those from 1 to 11,834, and they relate to the evidence submitted by Sir Frederick Willis and other members of the Board of Control; Sir Claud Schuster, Permanent Secretary to the Lord Chancellor; Mr. L. G. Brock and Mr. H. W. S. Francis, of the Ministry of Health; Mr. E. J. Lidbetter, President of the National Association of Relieving Officers; Justices of Peace for the Counties of London and Herefordshire and the Cities of Birmingham and Cardiff; the Medical Superintendents of Lambeth and Salford Poor Law Infirmaries; the President and Secretary of the National Association of Masters and Matrons of Poor Law Institutions; several representatives of the Association of Poor Law Unions; the Chief Officer, Mental Hospitals Department, London County Council; the Chairmen of the Middlesex and Birmingham Mental Hospital Visiting Committees; the Medical Superintendents of Leicester, Norfolk, Portsmouth, Barming Heath, Rubery Hill, and Claybury Mental Hospitals; of York Retreat, Bethlem, Camberwell House, Old Manor, and the Licensee of Moorcroft House; the Medical Visitors to the Justices of East Sussex and Liverpool; the Chairman of the National Society for Lunacy Reform [86 pages]; the Secretary, Mental After-Care Association; Sir Maurice Craig, Dr. W. H. Butter Stoddart and Dr. R. Percy Smith, Consultants; Mr. C. R. Steele, Solicitor; Mr. H—, a former patient; and Dr. R. Langdon-Down and eight others representing the British Medical Association.

Much of the evidence in this volume deals with legal and administrative lunacy ; that of the medical superintendents with the care and treatment of patients while under certificate ; and that of the consultants almost entirely in regard to certification and the case of Mr. H—.

Perhaps the most important evidence was that submitted on behalf of the Board of Control, and of the British Medical Association (first occasion). The case of Mr. H— and the evidence relating to it given by the consultants forms piquant reading. It was during the trial, as it were, of this case that the firmness, perspicacity, and fair-mindedness of the Chairman proved such a valuable asset to the Commission.

The provocative way in which Mr. H—'s case was presented, and the truculent, and at times even offensive, treatment of the eminent consultants, whose professional actions were called in question, made his task one of great difficulty ; yet he succeeded throughout in holding even the scales of justice so that the case had a patient and fair hearing, and failed solely on its merits. The two things brought out prominently by the hearing of this case and also by the evidence presented on behalf of the National Society for Lunacy Reform were the truth of Pope's famous lines—

"A little learning is a dangerous thing ;
Drink deep, or taste not the Pierian spring"—

and the utter irreconcilability of the legal and medical outlook on mental disorder. The solid advantage gained was the opportunity it gave the Chairman to probe deeply into the difficult matter of the procedure involved in certification.

Part II comprises the questions and replies : Nos. 11,835 to 21,659. It covers the proceedings at 22 sittings between February 24 and December 11, 1925. In this volume the British Medical Association conclude their evidence ; and that of the Royal Medico-Psychological Association, under the leadership of the late Dr. R. H. Cole, takes up 41 pages and the replies to 689 questions. The National Asylum Workers' Union and the Mental Hospitals and Councils Associations are heard, also the National Council for Mental Hygiene. The voices of Dr. Montague Lomax and other disgruntled witnesses are raised, but in the main prove unconvincing. Important and illuminating evidence from Scotland is given by Dr. Hamilton C. Marr, Prof. George M. Robertson and Dr. John D. Comrie. Dr. John Carswell also proffers his advice and unique experiences in lunacy matters.

The case presented by the Mental Hospital Chaplains is considered, and a wide range of psychiatric interests is raised by the evidence of Dr. R. Withers Gilmour, Dr. Helen Boyle, Dr. Edward Mapother and Sir Maurice Craig. Pathology and research work are dealt with by Dr. Lucien Golla.

It also contains the evidence tendered by the Central Association for Mental Welfare. The Hon. William Sidney and Mrs. Dunn Gardner speak on behalf of the London County Council. The

Countess of Chichester tells of the work of the hospital at Hove which bears her name. The Lord Sandhurst gives evidence as Lord Chancellor's Visitor, and the work of the office of Master-in-Lunacy is narrated by Mr. G. M. Hildyard.

Further evidence on behalf of the Board of Control and the Ministry of Health concludes the volume.

It would be difficult to appraise the relative values of these two volumes. On the whole we would certainly advise the lawyer to read vol. i and the psychiatrist to read both, but preferably vol. ii.

Part III—the Index and 26 Appendices—is an expensive document, but useful, even essential, to the convenient study of Parts I and II. The index is divided into two parts: one relates to subjects, the other to witnesses. Among the appendices are found the memoranda of evidence given by the Royal Medico-Psychological Association and the British Medical Association.

In conclusion we think that there should be at least one copy of these volumes available in every mental institution in England and Wales for study by the medical staff, for they reveal, as no text-book or manual can, the present position in regard to insanity and mental disorder, they also indicate where our national mental service succeeds and where it fails, as undoubtedly it does in many respects; and lead us to appreciate the immensity and importance of the problems involved, and the gravity of the task which faces us before the public will accept the supremacy of medicine in the care and treatment of the mentally afflicted.

J. R. LORD.

Les Troubles Mentaux dans les Tumeurs Cérébrales. By H. BARUK.
Paris: Gaston Doin et Cie, 1926. Medium 8vo. Pp. 400.
30 Illustrations. Price 48 fr.

This monograph is based on observations on 55 cases of cerebral tumour, mainly from the Salpêtrière. Of these, 41 showed some degree of mental disturbance, and 15 of these latter were regarded as cases of severe mental disorder.

The following syndromes are described: (1) Transitory confusional states, such as mild clouding of consciousness, dream states, narcolepsy, apathetic, torpid and stuporose states and automatisms. (2) Depressive types resembling melancholia and psychasthenia, and which may be the earliest manifestation of intracranial disease. (3) More permanent and dominating syndromes. Some of these simulate general paralysis very closely; others show the features of dementia præcox or of Parkinsonism. Profound dementia resembling senile dementia is common. Euphoria and childishness are described. A distinction is drawn between childishness due to dementia and regression to an earlier period of life due to mental confusion (ecmnesia). Finally various poorly systematized delusional states are included in this group.

The differential diagnosis of these conditions is discussed, and stress is laid on the distinction between true mental disorder and

ordinary psychological reactions to somatic disturbances (such as severe headache).

In the second part of the book an attempt is made to correlate the clinical findings with the anatomical localization of the tumour. Tumours of the frontal lobe and of the corpus callosum are especially associated with very early and profound confusion and dementia. Tumours at the base of the brain give rise to somnolence and lethargy, to dream states, and to general slowing of all mental processes. In tumours of the temporal and parietal regions, psycho-sensory manifestations and disturbances of speech predominate.

A detailed description of the 55 cases is given in the third and longest part. Finally the pathology and treatment of these conditions is discussed. In the author's opinion, several factors operate in causing mental disturbances in cases of cerebral tumour. These are the site of the tumour, inflammatory meningitic reaction, increased intracranial tension with ventricular dilatation and cerebral œdema. As regards treatment, early decompression is advised. The administration of hypertonic solutions (sodium chloride intravenously or glucose by the mouth) causes increased absorption of cerebro-spinal fluid and reduces intracranial tension. Radiotherapy is also advocated.

The book is attractively got up and very readable. It is likely to become the standard work on the subject. A. WALK.

Part III.—Epitome of Current Literature.

1. Neurology.

Means of Examination of the Sympathetic System and their Value [*Les Moyens d'Exploration du Système Sympathique et leur Valeur*]. (*Gaz. des Hôp.*, July 31, 1926.) Reported by Mouzon, J.

The discussion on this subject at the Seventh Annual International Neurological Reunion is reported. The principal speakers were A. Thomas on the means of examination of the sympathetic system and their value in organic disorders of the nervous system, and Soderbergh, on their value in visceral diseases. The former reviewed existing knowledge of the functions of the sympathetic, which are mainly vaso-motor, secretory and pilo-motor. He denied that it had any connection with trophic or sensory disorders, and doubted its relation to muscle-tone. He then proceeded to describe in some detail the various sympathetic syndromes, and referred to pharmaco-dynamic tests of the sympathetic and special characters of sympathetic reactions, and to symptoms due to lesions of the visceral sympathetic in organic nervous diseases, such as visceral crises in *tabes dorsalis*.

The second speaker pointed out that the prevalent idea of antagonism between the sympathetic and the para-sympathetic was unsupported by any experimental evidence. He considers that the vegetative system is quite decentralized, and that the reaction of each viscus is special to itself. He maintains that in the present state of our knowledge it is impossible to interpret the results of pharmaco-dynamical and physiological tests of the sympathetic, and gives his opinion that progress will only be possible on the basis of large numbers of observations, first on normal persons, then on subjects suffering from anatomically definite diseases, and finally on cases of functional vegetative disorders.

A general discussion followed and is briefly reported.

W. D. CHAMBERS.

Two Cases of Cerebro-spinal Fever Treated by Autogenous Vaccine after the Failure of Serotherapy [À Propos de Deux Cas de Méningite Cérébro-Spinale traitées par l'Autovaccinothérapie après Échec de la Sérothérapie]. (Gaz. des Hôp., August 4, 1926.) Courtois-Suffit and Garnier, G.

Two classical cases of this fever are described, which were treated with intraspinal, intravenous and intramuscular injections of anti-meningococcal serum. The first case (type A) had 430 c.c. of serum in fifteen days, and the second (type B) 560 c.c. in twelve days, each without any improvement. Treatment by autogenous vaccine, grown on ascitic agar, was followed by recovery in the former and death in the latter case. The authors record their opinion that for some reason anti-meningococcal serum is not now so potent as it was during the war, and in treating cases of cerebro-spinal meningitis recourse should be had to autogenous vaccines as early as possible.

W. D. CHAMBERS.

Recovery from Tuberculous Meningitis following a Fixation Abscess [Méningite de type tuberculeux guérie à la suite d'un abcès de fixation]. (Ann. Med. Psych., July, 1926.) Allonnes, R.

The case of a boy, æt. 12½, moribund with tuberculous meningitis, who recovered after the subcutaneous injection of 2 c.c. of spirit of turpentine. The child was and is weakly and defective. In the discussion grave doubt was cast on the diagnosis of the case.

W. D. CHAMBERS.

The Argyll-Robertson Sign and Epidemic Encephalitis [Signe d'Argyll-Robertson et Névrite Épidémique Chronique]. (Gaz. des Hôp., July 7, 1926.) Mériel, P.

The author describes a case of epidemic encephalitis in which all tests for syphilis were negative, and in which the Argyll-Robertson sign was present. Reviewing the literature, he notes that most writers on encephalitis agree that the Argyll-Robertson phenomenon is extremely rare in any but syphilitic cases, though changes in the pupillary reactions are not uncommon in encephalitis cases. He

concludes that this phenomenon cannot be considered as invariably due to syphilitic infection.

W. D. CHAMBERS.

The Argyll-Robertson Sign, Its Pathogeny and Symptomatology [Le Signe d'Argyll-Robertson: Pathogénie et Sémiologie]. (Gaz. des Hôp., July 24, 1926.) Nayrac, P., and Breton, A.

The first part of this paper consists of a concise review of the cerebral connections of the visual apparatus. In the second part the four definite theories as to the pathogeny of the Argyll-Robertson phenomenon are considered, and the medullary, the retino-quadrigeminal and the peduncular theories are described and dismissed. The authors argue that it is beyond doubt that the sign is due to disease of the ciliary ganglion. As regards its symptomatology they conclude that in the vast majority of cases it indicates cerebral syphilis, epidemic encephalitis in a few, and rarely any other disease.

W. D. CHAMBERS.

Glioma in the Fourth Ventricle, with Involvement of the Triangular Vestibular Nucleus. (Fourn. of Neur. and Psycho-path., February, 1926.) Schaller, W. F.

A detailed case-history, with *post-mortem* findings, of a patient who suffered from a cerebellar tumour filling the fourth ventricle. The most prominent symptoms were inco-ordination, the patient reeling to the right and throwing the right foot to the right, vomiting, with no relationship to food, "spasms," described as stiffening, failure of vision and occipital headaches. There is a full discussion of the case in its various aspects.

WM. McWILLIAM.

Spontaneous Subarachnoid Hæmorrhage with Recovery. (Fourn. of Neur. and Psycho-path., July, 1926.) Weber, F. P., and Bode, O.

In this article the authors describe the case of a woman, æt. 54, who was admitted to hospital in a deeply somnolent condition, as a probable case of encephalitis lethargica. The neurological signs were largely negative, but lumbar puncture proved the case to be one of subarachnoid hæmorrhage as it yielded cerebro-spinal fluid uniformly mixed with blood. The history and course of the condition are fully described and its ætiology discussed. Among conditions of diagnostic importance reviewed are congenital aneurysms, rupture of a defective artery, and functional vasomotor disturbance analogous to migraine.

WM. McWILLIAM.

The Lævulose Tolerance Test in Paralysis Agitans. (Fourn. of Neur. and Psycho-path., February, 1926.) Hurst, E. W.

The research was in relation to the pathological changes in the liver arising in the course of progressive lenticular degeneration and in encephalitis lethargica. The patient to be investigated was starved for a period of five hours, and after the percentage of sugar in the blood had been determined, was given 30 grm. of lævulose by

the mouth. Readings were taken at intervals of 30 minutes for one hour and a half. The sugar was estimated by Maclean's method immediately after removal of the blood.

The following conclusions were given :

(1) A certain degree of hyperglycæmia is commonly observed in paralysis agitans, but is inconstant, while a similar degree also occurs in cerebral vascular disease; it is probable, therefore, that this hyperglycæmia is the effect of coincident vascular disease and is not due to the nervous affection.

(2) In paralysis agitans there is no definite evidence of liver deficiency as detected by the lævulose tolerance test. In only one of the eighteen cases was an abnormal rise in the blood-sugar found after the administration of lævulose.

WM. McWILLIAM.

Traumatic Epilepsy [Épilepsie Traumatique]. (Gaz. des Hôp., May 29, 1926.) Vogt, Mlle. A.

The writer gives a comprehensive review of the subject and of the literature. In her description of the pathogeny of the condition she mentions the two conflicting pressure theories—the one that there is an increase of the arterial pressure with a consequent increase of the intra-ventricular pressure and a pressing out of the brain into the irritating agent, whether it be a splinter of bone or a foreign body. Further, she points out the growing attention which is being bestowed on the sympathetic in this condition, and notes that Teriche has severed the carotid sympathetic in Jacksonian epilepsy. On the subject of treatment the author has little new to say. She notes the success of radium and radio-therapy in certain cases where the seizures have been particularly severe and frequent, and have not yielded to any other form of treatment.

D. EWAN CAMERON.

The Diagnostic Value of Babinski's Sign [Valeur Séméologique du Signe de Babinski]. (Gaz. des Hôp., May 8, 1926.) Roger, Henri.

After an exhaustive examination of the condition in which this sign can be elicited, the author concludes that it is one of the most reliable tokens which we have that the pyramidal tract is involved. The literature of the subject is reviewed and many interesting and somewhat obscure cases cited—for instance, a case of Renuci's, where a patient suffering from hydatid cyst in the left frontal region showed a bilateral Babinski, which disappeared on puncture of the cyst, to reappear as the cyst reformed.

The persistence of Babinski's sign in cases of tabes occurring in hemiplegic patients, or in hemiplegia supervening in the course of tabes even after all the tendinous reflexes of the lower limbs have disappeared, is noted. With regard to the time taken for this sign to develop following a hemiplegia, the author quotes various authorities who have found it to be present as soon as a quarter

of an hour after the lesion was established. The writer warns the investigator against being deceived as to the presence of this sign where this is a weakness or loss of tone in the flexor group muscles in the leg.

D. EWAN CAMERON.

Dental Sensation in Syphilis of the Central Nervous System. (*Arch. of Neur. and Psychiat.*, November, 1926.) Pentz, W. R., and Borman, M. C.

In 24 cases of advanced tabes dorsalis and 8 cases of general paralysis the authors found dental sensation diminished or absent in all but two.

To test sensation, a No. 1 rose-head burr was used, the pulp chamber being entered from the labial surface of a vital tooth. As a final check the faradic current was used to test the vitality of the pulp. There were varying degrees of anæsthesia. The pericementum branches appeared to be normal. Sensation in the branch of the trigeminal supplying the pulp only was affected. The authors suggest that the changes may be due to a specificity of action on the dental pulp tissues by the metabolites of syphilitic infection.

G. W. T. H. FLEMING.

Psychosis as an Early Sign of Epidemic Encephalitis. (*Journ. of Nerv. and Ment. Dis.*, October, 1926.) Kasanin, J., and Petersen, J. W.

Four cases of encephalitis are reported in which a psychotic disturbance preceded the development of neurological signs. One patient manifested an affective stupor, two showed symptoms of an affective disorder of the manic type, with over-activity, flight of ideas and distractibility, while the fourth was diagnosed as schizophrenia. The authors think that a review of some of the early histories of atypical cases of schizophrenia or affective disorders may reveal a previous encephalitis.

G. W. T. H. FLEMING.

2. Psychology.

The Re-absorbed Affect and Its Elimination. (*Brit. Journ. of Med. Psych.*, November, 1926.) Burrow, T.

Burrow points out how, in childhood, the relations of "you and me" consist of a series of projections. The infant mind is prejudiced early in favour of its own parents. There is no question of judgment; the attitude is purely arbitrary, autocratic and presumptive. "Good papa" and "bad Fido" are assumed entirely with reference to the baby as criterion. The author sees in this the source of projection and ideas of reference. Adult judgments are warped by this autocratic influence of affect in a similar manner. The remedy for the projection of an affect is the recalling of the affect. Instead of arguing about the object on which the affect

is projected, an attack is made on the subject and he is made to realize his wrong attitude. Burrow maintains that it is this arbitrary image-presumption which investigation will prove to be the generic source, mental and social, of the neurosis as of the psychosis.

G. W. T. H. FLEMING.

The Language of Schizophrenia. (*Arch. of Neur. and Psychiat.*, October, 1926.) White, W. A.

The author first reviews recent papers by Storch, Domarus, Schneider and Bertschinger on the language of the schizophrenic and then develops his views. He holds that schizophrenia is a regression psychosis. Thought and language are developments from the awareness of primary feelings and perceptions, and are the instruments of reasoning, differentiation and abstraction. If schizophrenia is a regression psychosis, then in the schizophrenic thought and language must show a reversion from this development, *i.e.*, they should be of a lower order of abstraction than normal adult language. At the same time the schizophrenic makes use of words which are ordinarily taken as expressing a high order of abstraction. The regression from the abstract to the concrete accounts in part for the development of hallucinations. Speech-forms showing rhythmic repetition of sounds, such as lalling, echolalia, verbigeration, perseveration, are related to the pleasure-pain principle. The author suggests the study of the oral zone as offering possibilities for understanding these pleasure-pain components of speech and perhaps other more subtle elements. The study of sounds emitted in connection with certain physiological states is also suggested as a means of affording an explanation of the primitive components of speech, which are combined in innumerable ways.

G. W. T. H. FLEMING.

A Hypothetical Mental Constitution of Compulsive Thinkers. (*Brit. Journ. of Med. Psych.*, November, 1926.) McCurdy, J. T.

McCurdy holds that the problem to be faced in regard to the understanding of the mental constitution of the compulsive thinker is to establish the correlation between the compulsive thoughts, often of extraordinary crudity, the prominence of unconscious sadism, the intellectual superiority and the obduracy to treatment. His hypothesis is that the patient finds in early childhood a marked discrepancy between the actual behaviour and that expected from the idealized object of love (imago). This situation leads to a conflict between the idealized mother (or father or other surrogate) and the idealized self, and is followed by the development of a sadistic attitude. The physical expression of animosity is, however, futile in a child, and consequently the destruction of the object is contemplated in fantasy. This is an intellectual operation and is carried out compulsively, because the preservation of the self appears to depend upon it—it is a panic reaction. Sadism and the compulsive use of intellectual processes are thus established and intertwined. As the individual matures, the ideal of self becomes

more elaborate and socialized, but remains peculiarly sacred. When failure of adaptation occurs the sadistic tendency emerges, to the surprise and horror of the patient, and because it appears as a new and unexpected development it holds the compulsive force relatively of its original form.

Treatment is difficult; the patient does not lack intelligence, but he cannot accept that change of outlook which involves change of personality, because treatment resuscitates the old panic reaction. Insight is present only for symptoms and not for defects of character. This type of mental constitution probably occurs in many people of intellectual vigour who never develop compulsive symptoms.

G. W. T. H. FLEMING.

Personal and Character Tests. (*Psychol. Bull.*, July, 1926.) *May and Hartshorne.*

This paper is a bibliography on these tests for the years 1920-25. 196 Books and papers are referred to.

W. D. CHAMBERS.

Educational Psychology. (*Psychol. Bull.*, July, 1926.) *Henmon and Melrose.*

A short review of this subject, accompanied by a comprehensive bibliography of 240 books and papers.

W. D. CHAMBERS.

Intelligence Tests. (*Psychol. Bull.*, July, 1926.) *Pintner, R.*

This paper is a short review of the work done on intelligence tests, with a complete bibliography.

W. D. CHAMBERS.

Educational Tests. (*Psychol. Bull.*, July, 1926.) *Jones and McCall.*

The various educational tests in use and the further development of this method are discussed shortly. A plea is made for uniformity in the tests. Reference is made to 42 books and papers on the subject.

W. D. CHAMBERS.

Individual Predispositions and Affective Psychoses [Prédispositions Individuelles et Psychoses Affectives]. (*Gaz. des Hôp.*, July 28, 1926.) *Claude, H., and Robin, G.*

The sub-title of this important paper reads: "The hereditary constitution and the acquired constitution in the light of psychotherapy." The authors deplore the rigidity of outlook and diminution of therapeutic endeavour inflicted upon psychiatry by theories of morbid congenital predispositions, though admitting the value of these theories in the past. In their view, what is apparently a congenital predisposition may in reality be an acquired one, due to morbid intellectual habits, etc., and even a classical case of dementia præcox may have started in a schizomania of affective origin. They urge that the possibility of successful therapeutic

interference must never be overlooked, even in cases apparently hopeless. Two cases are described to illustrate the views advanced.

W. D. CHAMBERS.

Aphasia—A Psycho-clinical Essay [L'Aphasie, Essai Psycho-clinique]. (Gaz. des Hôp., June 2, 1926.) Benon, R.

This lucid paper is a consideration of certain aspects of aphasia from the clinical side, mainly the meanings of "verbal images" and "interior language," and deals with the mental enfeeblement and the actual disorders observed in the syndrome. The author's conclusions include the following: Language is essentially a motor function; there is, therefore, only one aphasia, the old aphasia of Broca. This motor aphasia is the expression of a disorder of exterior and interior language and should be regarded as a sort of verbal apraxia; it is the loss of the motor habits of spoken and written language. The "amnesic" aphasia of Pitres, etc., are indications of motor aphasia. Sensory "aphasia" is not an aphasia, but an agnosia, a disorder of verbal recognition. The intelligence is not diminished in aphasia nor is the memory defective, but interior language is affected equally with exterior. Different degrees of verbal apraxia and verbal agnosia, auditory and visual, may be associated, giving rise to many varying clinical pictures.

W. D. CHAMBERS.

3. Clinical Psychiatry.

Threshold Symptoms of Dementia Præcox [Les Symptômes Liminaires de la Démence Précoce]. (Ann. Med. Psych., July, 1926.) Abely, X.

The author has studied the development of upwards of 150 cases of undoubted dementia præcox in a search for facts which will assist in the diagnosis and prognosis of this disorder. He describes a number of symptoms which he states are sufficiently constant to render diagnosis certain, namely, personal awareness of a morbid state, feeling of change in the personality, ideas of influence, attacks of anxiety, a tendency to resist any restraint, exaltation of the instincts, especially that of sex, thoughts of suicide, and a taste for abstract thought and language. Each of these symptoms is marked by a bizarreness, and the characteristic of dementia præcox is their incongruous and paradoxical association in groups.

A case is described in which many of these symptoms were present in a young woman who recovered after septicæmia following a suicidal wound.

W. D. CHAMBERS.

The Correspondence between Human Morphology and Psychopathic Types [Les apports de la morphologie humaine avec les types psychopathiques]. (Ann. Med. Psych., July, 1926.) Wertheimer, F. I.

The author alludes shortly to work already done on this subject and describes his own methods and the indices he uses. He follows

Kretschmer in distinguishing four morphological types—the pycnic, the athletic, the asthenic and the dysplastic. Kretschmer found a preponderance of the pycnic type to be cyclothymic, and of the other three types to be schizophrenic. The author does not draw any conclusions from his own work.

W. D. CHAMBERS.

A Case of Chronic Hallucinosis [Sur un Cas d'Hallucinoſe Chronique].
(*Ann. Med. Psych.*, July, 1926.) Leyritz, J.

This paper is a very careful description of a case of long-standing hallucination in a woman, æt. 70, without any enfeeblement or delusion, followed by a discussion on the nature and mode of development of the hallucinations. This case began as complex pseudo-hallucinations which were later located in the exterior, thus confirming the theory of Froment that hallucinations are nothing more than a lively variety of interior language. No indications of any endogenous or exogenous toxin were observed.

W. D. CHAMBERS.

F. Doublet and Psychiatry in the Time of Louis XVI [François Doublet et la Psychiatrie au Temps de Louis XVI]. (*Ann. Med. Psych.*, July, 1926.) Carrette, P.

This paper is a review of the work of François Doublet, published in 1785, on the therapy of mental disorders. Doublet regarded these as divided into four classes—delirium, mania, melancholia and imbecility. For delirium the treatment recommended was phlebotomy, hydrotherapy, purgation and blisters; but it was recognized that delirium often arose in the course of a bodily disease which must be diagnosed and treated. The treatment for mania was similar, but less drastic, warm baths being particularly commended. It was observed that mania may often be cured by an intercurrent disease. For melancholia, bleeding is most valuable, and gentle aperients may be followed by stronger purges. Imbecility is noted as the mildest but least tractable of mental disorders.

The author of the paper regrets that the energetic treatment indicated above lapsed early in the nineteenth century, when the teaching of Pinel gained influence, and quotes critics of Pinel to this effect. The view of Fodéré (1817) was that Pinel had put nothing but expectant medicine in the place of the methods of treatment he banished.

W. D. CHAMBERS.

The Affective Symptomatology of Disseminated Sclerosis. (*Journ. of Neur. and Psycho-path.*, July, 1926.) Cottrell, S. S., and Kinnier Wilson, S. A.

In a lengthy paper these authors present in interesting detail a study of the emotional changes in 100 cases of disseminated sclerosis. Minute attention is paid to the "bodily feeling" of these patients.

Having dealt with the literature the authors proceed to outline their method of examination. The clinical material is considered

from various view-points, *e.g.*, sex, age at onset, duration of symptoms at time of examination and neurological types. Then the authors pass to the affective symptomatology, which is discussed under the headings of (1) emotional content (prevailing mood), (2) psychical determinants, (3) physical determinants, and (4) affective expression and behaviour, numerous tables being appended, with short clinical illustrations. There follows an analysis of individual symptoms under the sub-headings of "exaggeration of emotional expression," "emotional content," "bodily feeling" and "optimism (*spes sclerotica*)," and the authors bring their paper to a close by a discussion of the pathogenesis of affective symptoms.

Among many important conclusions reached are the following:

The affective symptoms are characteristic of the disease, are primary or direct results of the disease-processes, and are completely independent of duration, degree or clinical type. In a fair number of instances they precede the appearance of any somatic neurological symptoms, subjective or objective.

The feeling of well-being may be designated *euphoria sclerotica*, and that of physical well-being *eutonia sclerotica*. The undue optimism exhibited by a majority of patients may be called *spes sclerotica*.

The authors associate the invasion of the affective sphere with the known pathological fact that the disease almost constantly shows a periventricular and subependymal spread, and they regard the comparative integrity of the intellectual faculties as dependent upon the relative conservation of the cortex.

Evidence is adduced which suggests that the affective symptoms are the outcome of invasion of the palæothalamus by the morbid process, and it is concluded that certain psychoses and psychoneuroses characterized by changes in the affective field may have, a toxic or toxi-structural and not a psycho-pathological basis.

WM. McWILLIAM.

The Normal Course and Expectation of Life in General Paralysis. (State Hosp. Quarterly, August, 1926.) Woodman, R.

The duration of life after admission to the Middletown State Homeopathic Hospital is discussed. In 1872, when no nursing was attempted, duration is stated to have been only nine months. From 1885 to 1900, when nursing attention was given, the average duration was a little over 23 months. From 1907 to 1917, when the cases were given little or no medical treatment, but only nursing attention, as in the previous group, the average duration was 26 months.

G. DE M. RUDOLF.

Weight of the Heart in Dementia Præcox. (State Hosp. Quarterly, May, 1926.) Reed, R. G.

The author's paper is based on one by Nolan Lewis entitled "The Constitutional Factors in Dementia Præcox," and deals particularly with the claim that in this psychosis the heart is

characteristically small. Various comments and criticisms are passed on Lewis's findings, and Dr. Reed concludes that the heart in dementia præcox compares favourably with the organ in other psychoses as regards weight; that it is doubtful whether it is usually small in the catatonic and hebephrenic types; and that the opinion seems to be justified that the heart in these patients does not lack the capacity for hypertrophy. WM. MCWILLIAM.

Psychological Aspects of a Case of Epidemic Encephalitis. (State Hosp. Quarterly, May, 1926.) Hinsie, L. E.

The author gives clinical details of a case of epidemic encephalitis, which showed psychotic symptoms during the acute stage of the illness and which later developed "hysterical" manifestations. The case was one of a boy, æt. 12. Careful analysis of the mental mechanisms underlying the abnormalities of conduct showed an œdipus background, consisting of a mother-attachment and abnormal stimulation of the sexual instinct. The case was treated by being weaned from his mother through interviews in which he gradually came to an understanding of the significance of his attachment. In the view of the author the brain disease operated as a provocative agent in the conversion mechanism, and that the nearness of puberty contributed no small part.

WM. MCWILLIAM.

The Epileptic Psyche. (State Hosp. Quarterly, May, 1926.) Clark, L. Pierce.

In the first section the author deals particularly with the epileptic constitution and alteration in character at the advent of a positive diagnosis of epileptic attacks. This "alteration" is first discussed in detail and two reasons for its occurrence are given *viz.*, the enforced projection of an individual of unstable make-up and with inelastic behaviour response patterns into a continually widening social environment which requires an increasing flexibility of adaptation; and secondly the reflex effect of hampering social customs upon the personal egoistic demands of the epileptic.

Among historic descriptions of the epileptic character reviewed and commented upon are those of Vogt, Sommer, Kræpelin, Arndt, Bianchi and Macpherson. He takes it as proven that (1) there is affective defect in all epileptics, sane as well as insane; (2) the alteration is seen to proceed from the mental make-up or constitution of the individual epileptic long before his malady reaches the convulsive stage; and (3) the dementia is but a further development of the make-up.

WM. MCWILLIAM.

Peculiarity of Thought in Schizophrenia. (Amer. Journ. Psychiat., July, 1925.) Sullivan, H. S.

In this paper the author presents a psychological study of dementia præcox with the detailed clinical histories of six cases.

Variations in conduct, subjective view-points and mental mechanisms are all dealt with at length, the whole taking the decidedly Freudian colouring of the author's opinions. He finds in schizophrenic thinking nothing "exterior to the gamut of ordinary thinking," including that of reverie and of dreams, but a peculiarly inadequate adaptation of the cognitive processes to the necessities of adult life. Remarking that the transit from quasi-normality to deep stupor may occur with great rapidity, he suggests that this is brought about by the activity of symbols pertaining to death. When the schizophrenic has effected his recoil, either from everyone, or from all but a few who are highly illusory to him, his thinking is almost entirely a matter of dreams, in which his problems are dealt with in activities the peculiarities of which result from mechanisms which the author terms "dream dynamics." The difference from ordinary dreams is then discussed.

WM. MCWILLIAM.

Studies of Gastric Secretion and Motility in Mental Patients. (Amer. Journ. Psychiat., July, 1925.) Farr, C. B., Lueders, C. W., and Bond, E. D.

The authors in this paper describe work which is a continuation of research reported in 1923, and from which it was concluded that depressing emotions appear to exert an inhibitory effect on gastric and even duodenal secretions; that motility is less clearly influenced; that somatic and hypochondriacal delusions bear no evident relation to secretory variation, and that mental exaltation seems to favour gastric digestion. They conclude as follows: That long-continued depression as such has no well-defined effect on secretion; that emotion or increased nervous tension (vago-tonia), in those who are capable of an emotional response, does have a very decided effect on gastric secretion. The authors state: "We are inclined to think from our experiences that emotional factors may influence gastric secretion in one direction or the other very perceptibly, but that such effects are usually associated with acute emotion, not with a mere habitual feeling-tone. . . . The effects which we have been considering would naturally concern what we may call the higher 'levels'—sympathetic and parasympathetic control. One might surmise that there may also be disturbances on the lower levels—in the intrinsic nervous mechanism of the gut, or even in the myogenic mechanism, but our observations do not afford us any real basis for profitable speculation in these fields."

WM. MCWILLIAM.

Conversion Hysteria in a Child. (Amer. Journ. Psychiat., July, 1925.) Lehrman, P. R.

The sub-title of this article—"A Report of the Psycho-analysis of a Child Neurosis"—aptly summarizes it. It deals with the case of a girl, æt. 9, suffering from a functional paralysis of both

legs, who was analysed during a period of two months of twelve sessions. The author states that the analysis was much more rapid and ran more smoothly than in an adult. It was rich in sexual phantasies and masturbatory practices since the age of four. Incest strivings for her father and a birth phantasy were discussed. The case is reported in considerable detail.

WM. McWILLIAM.

Psychosis in Criminals: Clinical Studies in the Psychopathology of Crime. (Fourn. of Nerv. and Ment. Dis., October–November, 1926.) Karpman, B.

After a general discussion on the psychopathology of the criminal constitution, Karpman proceeds to discuss prison reaction types and their classification. He divides them into an endogenous group, which includes all those reactions determined by factors antedating the commission of the crime and the confinement; and an exogenous group, in which the reactions are primarily or largely conditioned by crime and confinement. In the endogenous group he finds:

(1) The criminal psychopaths, whose criminality results from psychopathic difficulties and maladjustments. They are the habitual criminals, and the crime is usually one against property.

(2) The criminal defectives of low intelligence, who lack self-control and the wisdom to foresee the results of their actions. The type of crime varies greatly.

(3) The criminal psychoneurotics, whose anti-social behaviour is the outward expression of repressed conflicts that have obtained expression as irresistible impulses. The offence is often of a sexual nature.

(4) The criminal psychotic, who differs little from the ordinary psychotic with paranoid trends, regressive tendencies and deterioration. The crime is usually very serious, assault and murder being frequent.

The exogenous group includes the true prison psychoses, the psychosis being directly the result of crime and confinement. This group contains three major subdivisions:

(1) The more predominantly schizophrenic reaction types, in which a distinct schizophrenic trend obscures any effective disturbances. This sub-group contains the malingerers, the situation psychoses proper, including acute manics, paranoid states, confusional and catatonic reactions, etc., and the regressive prison psychoses of dementia præcox type.

(2) Types in which the display of affect is very marked, and which resemble manic-depressive insanities although fundamentally different.

(3) The psychoneurotic reaction types, which manifest hysterical or neurasthenic mechanisms, such as amnesias, mutism, etc.

G. W. T. H. FLEMING.

Digestion and Mental Disease: An Analysis of One Hundred Consecutive Fractional Test-Meals, with Some Animal Experiments. (*Med. Journ. of Australia*, May 8, 1926.) Bostock, John.

CONCLUSIONS.—(1) Achlorhydria and hypochlorhydria are discovered to be surprisingly frequent in the psychoses; it is not inferred that they are causal, but that they are expressions of the general psycho-physical change.

(2) The mode of production of these physiological changes is not precisely determined, but it is probable that a large number of factors are involved, the most important of these being:

(a) The psyche including alterations in the emotion of hunger.

(b) Changes in the motility of the stomach, sphincter mechanisms and the duodenal alkaline reflux.

(3) Evidence is adduced concerning the possibility of an intimate functional connection between the vagal nucleus, the thyroid gland and digestion. A preliminary investigation shows that achlorhydria is relatively more common in rabbits whose thyroids have been removed than in normal controls. J. R. LORD.

The Blood-Sugar Curve in Mental Disease. (*Arch. of Neur. and Psychiat.*, October, 1926.) Kasanin, J.

Determinations of blood-sugar curve were made, according to the technique of Janney and Isaacson, in 33 schizophrenics. The average curve of patients both in the literature and in this series falls well within normal limits, although the percentage of abnormal sugar curves is much higher than in healthy subjects. Patients with a stupor usually respond with a high sustained sugar curve.

G. W. T. H. FLEMING.

4. Treatment.

Presentation of the Psychiatric Point of View to the Occupational Therapist. (*Occup. Therap. and Rehabil.*, August, 1926.) MacLachlan, M.

The author urges the importance to the occupational therapist of the closer study of mental disorders and their nature, laying especial stress on a comprehension of the patient's make-up, of the causes which operated in each case, and on the mechanism of the reactions. Under the heading of "treatment" it is stated that one of the most important things "is to prevent a display of sympathy, but to show a very sincere interest"; and the second "is to have an entire lack of criticism and avoid any judgment of the case." In concluding paragraphs some types of reaction are discussed. Wm. McWILLIAM.

Following the Prescription in Occupational Therapy. (Occup. Therap. and Rehabil., August, 1926.) Vaux, C. L.

The attitudes of the prescribing physician and the actual therapist are discussed at length, with a view to more efficient co-operation of these two officers. Recommendations are made to both: To the physician, direct assignment of patients to the occupational aide, daily rounds of the class, lectures and demonstrations to aides, consulting the notes on the progress sheet, taking note of the aide's comments, maintaining a readiness to accept her suggestions and giving explanations and advice. To the aide, early attempts to secure the patient's confidence, a study of the principles of psychology and psychiatry, free notes on the progress sheet, frequent verbal reports, and frequent consultation with the physician.

WM. McWILLIAM.

The Malarial Treatment of General Paralysis of the Insane. (Newcastle Med. Journ., October, 1926.) Fleming, G. W. T. H.

The author (after reviewing the results up to date) gives his results in 14 cases. Two failed to develop malaria, two died, and of the remaining 2 showed very marked physical and considerable mental improvement, but no case could be said to be in full remission. Five patients previously wet and dirty became clean. In three there was a partial return of the pupillary reaction to light. In regard to the serology, one developed a negative Wassermann in the cerebro-spinal fluid, in three a positive test for globulin became negative, in nine a positive Boltz test was reversed, and in six there was a weakening of the gum-mastic reaction.

G. W. T. H. FLEMING.

The Treatment of General Paralysis, with Special Reference to Tryparsamide and Malaria Treatment. (State Hosp. Quarterly, August, 1926.) Kirby, G. H.

Referring to the fact that from 60 to 70% of spinal fluids in early untreated cases of general syphilis are abnormal, the author advises that if these fluids cannot be altered by salvarsan treatment, the cases should be regarded as early tabetics or general paralytics. Citing Furman, who dealt with 500 cases of general paralysis treated intensively with salvarsan, mercury and spinal drainage, but with negligible results, he goes on to point out that salvarsan is only of value in interstitial forms of neurosyphilis. In well-developed cases of general paralysis in the New York State Psychiatric Institute tryparsamide has produced 30% of full remissions.

Kirby shows the decrease in the number of cases of general paralysis commencing about 1920 in the York State hospitals, and thinks that it is suggestive that a decline began about ten years after the introduction of salvarsan.

Of 112 cases of general paralysis treated with malaria, 32% underwent complete remissions, 19% died. Nine per cent is, the author believes, about the mortality-rate incidental to malarial treatment.

As the average annual death-rate of untreated paralytics in the New York State hospitals is about 30%, the treatment decreases the number of deaths from this disease. The blood Wassermann reaction became negative in about one-third of the cases and the spinal fluid Wassermann in 20%.

Discussing the absence of gametocytes stated to be the case in the Vienna strains of parasite, Kirby believes that further work should be performed before patients are treated with malaria without the usual precautions of screening.

In the New York State hospitals 524 paralytics were treated up to May 1, 1926, with tryparsamide and 661 with malaria, and the number on parole at home on the same date was 197. In ten of the hospitals an increase by 105 cases on parole took place in three years. Kirby does not state the numbers of cases in the parole group who were treated with either tryparsamide or malaria.

G. DE M. RUDOLF.

Malaria in the Treatment of General Paralysis. (State Hosp. Quarterly, August, 1926.) Corcoran, D.

Of 42 paralytics each treated with malaria, neosalvarsan and mercury, 45.2% underwent good remissions and 23.8% died. Eleven of these cases were given a course of tryparsamide in addition. Of these 11, 9 underwent good remissions and one a slight remission. Of 48 cases treated with malaria alone, 29.2% showed good remissions and 33.3% died. On combining the results obtained in the two series, 36.7% are reported to have had good remissions and 28.9% to have died.

The percentage of good remissions was not identical with the percentage of patients out of hospital, either discharged or on parole. Of the 48 cases treated with malaria alone, only 8 (16.7%) were discharged or on parole, whilst of the 42 who received drugs in addition to the malaria, only 10 (23.8%) were out of hospital. On combining the results of the two series, a total of 18 (20%) are reported to be out of hospital.

G. DE M. RUDOLF.

Treatment of General Paralysis with Inoculation of Malaria. (State Hosp. Quarterly, August, 1926.) Cheney, C. O., and Warner, G. L.

The authors could observe no consistent relation between the course and height of the fever and the results in 33 paralytics treated with malaria. The patients who improved mentally showed an average gain in weight of 4 lb., whereas those who showed no mental improvement gained approximately only $\frac{1}{2}$ lb. each.

Of 14 cases treated with malaria after having previously been given from 16 to 73 treatments with tryparsamide and mercury, 6 improved mentally after the malaria, 5 physically, 2 neurologically and 9 serologically.

G. DE M. RUDOLF.

Results of Malaria Treatment of General Paralysis. (State Hosp. Quarterly, August, 1926.) Green, L. M.

Of 50 paralytics treated with malaria, 26% showed complete remissions. In 30 cases whose serological reactions were examined from 12 to 20 months after treatment, the author found that the blood Wassermann reaction was affected only slightly, whereas the other serological reactions were improved to a much greater extent.

G. DE M. RUDOLF.

The Malarial Treatment of General Paralysis [A Summary of Gerstmann's Monograph based on the work of the Vienna Psychiatric Clinic]. (State Hosp. Quarterly, August, 1926.) Fiertz, C. O.

A review of *Die Malariabehandlung der Progressiven Paralyse*, by J. Gerstmann. Fiertz deals with a few points not mentioned in the reviews of this monograph appearing in this country in the *Lancet*, 1925, ii, p. 386, and the *Tropical Diseases Bulletin*, xxiii, p. 496.

Gerstmann states that "galloping paralysis" is not only not benefited by malaria, but is made worse by the treatment. He believes that intravenous injections of the malarial blood may sometimes have an unfavourable effect on the patient owing to the shortened incubation-period. The incubation-period ends at the first rise of temperature to 39° C., which begins with a chill and terminates with sweating. To stop the fever, Gerstmann now gives by mouth .5 grm. of quinine bisulphate twice a day for three days, followed by the same dose once a day for seven days.

Histologically, in cases dying during or shortly after the treatment, inflammatory and proliferative processes have been found with the presence of large numbers of plasma-cells. In cases dying of intercurrent disease after treatment, a condition of so-called stationary paralysis was present.

Attention is drawn to the development of hallucinations during or after malarial treatment, and also to the appearance of delirium and confusion during the first pyrexia. That these reactions are related to the parietic process is shown by the observation that they never occur after malarial treatment of pure tabes, primary optic atrophy, lues cerebri or latens, multiple sclerosis, post-encephalitic Parkinsonism or dementia præcox.

With regard to the employment of relapsing fever, Gerstmann prefers not to use it, as, although it is more benign, it is impossible to control or terminate it when necessary, whereas malaria invariably reacts to quinine.

G. DE M. RUDOLF.

5. Psycho-Pathology.

Family Hatreds in Mental Pathology [*Les Haines Familiales en Pathologie Mentale*]. (*Ann. Med.-Psych.*, April, 1926.)
Robin, Gilbert.

The author limits the discussion to the more severe and dangerous hatreds such as one finds in the case of the mother suffering from a toxic exhaustive psychosis, the persecuted paranoiac and certain schizophrenics. He points out the necessity of determining whether the hatred is a causative or a secondary phenomenon. As an example of the latter case he instances the schizophrenic who takes a dislike to certain members of his family, for the reason that they are the people who try to rouse him from his preoccupation. On the other hand, there is the importance of the œdipus and the electra complexes, involving, as they do, a jealousy and hatred of the rival parent.

As regards treatment, he advocates firstly the elimination of any possible physical factor as in the toxic exhaustive group. For others a certain degree of separation from the family—at all events while treatment is being carried out. For those cases where the cause of the hatred is not manifest to the patient he urges that the situation in its entirety should be laid before him. In difficult cases of phobias, in obsessions, and even in schizophrenia he advises the employment of psycho-analysis.

D. EWAN CAMERON.

6. Pathology.

Some Observations upon Carbohydrate Metabolism in Malaria, with Special Reference to the Effect of Insulin and Glucose upon Benign Tertian Malaria. (*Journ. of Trop. Med. and Hyg.*, March 1, 1927.) Rudolf, G. de M., and Marsh, R. G. B.

SUMMARY.—(1) When single specimens of urine from each case were examined, glycosuria was found in 0·9% of untreated general paralytics, but in 15·4% of those who had been treated with benign tertian malaria.

(2) Glycosuria was present in 90% of treated paralytics when the urine was examined on numerous occasions.

(3) Blood-sugar curves following the ingestion of glucose tended to approach the normal after inoculation with malaria, and also between febrile paroxysms, but these observations were made on only two cases.

(4) During malarial therapy the blood-sugar was found to vary inversely with the temperature. The subsequent rise in the blood-sugar does not necessarily take place steadily, and the final level after the temperature has fallen may be higher than the level before the pyrexia.

(5) The administration of glucose during malarial pyrexia produced no obvious change as regards the objective signs, but apparently relieved of the subjective symptoms. No effect upon the parasites was observed.

(6) The administration of insulin during malarial therapy produced indefinite effects as regards the number of parasites, but in 60% of instances the fever terminated after insulin had been given. Relapses followed, but differed from those following small doses of quinine in having a degree of pyrexia.

(7) It is inadvisable to give insulin if there is a possibility of a rise of temperature shortly after.

J. R. LORD.

Enumeration of Parasites in Therapeutic Malaria. (Fourn. of Trop. Med. and Hyg., January 1, 1927.) Rudolf, G. de M., and Ramsay, J. C.

Parasites enumerated by two different observers working independently were found to vary considerably in numbers in the peripheral blood-stream during the course of malaria in general paralytics.

In thirteen out of fourteen cases a decrease in the number occurred between the stages of sporulating and half-grown forms, and in ten out of the fourteen an increase in number took place as the parasites grew from young rings to older intra-corporal forms. The decrease and the increase were not constant in each patient. As development proceeded from half-grown to ring forms a decrease occurred in 97.9%, an increase in 2.1%. As development proceeded from ring to half-grown forms a decrease in numbers occurred in 24.8%, an increase in 60.9% and no change in 14.3%. For these calculations the assumption has been made that each sporulating parasite produces only ten merozoites, although the number is usually stated to be from fifteen to twenty. Despite this low estimate in a very high percentage young forms are not even ten times as numerous as the forms from which they originated. No doubt a number of the small rings would be overlooked, and few, if any, of the larger forms, but the difference in the number of parasites is too great for this to be the only explanation in many cases. The decrease in numbers as the parasites pass from three-quarter grown forms to sporulate and become small rings corresponds with the general biological law that where the mortality is high large numbers of eggs or young organisms are produced (see J. Arthur Thomson). The number of merozoites from each schizont is comparatively large, and so a high death-rate would be expected. This is what is found.

The cause of the increase in number as the parasites develop from the ring to the half-grown stage is obscure. Possibly, the older forms emerge from the internal organs; or numbers of merozoites take an abnormally long time to develop, or perhaps a combination of both occurrences is the correct explanation. In Case 3 a decrease in the number of different forms of the parasites took place just before and during the fever, and an increase occurred after the fever. If all the parasites disappeared into the internal organs, to reappear later, none should be found in the peripheral blood during the pyrexia; and yet they can be found. Whether the parasites enter the internal organs temporarily, whether some

merozoites take an abnormally long time to develop, or whether numbers of parasites are destroyed and others from the internal organs take their places, it is impossible to say. The increase as the parasites developed from the ring to the half-grown stage was present, at some period, in ten out of fourteen cases, but in 60.9% of the number of transitions from the one stage to the other.

In four patients the parasites remained very scanty during the first few days, suddenly to increase later. In five out of ten patients a relationship was found between the numbers of parasites and the degree of fever. In these five cases the same number of parasites was not accompanied by the same degree of fever in different patients, but as the temperature became greater the parasites increased, and decreased as the rises of temperature became smaller.

The number of gametocytes was enumerated in cases in Series 2 and 3. The error in Series 2 is 25%, as with the asexual forms. The curves are more regular than in the case of the asexual forms, but there is a tendency for the numbers of the gametocytes to vary with the numbers of the asexual types. J. R. LORD.

Basal Metabolism as Determined by the Respiratory Exchange. (Proc. Royal Soc., B, vol. ci.) Pickworth, F. A.

SUMMARY.—The numerous determinations of the basal metabolic rates by the bag method have involved certain variable and preventable factors, such as muscular tonus and attention, which may have considerably obscured the results; and the usual accepted limits by this method of up to 15% are too large, so that more refined methods of investigation are needed.

The paper shows how figures can be obtained which approach more nearly the true basal rate; and by reducing the magnitude of certain variable factors results more than 20% lower than those by the bag method are obtained with normal subjects.

The effect of various factors upon the metabolism has been studied and figures illustrating the effect of relaxation of mind and body sleep, fatigue, diet, irritation, hot baths, etc., are given.

J. R. LORD.

The Pathological Effects of Hypnotic Drugs upon the Central Nervous System of Animals. (Brit. Journ. Exper. Path., 1926.) Mott, Sir F. W., Woodhouse, D. L., and Pickworth, F. A.

The occurrence of mucinoid material in such remarkable amounts in the nervous system of the treated animals is the most interesting feature of the effects of continued treatment with hypnotic drugs.

Although the drugs sulphonal and veronal have been isolated from brain-tissue (Russel and Parker, 1914), and might be present in the nervous systems of animals treated as above, the mucinoid substance does not consist of these, but it shows entirely different physical properties. It also appears improbable that substances of such widely different chemical constitution as the barbitone and sulphonal groups of drugs would combine with the mucinoid material.

So far we have not been able to demonstrate the substance in living tissues, and it is only after formalin fixation that it appears in characteristic form.

The mucinoid substance occurs sometimes actually within the nerve-cells; it is therefore probable that it is a metabolic product of the nerve-cells themselves which have been damaged by the drugs; also many cells have the Nissl substance much diminished, whilst others are disintegrated completely, leaving only an outline with masses of mucinoid lying adjacent to them, and phagocytic glia-cells apparently digesting the remnants. Possibly the mucinoid substance is itself a product of the ordinary metabolism of the neurones, which normally is quickly removed and thus never accumulates into large masses. Under the action of the drugs, however, either much larger quantities of the material are produced, or it is not removed so readily, therefore accumulating within the cells and adjacent to them, and in time aggregating into large masses filling the perivascular and lymph-spaces in the neighbourhood.

The experiments show that it disappears on ceasing administration of the drugs, and the animals soon regain their activity and intelligence.

The permanence of the damage done is, however, difficult to estimate, since histologically we have shown that many nerve-cells are damaged beyond hope of recovery.

Scharlach R and other fat lipid reagents do not stain the substance in formalin-fixed sections, consequently the material described above shows differences from the lipid excretions described by Orr and Sturrock (1922), Buscaino (1914) and other workers.

It is submitted that incidental to the demonstration of this material in formalin-fixed sections in drug-treated animals, the presence or absence of this material suggests further research into the metabolism of the neurones, and we are continuing investigations upon these lines.

SUMMARY.—(1) In all cases where hypnotic drugs are administered over a period of seven or more days, numerous masses of a peculiar mucinoid material $5\ \mu$ to $60\ \mu$ in diameter are found distributed throughout the central nervous system. Normal control tissue shows complete absence of this material. The fixed material in its staining reactions shows properties somewhat similar to amyloid.

(2) Chromatolysis, loss of Nissl substance and signs of cell degeneration are observed in the cerebellum, mid-brain and spinal cord after intensive treatment with any of the hypnotic drugs. The cell degeneration is accompanied by the appearance of numbers of phagocytic cells, which appear to digest the nerve-cells.

J. R. LORD.

7. Mental Hygiene.

The Progression of Psychiatric Therapy towards Treatment without Certification [L'Evolution de l'assistance psychiatrique les Services ouverts Sans Interrement.] (L'Hygiène Mentale, June, 1925.) Raviart and Vulliers.

Discussing one direction in which the voluntary system may be said to have failed, namely, in avoiding the stigma which is attached to certification, the authors point out that for the general public the mentally ill remain "madmen," whether one treats them in psychiatric hospitals, in cliniques, on a voluntary or a certified basis. The aim of psychiatry should be to educate the public rather than to enter upon a fruitless attempt to deceive it by calling old things by new names.

They advocate the establishment of psychiatric hospitals, where those who after a preliminary period of observation and examination seem likely to show an early improvement may be treated, the more chronic cases being relegated to the asylums.

In the description of these hospitals one notes the importance laid upon baths for the more excited patients, and for those who are confused or agitated a special variety of covered bed, in which the patients, while they have a certain degree of freedom of movement, are prevented from doing themselves any serious injury.

D. EWAN CAMERON.

Where and How one ought to Treat Psychopaths [Ou et comment l'on doit Traiter et assister les psychopaths]. (L'Hygiène Mentale, June, 1925.) Reyneau.

The author in his article proves himself a strong advocate of the newer conception of psychiatric treatment. His aim is to treat the mentally ill as one would the bodily ill. Admission to hospital should, if possible, be voluntary. The patients' relatives should be encouraged to visit him and as much liberty afforded him as possible. Work in which the object in view is the patient's benefit and not the production of an article of commercial value is advocated.

In order to avoid the stigma of insanity, the name of "psychiatric hospital" should be employed rather than "asylum." The author makes a strong plea for the treatment of the poor on the same lines.

D. EWAN CAMERON.

8. Mental Hospital Reports, etc.

ENGLAND.

Kent County Mental Hospitals.—(1) Barming Heath: The total number of admissions for the year 1925 was 314 (males 109, females 205), the number of male admissions being the lowest recorded for

fifty years. Hereditary defect was considered to be a causative factor in 62.6% of the admissions for the year. Of the direct admissions, the chief form of mental disease was recent melancholia, the diagnosis in about 19% of the cases; confusional insanity, primary dementia and delusional insanity also figured largely among the admissions.

The recovery-rate for the year was 36% of the total admissions, and nearly 70% of the recoveries took place within a year of the commencement of the mental illness.

The death-rate was the low one of 6.2% of the average number resident, either broncho-pneumonia or lobar pneumonia was responsible for over 20% of the deaths, and general paralysis for 13.6%.

The hospital was unfortunate enough to be visited by a severe epidemic of influenza, involving some 200 patients, with only 4 deaths, however.

Dr. Wolsley Lewis has adopted a complete scheme for the training of nurses, which will be carried out with greater ease when the new Training School for Nurses is available.

"With regard to the recommendations of the Committee on Nursing, the following system has been adopted: After three months' probation, candidates of good character, if physically fit and of sufficiently good educational standard, are required to sign a contract for three years' training, at the same time paying a deposit of £5, which is refunded on completion of the course. The curriculum is as follows: (i) Practical Work in the Wards; Sick Nursing (6 months); Admission Wards (6 months); Wards for Melancholics (6 months); Wards for Epileptics (6 months); Wards for General Paralytics (3 months); Wards for the Tubercular (3 months); Wards for the Delusional cases (3 months); Children's Ward (3 months). Some part of this time is spent on night duty. Lectures and demonstrations in the Wards are given by the Medical Staff; tutorial classes by the Sister-Tutor and detailed instructions by the Ward Sisters; in addition there are 12 practical classes (bandaging, instruments, etc.) by the Sister-Tutor; 12 sick-room cookery classes by the Kitchen Superintendent; 20 massage classes by a trained Masseuse; 6 classes in dispensing by the Dispenser. (ii) Lectures are given on the following subjects: Anatomy (10); Physiology (10); Hygiene (15); Theory and Practice of Nursing (20); General Diseases (20); Mental Diseases (20). We have an arrangement by which selected nurses are sent to London Hospitals for general training (5 are being trained at the present time); we also have 11 general hospital nurses undergoing training in mental nursing here."

Occupational therapy in this hospital, referred to in some detail in a former report, gives evidence of continued and increasing value.

(2) Chartham Downs: The total number of patients in this hospital at the end of the year 1925 was 1,182, and there were 263 admissions (males 119, females 144) during the year. The largest single form of mental disease amongst these was recent melancholia; 19 cases of general paralysis were admitted, and of these latter Dr. Collins notes that suitable cases treated by the Starké method in lieu of malaria infection have shown good results.

36% of the admissions were cases of senile dementia, and 15 epileptics were admitted. The recovery-rate was 32% of the direct admissions.

The year has been one of considerable anxiety owing to the difficulty of efficiently carrying on the work of the institution during extensive renewals in the hot-water system, laundry machinery, etc., and the refitting of the general kitchen.

A small clinical laboratory is in course of being equipped.

Devon County Mental Hospital.—The numbers on the register of this hospital increased from 1,181 at the beginning of the year 1925 to 1,216 at the end, 262 (males 90, females 172) cases having been admitted during the year, with the result that the accommodation on the female side is considerably strained.

The percentage of recoveries on the direct admissions was 37·4, and for private patients only, 47·3. The death-rate was the lowest since 1899, namely, 6·6% of the average number resident. The death-rate for tubercular diseases for the year was 11·4%, which, as Dr. Eager points out, is a very favourable one compared with the high rate of 25·7% which was recorded in 1917, and attributable in some measure to the economies enforced by war conditions.

The pathological laboratory shows a continuous record of valuable work under the newly appointed pathologist, Dr. Henderson. It also has the advantage of the services of Dr. Solly, Pathologist to the Devon and Exeter Hospital.

An important step in advance is recorded by Dr. Eager in the establishment in conjunction with the Exeter City Mental Hospital of an out-patient clinic at the Exeter Dispensary.

The urgent need of a new nursing home is pointed out both by Dr. Eager and the Board of Control, which will no doubt be of great assistance in establishing on a sound basis the excellent system of training introduced into this hospital.

The value of efficient after-care in the case of those convalescing from mental disease is fully appreciated by Dr. Eager, as is shown in the following excerpt :

" Here I should like to refer to the help we have received from the After-Care Association in taking any cases under their care, who have no home to go to on discharge. No less than 9 cases (1 male and 8 females) have been sent to London and handed over to the officials of this Association during the year, and only one has so far returned.

" In this way we are able to discharge cases who have no homes to go to, with the feeling that they will be well cared for, and that every effort will be made to obtain suitable situations for them, which means so much to a patient discharged from a mental hospital."

Dr. Eager publishes in his report some interesting charts covering a period of some 80 years, showing the movement of the population of the hospital and the weekly maintenance charge.

Wilts County Mental Hospital.—At the end of the year 1925 there were 1,168 patients resident in the hospital—an increase of 110 in the year. There were admitted during the year 272 patients (males 112, females 160), a considerable number, however, under contract from other counties. Of the admissions heredity was a

factor in causation recognized in 30% of the cases, senility in 21%, and alcohol was accepted as an element in causation in 7·5%.

The recovery-rate amongst the direct admissions was about 36%, and of those recovered over 50% were cases of first attack of less than three months' duration.

The death-rate for the year was 6·9% of the daily average number resident, and the chief causes of death were senility, tuberculosis and dysentery. No cases of enteric fever occurred during the year.

The Visiting Committee are hoping at an early date to establish in the county an out-patient clinic in connection with the neighbouring general hospital, to be worked by the staff of the mental hospital.

A considerable amount of structural alteration and improvement has been carried out during the year, and the building of a new nurses' block is in progress.

Derby Borough Mental Hospital.—There were on the registers of this hospital, at the end of the year 1925, 484 patients, of whom 46 were out-borough cases, and there were admitted during the year 139 cases (males 34, females 105), of whom 16 were private patients. The recovery-rate for the year was 22·3% on the direct admissions. Of the ætiological factors in the admissions, heredity was established in 29% of the cases and alcohol was only a principal factor in one case. The death-rate for the year was 5·9%, calculated on the average daily number resident.

A considerable epidemic of influenza occurred during the early months of the year, which fortunately was of a mild type.

Much renovation was carried out during the year, wireless installed and distributed to the various wards, and the isolation hospital converted into a detached villa residence for convalescent patients.

59% of the male and 33% of the female nursing staff hold the certificate of the Royal Medico-Psychological Association, and the Committee have recently granted long-service bonuses to five nurses.

St. Audry's Hospital for Mental Diseases (Suffolk County).—There were on the hospital registers, at the end of the year 1925, 983 patients (males 470, females 513)—30 more than at the beginning of the year. There were admitted during the year 184 patients (males 75, females 109), and Dr. Brooks Keith shows in tabular form the areas of the county (with the population at last census date) from whence these cases were derived, compared with the corresponding figures of the previous year. The chief forms of insanity amongst the admissions were primary dementia, recent melancholia and mania, and senile dementia, and of the ætiological factors, alcohol is only considered a principal factor in two cases of the "first attack" series. The recovery-rate for the year was 19%, and the death-rate created a new low record for the hospital at 5·5% on the average number resident.

A considerable amount of structural alteration and addition has.

been taken in hand during the year, including the erection of a nurses' home, "which will set free 50 beds for the use of patients," while in order to meet the present urgent requirements for accommodation at the hospital patients are being boarded at Canterbury, and negotiations are being carried on to board out further patients under Section 26 (L.A., 1890) at a Poor Law institution in the county.

A considerable proportion of the nursing staff hold the certificate of the Royal Medico-Psychological Association.

SCOTLAND.

Inverness District Asylum.—The report is for the year ending May, 1926. There were remaining on the register at the end of the year a total of 717 patients—that is, an increase of 9 males and 18 females on the corresponding figure at the commencement of the year. There were admitted during the year 162 patients (males 77, females 85), in whom the form of mental disease was principally melancholia or mania; heredity was ascertained as a predisposing factor in 69 of the cases, and in 58 a previous attack had occurred; alcohol was assigned as a cause in only one case.

The recovery-rate for the year was 35·8% calculated on the admissions, and of the 162 admissions, 30 recovered during the year. The death-rate calculated on the average number resident was 8·2%, senile decay and phthisis pulmonalis being responsible for 56% of all the deaths.

Dr. Mackenzie is to be congratulated on the appearance of his nursing staff at the examinations of the Royal Medico-Psychological examination, seeing that for the second year in succession all his candidates for the final examination were successful, and even more is he to be congratulated on the fact that during the year 52 nurses and 25 attendants have been under training and instruction for this certificate.

Like many other mental hospitals, this one is faced with the difficulty of accommodation, and Dr. Mackenzie points out that this is a question closely related to that of the admission of private patients to public mental hospitals and also the reception into these hospitals of rate-paid voluntary patients. With regard to the first of these, the District Board decided in 1909, owing to pressure on their accommodation, that private patients should not be admitted, and with regard to the second, Dr. Mackenzie quotes excerpts from recent reports of the Board of Control, which indicate some of the factors governing the situation:

"In one of the Royal Asylums this admission of voluntary private patients has proceeded to such an extent that the admission-rate of voluntary patients now exceeds that of certified private patients.

"Voluntaryism on the part of pauper patients is handicapped by the fact that the Lunacy Grant of £115,000 is paid to parish councils towards the cost of certified lunatics. Consequently, a parish council is reluctant to pay for a voluntary inmate in an asylum, as the proportion of grant, amounting to about 25.9d. weekly, for each patient would be lost.

"It is noteworthy that ten parishes in the district of Argyllshire have agreed to give facilities for any person in their districts who requires institutional care on account of mental condition to enter the District asylum voluntarily as a rate-aided patient.

"During the year under review 431 voluntary inmates have been admitted to asylums, compared with 381 in the previous year. This increasing number of voluntary inmates is mainly among the private class of patients, and in some institutions receiving chiefly private patients the admission-rate of voluntary inmates exceeds that of certified patients. The changes that have taken place among the voluntary inmates are naturally much more numerous, relatively, than among the certified class, owing to the fact that voluntary patients usually suffer from a milder form of mental disorder, and consequently are more responsive to care and treatment. They generally leave the institution after a short period of residence completely recovered or much improved.

"The tendency of parish councils to pay the cost of voluntary patients in District asylums, a tendency which was referred to in our previous Report, continues to develop, and a number of other parishes have followed the example of the ten parishes in Argyllshire, and are now giving facilities for persons from their districts who require institutional care to enter district asylums voluntarily as rate-aided patients. These Local Authorities are fully aware of the fact that they thereby lose the Government grant, which is distributed in respect of expenditure incurred upon certified lunatic patients only, but they have been convinced that early treatment on this voluntary basis may in some cases prevent patients from becoming permanent burdens on the local rates."

THE GOVERNMENT MENTAL HOSPITALS OF EGYPT.

This report includes the report of the Director of Lunacy (Dr. Dudgeon) and the reports of the two mental hospitals at Abbasiya and Khanka for the year 1924. This year is marked by the transference of the "Lunacy Division," previously attached to the Ministry of the Interior, to the Department of Public Health. The total existing accommodation provided for cases of mental disease for the whole of Egypt is at the two hospitals mentioned and consists of 2,143 beds (Abbasiya 1503, Khanka 640)—that is, in the proportion of one bed to 5,000 population, and the number of patients in residence is already far ahead of the accommodation provided. Abbasiya receives all females cases, all criminal lunatics and all paying male cases; Khanka admits all non-criminal pauper male cases. Owing to the pressure of accommodation a large number of patients have to be discharged when the acute symptoms have disappeared to the care of relatives, though still insane, and as there are resident at Abbasiya 500 criminal cases, Dr. Dudgeon very naturally points out that the normal way to relieve this pressure is to provide a separate criminal asylum.

Abbasiya Mental Hospital.—A great deal of work has been done to bring this old institution up to date in the matter of pulling down walls, letting in light and air, with results that are entirely gratifying. The number of admissions for the year was 663, and 312 cases were discharged, still insane, to the care of their relatives, and the recovery-rate was a little over 20%. Of the 149 accused persons sent to the hospital for examination and observation 28 were returned for trial as not insane, and the chief forms of mental

disease present in the accused persons were dementia præcox, simple dementia and some form of congenital defect. The death-rate for the year was 6%.

Khanka Mental Hospital.—Here again overcrowding, as in many years past, is a constant menace to the health of the community, and in the year under review the average excess of population over the normal accommodation was 56%, or 359 on 640 beds.

The total admissions for the year numbered 739, of which 553 were first admissions, 14 were transfers from Abbasiya and the remainder were readmissions. The recovery-rate for the year was 11%, and the death-rate 18%. The leading feature of the year was a serious epidemic of malaria (the probability of this had been foreshadowed in former reports), which spread from east to west—from the direction of the marshes between the Gabel el Asfar farm and the hospital. The total number of cases was 655 (of whom 273 were staff), and in connection with this Dr. Miller gives the following interesting figures of the "spleen rate":

"The spleen rate, of importance as indicating not so much the malaria at the moment as the average prevalence of the disease, has been estimated at the close of the year, *i.e.*, during the months of February and March, 1925. The result is as follows:

Number of patients examined during these months	965
Spleen enlarged to one finger breadth	117
Spleen enlarged to two fingers' breadth	43
Spleen enlarged to three fingers' breadth	7
Spleen enlarged to over three fingers' breadth	—
Total enlarged spleens	167

or roughly 17% of the patients in residence.

"As Christophers has pointed out that the adult spleen rate in 'the highly malarious community' of Singhhum, Calcutta, is 11%, the above result, considered as a measure of the endemicity of the disease, can hardly be described as gratifying."

As the result of the outbreak of malaria some interesting results might have been expected amongst the general paralytics, but Dr. Miller points out that these cases do not as a rule come to the mental hospital until they are in such an advanced condition that little hope can be entertained of their recovery following upon an attack of malaria either naturally or artificially induced; he, however, gives some details of four general paralytics who developed definite malaria, without any improvement.

There were 103 cases of mental disease admitted during the year which were attributed to the abuse of drugs, chiefly hasheesh taken pure, or with other drugs.

"*Drug cases.*—Statistics were collected during the year of the total number of patients admitted between 1912-23 whose insanity could be ascribed to the taking of hasheesh (*a*) in a pure form, and (*b*) mixed with other drugs, chiefly in combination with alcohol, but a certain number, 19, in combination with opium alone, or in addition to alcohol. The results of the statistics are interesting, and show that, as the years pass, hasheesh tends to be taken in combination with other drugs, chiefly alcohol, and not alone as was formerly the case:

" Practically no patients seem to have regarded opium as a vice, but rather as an expensive habit on which they spent money they would prefer to save.

" During the slump years the wards were overcrowded by persons who, amongst other reasons, saw a chance of getting three weeks' living free; with the return of prosperity the numbers very rapidly reduced.

" The test which is most reliable should be the numbers passing through the wards and the effect on the sale of opium.

" In all 6,678 persons sought a cure since the wards opened.

Referring to the somewhat large number of " escapes " (83), Dr. Samuel maintains his sound view that " escapes " are better than " prisons," and in this connection complains quite justly of the large number of criminal lunatics for which he is compelled to accept responsibility.

Part IV.—Notes and News.

THE ROYAL MEDICO-PSYCHOLOGICAL ASSOCIATION.

THE USUAL QUARTERLY MEETING of the Association was held on Wednesday, February 16, 1927, at the Cheshire County Mental Hospital, Macclesfield. The chair was occupied by the President, Lt.-Col. J. R. Lord, *C.B.E.*, *M.D.*, *F.R.C.P.E.*

The Parliamentary and Education Committees met on the previous day at the same hospital and enjoyed the hospitality of Dr. H. Dove Cormac, the Medical Superintendent, with whom they partook of lunch and tea.

MINUTES.

The PRESIDENT said the minutes of the previous meeting had already appeared in the Journal, and unless members desired it they need not be read.

The minutes were taken as read and were approved and signed by the President.

OBITUARY.

The PRESIDENT regretted to announce the death of a number of members. Knowledge of the passing of some of them only came to hand recently, though the deaths took place some time ago; nevertheless he thought it right that they should all be mentioned, and the opportunity given to members to express their regrets. A notice had been inserted in the Journal asking that deaths of members should be notified to the Association as soon thereafter as possible.

The late Dr. Henry Morton Baker.

In May, 1925, there died Dr. Henry Morton Baker, who had been an ordinary member of the Association since 1878. Early in his career he was on the medical staff of Wakefield Mental Hospital, and afterwards served as Assistant Medical Officer at the Leicester City Mental Hospital for 32 years. He was a man of charming personality, bore a high character, and was greatly respected for his kindly and conscientious dealings with both patients and staff. He retired on a well-earned pension in 1910.

The late Dr. Josiah Oake Adams.

The Association lost its *doyen* in the death of Dr. Josiah Oake Adams, who had been an ordinary member since 1868. Of the '60 members there were now left only two, Dr. Outterson Wood and Dr. David Nicholson, and it was a pleasure to know that both those distinguished members were still spared to them. Dr. Adams died on June 15, 1925, in his 83rd year. He was a Bart.'s man, and served,

after graduation, as an Assistant Medical Officer at the City of London Asylum, Stone. In the year 1869 he succeeded Dr. Munro at Brook House, and remained there as resident physician until 1909, when he retired. He was a man of considerable culture and wide sympathies, and latterly was keenly interested in local affairs, especially in hospitals and other charities. During the war he did fine work as a very active medical officer at the Amhurst Park War Hospital.

The late the Rt. Hon. Michael Francis Cox.

There died, on February 20, 1926, the Rt. Hon. Michael Francis Cox, LL.D., M.D., F.R.C.P.I. He was Physician to St. Vincent's Hospital, Dublin, and a member of the Senate of the National University of Ireland. His membership of the Association dated from 1911.

The late Dr. Peter McLuskie.

On the 28th of the month following, psychiatry lost a promising young adherent by the death of Dr. Peter McLuskie, of Cane Hill Mental Hospital, after a short illness. He joined the Association in 1922.

The late Dr. Walter Richard Hugh Smith.

The Salop Mental Hospital, on September 19, 1926, suffered a severe loss by the death, after a long illness, of Dr. Richard Hugh Smith, who had served that hospital as Senior Medical Officer since February, 1914, except for the period of the war. He had been a member of the Association since 1914. He was a remarkable man, of some literary attainments, and contributed articles to *The Shooting Times* under the *nom de plume* "John Snipe." He was a keen naturalist and a lover of all sport. His broad sympathies and very human personality enhanced his work as a psychiatrist, which specialty he pursued diligently and conscientiously, and he was deservedly popular. He was a type of medical officer who, in these days, is becoming rare. He gave good service in India during the war as a mental specialist, where his health was undermined by dysentery and malaria.

The late Dr. Cecil Baumont Roscow.

Since the last meeting the Association had lost by death two of its ordinary members. On December 8, 1926, there died, in a London nursing home, Dr. Basil Baumont Roscow, who retired from Winson Green Mental Hospital in June last year, after 23 years' service. He was aged 56, and joined the Association in 1920. He was Lecturer and Examiner in Psychiatry at the Birmingham University. Of a retiring disposition and disliking publicity, his fine work as a superintendent was little known outside his hospital, but there it was keenly appreciated. He initiated many improvements in the lot of his patients. He had travelled a good deal, both in this country and abroad, and was a gifted man in many directions, but his main interest was his hospital and his patients.

The late Dr. Edward Stephen Pasmore.

On January 12, 1927, there occurred the death, after a brief illness, of Dr. Edward Stephen Pasmore, who had been a devoted and very active member of the Association and its Committees since 1898. He had just surrendered the post of Examiner for the Certificate of Psychiatry of the Association. Pasmore was a remarkable man in many respects, but of the known facts regarding him the outstanding one was his adoption, in the earliest period of his career, of the highest ideals with regard to the treatment of mental disorders. It appeared to be an undoubted fact that it was through his influence that a public asylum in England, for the first time, became officially and legally known as a "mental hospital." An excellent memoir of him was being written for the *Journal of Mental Science* by Sir William Job Collins, a lifelong friend.

The Late Dr. Edward Swan Simpson.

From a letter dated February 8 he had learned of the death, on February 2, of Dr. E. S. Simpson, Superintendent of the East Riding Mental Hospital. His death occurred with tragic suddenness during convalescence from influenza. An obituary notice would appear in the Journal in due course.

The passing of old members, though always regretted, was to be expected, but, from an Association point of view, the loss by death of younger members particularly, and also of those who were at the period of full vigour and mature judgment, was a grave misfortune.

Members showed their sympathy and condolence by rising in their places.

NURSING MEDALS AND CERTIFICATES.

The PRESIDENT said it was necessary to ask for approval or otherwise of the action he had taken respecting the revision of the Association's Nursing Medal, which had become obsolete owing to the change in the title of the Association and the adoption of a new seal. For the same reason it had been necessary to revise the Nursing Certificate. He felt that any delay in the issue of either medals or certificates, which might occur unless action was taken at once, would create dissatisfaction among those who had become entitled to them at recent examinations. He therefore asked for members' approval of his action. (Applause.)

ELECTION OF NEW MEMBERS.

The PRESIDENT nominated as scrutineers for the ballot Dr. Rambaut and Dr. Ronald Ross.

The following candidates were unanimously elected ordinary members of the Association:

PORTEOUS, HAROLD BURNET, M.B., Ch.B.Edin., D.P.H., Squadron Leader, R.A.F.; c/o Lloyds Bank, Gosport.

Proposed by Drs. R. M. Macfarlane, Geo. Somerville and R. Worth.

ARMSTRONG, EDWARD, B.Sc., M.D., B.Ch.Belf., Clinical Pathologist, Crichton Royal Institution, Dumfries.

Proposed by Drs. C. C. Easterbrook, C. J. Shaw and Wm. M. Buchanan.

MACLEOD, JOHN, M.B., Ch.B.Edin., Assistant Medical Officer, Woodilee Mental Hospital, Glasgow.

Proposed by Drs. Henry Carre, Alexander Dick and Wm. M. Buchanan.

COOK, L. C., M.R.C.S., L.R.C.P.Lond., Assistant Medical Officer, West Park Mental Hospital, Epsom.

Proposed by Drs. N. Roberts, V. L. Connolly and C. E. A. Shepherd.

HINCHCO, HAROLD, M.R.C.S., L.R.C.P.Lond., Assistant Medical Officer, West Park Mental Hospital, Epsom.

Proposed by Drs. N. Roberts, V. L. Connolly and C. E. A. Shepherd.

REES, RUFUS PRICE, M.R.C.S., L.R.C.P.Lond., Assistant Medical Officer, West Park Mental Hospital, Epsom.

Proposed by Drs. N. Roberts, C. E. A. Shepherd and V. L. Connolly.

CAMERON, DONALD HUGH, M.A., M.D., Ch.B.Edin., D.P.M., Assistant Medical Officer, Gateshead Mental Hospital, Stannington, Northumberland.

Proposed by Drs. J. B. Tighe, R. Worth and J. R. Gilmour.

PAL, SACHINDRA BHUSHAN, B.A., L.M.S.Calc., Senior Assistant Physician, Central Mental Hospital, Tanjong Rambutan, Perak, F.M.S.

Proposed by Drs. W. F. Samuels, Daniel F. Rambaut and R. Worth.

MATTERS ARISING OUT OF THE COUNCIL MEETING.

The PRESIDENT took the opportunity, while the ballot was in progress, of referring to certain matters which had arisen at the Council meeting.

Date and Place of the Annual Meeting.

The PRESIDENT invited the close attention of members to the notice regarding the Annual Meeting which had been published in the Journal. It would be held at Edinburgh during the week commencing July 18 in conjunction with the Medical Section of the British Medical Association. It promised to be a very successful

function both as regards work and play. Practically all members of their Association were also members of the British Medical Association, and an extensive social programme had been arranged, especially for the ladies. Already over two thousand members of the British Medical Association had expressed their intention to be present at the meeting of the latter body. He advised members, if they had decided to attend, to take steps at once to find accommodation, and, if they were to proceed by car, also garage accommodation. If difficulties arose members should communicate with Dr. Buchanan, the Secretary of the Scottish Division. The meeting would continue for five days, and he suggested that members should arrive on Saturday, July 16, in order to take part in an important function on Sunday.

In connection with that meeting he asked for approval for an expenditure of £25 towards entertaining representatives of foreign medico-psychological societies. (Agreed.)

The Prince of Wales's Appeal for the After-Care Association.

He also sought the sympathy of members, which it would be possible for them to indicate by acclamation, on the question of a grant from the Association of £100 in support of the Prince of Wales's appeal for the After-Care Association. That Association had always had the admiration, gratitude and support of the Association as a body, and of its members individually, and it was up to them, of all people, to associate themselves in an unmistakable way with the appeal which had been launched. The actual money could not be granted until the Annual Meeting, but the sum could be promised if he were assured that those present would not oppose it on the occasion to which he had just referred. (Applause.)

The Mental Deficiency Bill (1926).

In respect of this Bill the Association's Parliamentary Committee had tackled a knotty problem which the combined efforts of the House of Lords, the House of Commons and the influential committee of the Mental Welfare Association had failed to solve, namely, to arrive at a definition of mental deficiency which would be generally accepted. But he thought the definition which the Parliamentary Committee, assisted by its chairman, Dr. Nathan Raw, had drawn up might prove satisfactory. He thought the Ministry of Health would heartily welcome any help in this difficult matter, and he suggested that the Association's definition should be sent at once to the Ministry of Health and the Board of Control.

As proposed in the Bill the definition was : "For the purposes of this Section, mental defectiveness means a condition of arrested or incomplete development of mind, whether innate or induced after birth by disease, injury or other cause."

The definition suggested by the Association ran :

"For the purposes of this Section, mental defectiveness is a condition of arrested or incomplete mental development arising before the age of 21 years, whether innate or induced after birth by disease or injury."

THE GASKELL PRIZE FOR 1926.

The Gaskell Prize for 1926 was declared to have been awarded to Dr. Gerald de Monjoie Rudolf, of Claybury Mental Hospital, in respect of a thesis "The Malarial Treatment of General Paralysis and other Diseases."

This concluded the business part of the meeting.

PAPER.

Recent Investigations on Visual Imagery, with Special Reference to Hallucinations, by Prof. T. H. PEAR, M.A. (illustrated by lantern-slides) (*vide* p. 195).

The PRESIDENT said it would be agreed that this paper had given them something to think about, and certainly they would take away with them something which they would have to worry out for themselves. The subject Prof. Pear had so ably presented would not be materially advanced by being discussed before this had occurred, and he hoped more would be heard of the views put forward by Prof. Pear, which might exercise a wide influence on the way

one approached states of morbid illusion and hallucination. As regards eidetic thought it would save much time if it were possible for one to glance rapidly through a book and then, while seated in a comfortable chair, bring into conscious vision the details of what we had seen and ponder over them at our leisure. As an editor such would suit him admirably despite the risk of being thought rum, queer or unusual, which Prof. Pear had told them characterized the eidetic person. (Laughter.)

Dr. B. H. SHAW asked whether the eidetic memory spoken of by Prof. Pear was not the same as the artist's memory. It was known among artists that the man who could not individualize in that way was not of much use as an artist. A friend of his, a celebrated artist, claimed to possess an artist's memory. He said that if he were taken into a strange room and were afterwards asked how many windows it had he would not be able to say; but if a year hence he were asked to draw that room, he would be able to make a sketch of it, even down to the pattern of the fender. No poet-painter could be what he was unless he had that memory.

Prof. PEAR, in reply to Dr. Shaw, said it would take too long to give a satisfactory reply to that question. Much investigation was going on as to the amount of eidetic imagery among artists; only a small proportion of artists were eidetic, and they seemed to be people who had an almost photographic memory of things. It was unnecessary to remind members that modern art was by no means photographic. Many of the modern artists would claim that the eidetic type represented a particular form of pictorial art. Many artists would, he thought, in so far as they used visual imagery at all, belong to the type the speaker did not mention to-day—the caricaturing type. He himself had that type. According to one dictionary, caricatures were not necessarily something which ridiculed; the word meant “to draw an exaggerated resemblance of,” and that was one of the most perfect metaphysical phrases with which he had met. The modern artist had the type of visual memory which tended to exaggerate what, for him, were the salient aspects of something. The difference between the eidetic and the visual images seemed to be what modern writers called “structuration.” In the visual imagery of the person, whether he used it for diagrams or for caricatures, there was a building up around some central nucleus, and that nucleus was determined by the individual interests; whereas in the eidetic that had not much to do with it. These people might be looking at a room, or a picture, which did not interest them, and they gave exact details, whereas in the case of the other type there was a centering round his own interest. He thought it was one type of artist's memory, but investigation showed that a large number of artists had no visual imagery while they were drawing. Some said they had no imagery; others said they did not know what happened, but they saw things on the paper and drew round it. There was the possibility that the man who saw satisfying visual images did not want to draw at all; he felt no impulse to pass on what he saw to other people.

Dr. DONALD ROSS asked whether Prof. Pear had ever thought of investigating hearing in the same way. A study of that would be very useful. He, the speaker, could not help thinking of the auditory pseudo-hallucinations and various other manifestations, such as the echo in this connection.

Prof. PEAR, in further reply, said that not much had been written about auditory imagery, and he thought a good deal could be written on that subject. The whole subject of imagery, which had interested him for fifteen years, seemed to be marked by extraordinary poverty of any good description of auditory imagery. Obviously, from the clinical point of view, it was of vast importance, because auditory hallucinations were often looked upon as very grave symptoms of mental disorder. He did not know whether that was because they were rare—it might be due to deeper causes. Here there was something close to hand awaiting investigation if anyone had the time to devote to it. The field of eidetic auditory imagery was almost virgin soil.

The PRESIDENT said that he was a great admirer of Hogarth's drawings; he doubted whether his drawings were caricatures, and were not true representations of what he actually saw. For the most part people usually saw what they wanted to see. Visual perception was a very complex matter. Simple or single vision did not occur after the first few days of life. It was an impossibility afterwards. Visual perceptions were not synonymous with the form of the

objects which excited them. They were subjective creations into which many factors entered, probably every other special sense, previous imagery, and not least, affective tone and emotional reaction. This, of course, was normal vision, but he remembered seeing sketches of "No-man's Land" brought home from the war by soldiers—crude drawings, most unpleasant and bizarre. He thought that those soldiers had that same faculty of vision of a peculiarly objective type which Hogarth had, and which enabled him to depict the naked truth as far as it was humanly possible. If one looked in the mirror, say after a long illness, not uncommonly one received a severe shock. There was revealed to us an asymmetry of features hitherto unsuspected—the human face in all its natural ugliness. The impression was, however, only momentary; our *amour-propre* came to the rescue, and with it pre-perception and the expectant attitude, ugliness became "passable," and then, maybe, the positively beautiful; all because one did not wish the see the truth if it were not pleasing. (Laughter). Hogarth's drawings were not fanciful; he drew just what he saw. It was natural to him to do so, and the soldiers he had mentioned probably drew accurate representations, untrammelled by affect or fancy owing to fatigue and mental numbness induced by being in constant danger.

Ultra-violet Radiation, by Dr. K. K. DRURY (*vide* p. 200).

The PRESIDENT said members had heard only part of a very good paper; he had read the paper, and the whole of it would be published in due course in the Journal. He believed it would be found a sound and up-to-date guide for those mental hospitals which contemplated or who were carrying out this treatment, and he hoped it would be a stimulus in that direction. At Horton Mental Hospital they had the distinction, from a historical point of view, of having been the first to instal this form of treatment. He did not wish to repeat anything which Dr. Drury had said regarding the results of this treatment, and he could confirm every word of it, but every medical superintendent knew the cost, in nursing, dressing, etc., of cases suffering from chronic ulcers and skin conditions. Some few months ago, at Horton, he had had a nominal roll made of all patients who were so affected. These he turned over to Dr. A. Hancock, who was in charge of the Actinotherapy Department, and they were now practically all cured, and all that expense saved, and the time and attention of nurses released for other purposes. From that point of view only the expenditure in installing the plant had been amply justified. A good instance of its value was the following: A nurse had a very formidable mass of tubercular glands in the neck, and was awaiting a bed in a general hospital for surgical treatment. During this time actinotherapy was tried, and it was marvellous to see how, in a few weeks, the condition cleared up. The hospital bed was cancelled, and the nurse was on duty again. In addition the improvement in her general health was most marked. Even the claims of cures of the traditional quack doctor could be beaten by actinotherapy. There was much more, however, to be learned as to the why and wherefore of the effects produced by these invisible rays, and the future was most promising. With regard to the treatment of general paralysis of the insane, at Horton they had begun to watch the effect of ultra-violet light on cases which were undergoing malaria treatment.

Dr. P. B. MUMFORD said that as a member of the staff of the largest skin hospital for Manchester and Salford, where there was a wing for artificial sunlight, he had been very interested in all he had heard. Artificial sunlight was not the panacea for all skin troubles, but for tubercular conditions it brought about extraordinary improvement. Cases which seemed almost hopeless, such as lupus of a whole limb, had improved greatly under artificial sunlight. At Manchester they were interested in discovering whether it was really the absorption of sunlight itself which did good. Some evidence was accumulating in the States that the skin, like the thyroid and other glands, must be regarded as an endocrine gland pouring its secretion into the blood-stream. By exposing the body to cold air the skin was stimulated, in the same way as by ultra-violet rays. He asked what impressions Dr. Drury had as to the effect of the surrounding temperature when patients were exposed to these rays. He wondered whether, when patients were exposed to the rays in a warm or over-heated room, the effect was as good as when the air was cold, and thus at the same time stimulating the body generally. It seemed possible that the effect of the rays would be enhanced if patients, immediately afterwards, were given a cold shower-bath.

Dr. DOVE CORMAC showed several patients who had benefited from ultra-violet ray treatment.

Dr. J. GIFFORD asked whether Dr. Drury used ultra-violet rays for tubercular chest conditions, and if so, what his experience had been.

Dr. HASLAM FOX asked whether Dr. Drury had noted the difference between the results of this treatment in young people and in adults. He had had two cases of tuberculosis in the knee-joint, with several sinuses, one aged 8 years the other aged 11. Both had a back splint. They were given the sunlight treatment, and were now running about. A man who had the same condition, however, did not improve to anything like the same extent. He was 32 years of age, and had been treated in exactly the same way as the younger patients.

Dr. DRURY, in reply, expressed his cordial thanks for the way in which his paper had been received. He had been glad to hear the President's remarks about chronic skin conditions and ulcers, which bore out the results which were being achieved at Stafford. He was pleased to hear his remarks about the ultra-violet ray treatment of general paralysis of the insane.

In answer to Dr. Mumford, he had not tried the effects of cold air, but authorities seemed to hold the view that a temperature of about 70° F. was the most suitable for actinotherapy, as the skin reacted better at that temperature than at any other; a better erythema with a smaller dose was then obtained. At a colder temperature a larger dose was needed.

The cases shown by Dr. Cormac were instructive, especially in showing the effect the rays had in improving general nutrition.

He had not yet tried the light treatment in cases of chest tubercle. Great care was needed before commencing such treatment in those cases, as some observers had spoken of it unfavourably. Until more was known, he had hesitated to experiment in this direction.

With Dr. Fox, he had found that young patients reacted better to the treatment than did older ones. An old person with a wasted skin had to be given four times the dose of a young patient in order to cause erythema.

Owing to the pressure of time, Dr. Chevens's paper on "A Hypothesis of the Mechanism of the Functional Psychoses," and Dr. Mumford's communication on "Methods of Investigating Sudoriferous Activity in Certain Types of Psychosis," were not read.

Members were then entertained to tea.

THE LUNCHEON.

On the invitation of the Visiting Committee, members lunched together in the Annexe Hall before the clinical meeting, having already been conducted through the wards and various departments of the Annexe (Admission Hospital) and Uplands (Private Patients' Villa). Some also visited the main building.

The PRESIDENT, at the conclusion of the luncheon, said he rose not so much for the purpose of making a speech as to ask the sympathy of members for the toast he was about to propose, namely, that to the health of the Visiting Committee of the Hospital, and to thank them for their hospitality on this occasion. It was a matter of regret that owing to the pressure of private and business matters, no member of the Visiting Committee happened to be present, but they were very worthily represented by Dr. Dove Cormac. (Applause.)

Speaking on behalf of the Council of the Royal Medico-Psychological Association, it was a great pleasure to receive the invitation to hold the Quarterly Meeting here. It was anticipated that the meeting would be both interesting and fruitful. He thought all who had taken the opportunity of seeing what was being done here, in this magnificent building—which, to his regret, would probably never be reproduced as regards style of architecture and materials used—would agree that all their anticipations had materialized absolutely. One great feature of the hospital was that it did not advertise its work; yet it was a matter of regret that the fine work it was doing, especially as regards Alpine light treatment, was not more widely known. Those who had been round the hospital had learned much. It was to him as President a matter of pride that the attendance was so good, and this meeting in the North would go down in the Association's history as a most memorable one.

He proposed the toast of the Visiting Committee of the Hospital, and coupled with it the name of Dr. Dove Cormac.

Dr. DOVE CORMAC, in response, said that unfortunately the Chairman of the Hospital had been unable to be present that day on account of ill-health, and the other members of the Committee were unavoidably absent, as they had other meetings to attend. They much regretted their inability to be present. On their behalf he expressed a cordial welcome to the President and members of the Association; the Visiting Committee would feel gratified that the meeting had been so successful. They were proud of the hospital, and they took a great interest in it and did all they could to help forward the work which was going on. He also wished to acknowledge his indebtedness to his colleagues and the staff generally, who supported him whole-heartedly in the work. This meeting would do the staff a great deal of good, as they would feel that they were doing something worth seeing and knowing, and would be encouraged thereby to make even greater efforts for the patients.

He felt much indebted to Col. Lord for his kind remarks.

On the previous evening members dined together at the Queen's Hotel, Manchester.

EDUCATIONAL NOTES.

The Maudsley Hospital, Denmark Hill, S.E. 5.—Lectures and Practical Courses of Instruction for a Diploma of Psychological Medicine. Course X, 1927. Part II.

(1) Eight lectures on the Psychoneuroses. By Bernard Hart, M.D., F.R.C.P. University College Hospital, on Mondays at 3.30 and 5 p.m., commencing May 9.

(2) Eight lectures on Morbid Psychology. By Edward Mapother, M.D., M.R.C.P., F.R.C.S., on Wednesdays at 2.30 and 4 p.m., commencing April 6.

(3) Four lectures on the Pathology of Mental Diseases. By F. Golla, F.R.C.P., followed by four demonstrations in Pathological Anatomy, by Charles Geary. On Fridays at 2.30 p.m., commencing May 6.

(4) Two lectures on the Legal Relationships of Insanity and Treatment. By C. Hubert Bond, D.Sc., M.D., F.R.C.P. On Mondays at 4 p.m., April 25 and May 2.

(5) Six lectures on the Practical Aspect of Mental Deficiency. By F. C. Shrub-sall, M.D., F.R.C.P. On Tuesdays at 2.30 p.m., commencing March 15, omitting April 19.

(6) Four lectures on Crime and Insanity. By W. Norwood East, M.D. On Tuesdays at 2.30 p.m., commencing May 3.

(7) Three lectures on Therapeutics. By A. A. W. Petrie, M.D., M.R.C.P., F.R.C.S. On Fridays at 2.30 p.m., commencing March 18.

(8) Five demonstrations in Clinical Psychiatry. By Edward Mapother, M.D., M.R.C.P., F.R.C.S. On Wednesdays at 2.30 p.m., commencing April 27. (Fee 1 guinea payable at the hospital.)

(9) Twelve Clinical Demonstrations in Neurology. Six by F. Golla, F.R.C.P. On Thursdays at 2.30 p.m., commencing March 17, at the Hospital for Paralysis and Epilepsy, Maida Vale. Six by F. M. R. Walshe, D.Sc., M.D., F.R.C.P. On Thursdays at 2.30 p.m., commencing April 28, at the National Hospital for Paralysis, Queen Square.

(10) Two lectures on Abnormalities of the Fundus Oculi. By R. Foster Moore, M.A., F.R.C.S. On Mondays at 2.30 p.m., April 25 and May 2.

(11) Four demonstrations with Practical Instruction in Laboratory Methods. By S. A. Mann, B.Sc., F.I.C. On Mondays at 2.30 p.m., commencing March 14, Fees: For whole of Part II, £10 10s.; for one single series of lectures, £2 2s.

Inquiries as to lectures, etc., should be addressed to "The Director of the Central Pathological Laboratory, Maudsley Hospital, Denmark Hill, S.E. 5."

The Fellowship of Medicine, 1, Wimpole Street, W. 1, will collect fees from, and issue admission tickets to, medical men intending to take the course who are introduced by the Fellowship.

In addition to the special lectures and demonstrations of the above course, there is opportunity for clinical experience and instruction available at the Hospital. In particular there are a limited number of appointments available as clinical

assistants; service in this capacity (either whole time or part time) is recognized by the various examining bodies as constituting the clinical experience required by the regulations for the Diploma. Applications and inquiries regarding these clinical facilities should be made to the Medical Superintendent of the Hospital.

National Hospital, Queen Square.—A Post-Graduate Course on Diseases of the Nervous System will be held at the above hospital from May 9 to July 15, 1927.

The general course will consist of Clinical Lectures and Demonstrations; teaching in the Out-Patient Department; and Pathological Lectures and Demonstrations. The Fees for this course will be £5 5s.

A course of Lectures on the Anatomy and Physiology of the Nervous System will be arranged if there are sufficient applicants. Fee £2 2s.

A course of Clinical Demonstrations chiefly on Methods of Examination of the Nervous System will be given. Fee £2 2s.

Tickets entitling to attend the Out-Patients' Clinic only (£2 2s. for 3 months) may be obtained from the Secretary.

Applications should be addressed to the Secretary, Medical School, National Hospital for the Paralysed and Epileptic, Queen Square, London, W.C. 1.

QUALIFYING EXAMINATIONS FOR NURSES.

THE qualities needed for looking after the sick are largely temperamental, and of numerous women it has been said that they were born nurses. This means that nursing must always be a vocation—that it is not a mere trade in which the most skilful are necessarily the most successful; and the distinction is especially important to remember now that State examinations have to be passed before a nurse can enter her profession. It is not enough to be born, she must be registered as well; and though this is admittedly desirable, it introduces a principle which may easily be carried too far. A qualifying examination is always dangerous, because it lays emphasis on certain attributes in the candidate, and it is necessary to be careful that these attributes shall be those on which efficiency depends. There are special reasons, moreover, for care in choosing examinational standards for nurses. The first is that since registration was devised as a means of raising the status of the nursing profession, there is a risk of the standards being set too high by people who have in mind an ideal which is for the time being unattainable; any new mechanism of progress is liable at first to over-use. The second reason is that at the present time there is a shortage of candidates for the nursing profession, and it would be sad if either the qualifying examinations, the study required for them, or the conditions of training entailed, were regarded as a bar to the service by girls who were otherwise suitable. The third reason, which has been indicated already, is that knowledge is on the whole less important in nursing than are temperament, health, and the kind of practical ability which either is inborn or comes with experience. Training and book-learning are useful supplements, but the public should not be encouraged to think that an aptitude for acquiring theoretical knowledge is an essential part of the nurse's equipment.

These reflections arise from perusal of the examination papers recently set by the General Nursing Council for England and Wales. In the Preliminary Examination held on February 1 the candidates were probationers of one year's standing, and in their first paper they were invited to answer three of the following questions, including one from each section:

A. Anatomy.—(1) Give a short anatomical description of the knee-joint. (2) What parts of the body receive their blood-supply through the innominate artery? (3) Describe briefly the cavity of the pharynx, and the various openings which communicate with it.

B. Physiology.—(1) Describe the various kinds of blood-corpuscles. What do you know of their functions? (2) How does the body obtain its store of glycogen, and what are its uses? (3) What are the functions of the lymphatic vessels?

Most of these questions might be asked in examinations for the highest medical and surgical degrees, and it must be supposed that the Council's examiners are content to receive very simple and dogmatic answers. The candidates, however, have little assurance of this, and anxiety will not be diminished by turning to the

"Answers by a Sister-Tutor," published in the *Nursing Times*. Dealing on February 19 with the examination paper we have quoted, the sister-tutor answers the third of the anatomical questions and begins as follows :

"The pharynx is a muscular tube suspended from the base of the skull and lying directly in front of the cervical vertebræ. Its upper portion, which lies behind the posterior nares, is called the naso-pharynx, and the lower portion behind the mouth and tongue is the oro-pharynx. It is lined throughout with mucous membrane, which is continuous with that of the nares and mouth above, and that of the larynx and œsophagus below. The muscles of the pharynx are largely arranged in circular and longitudinal fibres, which contract alternately, forming a wave-like movement during swallowing. At intervals throughout the pharynx are patches of lymphoid tissue, which are a great safeguard against the entry of disease germs, the chief being at the base of the naso-pharynx."

She continues in this strain for another 320 words, ending with the statement that "the cricoid cartilage below is the only complete ring of cartilage in the trachea and is narrow in front and broad behind." Her answer is a praiseworthy summary of the facts, but it does not suggest that candidates are intended to reply to the questions only so far as they bear on the practice of nursing, as might otherwise be presumed. Nor can this limited requirement be inferred from some of the papers set in the Final Examination for the General Register, which was held on February 2. The first paper begins thus :

Medicine.—(1) Give the symptoms and signs of rheumatic fever, pointing out the difference, as found in children and adults. (2) What is meant by "pleurisy"? What are the different forms? Give the symptoms of each. (3) What are the chief causes of irregular enlargements of the breast? What advice would you give to a patient with such condition if she applied to you?

The candidates had to answer at least one of these questions, whilst among the alternatives in the second section was, "What dietetic and local measures might be recommended for an adult patient with severe eczema?" This question is far from being beyond criticism, but even more controversial are two others, in which the nurse was asked to indicate the chief characteristics of the various kinds of ulceration of the cervix (stating what methods of treatment might be employed in each), and was expected to give some account of "the principles underlying the use of antitoxins and vaccines in infectious disease."

It may be that in practice the Council does not reject candidates for their ignorance on the questions we have quoted; it may be that its bark is worse than its bite. At the moment, however, the bark is likely to have unfortunate results. The recent examination papers deal with too many subjects of which knowledge is not essential to every nurse. The fact that the questions have alternatives will not prevent the conscientious student from trying to cover the whole ground surveyed, and the scope of the examinations makes it necessary for the schools of nursing to cram their pupils with facts which cannot be digested. Much of the theoretical teaching nowadays given does not arise naturally from work in the wards, but rather out of the demands of the examining body. Everyone will agree that an elementary knowledge of physiology and anatomy is all to the good, but a nurse must seldom find it necessary to remember morphological details; nor is it desirable that probationers should be taught to think in this peculiar way. And here, indeed, is the crux of the matter. There is no time to teach a nurse to think like a medical man, even if there were inclination; and if she is taught a great number of facts, without being instructed in the use of them, it is quite possible that she will end by getting a dangerously false impression of her powers. In diagnosis, with which some of the questions incidentally deal, there is nothing more risky than the half-knowledge which comes from reading elementary handbooks, and the nurse who relates her patient's every symptom to the medical adviser is a far safer assistant than she who fancies herself an amateur doctor. Frequent reference to a medical man is, of course, a counsel of perfection, for many nurses carry on their work in places where help is not available for weeks at a time. In such situations they have to use their discretion, which is often admirable; but these posts should only be entrusted to experienced women or those with special training. Admission to the State Register is surely not meant to imply that the newly qualified nurse is fitted to assume diagnostic responsibility. It ought merely to show that a candidate has the knowledge essential for efficient nursing—that she can keep a patient clean and comfortable, dress his wounds,

prepare his food, administer the remedies prescribed, observe and report on his condition, and cope with emergencies which are likely to arise. These are no easy tasks, but they do not require knowledge of the innominate artery, the kinds of blood-corpuscule, the metabolism of glycogen, or the functions of lymphatic vessels. Such information will doubtless increase a student's interest in the human body, and within limits it is valuable; but it is seldom, if ever, of immediate practical importance in nursing; it is an extra, and should be regarded as such. To know about the varieties of ulceration of the cervix and the dietetic treatment of eczema is only necessary for those whose work is done under special conditions of isolation or responsibility. The present examination seems to demand knowledge which it is hard to gain without either long experience or a special training which cannot be given to every probationer. The result is a tendency towards widespread cramming. The immediate need, alike from the point of view of the public, the medical profession, and the nurses themselves, is for a more copious supply of women who wish to take up nursing. Good material is almost certainly available, and it would be a pity if the enthusiasm of suitable people were inhibited by too ambitious a scheme of education. Excess of book-work means a heavy strain on the minds and spirits of probationers. Any loss of good recruits from this cause seems especially regrettable when it is realized that theoretical knowledge is at best an unsatisfactory criterion for the selection of nurses.

[This is reprinted from the *Lancet*, March 5, 1927, by kind permission of the Editor, not as a gesture of disapproval of the State Nursing Examinations, but as apropos of the remarks made by the Royal Commission on Lunacy and Mental Disorders on the severity of the Nursing Examinations of the Association which we criticized in a recent "Occasional Note."—Eds.]

THE MENTAL AFTER-CARE ASSOCIATION.

THE PRINCE OF WALES'S APPEAL.

At the meeting on March 31, 1927, at the Mansion House, of the After-Care Association, presided over by H.R.H. the Prince of Wales (whose speech is reported on p. 285), Dr. R. Percy Smith, chairman of the Council of the Association, announced the result of the above appeal. He said that by the courtesy of the British Broadcasting Corporation, their President, Sir Charles Wakefield, was enabled to make an appeal from Daventry last Sunday, the latest result of which was £1,125 7s. 7d., which brought the aggregate result of the Prince of Wales's special appeal to date up to £8,409 10s. (Cheers.)

The LORD MAYOR (Sir Rowland Blades, M.P.) expressed the Association's thanks to the Prince, and referred to the many causes which his Royal Highness had advocated at the Mansion House. It was only a month ago that the Prince delivered an important speech in that hall on the subject of British industry. He doubted, however, if among all the charities which had had the advantage of the Prince's advocacy and support, there had ever been one so pathetic and touching as that which they had been dealing with that day. (Cheers.) The after-care of poor patients discharged from mental hospitals was an object deserving of their greatest commiseration and pity. The hurrying of such patients into work and the worry of family anxieties before they were fully restored to mental and physical health contributed to a recurrence of their maladies. The objects of the Association in preventing such results had his warmest approval and his deepest sympathy. (Cheers.)

Sir CHARLES WAKEFIELD also expressed the Association's gratitude for the Princes' espousing what was comparatively an unknown cause. Through the Princes' championship their work had secured many hundreds of new friends.

Among those present on the platform were:

The Lady Mayoress, Mr. Sheriff Shepherd and Mr. Sheriff Vincent, Lord Sandhurst, Sir Robert Armstrong-Jones, Sir Marriott Cooke, Sir Lionel Phillips, Sir George Wyatt Truscott, Sir Frederick Milner, Sir Frederick Willis, Dr. C. Hubert Bond, Dr. Nathan Raw, Sir Lisle Webb, Lt.-Col. J. R. Lord, Dr. C. Hamilton Marr, the Rev. F. A. H. Hawkins (son of the Founder of the Association), Mrs. Dunn Gardner, Dr. David Ogilvy, Dr. R. Worth, Dr. J. Porter-Phillips and Mr. H. F. Keene.

DOWN COUNTY MENTAL HOSPITAL, DOWNPATRICK.

THE Down County Mental Hospital on February 8, 1927, was visited by Viscount Craigavon, Prime Minister of Northern Ireland, accompanied by Sir Dawson Bates, the Minister of Home Affairs. They were received by Senator J. Hill Dickson (Chairman), Viscount Bangor (Vice-Chairman), and other members of the Committee of Management, and Dr. M. J. Nolan, the Medical Superintendent.

Senator Hill Dickson expressed the great gratification the Committee felt at the honour of the visit. Mental institutions, he said, had recently been put on trial before a Royal Commission on Lunacy in England. It was a source of the deepest satisfaction to them that many of the chief recommendations of that Commission had been long since anticipated at Downpatrick, so that they might pride themselves as being among the pioneers in progress. The Committee had an executive officer whose capacity had won for him the blue ribbon of his fellow-workers in this special branch of medicine—he had recently been the honoured President of the Royal Medico-Psychological Association. Moreover, his link with general medicine was so strong and so much appreciated that he this year occupied the presidential chair of the Ulster Medical Society.

The Prime Minister, having thanked the Committee for their resolution of congratulation, said it was unnecessary for him to remind them of the very distinguished services that Dr. Nolan had given in these institutions for many years, and he (the Prime Minister), along with all other Ulstermen, was very proud that Dr. Nolan had risen to the high position he holds.

ROYAL MEDICO-PSYCHOLOGICAL ASSOCIATION LIBRARY.

The current number of any of the following journals will be loaned, as they appear, to any member:

American Journal of Insanity.
Journal of Neurology and Psycho-Pathology.
L'Encéphale.
International Journal of Psycho-Analysis.
Journal of Abnormal Psychology.
Mental Hygiene.
Journal of Nervous and Mental Diseases (New York).
Revue Neurologique.

CORRESPONDENCE.

To the Editors of the JOURNAL OF MENTAL SCIENCE.

Re DIAGNOSIS OF GENERAL PARALYSIS.

SIRS,—In the Journal for January, 1927, there appeared a note on the Wassermann reaction in the blood-serum in a series of male admissions to a mental hospital. In this it was stated that "a positive Wassermann reaction of both serum and cerebro-spinal fluid is confirmation of the diagnosis of general paralysis."

To a physician with any knowledge of neuro-syphilis the error of this statement is obvious, and we feel that its publication in the Journal should not be allowed to pass unchallenged. The acceptance of such a dictum would certainly lead to grave errors in diagnosis and to the institution of a serious form of treatment, which might not in any way be justified in cases of meningo-vascular syphilis.

We are, Sirs,

Yours faithfully,

A. G. DUNCAN, A.M.O.
 F. KIDDLE, A.M.O.

SEVERALLS MENTAL HOSPITAL,
 COLCHESTER;
 March 26, 1927.

[The author of the article to which this letter refers suggests that his idea would be accurately stated had "strong" been inserted before "confirmation."—Eds.]

OBITUARY.

JOSIAH OAKE ADAMS, M.D., L.S.A., F.R.C.S., J.P.,

Ordinary Member since 1868.

On June 15, 1925, the Association lost its *doyen* by the death of Dr. Josiah Oake Adams, who was spared until he reached the ripe old age of 83 years. He was born and received his early education at Plymouth. From there he came to London, and taking up medicine as a career, entered as a student at St. Bartholomew's Hospital, and qualified as M.R.C.S.Eng. in 1865 and L.S.A. in 1866. He took his Fellowship of the Royal College of Surgeons of England in 1874.

As a young practitioner, Dr. Adams was appointed Assistant Medical Officer at the City of London Mental Hospital, Stone, Dartford, and in 1869 he succeeded Dr. Munro as Resident Physician and Licensee of Brooke House, Clapton—a famous old baronial mansion, then, as now, a private asylum, where he remained until 1909, when he retired.

In addition to being a sympathetic and successful medical practitioner he was a highly esteemed and valued citizen, and was widely known by reason of his public services and his beneficent activities in connection with social work in his district. He was an alderman of the Hackney Borough Council, had the refusal of the Mayoralty, but became a J.P., and attended assiduously to his duties on the Bench. He was President and an active supporter of the King's Home for Nurses, Lower Clapton, and trustee of the Spurstowe Charity, and for many years was honorary secretary of the Manor House Refuge for Girls. He was also Chairman of the British Home for Deaf and Dumb Women, and a Churchwarden of St. James's Church, Clapton. At the age of 72 he patriotically offered his services as surgeon during the war, and became medical officer of the Red Cross Hospital at Amhurst Park.

He never sought honours or rewards and avoided publicity, and his life was entirely and unselfishly devoted to the service of humanity.

He was a cultured gentleman, of charming manners, and possessed a happy and cheerful disposition, which endeared him to all who came to know him, were they patients, friends or acquaintances, and died rich in good works, and was buried near his wife, who pre-deceased him some fifteen years ago, at Chingford.

He left one daughter, who married the Rev. F. R. Holmes. J. R. LORD.

EDWIN STEPHEN PASMORE, M.D., M.R.C.P.Lond.,

Medical Superintendent, Croydon Mental Hospital, and Ordinary Member since 1898.

The announcement in the evening papers of Wednesday, January 12, of the death, after but three days' illness, of Dr. E. S. Pasmore, came with a painful shock to his wide circle of friends. A few days or weeks before they had met him and talked with him, not only in the pursuit of the welfare of the hospital which he loved and its patients, to whom he was devoted, but also in many of the outside philanthropic and academic enterprises in which he bore his part. The large and representative gathering which, on Saturday, January 15, assembled in the beautiful old parish church of Warlingham, and followed his body to the grave, testified to the extent and depth of the friendships he had formed and the esteem he had evoked. At the final scene on that clear winter evening, as the shades were falling, deep and sincere was the silent but heartfelt sympathy shown by all the mourners for his wife and children as they followed the remains of their loved one to the graveside in the churchyard among the ancient yew trees.

Edwin Stephen Pasmore was born at Falmouth, Jamaica, in 1864, the son of Captain John Pasmore. He pursued his medical studies in London, Paris and Brussels, and from University College he graduated M.B. in 1890, and M.D. in 1891 at London University, and took his M.R.C.P. in 1897. With a predilection for psychological medicine he worked at Queen's Square with the late Sir William Gowers, and was inspired by that illuminating and industrious teacher to study,

alike in ward and laboratory, the pathology of diseases of the mind and the nervous system. Later, in 1893, he entered the service of the London County Council, and under the late Dr. Claye Shaw (whose death within the same week we deplored) at Banstead Asylum he pursued his pathological studies. His chief at that institution, in his brusque though genial way, had expressed himself as not sanguine that new light would come from the study of the pathology of insanity. The Claybury laboratory, under the late Dr. (afterwards Sir) Frederick Mott, was then in its infancy; Pasmore was attracted thither, and resorted to those newer methods of research which are slowly yielding such fruitful results.

When the Croydon Borough Council sought a medical superintendent for their new asylum at Warlingham, they were fortunate in securing Pasmore for that office. By naming it a "mental hospital," he sought to annex the island of mental disease to the mainland of diseases of the body, to inspire greater hope of recovery, and to abolish the stigma which had fallen upon asylums for the insane. Under his guidance the new hospital on the Surrey hills was equipped with every modern appliance. An X-ray installation, good operating theatre and proper laboratories were fitted up, and every provision made for the social side and recreation of the patients. The recovery-rate was remarkable—42% over a period of 10 years. He won the confidence and regard of patients of every grade in the social scale. There was nothing of the stern disciplinarian, the oracular dictator or the condescending and self-assertive patron in his attitude towards those for whose mental betterment he was responsible. In 1899 he contributed a paper on the "Classification of Insanity" to the *Journal of Mental Science*. He urged the grouping of cases under seven headings, namely: auto-toxic, exo-toxic, epileptoid, degenerative, hysteroid, congenital, and feigned. He directed attention to a special type of mental disease which he called "deprementia," distinguishable from melancholia, and which, from a study of some 500 cases, he attributed to auto-toxæmia arising from alteration of some metabolic process. He recognized that—

"Distemper'd nerves
Infect the thoughts; the languor of the frame
Depresses the soul's vigour."

He was no materialist, but he believed that a *corpus sanum* was a needful concomitant of the *mens sana*, and he asseverated the truth "that the great stumbling-block to the advance of alienism in the past has been its separation from the domain of general medicine."

Outside his professional and administrative duties Pasmore was engaged in philanthropic activities. He was joint founder of the University College Working Lads' Club, now known as St. Christopher's. He was a Vice-President of the League of Mercy for the Epsom-Esher district, an Honorary Inspector of Hospitals for the League and a regular attendant at its functions. The Order of Mercy was awarded him in 1917. He was also deeply interested in proposals for the reconstitution of the University of London, and was a loyal son of his *alma mater*. He married in 1907 Miss Gertrude Screech, a daughter of Mr. John Screech, of Yelverton. In his family life, and especially in the educational progress of his two sons and daughter, Pasmore was particularly happy. By his too early death psychological medicine is the poorer and many a patient has lost a true and trusted friend, while his colleagues and intimates will miss for many a long day the cheery greeting, the obvious sincerity and courteous chivalry of a very lovable man.

W. J. C.

CHARLES LEIGHTON HOPKINS, B.A., M.B., B.Ch.Camb.,

Late Medical Superintendent of York City Mental Hospital, and Ordinary
Member since 1903.

We regret to record that Dr. C. L. Hopkins died at St. Leonards-on-Sea on March 16, 1926, just six months after he had retired from the post of Medical Superintendent of York City Mental Hospital—an appointment which he had held for twenty years. He had been in failing health for some years, but his fortitude and his interest in his work enabled him to carry on at his post when others not

so well endowed with these qualities would have given in. It was indeed sad that he did not live longer to enjoy his well-earned rest.

Dr. Hopkins was the third son of the late Canon W. B. Hopkins, Vicar of Littleport. He was educated at Haileybury, Caius College, Cambridge, and Guy's Hospital. He had a distinguished career at the university, and shortly after taking his degree he was appointed fourth Assistant Medical Officer and Pathologist at the Kent County Hospital, Maidstone, where he rapidly gained promotion, becoming Senior Assistant in 1902. When in 1905 the York Corporation selected him as Medical Superintendent of their recently built mental hospital they made a wise choice, and his vigilance, his business acumen and foresight gained for him the reputation of being a first-rate administrator. He also earned the respect of all those who had the privilege of working with him. One could not go through the Hospital wards with Dr. Hopkins without realizing the esteem in which he was held by patients and staff alike. He had a sound knowledge of clinical medicine and psychiatry, and he would carefully examine any case which presented difficulty or doubt as to diagnosis or treatment, and, in the discussion which would follow, his skill and insight were readily revealed. He did not agree with the modern schools of psychology—he believed that far too many put their ideas into print long before they had stood the test of experience. Apart from his work in the hospital, he was keenly interested in the farms, and was a good judge of stock. In his younger days he was an all-round sportsman—he rowed for his college, he was a useful cricketer, and he spent many of his vacations climbing in Switzerland. He was, for a time, secretary of the Fulford Golf Club, and had the distinction of being the first member to do one of the holes in a single stroke. He was an ardent Freemason, and in 1917 was Worshipful Master of the Albert Victor Lodge.

In 1910 Dr. Hopkins married Miss Hilda Wilberforce, of York, who cheered him in his work and was a constant solace to him in his illness. His widow and one daughter mourn his loss.

R. A. HOOPER.

EDWARD SWAN SIMPSON, M.C., M.D., Ch.B.Edin.,

Medical Superintendent, East Riding Mental Hospital, and Ordinary
Member since 1905.

We regret to record the death of Dr. E. S. Simpson, Medical Superintendent of the East Riding Mental Hospital, which occurred at Beverley, after a short illness, on February 2, 1927.

He was born in Edinburgh in 1882, and was educated at George Watson's College. He received his medical education at the University of Edinburgh; he graduated M.B., Ch.B. in 1905, and proceeded to M.D. in 1910. He held also the Certificate in Tropical Medicine of that University. In 1905 he was appointed an assistant medical officer at the East Riding Mental Hospital, and in 1919 succeeded Dr. Archdale as Superintendent. He served the hospital for twenty-two years—exactly half his life.

He was a representative member of the Northern and Midland Division of the Council of the Association for some years. He was an able psychologist, a sound general physician, a man of considerable mental culture and a good administrator.

During the war he served overseas with the 1st/3rd Northumbrian Field Ambulance, and was then posted, at his own request, to the 4th Green Howards as regimental medical officer. He was a gallant and efficient officer, and was awarded the Military Cross for his service during the great retreat in the spring of 1918.

His was a very full life. He was at once a scholar and a sportsman; for many years he was secretary to the Beverley and East Riding Golf Club, and was captain in 1926; he was a keen fisherman, a noted raconteur, a hospitable host, and a welcome guest wherever he went. He was an ardent Freemason, and three weeks before his death was installed Worshipful Master of the Constitution Lodge of Beverley. Simpson was beloved by all who came in contact with him; his geniality endeared him to his friends, and his unflinching kindness and consideration for staff and patients will not be soon forgotten. His loss is deplored, and great sympathy is felt for his widow at his early death.

A service was held in the hospital chapel on February 5, which was largely attended by his friends and colleagues, and his remains were interred at Edinburgh on February 6.

F. G. DOBSON.

WALTER RICHARD HUGH SMITH, B.A., M.D. Dubl.,

Senior Assistant Medical Officer, Salop Mental Hospital, and Ordinary Member since 1914.

We regret to record that Dr. Walter R. H. Smith, Shrewsbury, passed away on September 19, 1926, after a long and painful illness, which he bore patiently and uncomplainingly, while attending to his duties up to a fortnight before his death.

Born at Antwerp, of Irish parentage, on April 25, 1876, he spent his early days in Belfast and later in Dublin. He went to school at Haileybury, and received his medical education in Dublin, where he took his M.D. degree in 1902. He entered on public mental hospital work as an Assistant Medical Officer at the Lancashire Mental Hospital, Whittingham, on March 2, 1903, remaining there until he went to the Salop Mental Hospital, Shrewsbury, as Senior Assistant Medical Officer on February 27, 1914. He remained there until the time of his death, except for 3½ years' war service, most of which was spent in India, where his health was considerably undermined by attacks of dysentery and influenzal pneumonia.

Dr. Smith was essentially an outdoor man. A prominent athlete in his youth, he later became an enthusiastic and successful gardener, and was keen on golf, shooting, and fishing. He was a reliable and well-informed observer of nature, and he frequently sent original and interesting contributions to the Press, particularly to the *Shooting Times* under the *nom de plume* of "John Snipe."

He was of a generous, bright and cheerful disposition, and he retained these qualities even during months of suffering from considerable pain and insomnia. His readiness to sing or make a humorous after-dinner speech made him a welcome guest at any social gathering, especially in Masonic circles, which he had entered since his return from the war, and at the time of his death he was the Junior Warden of the Salopian Lodge, No. 262.

He was a loyal and conscientious medical officer, who spared neither his health nor his time in attending to his duties. He was popular with everybody, and especially with his patients, by whom and by all others at the Salop Mental Hospital he will be greatly missed. A tablet to his memory, which is to be placed in the Hospital Chapel, is in course of preparation.

W. STANLEY HUGHES.

The Right Hon. MICHAEL FRANCIS COX, LL.D., M.D., F.R.C.P. Irel.,

Ordinary Member since 1918.

On February 20, 1926, there passed away a distinguished physician who had made his mark as a medical consultant in Ireland.

Michael Francis Cox had been an invalid for at least two years, which fact partially concealed a gap that would otherwise have loomed large at his demise. The quietude of his passing also accounts for the somewhat overdue notice by this Journal.

Born in the West of Ireland in the year 1852, he was educated at the Catholic University School of Medicine, and he obtained the medical qualifications of the Royal Colleges of Surgeons and Physicians of Ireland some fifty years ago.

At first he chose to practise in the country, but soon he transferred to Dublin, where he was appointed one of the physicians to St. Vincent's Hospital.

He proceeded to the Fellowship of the Royal College of Physicians in 1892, and in 1922 he became its President, upon which occasion his old students assembled in large numbers, and, at a public luncheon, presented him with a loving-cup in the form of a copy of the Ardagh Chalice.

Among many other distinctions conferred upon him were those of Senator and Chairman of Convocation in the National University, the M.D. and LL.D. degrees of which had been granted to him *honoris causa*.

In 1911 he was appointed a member of the Irish Privy Council, which office he resigned in 1920 as a protest against the policy of Mr. Lloyd George's government towards Ireland.

Cox was a man with wide interests—literary, antiquarian and political.

An intimate friendship with Parnell, John Dillon and Redmond brought him into close contact with the inner politics of his country.

His connection with psychological medicine was not very marked beyond that which a noted physician experiences in his work as a general consultant.

He joined the Association in 1918, so that the number of his years with us was small, but he came at the zenith of his fame, and by doing so he did us some honour. *Requiescat in pace!*

H. R. C. RUTHERFORD.

C. B. ROSCROW, L.R.C.P., L.R.C.S.Ed., L.R.F.P.S.Glas.,

Late Medical Superintendent, City Mental Hospital, Winson Green, Birmingham,
and Ordinary Member since 1920.

We regret to record the death of Dr. Cecil Beaumont Roscrow, in a nursing home in Sutton, Surrey, on December 8, at the age of 56.

Dr. Roscrow received his medical education at Edinburgh University, and obtained the diplomas L.R.C.P., L.R.C.S.Ed., L.R.F.P.S. Glas., in 1894. After a period of general practice in Sunderland and in London, and serving as ship surgeon, he went to the City of Birmingham Mental Hospital at Winson Green as Senior Assistant Medical Officer. At the end of eight years' service he succeeded the late Dr. E. B. Whitcomb as Medical Superintendent, and in June of last year retired on pension after twenty-three years' service, and went to live at Sutton, Surrey.

He had, for the last five or six years, suffered from diabetes, which influenced him in his decision to retire so early. A week before he died he developed a large carbuncle in the neck, which involved the spine, and despite two operations he passed away.

Dr. Roscrow was a man of strong character, well read and practised in his profession, and very conscientious. He had an intense dislike of publicity, and two years ago, when requested by his chairman to allow certain press representatives to visit and report on what the hospital was doing in regard to the treatment of general paralysis by malaria, etc., he did so with great reluctance, and only on condition that the names of the officers concerned should be omitted. It was characteristic of him, too, that when his predecessor died he made no effort to succeed him.

He continued the Winson Green atmosphere of homeliness, and it was his proud boast that he knew each of his 800 patients by name. He had a ready wit, and this carried him through very often when dealing with an "awkward" patient. He discouraged the display of keys by the staff (key-chains were anathema), and tried always to have the doors of the club wards open at all times of the day. He increased very much the amount of liberty given to patients, and it is the rule now, rather than the exception, that chronic patients should have a day out with their relatives every month. For those who had no friends, or whose friends lived too far away, he organized weekly picnics for the women and weekly fishing parties for the men.

He was strict in the supervision of his staff (especially if patients were concerned), but he had the rare and inestimable gift of being able to turn a blind eye to many little delinquencies when he judged that was the better course. As a result he was loved and very highly respected by his staff and by the patients, who felt they had one they could confide in. He was never very keen on games (although earlier he had played in the hospital cricket team), but he loved to study astronomy, geology and architecture. Many of his old colleagues will remember his "two in the morning" lectures on the heavens. Although he had travelled abroad a good deal, he became interested, after the war, in the various architectural features of this country, and he motored all over England in his search for architectural knowledge. At Winson Green he greatly increased the practice of sending out patients on trial with a money allowance, and the visiting by the After-Care Visitor of those who desired it. He made Winson Green one of the earliest of mental

hospitals to introduce the "improved breakfast," and although he was a keen economist, he never attempted to cut down food, either in quantity or in quality. Other improvements, such as cinema, mechanical spreaders, mixers and so on, were added as soon as brought to his notice.

He was Clinical Lecturer in Mental Diseases in the University of Birmingham. Last year he was photographed with nearly 70% of his nursing staff, all of whom had gained the certificate of the Royal Medico-Psychological Association.

Dr. Roscrow never married, and he used to quote the late Lord Kitchener in support of his contention that the married man's interest in his work was subordinate to his interest in his home. At any rate he himself made his hospital his whole interest, and it is extremely sad that one who so thoroughly deserved a well-earned retirement should have been so soon cut off.

When he retired last June he was the recipient of many gifts from committee, staff and patients, and at his funeral at Sutton on December 10 many representatives from the hospital went to pay a last tribute to his memory.

ERNEST SHAND.

NOTICES BY THE REGISTRAR.

FINAL EXAMINATION RESULTS FOR THE NURSING CERTIFICATE, NOVEMBER, 1926.

List of Successful Candidates.

Those marked * are "with distinction."

Mental Nursing.

Berkshire.—Ellen Louisa Prendergast, Dorothy Jewell, Eileen Kathleen Gladys Lines, Annie Kirk, Grace Michael Dobson.

Cheshire, Chester.—Thomas Mellor Hooson.

Cheshire, Macclesfield.—Florence Hopkins, Hilda Jones, Kathleen Hughes, James Leslie Leighton.

Cornwall.—*Muriel Solomon, *F. Higginson, Clarinda Bertolucci.

Derbyshire.—Audrey Shawcroft, Bertha Harriet Widdowson, Winifred Lucy Goldsmith, Walter Hall, Charles Frederick Victor Low, Douglas Walters.

Devonshire.—William George Bearne.

Dorset.—Sarah Jane Daisy Carter, Florence Mary Lucas, Frank Robinson, George Goodman, Ethel Florence Swatman.

Essex, Brentwood.—*Charles Arthur Annereau, Henry Louis Jackson, George Henry Mallinson, George Baden Perrior, Kathleen Janet T. Hewitson, Theresa Ballantyne, May Annie Pegg, Madeline Irene Norton Harvey, Blanche Frances Solomon, *Zoe Phillips, Florence Mary Sharman, Elsie Mabel Walker, Rose Lilian Elizabeth Cook, Gertrude Dorothy Bavin.

Essex, Severalls.—*Elsie Christian Eary, Anna Mary Jones, John Robert Crompton, Thomas William Collins, Arthur John Woolley.

Hampshire, Knowle.—Winifred Matilda Warder, Ethel Florence Josephine Blake, Irene Iris Baker, William Stanley Lucas Matson.

Hampshire, Park Prewett.—William James Cottrell, William John Startup, David James Locke, Arthur William Fryer, William Evans Tucker, Alice Winifred Heron, May Anderson, *Lilian Snowdon.

Isle of Wight.—Alfred Thomas Symons, Michael Nolan.

Kent, Chartham.—Leslie Halsey, Annie Hammond, Ethel Gertrude Howell, Agnes Roach, Elsie Winifred Goodban.

Kent, Maidstone.—James Miles, Percy Leonard Jarrett.

Lancashire, Whittingham.—Edward Parkinson, Joseph Woodcock, Margaret Halsall, Eleanor Parkinson.

Lancashire, Winwick.—Edward Thomas Jones, Percy West.

Lincolnshire, Bracebridge.—Ivy K. Howman, Elsie Toyne, James Bell.

London, Banstead.—Elsie Standing Day, Ivy Florence May Hulford, Doris Nellie Phillips, Dorothy Gladys Nellie White, Elizabeth Annie Christian, James John Weatherley, Reginald Charles Procter, John Skeffington House, Charles Alfred Hyder.

London, Bexley.—Rose Preston, Rosina Green, Kathleen Riley, James Robert Charles Funnell, Hugh Hardy, Edward Walter Fredk. Mason, Frederick Thomas

Pennial, George Samuel Sells, Leonard Thomas Still, Frederick Thomas George Saunders, Stanley George Vickers, Irene Mabel Clematt, Doris Mary Ransley, Mabel Alice Line, Melinda Urquhart.

London, Cane Hill.—Harold James Halfacre, William Frederick Maidwell, Gladys Dorothy Irene Young, Millie Samuel, Honora Cockram, Louisa Cockram, *Katie Susan Craddock, Ellen May Whittle, Mabel Margaret Esther Fothergill, Ethel Blanche Funnell.

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Mental Defective Nursing.

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State Rampton.—Robert Harold Kelsey, James Francis Beare, Paul Kevin Laffan.

Stoneyetts.—David McLean Lindsay.

South Africa.—Izaak Deffame Barnard, Albert Jozua Zinn.

HONOURS ROLL.

In the absence of a register of the names of those who had been awarded the Gaskell Prize or the Bronze Medal and Prize of the Association, the Honours Roll published for the first time in our January number in compliance with the revised byc-laws was compiled with difficulty.

The following omissions have come to our knowledge: Gaskell Prize, 1892, Dr. Nathan Raw should be bracketed with G. R. Wilson, and in regard to the year 1902, G. H. Grills should be inserted.

The Registrar would be glad to be notified of any other omissions.

NOTICES OF MEETINGS.

The *Annual General Meeting* for 1927 will be held at Edinburgh during the week commencing July 18, in conjunction with the Section of Mental Diseases of the Annual Meeting of the British Medical Association.

It will also be the occasion of the celebration of the centenary of the death of Pinel.

Members proposing to attend should at once take steps to secure accommodation, or communicate with Dr. W. M. Buchanan, Secretary, Scottish Division, Kirklands Asylum, Bothwell, Lanarkshire.

Quarterly General Meeting.—May 19, 1927, at the British Medical Association House (Hastings Hall), 19B, Tavistock Square, London, W.C. 1, at 2.30 p.m. On the same day at 3.30 p.m. the 8th Maudsley Lecture will be delivered in the Great Hall. (All Standing and Special Committees meet on the previous day.)

South-Eastern Division.—April 14, City of London Mental Hospital, Stone, near Dartford.

South-Western Division.—April 28, County and City Mental Hospital, Littlemore, Oxford.

Northern and Midland Division.—April 28, North Riding Mental Hospital, Clifton, York.

Scottish Division.—Stirling District Mental Hospital, Larbert; date not yet fixed.

Irish Division.—April 7, Elmhurst, Glasnevin, co. Dublin; July 9, Portrane District Mental Hospital, Donabate; November 3; April 5; 1928, July 5; 1928, November 1, 1928.

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- Mental Hospitals, Bengal, Annual Report, 1925.
Craig Colony, 33rd Annual Report, 1926.
Bihar and Orissa Mental Hospitals for Indians, Annual Report, 1925.
American Health Congress: Venereal Disease and Vision Impairment, 1926.
Basal Metabolism as Determined by the Respiratory Exchange, by *Dr. F. A. Pickworth*.
Digestion and Mental Disease; Diabetic Tabes, So-called, by *Dr. John Bostock*.
The Heroic Rôle—An Historical Retrospect; Psycho-analysis in Theory and in Life; Psychiatry as an Objective Science; Our Mass Neurosis; Our Social Evasion; and Insanity a Social Problem, by *Dr. T. Burrow*.
Peculiarity of Thought in Schizophrenia; Regression; Exogenous Maturation; The Oral Complex, by *Dr. H. S. Sullivan*.
The Outcome of Mental Diseases in the United States; Annual Statistical Review—State and Private Hospital of New York, by *Dr. H. M. Pollock*.
A Memory going back to the Age of Six Months, by *Dr. E. Pickworth Farrow*.
The Case of John Perry, 1660, by *Sir John Collie*.
Instinct and Functioning in Health and Disease, by *Dr. P. Macdonald*.
Observations on Epilepsy, by *Dr. W. Aldren Turner*.
The Protean Aspect of Insanity in Relation to Bodily Disease, by *Dr. M. J. Nolan*.
L'Enseignement Psychiatrique d'Adolf Meyer, by *Dr. Henri Flournoy*.

Books received for review :

- Woman, by *Dr. Bernhard A. Bauer*; English translation by *E. S. Jerdan*.
Types of Mind and Body, by *Dr. E. Miller*.
Psychological Studies, by *Theodor Lipps*.
Le Peyotl, by *Dr. A. Rouheir*.
Convulsions et Épilepsie des Enfants, by *Dr. A. Collin*.
Sur l'Évaluation du Temps dans Certains Troubles Mentaux, by *Dr. Roger Bouchard*.
Genius—Some Revaluations, by *A. C. Jacobson*.
Shell-shock and its Aftermath, by *Dr. N. Fenton*.
Précis de Séméiologie, by *Dr. A. Rouquier*.
Further Contributions to the Theory and Technique of Psycho-Analysis, by *Dr. Sandor Ferenczi*.
Mind and its Disorders, 5th Ed., by *Dr. W. H. B. Stoddart*.
Victorian Jottings, by *Sir James Crichton-Browne*.
Solubles ou Insolubles, by *Dr. Henri Drouin*.
The Ego and the Id, by *Dr. Sigm. Freud*; English translation by *Joan Riviere*.
An Introduction to the Theory of Perception, by *Sir John Herbert Parsons, C.B.E., D.Sc. F.R.C.S., F.R.S.*
An Introduction to Forensic Psychiatry in the Criminal Courts, by *Dr. W. Norwood East*.
Mind not a Machine, by *Prof. Eugenio Regnano*.

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JULY, 1927.

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THE JOURNAL

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LETTERS PATENT RE COAT OF ARMS.

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The following Mental Hospital Reports for the years 1925 and 1926 have been received :

Glasgow Royal.
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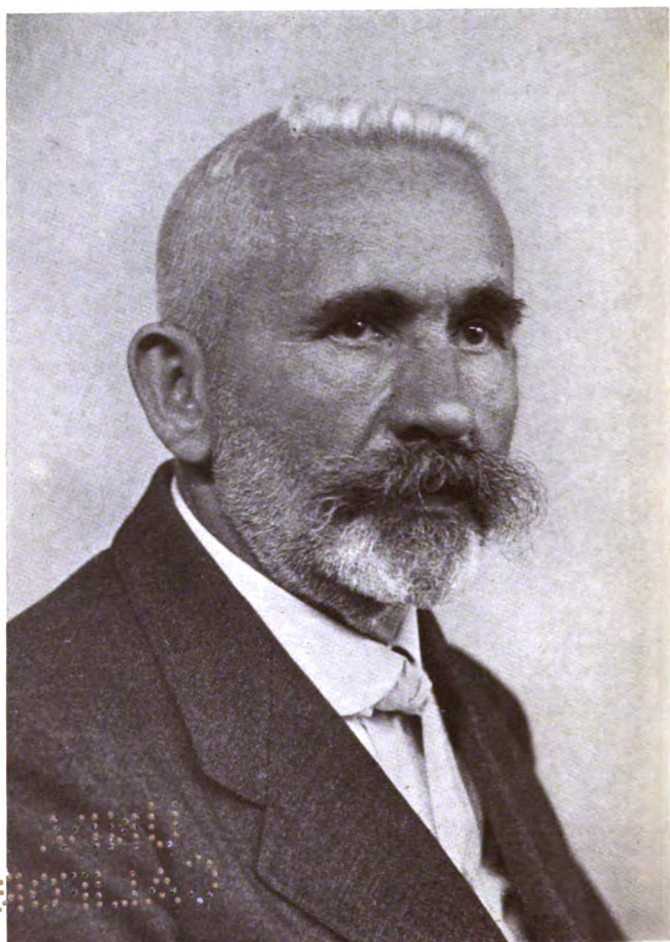
Also the following Reports, Reprints, etc. :

The Fourth Report of the Inspectors of Lunatics for Northern Ireland, 1925.
The Twenty-seventh Report of the Lebanon Hospital, 1925–1926.
The Sixty-eighth Annual Report of the Royal Eastern Counties’ Institution, Colchester, for 1926.
The Forty-fourth Annual Report of the Royal Hospital for Sick Children, Glasgow, 1926.
The Need of an Analytic Psychiatry. Speaking of Resistances. The Reabsorbed Affect and its Elimination. The Ethnic Aspect of Consciousness. All by *Dr. Trigant Burrow*.
The Onset of Post-Encephalitic Parkinsonism, by *Dr. John P. Steel*.
The Function of the Valves of Houston, by *Dr. J. F. Montague*.
Recent Discussions on “Time,” by *Dr. G. F. Goldsbrough*.
Reminiscences of Lister, by *Dr. J. Ford Anderson*.
Les Précurseurs de Pinel, par *Dr. René Semelaigne*.

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THE JOURNAL OF MENTAL SCIENCE

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VOL. LXXIII.

Part I.—Original Articles.

The Eighth Maudsley Lecture : Dealing with some of the Work done to elucidate the Pathology of Disease falling to be considered under the Rubric "Insanity." Delivered by EDWIN GOODALL, C.B.E., M.D., B.S., F.R.C.P., Medical Superintendent, Cardiff City Mental Hospital; Lecturer on Mental Disorders, Welsh National School of Medicine; at the Quarterly General Meeting of the Royal Medico-Psychological Association, held on May 19, 1927, in the Great Hall of the British Medical Association House, Tavistock Square, London.

MORBID HISTOLOGY.

It has not been given to many of those whom I have the privilege of addressing to watch the course of the scientific investigation of the pathology of the psychoses for a period of thirty-four years. Many of my hearers are scarcely old enough to feel the pangs of disappointment. It will be some twenty-five years ago that, in general, the attention of workers in the domain of the pathology of insanity began to slacken in respect of that aspect of the work which, till then, had mainly interested them, *viz.*, the morbid anatomy of the brain. The output of work in this field about then showed signs of diminishing. Attention began to be directed to the problem of pathological causation. Search began to be made for the pathological factors which expressed themselves in the morbid histological conditions found in the brain-cortex, and, passing on, if we note the interests of young graduates studying for a diploma in psychological medicine, we shall, I think, find that they are not in the direction of histo-pathology, but rather in that of, for example, the function of the endocrines, of the autonomic nervous system, possibly of bio-chemistry. My experience of published work from foreign clinics in psychiatry is that the same drift from histology is noticeable. Nevertheless, it would be unphilosophical

to take the view that research in morbid histology of the brain is not worth while, and a perusal of the literature shows the work in progress in the field of the normal histology of the nervous system. Improvements in technique—in the main due to German, Spanish and Italian workers (how comes it that this branch is so little cultivated by the British?)—will add to our knowledge, and thus research in morbid histology will be constantly stimulated.

The application of the method of photo-micrography in ultra-violet light to the study of the nervous system appears to date from about 1911. A series of studies in the human nervous system is reported by Weimann (1) (1925). This method may be of much significance in the study of the histology and histopathology of the nervous system, but the difficulties and sources of error associated with it will, however, prevent it from becoming a method of general use.

The origin and significance of the plasma-cells, found in dementia paralytica, encephalitis lethargica, and some other conditions; the functions of the different types of neuroglia cells, and of the microglia—these, for example, are matters of interest. A masterly contribution by Cajal (2) upon the topic of the neuroglia in general paralysis shows that the microglia was first fully demonstrated by means of the technique perfected by Del Rio Hortega. This work dates back only some seven or eight years, and it was led up to by the work of the Italian, German and Spanish schools.

Comparatively recent work has shown the neuroglia to be a more complicated structure than was thought twenty years ago. This development in normal requires to be further supplemented by research in morbid histology. The function and dysfunction of this structure are still mainly matters of hypothesis. A good account of the microglia was given by Del Rio Hortega in August, 1925 (3). This third element, as it has been called, of the nervous tissue is, in his view, not a part of the neuroglia at all, but a cell of mesodermic origin which has migrated into the nervous centres. From Hortega's description, based on histological and experimental evidence, one pictures the microglia cells as amœboid bodies, of varying figure, according as they require to adapt themselves to the local characteristics of the framework of nerve-cell, blood-vessel and neuroglia in which they have to function. The conception of function presented is that of a permeating tissue, subserving depuration in health, phagocytosis and scavenging in disease, these latter purposes being achieved by movement of the microglial elements to the site of disease. This was a conception formerly applied to the astrocytes, but never, I believe, on sufficient evidence.

As recently as December, 1926, the subject of the appearance and activity of the Hortega (microglial) cells in pathological states was dealt with at length by Creutzfeldt and Metz (4).

If we except dementia paralytica, senile and arterio-sclerotic dementias, the brain-changes found in cases of mental disease are uncharacteristic. As regards the so-called "dementia præcox" group, and especially the cases exhibiting catatonia and catalepsy, it cannot be admitted that morbid histological states described by individual workers as characteristic have been generally accepted as such—thus, that lesions of the ectodermal elements (which probably preponderate over those of the mesodermal tissue) are especially pronounced in the deeper layers of the cortex cerebri; that they are especially pronounced in certain cortical strata. The excessive fatty deposit found in ganglion cells of the cortex in quite young persons who were cases of dementia præcox is of note. This may be an instance of the phenomenon referred to by Leathes and Raper (5)—the conversion of fat normally present, which does not stain, into fat that does, because of a change in dispersion of the fat, leading to aggregation. The example they quote from Dudgeon is significant. Whereas normal heart-muscle of guinea-pig and other animals shows no sign of fat in the cells when treated appropriately with Scharlach R., these cells similarly treated 24 hours after the injection of diphtheria toxin "may be densely studded with deeply-stained droplets and granules. Chemical analysis shows, however, that the normal heart may contain as much fat as the deeply-stained poisoned cells, or even more, though none of it is revealed by the staining." It is notorious that great difficulty surrounds the proper investigation of these cases of malignant dementia of adolescence ("dementia præcox"), since they succumb comparatively late in the course of the disease, and from intercurrent maladies. The histopathological conditions present at the base of the brain (basal ganglia, third ventricle environment, and mesencephalon) would be of great interest. Schuster (6) made a contribution in 1926 upon the patho-histology of two cases of dementia præcox which showed during life striking psycho-motor disturbances, in which muscle-rigor was present up to the end of life; severe ganglion-cell degeneration and neuronophagy were found in the vegetative centres and basal ganglia and nuclei which are brought into association with the psychomotor disturbances.

Although it is probably the prevailing opinion at present that the motor disturbances seen in catatonia are not due to pathological processes in the sub-cortical areas, but to such in the grey matter of other regions of the encephalon (degeneration of the nervous

parenchyma), recent work tends to give us pause; more work is needed upon this important point. Apart from the instance cited above, pathological changes have been described in the extra-pyramidal centres in cases diagnosed as dementia præcox, affecting both cells and blood-vessels (7). In order justly to appraise such work we require particulars regarding the clinical symptoms and signs exhibited by the patients, their ages, accompanying bodily disease, if any, the cause of death, and the pathological conditions found *post-mortem*. In so far as material has been available from cases free from intercurrent (especially infectious) disease, at the disposal of competent workers, and within a few hours of death—a rare combination—the histo-pathological data point to changes in the encephalon, not inflammatory, but degenerative, and of a widespread nature. Cerebrum, cerebellum, mesencephalon, pons and medulla, basal ganglia and extra-pyramidal structures—lesions have been described in all. More evidence is required before statements made concerning a concentration of these lesions in the subcortical areas in cases of the catatonic type can be accepted (8). As regards what may be described as the malignant psychoses of adolescence and early manhood, it would be more scientific if the superficial evidence of defective development, which so many of these cases yield, were confirmed by systematic examination for stigmata of degeneration. For these, and other instances of the psychoses, such examination, after a scheme sufficiently comprehensive, is desirable.

Corroborative evidence of infantilism, of Mott's observation on arrest of spermatogenesis and regressive atrophy of the testes, and on the decay of nuclei of the cortical nerve-cells, is required. Witte (9), giving careful regard to the various sources of error (due to secondary disturbances), considers that in about 60% of cases of schizophrenia (controlled by other cases) the testes are abnormally small, and very often there is defect or absence of spermatogenesis. These conditions he regards as the expression of inborn deficiency of the testes. The diminution of the interstitial cells, which Mott described, is, according to this writer, but rarely found. The views of Mott are in general corroborated by Münzer (10) in a particularly valuable contribution on an individual case. If it is hereafter established that the testis (and the ovary) presents morbid histological conditions in some kinds of adolescent dementia, it will be reasonable to expect research with a view to ascertaining whether any reactive substance can be discovered in the blood-serum.

The hopes raised by the Abderhalden procedure for the demonstration of specific antibodies in the blood-serum extended to the domain of psychiatry, so that about 1913 a considerable amount of

work was done in Germany in that domain with this method. It could not, however, be decisively demonstrated that breakdown-products of protein of genital gland, cortex cerebri, or any other tissue were present in the circulation, and gave rise to protective antibodies. After a brief experience of the Abderhalden procedure, as originally described, I, in common, I believe, with most who tried it, concluded that the complicated technique and sources of error therewith associated ruled it out as a practical method.

It seemed as though the Abderhalden method had been discarded, but evidently much patient work has been bestowed upon it since the above date, as reports are again appearing, at any rate in the German medical press, upon clinical work carried out with improved technique, whether with the dialysing method, or by the methods of interferometry and refractometry.

The results obtained with these methods are not encouraging. In July, 1926, Kafka (11), of Hamburg, than whom there is no more experienced worker in serology, described his experiences with new methods worked out by Sellheim, Lüttge and v. Mertz, which dispensed with dialysing. In substance, these consist in obtaining the dried organ-powder (of the tissue to be tested) by a technique described, adding to this the serum to be tested, incubating, and further adding aldehyde-free 96% alcohol, and, after boiling and filtering, adding the ninhydrin solution used for the test. A control tube of serum without organ-substratum is put up. A definite blue reaction is positive. Kafka's results go to show a preponderance of strong reactions with gonadal tissue in schizophrenia—mostly associated with reactions with brain-cortex and thyroid; a remarkably constant reaction with thyroid in epilepsy; preponderatingly negative results in manic-depressive psychoses with the substances giving positive results in schizophrenia. This interesting communication should incite to further work on these lines.

To pursue for the moment the subject of antibodies or ferments: The diastase-content of the urine is an index to the amount of diastase in the blood. Scholberg and I (12) examined the urine at least twice, and in many cases oftener, in 120 instances of mental disorder of various kinds, as admitted into a public institution, and found a normal diastase value in all except 7 cases. Evidence of kidney disease was absent in these 120 cases with one exception. In view of recent work by von Strasser (13) upon the diastatic ferment in blood, embracing patients suffering from many forms of disease as well as healthy persons, it seems clear that normal diastase-values in the serum are only found to be exceeded where there is good reason to suspect that the pancreas is involved (especially in pancreatitis).

As regards proteolytic and so-called lipolytic ferments in blood, it is the case that some work as regards the former has been published in respect of epileptics, but I am of opinion that in the present state of knowledge we are not in a position to study the action of these ferments in cases of disease.

While one must recognize that it is very difficult to obtain pathological material from typical cases of the psychoses sufficiently free from the complicating effect of intercurrent disease to render it of value, I, nevertheless, think that we have not taken, and are not taking, sufficient advantage of our opportunities to study the morbid histology of the glands of internal secretion in cases of adolescent dementia—a subject on which we are very badly informed. Its importance was recognized, I would recall, by Sir Frederick Mott, whose pioneer work on certain of the glands of internal secretion we are familiar with. The study of as many as possible of these glands in one suitable case is more likely to be informative than that of an individual gland in many cases.

At this point, a few words as regards remissions in dementia præcox. Since these occur, transforming the clinical picture in many cases dramatically, producing such a degree of amelioration that the patient is fit for discharge, mentally well for the time being, and even able to take up a subordinate occupation, it becomes a duty, and an interesting one, to seek out Nature's method of bringing about the change. Many of us who had charge of mental cases amongst troops during the war must have been struck by what appeared to be recoveries in cases which, in ordinary civil experience, would have been classed as dementia præcox. These cases could not be followed up, and may have been instances, some of wrong diagnosis, others of dementia præcox in remission. These remissions in dementia præcox are doubtless less frequent and less complete than those noted in dementia paralytica. In neither case do we know to what they are due. While they can be imitated—probably improved upon—by the malarial treatment in dementia paralytica, I have not been able to find evidence that any success has attended this or the like empirical means when applied to the case of dementia præcox. There is a fascinating field of work which may be commended to the juniors in our branch of medicine in respect of the phenomenon of remission in both the diseases mentioned. The conception—and it is no more, and one based on observations in need of extensive corroboration—of a premature decay in vitality in cases which break down at adolescence, is likely to damp the ardour of the research worker, and to exalt the horn of the numerous pessimists who, unemployed, frequent the glades of psychiatry. The evidence of remission should act as a corrective

and a stimulant. Indeed, I would suggest that the clearing up of mental and physical symptoms and signs sometimes seen in dementia præcox is difficult to reconcile with a doctrine of premature decay of neurones and endocrinal tissues, and justifies the working hypothesis that, in order to have a remission, an exciting cause must be put out of action. Most people will work only in faith, and if this form, like others, has its detractors, it will inevitably have its devotees likewise. We must, I consider, look to the neuro-psychiatric clinic in all countries to deal with the problem of the pathogenesis of the dementia of adolescence—in my view, far the most serious and the most difficult of the problems of psychiatry. Such a clinic, because of its superior staffing and research facilities, and because these cases will be seen in earlier stages than at the present mental hospitals, will be in a far better position to conduct this investigation than are the latter.

If this be sound, then how do we stand in this country, with its primitive organization for dealing with the problems of psychiatry?

Bonhoeffer, who deals with the psychoses associated with infectious diseases in Aschaffenburg's authoritative *Handbook of Psychiatry*, points out the great difficulty—indeed, sometimes the impossibility—of diagnosing between catatonia in its acutest phases and a similar condition seen in the infection-psychoses. He states that there is no single catatonic symptom that may not be found in the latter. Diagnosis, if feasible, must be made by the help of certain accompanying symptoms, and from the history. A similar difficulty has been described in respect of cases of poisoning by CO (14). I doubt whether sufficient attention has been bestowed upon this clue.

TOXÆMIA.

In the Presidential Address which I had the honour to deliver before this Society in 1923, I summarized the work which, to the best of my knowledge, had been done in the domain of bacteriology in the acute and recent psychoses. I am old enough to remember the introduction of bacteriological methods into mental hospital laboratories, at approximately the date when histological research had reached its apogee. In this direction, also, interest has waned, so that for some fifteen years little or nothing has been published. My summary of bacteriological investigations, including personal investigations in association with colleagues, dealt with the examination of the blood, urine, fæces and cerebro-spinal fluid. The results have not thrown light on the essential pathological causation of the psychoses. But improvement in mental disorders has been recorded as following upon removal of

sources of infection in the mucous tracts. As regards our knowledge of the intestinal tract as a source of infection, I consider that the position is still very unsatisfactory. For a few years prior to 1914 my colleagues and I at the Cardiff Mental Hospital Laboratory had carried out much tedious work on the bacteriology of the fæces in states of acute melancholia and mania. An extensive survey in 1914 of all the foreign literature of importance enabled me to state that extremely little work had been done in this direction. Knowing as we do the striking effect upon the mental state of dealing drastically with the extreme constipation present in numbers of newly admitted patients, and appreciating the evidence of radiograms after a barium meal in these cases, it is clear that some toxic agency or agencies are at work, as to the nature of which, in my opinion, we are wholly ignorant. In the work on the bacteriology of fæces in acute mental disorders just alluded to we were unable to confirm the statement that had been made by the Italian observer, Pardo, that the putrefactive anaerobes of the intestine were increased. According to quite recent work of Kaemmerer and others, of the Medical Clinic in Munich, porphyrin has significance as a criterion of intestinal putrefaction. In its formation the obligatory anaerobes are the chief factors. We therefore carried out tests with the technique of Kaemmerer in 12 cases of acute and recent mental disorder, but in none could porphyrin be found spectroscopically.

As Bergeim (15) says, more satisfactory chemical indices of intestinal putrefaction are much needed. He has employed as such an index the reduction in the intestine of ingested ferric oxide, using the rat for the experiments. It was found that the oxide was reduced almost entirely in the cæcum and large intestine; that a carbohydrate diet, which altered the intestinal flora to an aciduric type, resulted in marked diminution of intestinal reduction; that intestinal stasis led to marked increase in reduction. This line of work seems worthy of further study, with a view to ascertaining whether the reduction is actually to be ascribed to the preponderance in the large bowel of the bacteria which produce proteolysis and putrefaction (usually described as, mainly, obligatory anaerobes). Is the reduction an index to such preponderance? If so, do toxic states result from such? In German literature one comes across references to the effects of absorption of "Darmfäulnis produkte." These putrefactive products arise from proteolysis in the bowel, such bodies as indol, phenol and kresol resulting. The estimation of indican and phenol in the blood is difficult. Notwithstanding all the work done on the former, I do not believe exactitude and reliability of method can be claimed. Becher and others (16) have recently described a colorimetric method for phenol,

which they claim estimates that substance, free and bound, in blood, etc., "with sufficient exactitude." The presence in excess of such substances in the blood is clearly bound up with the factors of diet and of kidney-function, whatever other morbid factors may be involved. I hope to refer to the importance of routine functional tests on our patients.

Ford Robertson and Cotton have drawn attention to the foci of infection which exist in the gastro-intestinal tract in the insanities, and in quite recent times Mazzanti (17) reported upon 12 cases of confusional insanity which came to *post-mortem*, of which 8 showed macroscopic lesions of the intestine; three of them, studied histologically, macroscopic lesions likewise, of the intestinal wall—intense congestion, hæmorrhage and degenerative changes. These acute alterations permit, according to the author named, of abnormal absorption of toxic substances from the intestine. In these cases the small intestine especially showed the lesions. How often is the small intestine cut open and examined at mental hospital autopsies? In my belief this is but seldom done. One of my colleagues and I, with the skilled assistance of Dr. Robert Knox, of King's College Hospital, studied the passage of a barium meal in 34 cases of mental disorder (18). Stasis, ptosis, and spasticity were marked. Dr. Chalmers Watson, of Edinburgh, described much the same findings. These results were recorded in 1922 and 1924, yet I have seen but little record of further work, obviously necessary, in this direction.

Henry (19), who has also studied this subject, remarks that such study shows evidence of relationship between psychoses and altered function of the vegetative nervous system, with which I agree.

These radiograms furnish an argument for the systematic employment of colonic lavage in newly-received cases of the symptomatic psychoses—to be continued as long as bed-treatment is maintained. It is not easy, though desirable, to make fractional tests of the duodenal contents in acute and recent cases of insanity. It has been shown in other forms of disease that, under the abnormal conditions obtaining, organisms which normally have their habitat in the large bowel migrate upwards, and are found in the small gut, including the duodenum. Substances secreted by the intestinal mucosa, which normally destroy bacteria or inhibit their growth, are deficient or absent. This point, of the prohibitive difficulty of carrying out tests and treatment of very many of the insane, which are more or less routine in ordinary disease, is, I think, scarcely allowed for by our colleagues in general medicine, who criticize the paucity of our research output. Take such an investigation as an examination of the N-partition in blood, cerebro-spinal

fluid and urine in typical forms of mental disease: the very cases we desire to investigate, and at the earliest possible moment, elude us, by reason of restlessness, resistance and faulty habits.

In the Croonian Lectures of 1913, before the Royal College of Physicians, I dealt pretty fully with the work, including my personal work, done upon the leucocytal count in the psychoses. I think we are entitled to conclude that the leucocytosis, with polynucleosis, found in many of our acute and recent cases points to toxæmia, albeit not severe. The evidence of a mild acidosis furnished by the CO_2 combining power test points in the same direction, as does also the evidence of nitrogen-retention. With these two points I deal later. These indications of toxæmia support clinical evidence of the same—a mild toxæmia, therefore, not bacterial, but of unknown origin.

The psychoses due to exogenous toxic or infectious processes constitute a welcome link with general medicine, and seem particularly worthy of study, as tending to afford an insight into the pathogenesis of like mental disorders arising without obvious cause. Such conditions as typhoid, malaria, influenza, pneumonia can produce all forms of insanity, or very good imitations of it, except a systematized delusional state.

Bonhoeffer, in his well-known study of the symptomatic psychoses, deals with the pseudo-general paralysis which occurs in connection with some of the specific fevers.

The complete symptom-complex of the catatonic variety of so-called "dementia præcox" has been described as following upon typhoid and pneumonia. A pseudo-general paralysis occurs as a result of toxæmia of intestinal origin in persons with neurotic inheritance. Such a case at the Cardiff City Mental Hospital was described by one of my colleagues (20) in 1924. In this there was mental confusion, exaggeration of the deep reflexes, unsteadiness of gait, defective speech (to test-words), loss of pupillary reaction, direct and consensual. A radiological examination revealed marked atony of the stomach, with proptosis, delay at the ileo-cæcal junction, extreme stasis, with spasticity, of the colon. Some three weeks' treatment was necessary to overcome the marked constipation present. The patient recovered in two and a half months, and was under observation at the Out-Patients' Psychiatric Clinic for over a year, during which time she remained well; she has not been seen since.

The question of toxicity of the body-fluids of persons suffering from the various kinds of insanity has not been thoroughly inquired into—a surprising state of things (21). The literature contains merely isolated and desultory references to the subject. In such work as has been done the animals used have been rodents in

practically all cases. In a systematic investigation animals higher in the scale should be employed. Probably the work done by my colleagues and myself—in which rabbits and fowls were used—is the most extensive as regards the psychoses, material, in the shape of serum, red blood-corpuscles, stroma of such, and cerebro-spinal fluid, from all the main clinical varieties of insanity being employed. The number of rodents and birds employed was very large. Control material was obtained from healthy farm-patients of a chronic class. The net result of these observations was that the deaths and losses of weight noted in the creatures injected with serum and red blood-corpuscles from cases of the psychoses (cerebro-spinal fluid produced no deaths) were not greater than those observed in creatures injected from control cases. For some unknown reason the stroma of corpuscles from cases of grave mental disease produced a heavy death- and loss-of-weight-rate, which was entirely absent when stroma from the controls was used. But in this particular case more numerous controls are desirable. In our experiments the rodents and birds were injected intravenously, in some cases intraperitoneally. Subdural and intraperitoneal injections are desirable.

One of the most interesting statements that I have come across is by Loewe (22). He found that the dried insoluble adialysate of urine from the catatonic type of dementia præcox, from dementia paralytica (after seizures) and from *delirium tremens* was highly toxic. From cases of epilepsy this is, in addition, capable of producing seizures very like epileptic ones, when injected intravenously. Similar adialysate from the urine of normal persons was not toxic. As regards toxicity of fluids (serum, urine) of epileptics or general paralytics, it is the case that statements in a positive sense have been made as to fluids withdrawn shortly after seizures, but findings in the pre-paroxysmal state would be of more importance.

In keeping with this evidence of lack of toxicity of the blood and cerebro-spinal fluid in cases of the psychoses is the result of a large number of experiments carried out by my colleagues and myself, which showed that there is no specific antisubstance (precipitin, hæmolysin, hæmagglutinin) formed when serum, red-blood corpuscles and stroma of such is injected into rabbits intravenously, even from recently received cases of acute mental disorder. As regards cerebro-spinal fluid from cases of general paralysis, this failed to produce any antibody in the serum of rabbits.

METABOLISM: SOME OBSERVATIONS.

About 1913, Allers, of the Munich Psychiatric Clinic, published a critical survey of the information then available in respect of

metabolism in the insanities. The subject had been worked at then for some nine years, but most of the work gave evidence of lack of training and inadequacy of method. A notable exception was the work of Folin and Shaffer (23), entitled "Some Metabolism Studies, with Special Reference to Mental Disorders." This classical and exhaustive study led to the following conclusions: A strong suggestion that general paralysis is a disease which may be associated at one stage or another with some metabolism disorder. Among other classes of the insane, pronounced variations (abnormalities of metabolism) from normal standard values are also very numerous, but no one metabolism-peculiarity could be identified with any particular form of mental disorder. The necessity for devising accurate analytical methods before this work could proceed is dwelt upon by Folin. His work was carried out between 1900 and 1904, since when chemists have been engaged in elaborating accurate methods for the examination of the chief constituents of urine, of blood-plasma or serum, and of cerebro-spinal fluid; in regard to the last two fluids, methods being adapted to the small quantities of fluid usually available, or the minute quantity of the constituents to be examined in the fluid. Thus, at our Chemical Laboratory at Cardiff, much patient research has been required in order to work out accurate methods for the estimation of reducing substances in the plasma and cerebro-spinal fluid, the components of non-protein nitrogen in the latter, and phosphorus and calcium in both fluids. As far as my knowledge goes, apart from the work of Folin upon urine, nothing of importance has been published in regard to metabolism in the psychoses except a small amount of work on basal metabolism, more particularly in states of stupor and in the insanity of adolescence. In this, as in other lines of research upon cases of mental disorder, including the early phases which it is so very desirable should be investigated, we are hampered by, to say the least, the lack of co-operation of our patients. Basal metabolism—or the energy output required to sustain the essential vital processes—has been occasionally estimated in mental cases of a limited class, as far as my reading goes, since 1908. Thus, Bornstein (1908–10) investigated 12 cases of the hebephrenic type of dementia præcox by the Zuntz-Geppert method (analysis of samples of expired air), and in the majority found a marked diminution in oxidation. Grafe (1910–11), in 18 cases of stupor occurring in different forms of mental disorder, also found a definite lowering of metabolism, especially in the dementia præcox cases, 39 being the figure given. For some time prior to 1923, my colleague, Dr. Walker (24), carried out painstaking research upon the basal metabolism in mental disorder, especially dementia præcox. In this

condition there is evidence of lowering of function, such as a subnormal temperature, cyanosed and cold extremities, damp hands, bradycardia—symptoms referable to a disturbance in function of the vegetative nervous system. Cases brought to me at the Out-Patient Department in Psychiatry, Cardiff Royal Infirmary, quite often show like symptoms. They should be warded in an indoor clinic, and have their basal metabolism investigated, among other functional tests, as a routine procedure. Dr. Walker, in his research, employed the Douglas bag method of indirect calorimetry, with a specially-made face-mask, the usual mouthpiece being unsuitable for mental cases. Haldane's apparatus was used for analysis of the expired air. Forty-four cases of mental disorder had 200 estimations made upon them. Thirty were cases of dementia præcox (without evidence of hypothyroidism). Of these latter cases, 50% had a basal metabolism of less than 10%—the range being from 12% to 47%—with 20% as the average. The non-dementia præcox types had either a normal basal metabolism, or one slightly in excess of this. In cases observed in a state of remission, the symptoms known as "vagotonic"—to which I have alluded above—disappeared, and a rise took place towards a normal rate of metabolism. Bowman and Fry (25) show in a table of all the cases of dementia præcox (schizophrenia)—125 (including Walker's)—which they could at that date (close of 1925) collect, the tendency towards a low basal metabolism (not necessarily below a normal limit of 10%), which has been noted by all observers. These authors noted the same tendency in instances of psychopathic personality, and—though less marked—in the depressed phase of manic-depressive insanity.

In connection with this subject I refer to diathermy as a means of treatment. This has been employed by us for many years. This treatment raises the pulse-rate and the body-temperature, increases the elimination of urea- and ammonia-nitrogen, and—as shown by Walker—increases the basal metabolic rate 10–15%. It is, therefore, indicated in the class of case above referred to. Now that artificial sunlight treatment is being introduced in psychopathic institutions, its effect upon basal metabolism in suitable cases should be recorded. Indeed, I consider it incumbent on those who have the installation for this treatment to furnish scientific evidence for or against the utility of the treatment in psychopathic cases—evidence based upon tests of function, blood-examination, etc. It will be time enough for mental hospitals in general to make provision when such evidence is forthcoming. Recently my colleagues and I have made systematic use, in suitable cases, of the method of the estimation of oxygen-consumption, in

order to get information upon the basal metabolism, using the British Benedict apparatus. It is affirmed by competent observers that with this method, applied with the necessary precautions, reliable information for clinical purposes can be obtained in regard to whether the general metabolism is raised or lowered. In the course of my reading I have found repeated confirmation of this statement. It is stated (Bernhardt (26)) that, by this method, the basal metabolism can be estimated with no more error than 1-2% in patients who have been duly trained. Lusk (27), experimenting with the dog, and Atwater and Benedict with man, find that the percentage difference in the calories produced in the same period, as estimated by indirect calorimetry (analysis of the respiratory gases) and direct calorimetry, is no more than 0.6 and 0.2 respectively.

A modification has been employed in the British Benedict apparatus used by us, in the interests of accuracy, in accordance with a principle introduced, according to my reading of the literature, by Knipping (I believe, of Hamburg). Valves are dispensed with. A small motor pump is interposed between the O₂ cylinder and the patient, and adjusted to run at a speed calculated to bring about the movement of gases of respiration so that the patient breathes at a normal speed, thus relieved of any effort (involving expenditure of energy), such as, with the ordinary apparatus, is necessitated by such causes as valvular resistance, friction of walls of the rubber tubing, stagnant gas or products of respiration. Repeated observations with this modified apparatus give results which accord well.

My thanks are due to Dr. R. V. Stanford, of our Chemical Laboratory, for valuable technical assistance and general advice in regard to the modification mentioned.

The metabolism of suitable patients might be further studied by recording the so-called specific dynamic effect of food-stuff after ascertaining the basal metabolism. This is done by giving a mixed test-meal of beef, carbohydrate and fat, which is known normally to raise the consumption of oxygen by a certain percentage, which is at its maximum in, say, 1½-2 hours, and observing the actual effect upon the consumption of oxygen; or these constituents are given separately (*e.g.*, roast meat 200 grm., glucose 100 grm., fat 100 grm.). With adequate staff, further tests could be done, such as tests designed to show the utilization and elimination of water, sodium chloride, glucose and total N.

BIOCHEMICAL WORK.

The application of chemical methods by trained chemists to the problems of disease may be called a recent event, since it took place,

apart from isolated pioneer efforts, well after the student days of the older members of the profession. As regards the psychoses, this application may be called a thing of yesterday. I may be doing the German and Italian psychiatric clinics an injustice, but I cannot recall any outstanding communication on the subject in question prior to 1904. I mention that date, as it was then that Otto Folin, whose contributions to bio-chemical work have been so numerous and weighty, published, with Shaffer, the metabolism studies (already referred to) which were carried out in the chemical laboratory (established in 1900) of the McLean Hospital for the Insane, Waverley, Mass. In 1901 a chemist was appointed to the London County Council's Asylums Service, in the person of S. A. Mann. Reference should be made to the work of Koch and Mann, which was a chemical study of the brain in healthy and diseased conditions, with especial reference to dementia præcox (28), and that of Pighini, upon organic metabolism in dementia præcox, published in *The Archives of Neurology and Psychiatry* (edited by Mott) in 1909. In more recent times chemical investigation in cases of the psychoses, and probably of disease as a whole, has been in the domain of bio-chemistry. In 1910 Dr. R. V. Stanford was appointed Research Chemist at the Cardiff Mental Hospital. Only those who have been in touch with this branch of investigation can appreciate the amount of spade-work which has been necessary to obtain accurate methods before any research could be undertaken. Above all, one should mention the elaboration of accurate micro-quantitative methods, essential where small quantities of material have to be dealt with. It is not surprising that up to the present bio-chemistry has been concerned, as far as our branch of work goes, with comparatively elementary research. But, with the growth of knowledge in physical chemistry, still more difficult fields must be cultivated. "Interest in the study of physical chemistry and of colloidal chemistry is steadily on the increase amongst biologists and medical men." Thus wrote Michaelis in 1920, in the preface to the first edition of his *Praktikum der physikalischen Chemie*. It must be an interest based upon sufficient knowledge of the subject to suggest to the chemist lines of research, and to enable the physician intelligently to follow the research.

I confess (envisaging the developments of the future) that I am an advocate of dichotomy in the matter of the "bio-chemist." Co-operation between the chemist and the physiologist (should we not add the biologist?) in association with the clinician and pathologist—herein lies the symbiosis to be aimed at. To a large extent, says Handovsky in a recent number of the *Deutsche medizinische Wochenschrift*, vital reactions are conditioned by physico-chemical

forces. Recondite problems are suggested by this observation, calculated to nourish that spirit of humility which should possess each of us. We have learnt that metamorphosis (fundamentally a matter of cell-growth) in the tadpole is profoundly influenced by hormones added to their fluid environment (e.g., thyroxin), the action of which, again, is conditioned by the addition of electrolytes (i.e., calcium, potassium—Zondek), which appear to play an important rôle at the cell-surface. Scholberg and I have found, from a large number of experiments upon rabbits, that the action of adrenalin, and of thyroxin + adrenalin, in increasing the output of reducing substances (amongst them glucose) in the blood is inhibited by calcium chloride. This, again, I would explain as the conditioning of hormonal action by the calcium-ion. Doubtless, other evidence could be cited in this connection. I am not aware that we know anything as to the relationship of the nervous system to these matters, but here are two physico-chemical problems to appeal to, or shall I say rather, to appal, the seeker after truth.

The following information has been obtained from work on biochemical lines. The statement of some that there is a hypoglycæmia before a fit has failed of verification in our laboratory. When a series of epileptics received a large dose of glucose daily in addition to their ordinary diet, the incidence of fits was not affected. Epileptic fits are not brought on by hypoglycæmia, and in this respect differ from the convulsions which may follow insulin treatment. Neither is there, in my belief, satisfactory evidence of alkalosis in the pre-paroxysmal state, as has been asserted. On the contrary, Claude and others (29) have established that when alkalosis is produced (pH 7.50, or slightly over) by injecting into the blood-stream carbonate of soda in dogs, the bearers of epileptogenic lesions of the Rolandic area, epileptic seizures do not result. Perhaps a toxin is required in addition.

These results are inconsistent with the statement (30) that epileptic attacks, said to be brought about by forced respiration in epileptics, are due to an alkalosis, produced by elimination of CO_2 in excess.

Drury and Farren-Ridge, and Holmström (cited by Mann (31)), found normal carbohydrate tolerance in epilepsy. In the course of a systematic investigation into the question of sugar-content of the blood and cerebro-spinal fluid in epilepsy, which formed part of research-work carried on with the aid of a grant from the Medical Research Council, we found that there was no consistent difference in the amount of blood-sugar before or after a fit, whether of the major or minor variety, or during the fit. In the cerebro-spinal fluid of the epileptic we found a higher sugar-content than the

normal average in the majority of instances; and this irrespective of the incidence of a fit, though a slightly higher reading was found during the fit. Glucose tolerance tests in epilepsy showed a normal reaction to an oral loading test in 10 out of 16 cases. The abnormal reactions showed delay in return to normal, or variations in concentration before such return. In the cerebro-spinal fluid there was, on the whole, a steady rise, so that when the consecutive blood-sugar hypoglycæmia is present, the cerebro-spinal fluid is richer in sugar than the blood. This bears out the observation of Halliday(32) that the cerebro-spinal fluid sugar curve, after glucose orally, rises more slowly than the blood-curve in normal persons and in encephalitics. This is an interesting contrast with what is noted in dementia paralytica. Taking the dextrose concentration-factor of the cerebro-spinal fluid as 0.6 for the normal average, epileptics on the whole were above this, while general paralytics were usually below. This may be due to defective functional capacity of the choroid plexus (? gland) in the latter.

As we know, a good deal of work has been done, and still more theorizing taken place, on the subject of the cerebro-spinal fluid—its origin, functions and disposal (there is still no complete knowledge of these matters), and on the function of the choroid plexus, with its cellular lining. The plexus-cells would appear, as far as we know at present, merely a part of the "barrier" or "screen" between blood-stream and nervous system, there falling to be considered in this structure the glia, the cerebro-meningeal capillaries (possibly their endothelium principally), the ventricular ependyma, the pia. This "barrier" is believed in health to hinder the penetration of toxic substances into the brain-substance. The subject is well dealt with by Büchler (33), of the Neuro-Psychiatric Clinic in Budapest. Up to the end of 1924 there was no satisfactory method of testing the degree of permeability of the "barrier," but the bromide-method of Walter (34), of the Neuro-Psychiatric Clinic in Rostock-Gelsheim, as modified by Hauptmann (35), has been favourably reported on by various workers, including Büchler. This consists in giving .01 grm. sodium bromide per lb. of body-weight three times a day for 5 days, and then withdrawing blood and cerebro-spinal fluids. The serum is allowed to separate, 4 c.c. of it being required, to which is added aq. dest. 8 c.c. Of the cerebro-spinal fluid, 8 c.c. are taken. The protein is precipitated by trichloroacetic acid. To 5 c.c. of the perfectly clear filtrate in each case 1 c.c. of $\frac{1}{2}\%$ of gold chloride solution is added. According to the amount of gold bromide formed, a yellow or brown colour results. This is compared with standard solutions of 1 : 6000 to 1 : 1000 in a colorimeter. A permeability-quotient (P.Q.) is

obtained by dividing the serum-bromide by that in the cerebro-spinal fluid. In healthy persons this quotient is very constant, and is taken as 2.90 to 3.30 by both Walter and Hauptmann.

The principal interest of this work seemed to be in the suggestion of Walter and Hauptmann that a difference in permeability of the "barrier" appeared to exist as between patients in the so-called schizophrenic group and those suffering from functional or symptomatic psychoses, the former manifesting a diminished permeability (therefore a higher quotient), the latter an increased permeability (therefore a lower quotient). It was clear to these authors that more work required to be done before this difference could be confirmed. Hauptmann and Walter, later also Büchler, found often (the first-named in 78%) a diminished permeability of the "barrier" in schizophrenia. No parallelism has been found between the clinical picture and the P.Q. The diminished permeability of the "screen" in this group is shown by Büchler to be more marked in the younger years.

I have examined 25 cases of schizophrenia and 28 cases of "functional" mental disorder. Of the former, 20 were done twice. The average quotient of the first time (25 cases), 3.35; ditto, second time (20 cases), 3.18; final average, 3.26.

None of these cases was recent in admission or origin except 4. All were in good health except 4. Eighteen were under 30 years of age; of the remainder, all were 36 or under.

Of the "functional" cases, the average quotient the first time (28 cases) was 2.9; ditto, second time (20 cases), 2.9; final average, 2.9. The great majority were recent admissions, and the disorder was of recent origin. Fifteen were cases of mania or melancholia; the rest, confusional disorder, hallucinatory, delusional or obsessional states, and 2 were found not insane.

Fifteen were under 35 years of age; 6 from 35-40; 7 from 40-58; all were in good health, excepting 4; several of those examined a second time were improved mentally; but the quotient obtained had no bearing upon the altered state.

From the work of Büchler, and also of Jacobi and Kolle (36), it may be concluded that, although in a large proportion of cases the P.Q. is increased in schizophrenia—and in a larger proportion than in functional symptomatic psychoses—the permeability-test will not serve as a means of diagnosis between these conditions. My results are in agreement with this.

The question of the permeability of the blood-liquor screen has to be considered in conjunction with that of plasma colloidal content. Kant (37) refers to the relationship between increased permeability of the screen and lability of plasma on the one hand,

and a diminished permeability of the screen and stability of plasma on the other.

The bromide-method shows well the increased permeability of the "screen" (meninges, vessel-wall, etc.) in dementia paralytica, these cases showing a diminished quotient.

A valuable contribution on "Blood-Sugar Studies in Mental Disorder"—based upon 152 cases—has been made by S. A. Mann (38). In common with all investigators who have studied this subject, he finds that in a large proportion of early and chronic mental cases there is a disordered carbohydrate metabolism, as shown by a sustained hyperglycæmia following glucose ingestion. This abnormality is not associated with any particular mental condition, but is more frequent in states of melancholia, and especially stupor. Even when blood-sugar levels in mental disorders approximate to the original fasting value about 2 hours after glucose ingestion, the curves are not, in general, similar to normal curves. The fasting level does not show any marked variation from the normal. Lorenz (39) also finds the fasting level normal in mental disease in general, but excepts dementia præcox. He, too, describes a hyperglycæmia in response to a glucose tolerance test in the depressed phase of manic-depressive insanity, and in active cases of catatonic dementia. Otherwise, the response is generally within normal range. Kasanin (40) remarks that the findings of various authors are not consistent. His paper deals with the special case of schizophrenia, and in regard to this his conclusion, based upon his series of 33 cases, and on 154 cases from the literature, is that the average glucose-curve in the blood falls well within the normal limits, although the percentage of abnormal curves is much higher than in healthy subjects.

Our contribution to this matter at Cardiff may be summarized thus: Cases of schizophrenia, 25, all chronic and in good health; 23 of them between 19 and 34 years of age; 2 aged respectively 39 and 40. The fasting blood-sugar was normal, except in 6. Response to a tolerance test (50 grm. of glucose by mouth) was only normal in 6 out of the 25, abnormal in 19. The abnormalities consisted in diminished or increased tolerance, or very poor reactions. Cases other than schizophrenia, of a functional, recoverable type: 25, all recent admissions, and disease of recent origin, excepting 5; in good health, 11; reduced, 14; 12 of the 25 were aged from 19–33 years, the remainder (excepting 4) were under 45. In these, again, the fasting blood-sugar was normal, except in 5. Response to the glucose tolerance test was abnormal in 20. The abnormalities consisted in very poor reactions or diminished tolerance. Our results in regard to the fasting blood-sugar agree with those of

other writers; it was found to be in general normal in amount. We found the response to the glucose tolerance test normal only in the minority of cases, whether of schizophrenia or of the functional psychoses.

The urine-sugar examined at the same time as the fasting blood-sugar by the Benedict test (as modified by Millard Smith), as well as colorimetrically, was found higher than normal in 21 out of 29 cases. The urine was examined also at the end (three hours) of the tolerance test, but the results are at present difficult to interpret.

In the above examinations the Folin-Wu method of estimation was employed.

The very poor reactions (low curves) which we obtained in a number of cases are puzzling.

The following considerations, cited from an article by Myer (to which for details I would refer you) in the *Klin. Wochenschr.* of December 17, 1926, are of interest in this connection. 10 grm. of levulose by mouth produce hyperglycæmia in normal persons. This begins to be noted at a time when absorption from the gastrointestinal tract cannot have occurred. Therefore the rise in blood-sugar is not due to the sugar ingested, but rather to a glycogenolysis produced by stimulation of the gastric mucosa. This stimulus works by way of the vegetative nervous system. There is a group of patients, free from liver disorders, which reacts to the levulose by a hypoglycæmia. These patients show lability of the vegetative nervous system, as evidenced by such signs as the following: Vagotonic type of adrenalin pressure-curve, positive oculo-cardiac reflex, respiratory arrhythmia, dermatographism, cold and damp hands and feet, spastic conditions of the bowel, with constipation, gastric hyperacidity, attacks of diarrhœa after psychological excitement, vaso-motor excitability, bronchial asthma. Some of these are improved by atropin. These are so-called vagotonic indications. The hypoglycæmic curve in these cases can be altered to a normal one by subcutaneous injection of 1 mgrm. atropin when the levulose is given, atropin alone not affecting the curve. This action of an anti-vagotonic drug appears to point to an important rôle of the vagus in blood-sugar regulation in these cases—an indication which is confirmed experimentally, electrical stimulation of the vagus producing a considerable increase of glycogen in the liver. This electrical stimulus is represented in the human experiment by the levulose. In the "vagotonic" type of patient, the stimulus, as in the experimental animal, is judged to lead to a storage of liver-glycogen, and, consequently, to fall in the blood-sugar.

A sharp distinction between "vago-tonic" and "sympathico-tonic" is, it is recognized, indefensible, but it is certain that many of our patients present stigmata referable to the vegetative nervous system, like those above mentioned. The conditions of the sugar test are, of course, not identical in these experiments with those of the usual clinical method; but the considerations adduced justify the reflection that the anomalous results in a sugar tolerance test in many psychotic cases may be referable to the influence of the vegetative nervous system. The statement of Myer *re* levulose is at the present time being tested in our laboratory at Cardiff.

As is known—and the subject is dealt with by Van Slyke and his associates (41)—there appears to be, in their words, "a definitely determinable, though small, amount of reducing substances in the blood which cannot be attributed to glucose. The exact nature of these substances is not definitely known . . ." After treatment of the blood under conditions that lead to complete destruction of glucose, these workers found in normal blood a residue of reducing substance, other than glucose, which showed a reducing power for copper equivalent to 0.01–0.03 (*i.e.*, 10–30%) of the glucose.

More recent methods than that of Folin and Wu for estimation of the sugar-content of blood give lower results by 17–25%, which are claimed to be more accurate, since these methods eliminate to a greater extent the interfering, non-glucose compounds (42).

According to Hector (43), in cases of severe diphtheria the concentration of the fasting blood-sugar is abnormally low "during the stage of toxæmia and acidosis." But in the psychoses, according to the evidence adduced above, it is usually normal; and all the evidence, as has already been intimated, points to a mild toxæmia, merely, in these states. This point is of interest.

In cases upon which functional tests are suitable, the state of the blood-sugar curve at periods during the course of the case should be ascertained, in order to learn what correlations, if any, obtain between the curve and the clinical condition.

The phosphorus- and calcium-content of the blood-plasma and cerebro-spinal fluid in the psychoses was investigated at our laboratory in Cardiff in 1925. Up to that time little or no information was available in regard to phosphorus in these states and a few references only existed in respect of calcium. It was necessary for our research chemists (Dr. Stanford and Mr. Wheatley) to devise accurate methods—after practical examination of existing ones—before this work could proceed. From an analysis of five preliminary cases they found (44) that the relative quantities of

inorganic, lipin and unknown P. are fairly constant in the blood. Of the total P., 85% is in the corpuscles. It is also interesting that the unknown P. is almost, if not entirely, confined to the corpuscles. It was established that, as regards the cerebro-spinal fluid, inorganic phosphorus is practically identical with total phosphorus, so that, whilst inorganic phosphorus was estimated in both fluids, total phosphorus required to be estimated in the plasma alone, calcium in both fluids. No reliable normal figures for phosphorus were available in respect of either fluid at that time. Knowledge as to calcium in serum in normal persons has some basis, and to this we were able to add information from six controls, plasma being investigated. For calcium in normal cerebro-spinal fluid there is even less information; to this we added results from our six controls. With these reliable controls in both fluids we may compare the calcium figures given by Weston and Howard (45) in the two phases of manic-depressive insanity in serum and cerebro-spinal fluid. The average amount of calcium was practically the same in each phase, and there was no variation from the normal. Their figures closely resemble those of our controls. Our investigation embraced 31 cases of various kinds of insanity, and shows that neither in respect of phosphorus nor calcium is there any significant deviation from the normal in blood-plasma and cerebro-spinal fluid. In many of our cases repeated examinations were made. If this work is extended, endeavour should be made to obtain a sufficiency of control cases and as many instances of the acute and recent psychoses as feasible, and to repeat examinations.

Since the above investigation, the calcium and phosphorus content of the blood have been investigated in cases of mental disorder by Henry and Ebeling (46), who also find them within normal limits, with a relative increase in manic, a relative decrease in depressed and agitated states. Armstrong and Hood (47) reach the same conclusion in respect of calcium in serum (*i.e.*, that it is within normal limits).

In 17 cases of epilepsy normal concentrations of chloride, bicarbonate, inorganic phosphorus, total fixed base and calcium were found in serum and cerebro-spinal fluid by Hamilton (48).

The following experiment was made: Six patients were placed on the average institution (that is to say, a sufficient) diet, and the total and inorganic phosphorus in the blood-plasma, the inorganic phosphorus in the cerebro-spinal fluid and the calcium in the plasma and cerebro-spinal fluid were estimated. The same diet was continued for a period of eight days, and at the same time parathyroid extract was administered intra-muscularly as follows:

1st day	.	.	$\frac{1}{10}$ gr.
2nd "	.	.	"
3rd "	.	.	"
4th "	.	.	"
5th "	.	.	" a.m.
" "	.	.	" p.m.
6th "	.	.	" a.m.
" "	.	.	" p.m.
7th "	.	.	" a.m.
" "	.	.	" p.m.
8th "	.	.	$\frac{1}{10}$ gr. p.m.

$\frac{1}{10}$ gr. total in each patient.

The blood-plasma and cerebro-spinal fluid were again examined for the above constituents, on the morning of the 9th day, with the following results :

Effect of Parathyroid Extract on Phosphorus and Calcium in Plasma and Cerebro-spinal Fluid.

Case.	Mgrm. %.									
	Plasma, total.	% change.	Plasma, inorganic.	% change.	Cerebro-spinal fluid, inorganic.	% change.	Plasma calcium.	% change.	Cerebro-spinal fluid calcium.	% change.
A. (before) .	10.5		3.4		1.3		11.1		3.8	
(after) .	10.0		4.0		1.2		10.8		4.7	
		-5		+18		-8		-3		+24
B. (before) .	12.4		3.9		1.3		9.1		4.1	
(after) .	10.5		3.5		1.3		9.3		5.0	
		-15		-10		0		+2		+22
C. (before) .	11.0		4.2		1.5		10.3		4.6	
(after) .	10.5		3.5		1.5		10.0		4.8	
		-5		-17		0		-3		+4
D. (before) .	10.4		3.6		1.3		9.7		5.0	
(after) .	11.6		3.8		1.2		9.5		4.8	
		+12		+6		-8		-2		-4
E. (before) .	13.5		4.6		1.4		10.2		4.6	
(after) .	11.5		3.5		1.3		9.0		4.6	
		-15		-24		-7		-12		0
F. (before) .	8.3		3.0		1.5		9.3		4.9	
(after) .	7.1		3.0		1.5		8.2		5.1	
		-14		0		0		-12		+4

The parathyroid did not, therefore, have any characteristic action, and more especially it did not produce any increase (unless a fugitive one, not present when the fluids were withdrawn) in the

calcium content of the plasma or cerebro-spinal fluid, except in the latter in two instances.

The extract used was supplied by a well-known firm, and was made by Collip's method.

The phosphorus and calcium were estimated by methods described by Dr. R. V. Stanford in *The Biochemical Journal*, vol. xix, No. 4, 1925. (See also the *Journal of Mental Science*, January, 1926, Scholberg and Goodall.)

Another line of chemical investigation—still in progress, with the financial aid of the Medical Research Council—at our laboratory at Cardiff has for its object the determination of the proportion of the various nitrogenous constituents of the plasma and cerebro-spinal fluid in cases of mental disorder. Up to the present 38 cases have been dealt with (plasma), and 40–44 cases for different constituents of the cerebro-spinal fluid. The following were investigated in the cerebro-spinal fluid: Total N, non-protein N, urea N, creatine N, so-called "creatinine" N, amino-acid N, and uric acid N. From these the protein N and the unknown N were calculated by difference. Simultaneously the same constituents, with the exception of total N, were estimated in the plasma. And total N, urea N and ammonia N in the urine (24-hours' specimen), these being the chief forms in which N is present in urine. It will be seen that we dealt with the chief forms in which non-protein N is present in the plasma and cerebro-spinal fluid. Our patients were in bed for three nights and two days on a standard diet, calculated to yield 15 calories per lb. of body-weight. The fluids were withdrawn in the fasting state before breakfast. Kidney-function tests (urea-concentration and Mosen-thal) were done in all cases, in addition to ordinary clinical urinary tests, to establish that any excess in nitrogen found in the plasma and cerebro-spinal fluid was not ascribable to damaged renal function. The ages of our cases ranged from 21 to 52 years, 10 being 35 and under; 13 were over 45. All were males except 8. As far as normal figures are available from Folin's *Laboratory Manual* (3rd edition, 1922), we have used these for comparison in respect of the plasma. These figures were obtained from 12 young men after a night's fast. The diet is not stated. To the best of our belief, no normal figures for the constituents estimated are available as regards the cerebro-spinal fluid, and probably the work now recorded is the first reliable detailed work on this fluid. Levinson's figures in his 1923 work on the cerebro-spinal fluid we do not find helpful. Therefore, as controls in this case we used average figures from five healthy quiet patients employed on the land, and one healthy patient, also so working, and who had

recovered some time since from an attack, probably alcoholic in origin. Our cases may be placed in three clinical groups: Dementia paralytica (9 cases), chronic mental disorders, but with definite mental disturbance (13 cases), acute and recent ones (20). I shall do no more than summarize our main results, thus:

Cerebro-spinal fluid.—The great majority of cases show abnormal figures of total N. The figures for dementia paralytica are high; other figures vary, but are mostly low. Protein N is high in dementia paralytica. Total non-protein N is low in this; not abnormal in other disorders. The well-proved increase of protein N in dementia paralytica is not, therefore, accompanied by an increase in the other nitrogenous constituents, taken as a whole or individually. Urea N: High and low figures occur, but the majority are normal. Amino N is not abnormal. The figures do not distinguish recent from chronic cases.

Plasma.—Non-protein N figures are high. Urea N figures tend to be high. Amino-N figures are low. The figures are irrespective of the type of case. In 14 cases the unknown N is high in the plasma, the non-protein N being also high, and the urea N high or normal in these cases. These cases are both recent and chronic. Unknown N forms 20–40% of the total non-protein N (a high proportion). The percentage tends to be higher in dementia paralytica. As to what the unknown N—which is got by subtracting the sum of the various non-protein N constituents estimated from the total non-protein N—is, remains for investigation. In our later cases, suitable methods having been elaborated, uric acid has been removed from the unknown N and separately estimated. The amino-acid N forms 9–22% of the total non-protein N of the plasma, the average value being 13.5, which compares with an average of 21 calculated from Folin's figures for normal persons. This is in keeping with the low absolute value of this constituent. Of the total non-protein N of the cerebro-spinal fluid, the amino-acid formed 3.5–6% (except in 2 cases). The amino N figures in plasma for our cases of the psychoses in various forms lie between 3.0–5.0, with an average of 4.0; 0.7 and 1.3, with an average of .95 for the cerebro-spinal fluid (all figures indicate mgrm. %).

Folin's normal figures for amino N in plasma are 4.4–6.2, average 5.4. Wiechmann's (49) figures, 4–6.1. Our psychotic cases (as just stated), 3.0–5.0, average 4.0. The psychotic cases, therefore, have a rather lower average. In the cerebro-spinal fluid the control and psychotic figures are practically the same.

Greene, Sandiford, and Ross (50) examined the amino N in the *whole blood* in 20 normal persons, and found the average to be

6.37 mg. % (4.8-7.8 mg. %). Blood samples were taken before breakfast. The authors state that according to Hammett, practically the same amino N content is found in blood samples taken from three to four hours after a meal as in fasting samples. In our cases (the patients having been, as previously stated, on a fixed diet) the blood was removed before breakfast, the patient having had nothing to eat since tea the night before. The authors just cited did not find any deviation from amounts found in the normal blood in a series of observations covering 20 various pathological states.

In general it appears that the quantity of amino N in the blood is maintained within normal limits with remarkable constancy.

We considered it was more logical to examine plasma than blood for this substance, since we were concerned with the circumambient fluid, and not with the internal processes of any living cell, mobile or fixed.

It is concluded from the above that there is no noteworthy deviation from the normal in the amino N figures of the plasma and cerebro-spinal fluid in our psychotic cases.

The low (absolute) figures in which the amino N is present in the cerebro-spinal fluid in normal and psychotic cases might be adduced as an argument against the view that this fluid has nutrient properties. Although variations occur in the chief N constituents, the amino N figures are pretty constant in both fluids in all classes of psychotic cases dealt with, including a special case (about to be referred to) with evidence of arterial disease, in which the chief N figures in both fluids are greatly in excess.

The high protein content of the cerebro-spinal fluid in cases of organic brain disease or lesion would indicate that this fluid is a vehicle for removal of breakdown products.

The examination of the N partition in these cases brings out that when protein is increased in the cerebro-spinal fluid, the case is invariably one of gross organic lesion of the brain-substance (*e.g.*, dementia paralytica, localized cerebral hæmorrhage). Certain cases which failed to pass renal function tests, and, therefore, were excluded from our series, although they showed excess of non-protein nitrogen in plasma or plasma and cerebro-spinal fluid, showed no excess of protein in the cerebro-spinal fluid.

The special case alluded to above was that of a male, æt. 52, with arterial disease; there had been two strokes, recovered from, and probably chronic renal changes. He exhibited mental hebetude, with faulty personal habits, and a physical condition suggestive of bulbar paralysis. It will be seen from the table hereunder that the chief N figures in both fluids are greatly in excess compared

with the controls. Yet the amino-acid figures in plasma and cerebro-spinal fluid remain normal.

Plasma.	Non-protein N.	Urea N.	Creatine N.	"Creatinine" N.	Uric acid N.	Amino-acid N.	"Unknown" N.
Special case :							
February 25, 1926	50.2	21.6	0.80	0.60	..	3.4	23.8
May 3, 1926	78.4	44.2	0.27	0.66	..	4.0	29.3
Average of 4 chronic, healthy, working adults	28.1	14.2	0.35	0.38	..	4.1	8.9
One sane, healthy, working adult	28.0	16.0	0.14	0.29	1.5	2.9	7.5
Folin	24.7	12.4	..	..	..	5.3	..

Cerebro-spinal fluid (clear and colourless).	Total N.	Non-protein N.	Urea N.	Creatine N.	"Creatinine" N.	Uric acid N.	Amino-acid N.	Protein N.	"Unknown" N.
Special case :									
February 25, 1926	44.7	31.8	21.4	0.16	0.42	..	0.8	12.9	9.0
May 3, 1926	69.4	48.7	40.3	0.04	0.41	..	0.9	20.7	7.1
Average of 5 chronic, healthy, working adults	26.0	17.7	12.9	0.8	0.35	..	1.1	8.3	3.3
One sane, healthy adult	26.8	24.0	16.0	0.1	0.3	0.2	0.8	2.8	6.0

This man's fluids were examined twice, it will be noted—on the first occasion, seventeen days after admission, and while still very ill mentally and physically; on the second, twelve days before he was discharged, being quite well in mind, and physically much improved. If the mental symptoms present when the fluids were first examined had been in any way due to the N-retention they should have been present at the second examination, when, as the table shows, the evidence of retention of the more important constituents was more marked.

This case seems of special interest, in that it can be but seldom that a clinical condition of the kind described has been investigated in respect of N-partition in cerebro-spinal fluid, blood and urine so fully, and, in the second place, it points to the need of caution in correlating chemical conditions with psychical manifestations. If a fall in the N figures had accompanied the clinical improvement, the chemist would, perhaps, have been in a position to supply a plausible explanation.

Lastly, as regards the urine in the mental cases examined (31 cases), control figures—minimum, maximum and average—are available from Folin's "Analysis of 30 'normal' Urines" (51). With very few exceptions the total N and urea N are low in all our cases; our resting calorie diet was lower in protein-value than the liberal protein diet of Folin. But the total N and urea N are as low in many of his cases as in ours. With these low urine figures go the figures for non-protein N and urea N in the plasma, which are high compared with Folin's normal figures before mentioned. And these results were obtained in patients whose kidneys were acting adequately according to kidney function tests.

These apparent anomalies of protein-metabolism, shown by this study of blood-plasma, cerebro-spinal fluid and urine, can at present merely be recorded. Folin, it will be remembered, found abnormalities of metabolism from his classical study of the urine of the insane.

With the progress of scientific medicine, especially aided by the contributions of bio-chemistry, it is to be expected that an ever-increasing demand will be made upon us in the matter of examination of recent cases of disease. Already, if we are to do what is right by cases of so-called mental disease, the number of medical and research workers on the strength at our mental hospitals is pitifully inadequate. When one is asked the time-worn question, "How many patients should there be to one medical officer at a mental hospital?" (I speak now of the public institutions), one replies, "Ask, rather, how many workers, and what sort of workers, should there be to concentrate on each newly-received case judged to be recoverable." My view is that the time is already upon us when it is for practical purposes very difficult for any public mental hospital to collect, maintain and retain the team of workers which thorough physical investigation of a case of disease demands. Very rare exceptions may be allowed, as where the mental hospital is very near a University centre, with medical school and general hospital available, and a degree of collaboration has been established. It is obvious that the necessary combination of workers will more easily be found in future psychiatric clinics—an integral portion of the general hospital.

In addition to a case-taking scheme which, as at many mental hospitals now, is comprehensive, functional tests are required, and special examinations, thus, to mention some: Blood-urea and urine-urea, quantitatively; fasting blood-sugar, glucose-tolerance test, quantitatively, contemporaneously with urine-sugar; CO_2 -combining power of plasma, with contemporaneous urine for "acetone" bodies; kidney-function tests; fractional gastric test-meals; set

of radiograms showing progress of a barium meal and position of digestive tract; rhinological and gynæcological examinations; dental ditto; basal metabolism; total blood-corpusele counts, and differential white-cell ditto, hæmoglobin percentage, colour index; reactions to adrenalin and pilocarpine. At Cardiff our chemical laboratory is but little involved in the above routine, and will come more on the strength as more recondite work—thus, the hydrogen-ion content of body-fluids—is taken up.

Do the cases brought to a neuro-psychiatric out-patient clinic require examination on the above lines? In my experience the majority do. Of what use, then, is such a department in the absence of beds? Of some use in, say, 30% of cases.

In conclusion, the following results of the examination of the CO₂ combining power (van Slyke and Cullen) in a series of freshly-admitted psychotic cases are cited:

These cases (40) come under the following clinical designations; melancholia, 9; mania (Graves's), 1; dementia præcox, 5; confusional state, 8; mania, 3; emotional state, 2; stupor, 1; delusional state, 7; simple-minded (? post-encephalitic), 1; G.P.I. mania (florid), 2; stupor-melancholia, 1. Their physical condition was reduced, in the usual way that it is reduced in patients admitted into these institutions. They had no other specific disease. Of these patients 33 out of 40 had CO₂-combining power of 53 to 42, indicating a mild acidosis. Acetone bodies in the urine in only 4. In only 4 cases was the combining power above 53; 2 were respectively 37 and 41. One showed a figure of 29, which indicates severe acidosis, and in her urine acetone bodies were well marked.

I desire to express my thanks to my colleagues at the Cardiff City Mental Hospital, and especially to Dr. Scholberg, Consulting Pathologist, and Dr. R. V. Stanford, Research Chemist, and his assistant, Mr. Wheatley (who were responsible for the chemical work), for their valuable collaboration.

References.—(1) Weimann, *Zeitschr. f. d. ges. Neurol. u. Psychiat.*, xcvi, 1925.—(2) Cajal, *ibid.*, c, 1925.—(3) Del Rio Hortega, *Bull. de la Soc. des Sci. Méd. de Montpellier*, Aug., 1925.—(4) Creutzfeldt and Metz, *Zeitschr. f. d. ges. Neurol. u. Psychiat.*, cvi, 1-2.—(5) Leathes and Raper, *The Fats*, 1925.—(6) Schuster, *Zeitschr. f. d. ges. Neurol. u. Psychiat.*, xliii, Heft 1-2, 1926.—(7) Nagasaka, Cited in *Zentralbl. f. d. ges. Neurol. u. Psychiat.*, xliii, Heft 13-14, July, 1926.—(8) Buscaino, *Rivista di Patologia nervosa e mentale*, xxi, fasc. 4, 1926.—(9) Witte, *Zeitschr. f. d. ges. Neurol. u. Psychiat.*, xcvi, Heft 5, 1925.—(10) Münzer, *ibid.*, ciii, 1926.—(11) Kafka, *Arch. f. Psych. u. Nervenkr.*, lxxviii, 1-2.—(12) Scholberg and Goodall, *Journ. of Ment. Sci.*, Jan., 1922.—(13) von Strasser, *Deutsch. Arch. f. klin. Med.*, cli, Heft 1 and 2, 1926.—(14) Kant, *Arch. f. Psych. u. Nervenkr.*, lxxviii, 3.—(15) Bergeim, *Journ. Biol. Chem.*, Nov., 1924.—(16) Becher and others, *Zeitschr. f. Klin. Med.*, civ, Heft 1 and 2, 1926.—(17) Mazzanti, *Riv. di Pat. nerv. e ment.*, xxxi, fasc 2, May 15, 1926.—(18) Stanford and Goodall, *British Journal of Radiology*, xxix, No. 283, Feb., 1924.—(19) Henry, *Amer. Journ. of Psychiat.*, iii, pp. 681-695, 1924.—(20) Walker, *Lancet*, p. 1058,

Nov. 22, 1924.—(21) Kastan, *Arch. f. Psych. u. Nervenkr.*, lxxviii, Heft 5, 1926.—(22) Loewe, *Zeitschr. f. d. ges. Neur. u. Psych.*, Originale, vii, Heft 1, 1911.—(23) Folin and Shaffer, *Amer. Journ. of Insanity*, lx, lxi, 1903-1905.—(24) Walker, *Journ. of Ment. Sci.*, July 13, 1923.—(25) Bowman and Fry, *Arch. of Neur. and Psychiat.*, No. 6, Dec., 1925.—(26) Bernhardt, *Klin. Woch.*, April 16, 1926.—(27) Lusk, *The Elements of the Science of Nutrition*, 3rd edition, 1923.—(28) Koch and Mann: Capt. Mann informs me that in this work the original investigations of Thudicum on the chemical composition of the brain were confirmed.—(29) Claude and others, *Comptes Rendus*, xciv, 1926.—(30) Radovici, *L'Encéphale*, Sept.-Oct., 1926.—(31) Mann, *Journ. of Ment. Sci.*, July, 1925.—(32) Halliday, *Quart. Journ. of Med.*, xviii, No. 71, 1925.—(33) Büchler, *Arch. f. Psych. u. Nervenkr.*, lxxvii, Heft 4, 1926.—(34) Walter, *Münch. med. Woch.*, Jan. 9, 1925.—(35) Hauptmann, *klin. Woch.*, No. 27, July 2, 1925 (numerous references); *ibid.*, Nos. 34 and 51, 1925.—(36) Jacobi and Kolle, *Monats. f. Psych. u. Neurol.*, Feb., 1926.—(37) Kant, *Arch. f. Psych.*, lxxviii, Heft 4.—(38) S. A. Mann, *Journ. of Ment. Sci.*, July, 1925; see also Drury and Farren Ridge (observations on 100 cases), *ibid.*, Jan., 1925.—(39) Lorenz, *Arch. of Neur. and Psychiat.*, viii, 1922.—(40) Kasanin, *ibid.*, Oct., 1926.—(41) Van Slyke and associates, *Journ. of Biol. Chem.*, July, 1925.—(42) Harned, *ibid.*, Oct., 1925.—(43) Hector, *Lancet*, Sept. 25, 1926.—(44) Stanford and Wheatley, *Biochem. Journ.*, xix, No. 4, 1925.—(45) Weston and Howard, *Arch. of Neur. and Psychiat.*, Aug., 1922.—(46) Henry and Ebeling, *ibid.*, July, 1926.—(47) Armstrong and Hood, *Journ. of Ment. Sci.*, Jan., 1927.—(48) Hamilton, *Journ. of Biol. Chem.*, Aug., 1925.—(49) Weichmann, *Allgem. Zeitschr. f. Psych.*, lxxxiii, Heft 7-8.—(50) Greene, Sandiford and Ross, *Journ. of Biol. Chem.*, Jan., 1924.—(51) Folin, *Amer. Journ. of Physiol.*, xiii, pp. 45-65, 1905.

*The Induction of Abortion in the Treatment and Prophylaxis of Mental Disorder.** By Lt.-Col. J. R. LORD, C.B.E., M.D., F.R.C.P.E., President of the Royal Medico-Psychological Association (1926-27).

My attention was sharply drawn to this subject by the submission to me recently of a case for decision as to whether abortion should or should not be induced as a prophylactic measure in regard to the possible recurrence of mental disorder.

I will first give you some details of this case, how it came to be brought to my notice, and the action I took regarding it.

She was admitted to a mental hospital late in 1923, single, aged 21. Her weight was 7 st. 6½ lb., and height 5 ft. Menstruation had been delayed until the age of 19, and had been slight and very irregular, and had occurred only occasionally with 4 to 6 months' intervals. Secondary sexual characteristics were scarcely at all present.

She passed the fourth standard at 14 years of age, being very slow to learn. School reports stated that she was backward in her studies, and with difficulty learned to read and write, and was dull and lazy. There was obviously a degree of congenital feeble-mindedness.

Her history for the past eleven years or so presented a train of schizoid symptoms, and ultimately her conduct became so outrageous that she could no longer be kept at home. For three months she had had horrible crawling sensations in her head, causing phases of acute confusion.

* Being the opening speech of the discussion on this subject held at a meeting of the South-Eastern Division, Stone, Dartford, on April 14, 1927.

Physical examination revealed many bad teeth and severe pyorrhœa. Her improvement followed the putting of her mouth in order and the establishment of normal menstruation.

She was discharged convalescent in September, 1924.

Now as to the reason why four years later her case was brought to my notice.

In March, 1927, I received a letter from her mother asking me to examine her daughter, hinting that the latter was pregnant, and stating that the doctor at the hospital at which she had been examined thought "things would go seriously for her," and enclosing me a letter from the R.S.O. of the hospital which stated that the surgeon was willing to terminate the pregnancy on receipt of a certificate from me, after examining the patient, that such should be done.

At first I declined to have anything personally to do with the case. I confined my action to communicating my views on the case to the R.S.O. of the hospital. In his reply he said that the patient had a perfectly normal pregnancy in every way, and that from a gynæcological point of view there was no justification for its termination. My opinion was demanded on the following point: "Is termination of pregnancy in this case justifiable purely on the ground of the patient's mental condition and that of the father of the child." The operation, if done, would be performed purely on mental grounds. I had further appeals, and I finally consented to interview the patient, whom I fully thought would be in a state of great mental distress. I had made up my mind, however, not to give any such certificate without consultation with the local authority and the Board of Control.

You can imagine my amazement when a few days later there was ushered in to me a very cool, calm and collected person who had improved wonderfully since she left hospital, and could not on any grounds be considered as suffering from any mental disorder.

She related a sad story as to how she had fallen on promise of marriage—an ex-soldier under treatment in a Ministry of Pensions hospital who had suffered from head wounds. The date of the marriage had been fixed, but before that day had arrived her intended husband had broken down in mind and been removed to another hospital.

It soon transpired that the chief grounds for her wishing the pregnancy to be terminated were economic—poverty, unable to afford the expense of the child's upkeep, etc.

As a result of the interview I declined to give the required certificate, and I should like your views on this decision. What struck me about the whole occurrence was the readiness of the hospital to

undertake this operation on purely mental grounds if they were present.

The whole question of the induction of abortion was discussed at the Nottingham Meeting of the British Medical Association in 1926, and later at a joint meeting of the Medico-Legal Society and the Obstetrics and Gynæcological Section of the Royal Society of Medicine held in January, 1927. I am much beholden to the reports of these discussions for the basis of much I have to say to-day.

First some historical facts: It may be taken that abortion was practised by the ancient Greek, for it is banned by the Hippocratic oath. In 350 B.C., however, it was advised in certain abnormal pregnancies by Priscianus. Tertullian laid it down that it was justified if the object were to save the life of the pregnant woman. He was one of the Latin Christian Fathers [A.D. 190-214]. At a later period physicians generally considered it a crime under any circumstances until about the middle of the 18th century, when, in 1771, William Cooper introduced the practice of inducing abortion for medical reasons into England; France and Germany followed suit, the indications being restricted to the necessity of saving the life of the expectant mother. A little time before this, in 1756, the induction of premature labour, *i.e.*, terminating the pregnancy after the child is viable, and able to live independently of the mother, was sanctioned by an assemblage of obstetricians called together in London by Thomas Denman, of Middlesex Hospital. Again it was not until later that the operation was performed on the continent. So England has taken the lead in both these matters. As regards the induction of premature labour, there is often a double reason for this measure, *i.e.*, in addition to saving the life of the expectant mother, the saving of the life of the child is also an objective.

The subject of the induction of abortion presents three aspects for discussion, namely: (a) Ethical, (b) sociological (eugenic, legal and economic), (c) medical. Is it difficult to deal with any one of these aspects separately, as a consideration of one more or less involves reference to the others. The subject has, in addition, biological, psychological and psychiatric bearings, also closely interwoven. I will first address myself to the ethical aspect.

Is it right to insist on a pregnant woman undergoing an ordeal she is either unwilling or afraid to face? Is it wrong to interfere with a normal pregnancy under these circumstances? It must be remembered that although, with the average woman, pregnancy is a period of both mental and physical well-being (a special provision by Nature), yet in the case of a subnormal or ailing woman

pregnancy may be a long-drawn-out period of suspense, anxiety, discomfort and fatigue—even at times of considerable pain. What are the rights of the mother, the father and the State in regard to the fate of the living, but unborn child?

Do any of these have the right to kill it—if so, which?

Some say it is entirely within the right of the mother to say whether her child shall be born alive or not. It is part of her body until born and separated from her. This might be called the modern Teutonic view. I think I am right, however, in saying that Soviet Russia is the only civilized country which has legalized abortion.

The only grounds the father can advance for killing the unborn child are of an economic nature. Any claim of such a right by either or both parents can, in my opinion, be dismissed by the contention that the life of a child, as a life entity, commences, not at birth, but at conception, and that conception, intra-uterine life, birth, infancy, puberty, adolescence, maturity, senility and death are all stages or epochs in the individual's career. Killing the child *in utero* is but infanticide predated.

If the right is given parents to kill the child *in utero*, the same right cannot logically be denied them at any period of its subsequent career.

As to the rights of the State in this matter, it may be remarked that we all live by permission of the State, and any right to live in a civilized community is only to the extent of not injuring it. The epicritic psyche does not recognize the cry of the "right to live" which is the unconscious claim of all living things, but grants "permission to live," and in regard to man this is subject to obedience to the State.

How far should the interests of the living be sacrificed in the interests of generations to come? We have good authority in regard to the respective interests of the living and the dead in that great pronouncement, "Let the dead bury their dead." Is the same attitude applicable to those living but yet to be born?

It is a law of Nature that the welfare of the individual must give way to that of the race. This law as applied to the subject under discussion means that the woman pays the price if the life of the child demands it.

Man, however, ages ago took his destiny into his own hands, and has since put up, as far as he has been able, a stiff fight against Nature's uncompromising attitude to him in many respects. Opinions differ as to whether man is always wise in thus defying the edicts of Nature, but nevertheless in regard to the interests and welfare

of the living and unborn respectively he has decreed that the former should have priority of consideration.

So it came to be conceded by civilized communities that the induction of abortion was justifiable when the life of the expectant mother was likely to be endangered by motherhood. This was the first stage.

The second stage was that the induction of abortion was justified if the pregnancy was likely to result in permanent *physical* injury or ill-health.

The third stage was that such a resultant injury or ill-health need not necessarily be permanent.

The question arises as to whether the State has recognized a fourth stage and conceded that the resultant injury or ill-health may be that of the mind only. A consideration of the still further extension of the grounds for inducing abortion leads us to the sociological (eugenic, legal and economic) aspect.

It cannot be denied that the ethical aspect of the question has been neglected in recent years, resulting in claims for the induction of abortion on eugenic and economic grounds: even claims for the inclusion of disgrace and exposure are made. Of course it might be held that the general adoption of "birth control" would abolish all these grounds for the induction of abortion, and it looks as if the future prosperity of the race might be left to the contraceptive specialist and the abortion monger if we remain blind to what is happening around us in these directions.

Again, killing is surely killing whatever the age of the victim may be. The taking of life is a grave matter, the responsibility for which does not sit lightly on either individuals or the State. It therefore behoves us to scan very closely these sociological grounds.

The eugenic aspect includes the allied questions of constructive birth control and the sterilization of mentally defective and insane persons.

Eugenists I divide into two classes—the thoroughly bad and the thoroughly good. At the moment we are only interested in the former. There is the eugenicist who would use the abortifacient, the surgeon's knife, even the lethal chamber in order to breed a human race to his liking. Some of them are out merely to save the rates; really they are economists, pure and simple.

I am one of those who do not think we know enough of the laws of heredity to justify such interference with natural or sexual selection on the grounds of racial interests.

Allied grounds are of an economic nature. Is abortion justified on the grounds of large families and poverty, the mother being

healthy? Historically, ethically and sociologically, No. The nation perhaps owes more to members of large and poverty-stricken families than to any other sections of the community. As to the claims made by some that disgrace and exposure are grounds for the induction of abortion, their recognition would be a complete surrender to the abortion-monger. Exception to this denial might be made in the case of rape—especially by a mentally defective.

As to the legal considerations,* these have been stated on good authority to be as follows :

(a) The law does not forbid the induction of abortion during pregnancy, if such is to save the life of the mother. Some authorities add "if such is likely to result in temporary or permanent ill-health of the mother." Ill-health should, I think, and may now, for that matter, include both mental and physical health.

(b) All acts are lawful which are done in the course of proper treatment and in the interests or life of the patient.

(c) Mr. Justice Salter has pointed out that the law, in speaking of the unlawful use of instruments or drugs in regard to abortion, implies that there is a lawful use of instruments and drugs for such a purpose.

Speaking broadly the law never justifies abortion. There is no such thing as justifiable abortion in law. The law is blind, and has nothing to do with abortion when undertaken for medical reasons only. How long or how far the law is going to remain blind to abortion for eugenic, economic and emotional reasons time alone will show. A curious attitude of the law is that it is not homicide to kill a child *in utero*, but if it is born alive and then dies from injuries sustained while *in utero*, the alleged offender in this case can be charged with manslaughter or murder.

We will now take up the consideration of the medical reasons or justifications for the induction of abortion.

It can at once be remarked that we are not particularly concerned now with the purely physical reasons, but the psychiatrist must be fully conversant with them. There may, however, be both mental and physical reasons present in the same patient.

It is also conceivable that the onset of a mental disorder may call for the induction of abortion when the physical state *per se* would not do so.

* Victoria 24 and 25, c. 100, sec. 58, enacts that : Any person who, being a woman with child, *unlawfully administers* to herself any poison or other noxious thing or *unlawfully uses* any instrument or other means whatsoever with intent to procure her own miscarriage ; or who, with intent to procure the miscarriage of any woman, whether she be or be not with child, *unlawfully administers* to or causes to be taken by her any poison or other noxious things, or *unlawfully uses* any instrument or other means whatever with the like intent, will be guilty of felony and liable to penal servitude for life.

The only morally sound reasons for inducing abortion are medical. These are (a) to preserve life, (b) alleviate or cure serious physical or mental illness, or (c) to prevent serious ill-health, physical or mental, whether permanent or temporary. This only states the position crudely, and accurate definition is needed.

As regards (a) we are on absolutely safe grounds in all respects.

Now for more problematical medical reasons, though they may also be morally and legally sound.

(b) The cure of mental disorders.

Have we sufficient facts to justify abortion for curing or alleviating mental disorder? If so, what kinds of mental disorder are susceptible to this treatment?

Expressions of opinions based on experience would be valuable in this relation and are now invited, or if more convenient might be communicated to the *Journal of Mental Science*. Short of this information it would be useful to know what mental disorders are not likely to be cured or improved by the induction of abortion.

(c) Prevention of mental disorder.

This might be discussed in its relationship to (1) first attacks and (2) recurrent attacks of mental disorder.

Have we sufficient grounds to justify the risks of abortion in a case of early pregnancy, say, with a psychopathic heredity and signs of mental instability? Are either of these conditions *per se* good reasons for the induction to prevent the possible occurrence of mental disorder?

In regard to (2) I think it is difficult to say that the induction of abortion is not justifiable. Do not we imply this when we so strongly advise against, even forbid future pregnancies in the case of many of our women patients discharged recovered, whether after (a) an attack of mental disorder associated with child bearing, or (b) not so associated?

Some of us, in practice, do go so far as to recommend the use of contraceptives as regards (a).

In any case, I am convinced that the modern practice of inducing abortion in order to prevent the occurrence or recurrence of mental disorder is extending.

I ask you to consider whether on all or any of these mental grounds this practice should be encouraged or discouraged. You will no doubt agree that if it is to continue in this relation it should be guided. What guidance can we as an Association give in this matter? (For discussion *vide* p. 495.)

*An Account of an Unusual Mental Hospital Epidemic.** By
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A STUDY of the hospital registers of the Limerick Mental Hospital over a period of five years prior to September 12, 1926, reveals the fact that, among an average population of 624, only 1 case of acute nephritis was recorded. In the three months following that date no fewer than 17 cases of acute inflammation of the kidneys were observed, presenting very interesting problems in ætiology and epidemiology. A consideration of the infective and clinical data of such an unusual outbreak, presenting, as it did, some remarkable characteristics, cannot fail to be of interest.

The classical example of nephritis on an epidemic scale occurred among the armies on active service during the Great War, and a very complete account of war nephritis is given in No. 43 of the Special Report Series of the Medical Research Committee by Captain H. McLean, R.A.M.C., under the title, *Albuminuria and War Nephritis among British Troops in France*. In conjunction with de Wesselow, Langdon Brown and Wilson, McLean utilized the great mass of clinical material thus derived to establish many new and important facts concerning the ætiology, epidemiology, and in particular the biochemistry of both acute and chronic kidney affections. Simple and reliable biochemical tests of kidney function were evolved, and their value as guides to diagnosis and prognosis, the results of treatment and the assessment of kidney damage was compared, with the result that our knowledge of nephritis in particular, and clinical medicine in general, has been greatly added to. These researches are now ancient history, but, in describing the recent epidemic of nephritis in Limerick Mental Hospital, a reference to their salient features will prove useful as a standard for comparison.

Briefly, then, McLean and his co-workers came to the following, among other, definite conclusions :

1. War nephritis is an infective disease due to an unknown organism or virus, probably transmitted by lice or other vermin.
2. Its symptomatology is very similar to that of ordinary civilian nephritis, except that dyspnœa is a characteristic feature.
3. Its course tends to be considerably milder than that of

* A paper read at a meeting of the Irish Division held at Elmhurst, Glasnevin, April 7, 1927.

civilian nephritis ; progress is usually rapid and favourable, the immediate mortality being undoubtedly low.

4. As regards remote prognosis, it was found that, roughly, 60% of the cases returned to complete health, while about 40% showed permanent impairment of kidney function of a greater or less degree.

Dealing with the Limerick epidemic under similar headings, the most intriguing problem is that of ætiology. Why should 17 cases of acute nephritis follow one another in rapid succession during the comparatively short period of three months, in a community among whom, during a previous period of five years, only one sporadic instance had been recorded? Before an infective cause can be accepted, certain possible alternative explanations must be excluded :

(a) Exertion, fatigue and exposure can be summarily dismissed. Whatever part these factors play in predisposing to or aggravating nephritis, the modern view is that they never actually, *per se*, initiate the condition, and besides, none of them could be said to exist to an exceptional degree during 1926 in Limerick, any more than during previous years. The time of the year undoubtedly favoured the spread of the disease, and an unusually severe cold "snap" was experienced in the second and third weeks of October. But the case-records show that 3 cases had occurred before October 6, and inquiries did not reveal an undue prevalence of Bright's disease during that month amongst the general community in the city.

(b) The water supply was exonerated. It is derived from the same source as supplies the city generally, and careful investigation of the supply from the main to the drinking vessels and kitchen equipment failed to reveal any causes of contamination.

(c) A suspicious circumstance occurred in connection with the milk supply, but the date seems to preclude the possibility of this being concerned in the outbreak. I mention it to show how exhaustive our efforts were to trace adventitious causes of nephritis. Some three months before the first of our cases was admitted to hospital the nurses complained of a peculiar taste in their tea. I myself noticed it—a formalin-like flavour—and unjustly suspected the contractor of putting a preservative in the milk. The true explanation came about a week afterwards, when the storekeeper told me he had found a mop used for swilling the dairy floor with disinfecting fluid in a milk trough, doubtless put there by a patient. As this carelessness was not permitted to recur, and no case of nephritis developed for nearly three months afterwards, much as it might simplify matters, we cannot invest this patient with the *role* of unconscious source of the disease.

(d) But the disinfecting fluid might possibly have fulfilled another rôle. Inhaled by the patients from the lavatories and wash-houses, the coal-tar derivatives of the fluid may have caused kidney inflammation in the course of being excreted, *i.e.*, a toxic nephritis. At the time there seemed to be some facts to support this plausible theory. For instance, a new contractor for disinfectants had been declared, and I noticed his particular fluid was aggressively odorous in the lavatories and sanitary annexes. This opened up the possibility that it differed in composition or was more concentrated than previous fluids which had proved innocuous in use. The first cask from this contractor was certified (and proved later by analysis) to contain 3-5% carbolic acid and 50% cresylic acid. Fluid used previously contained 25-30% of pure phenol associated with a saponified seed oil base.

But the first consignment of the suspected disinfectant was delivered on September 25, and not distributed to the wards until September 28, whereas cases of nephritis had occurred on September 12 and 17. Obviously, therefore, it was not the change of fluid *per se* which caused the outbreak. If not the change, could it have been the fluid at all, considering cresol oils as the basis of disinfectants had been used for many years in roughly similar concentration without ill effect?

I then commenced to investigate whether the patients affected had been exposed to the fumes to an exceptional extent—were they ward-helpers engaged using the disinfectant, or had they been in the habit of frequenting or spending long portions of their time indoors in the places thus disinfected? I found that, of the 17 cases affected, only 3 were ward-helpers employed in disinfection, and there was only 1 who might be described as an *habitué* of the lavatories, etc. Therefore it must be conceded that the inhalation of this toxic substance could not possibly have been a factor in the nephritis from which the remaining 13 patients suffered.

As additional evidence, we have the fact that no case developed amongst the nurses, male or female, who, in their supervision of and assistance at the disinfecting process, might reasonably be presumed to have been in just as intimate contact with the solution.

Furthermore, during the whole month of November I caused the use of all fluids to be discontinued, in spite of which 4 fresh cases of nephritis developed.

And lastly, when the epidemic had apparently subsided, I had done what might be described as a provocative test, namely the disinfectant was issued in increased quantities, used more liberally, and in greater concentration. No further case, however, developed as a result.

Taking all these arguments into account, we come to the conclusion that the inhalation of noxious gases as the cause of the nephritis must be excluded.

(e) It was suggested that the epidemic may have been atypical or modified scarlet fever. Had that been so, one should have expected at least an occasional case to exhibit some of the other characteristics of scarlatina. I think this theory may be dismissed by the statement that only 6 of the 17 patients were febrile during the course of the disease, only 1 complained of or showed signs of a sore throat, and no case exhibited a rash or desquamated.

After sifting all the evidence, we are forced to the unsatisfactory conclusion that, like war nephritis, the smaller outbreak in Limerick Mental Hospital must have been due to some infective agent, the nature of which we can only guess. We could find no evidence of a bacteriological agent, but our facilities for exploration of this avenue were, unfortunately, very limited, the nearest laboratory being 65 miles away. Possibly some hæmatogenous toxin or virus was responsible. It will be remembered that McLean considered the disease was probably propagated by lice or other vermin. None of our cases harboured lice, but one had *Pediculi pubis*, another *Pediculi corporis*.

As to symptomatology, while generally resembling ordinary acute idiopathic nephritis, and being, like war nephritis, characterized by the constancy of marked bronchitic and dyspnoëic symptoms, the Limerick cases exhibited some highly interesting and distinctive features. For instance, 5 cases, the third, fourth, fifth, sixth and seventh of the series, developed a simple, non-suppurative bilateral parotitis, quite on a par with mumps. This complication was absent from the first 2 and the last 10 cases, was well developed when the kidney inflammation was first recognized, was quite distinct from the usual facial œdema (I wish to emphasize this point), and altogether it presented a feature unparalleled in the history of acute nephritis.

Four cases in the series suddenly developed acute pulmonary œdema—assuredly a very high case-incidence for this rare event. One of these provided the only fatality of the epidemic—it was unfortunate that his relatives refused to allow an autopsy, thereby depriving us of the one opportunity of learning something about the morbid anatomy. I shall give a brief synopsis of the history of one of the four; it may be considered typical of the group, and of the four cases of pulmonary œdema in particular:

J. K—, male, æt. 44. Admitted to hospital on October 27 with slight dyspnoea, œdema of the feet and backs of the hands, and puffiness of the eyes. Both parotids were greatly swollen, the swelling being of a brawny, non-pitting nature, and extending both behind and forward over the jaw, and below the ear down into

the neck, just as in mumps. This parotitis lasted only four days, and the ordinary facial œdema still continued marked after it had subsided.

Urine.—Very scanty and blood-tinged; reaction, acid; sp. gr., 1020; high degree of albuminuria.

Blood-pressure.—Systolic, 152; diastolic, 100.

There was no fever or vomiting, but patient complained of headache and nausea. A small quantity of fluid in the abdomen was discovered on November 2, but up to November 6 the general condition was by no means bad, and dyspnoea, and bronchitis were by then absent. At 2 a.m. on November 7, however, a sudden attack of acute pulmonary œdema supervened, with orthopnoea, cyanosis, cold sweat, copious watery, frothy expectoration and small bubbling and clicking moist *râles* all over the chest. There were no convulsions. At 1 p.m. on November 7 he seemed to be dying, but on the substitution of strychnine and digitalin for atropine he rallied and was comparatively well within forty-eight hours. I formed the opinion that strychnine as a respiratory stimulant and digitalin as a diuretic are more potent and rapid in action in these cases than atropine as a pulmonary astringent. A cardiac stimulant did not seem to be particularly indicated as the pulse and heart action were good throughout. This was one of the seven cases in which the albuminuria proved resistant to treatment—on January 21, 1927 (*i.e.*, after twelve weeks), an appreciable trace of albumen was still present. On February 5 he contracted influenza, and its effect on the kidney condition was interesting. At the onset the bronchitic features so characteristic of the recent epidemic of influenza were particularly marked in his case, and they progressed to a patchy broncho-pneumonia with about 101° F. The expectoration became watery and frothy, as during the attack of acute pulmonary œdema blood reappeared in macroscopic quantity in the urine, and albuminuria increased to 3%. This time he responded much less favourably to treatment, and from his present clinical condition and the high degree of albuminuria still obtaining, it would appear that his kidneys have been irretrievably injured.

Judged by the criterion of disappearance of albuminuria, our cases have not done so well as the war cases. Nine of the 16 survivors still have albumen of varying amount in their urine, in 5 merely a trace; these 5 would seem to have completely recovered from the clinical standpoint. In 3 cases the urea concentration test, high blood-urea and increased blood-pressure strongly suggest chronic interstitial nephritis—the azotæmic type—while one female is obviously in an advanced stage of chronic parenchymatous nephritis, œdema being general, and huge quantities of albumen passed daily.

Handicapped though we were in Limerick by lack of facilities for investigation, I could detain you much longer with other aspects of this little epidemic, but I feel they would appear humdrum by contrast with the striking features set out above, so I shall conclude by expressing my thanks to Dr. Irwin, Resident Medical Superintendent, for permission to publish the cases, and to Dr. O'Connell, Temporary Assistant Medical Officer, for assistance in the urinary analyses.

*A Hypothesis of the Mechanism of the Functional Psychoses.**

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IN the organic and toxic psychoses in which a symptom syndrome is known to be associated with gross brain changes or a definite toxin, it is hard enough to correlate the physical and mental. As McCurdy writes (1): "To find what cell change corresponds to the delusion of having a ship full of rubies is much more of a task than that of looking for a needle in a haystack." In the case of the so-called functional psychoses—schizophrenia, the manic-depressive psychosis and paranoia—this difficulty is enhanced. It is only possible to treat the matter in the broadest manner, by considering the reaction between the organism and the environment.

The study of the human organism cannot be separated from the study of the personality, and closely linked with this are purely physical factors, such as endocrine balance and general bodily health. Such workers as Jung, Bleuler and Kretschmer have demonstrated that the introvert or schizoid type of individual is particularly liable to develop schizophrenia. It thus seemed of interest to examine the personalities of subjects of the other functional psychoses—on the assumption of the personality being primarily at fault. For comparative purposes each personality was examined under the following purely arbitrary headings:

- (1) Balance of instinctive tendencies.
- (2) Strongly developed sentiments.
- (3) Temperament: Sanguine, choleric, melancholic, phlegmatic, suspicious.
- (4) Introversion or extroversion.
- (5) Activity (2): Hypokinetic, mesokinetic, hyperkinetic.
- (6) Intelligence.
- (7) Amount of general information.
- (8) Type of ideals.
- (9) Strength of character (power of inhibition of instinctive tendencies).
- (10) Power of integration.
- (11) Physical condition and appearance.

By this means, although only an approximation of the actual make-up of the individual was obtained, a basis for comparison of

* A paper presented at the Quarterly Meeting held at Macclesfield, February 16, 1926.

different types was formed. Enough cases have not yet been worked on to justify the giving of findings. So far the schizophrenic would appear to be of weak character, phlegmatic temperament, decidedly hypokinetic and of normal or subnormal intelligence. The paranoiac, on the other hand, appears to be an "impracticable hyperkinetic," (2) and of an intelligence rather above normal. With reference to the manic-depressive make-up, the only generalization that has so far emerged is that the subjects are of an active type, with normal or supernormal intelligence.

Although only the broadest differences in mental make-up are indicated by a comparative examination of this nature, the necessarily different reactions of varying types of personality to similar circumstances is emphasized. It is suggested in the communication that, with the exception of certain types of depression, this is sufficient to account for the various symptom-syndromes described under the headings of "schizophrenia," "manic-depressive insanity" and "paranoia," the basic mechanism in all three forms being a withdrawal from reality. An attempt is also made to demonstrate that the actual *content* of the psychosis (*e.g.*, the form of the delusions) depends on the experience of each individual. In a paper of this length it was thought best to give an abridged account of a case of each of the three types of psychosis and to examine it from this standpoint.

SCHIZOPHRENIA.

It is of most value to commence with a case of schizophrenia, of which psychosis Bleuler, Jung and many others worker have demonstrated the autistic basis.

CASE I.—Female, *æt.* 37, single; teacher of elocution. Dull; does not associate with others or converse spontaneously, but talks willingly and at length, expressing herself fancifully when questioned. She will suddenly cease speaking and look vacantly before her. She laughs without cause and often makes sudden and jerky movements, such as putting her hand to her throat. She is impulsive and strikes others without cause, or sweeps objects from the table. Her behaviour is directed by her phantasies, and is little influenced by her actual surroundings. She has many bizarre ideas, which she expresses freely but in an involved manner. The basic ideas are quite fixed, but she elaborates them with the passing of time in a very fertile fashion. She is constantly referring to a man under whom she studied elocution, and at each interview tells how he shook hands with her. There was a small, red-hot spot in the palm of his hand about the size of a dime. She experienced a curious pricking sensation, which set her body aglow.

She felt a "vibration" which passed from her head to her pelvic organs. She often remarks, "He gave me the word 'flesh' from his hand. He had magnetic power, I had electric, thus there was perfect union." She states that she "saw her presence in his arms." She feels he "still has it and has relations with it." She one day related how her sister-in-law accompanied her to a lesson: "Someone seemed to join us there. He was tall, thin, and had black hair and blue eyes. I think he threw E— (the teacher) into a strange state and he drew my spirit." Her sister-in-law went straight to the spot where this man had stood and "got the spirit of art." Asked who this man was, the patient said, "He was a spirit who joined E—and myself—a sort of spirit minister." She later referred to this once more, and said that from that time her sister-in-law started to absorb the "fused talents" of E— and herself. These entered into the child (a niece of the patient) who was afterwards born. She speaks much of the Immaculate Conception, and says physical union is not necessary for the birth of a child. Referring to her brother and his wife, she remarked, "I saw them in bed—the purest thing I have ever seen. I saw him caressing her, but all sex was aside. Their spirits seemed to fuse." She also speaks of "College men" frequently "hypnotizing" her and putting immoral thoughts into her head. They also "draw her vitality" from her.

I have attempted to make relevant and coherent extracts from a great mass of rambling and bizarre statements made by the patient. A case such as this is very superficial and self-evident, and it has been introduced to demonstrate how well the phantasies of the patient fit in with her special personality and experience.

In appearance she was decidedly ugly, with some exophthalmos. Her father was interested in exotic religions and earned a livelihood writing thereon. She was the elder of a family of two, her brother being some years younger. She was strongly sexed, vain, rather underactive, of weak character, but with an extremely strong sentiment (stressed on her from infancy by her parents) as to the desirability of living within the bounds of every convention, great or small. In spite of this she became pregnant in the early twenties. She explained this by saying she was hypnotized and assaulted. Her mother firmly believes in this. This explanation is very illuminating. It points to (1) a failure to face reality; (2) a considerable amount of imagination; (3) a certain childishness, in thinking that such a story would be believed; (4) a simplicity on the part of the mother in accepting it (combined with the occupation of the father) would seem to indicate a tendency on the part of the family to evade everyday facts of life.

She has never earned enough to support herself.

Her psychosis is seen to be the natural outcome of the interaction of her personality with her environment. She obtains sex gratification which is missing in real life (she also masturbates considerably). What may be termed her "conventional sentiment" is satisfied by a "spiritual marriage." She goes further and has an imaginary family in the shape of her brother's child. Blended with this is the desire to escape from the hard fact of her own unfortunate pregnancy, so she develops a strong belief in Immaculate Conception—extending this to her brother's child. She will not face the fact that her inner thoughts are not spotless and attributes them to the malign influence of others.

THE MANIC-DEPRESSIVE PSYCHOSIS.

Kraepelin points out that hereditary factors play their part in four-fifths of manic-depressive cases. He postulates a basic predisposition, which may be depressive, manic (buoyant and overconfident), emotionally excitable or cyclothymic. MacCurdy (1), writing of the causation of manic states, gives the chain of causes as (1) make-up, (2) situation, (3) precipitating cause. This precipitating cause may be: (i) direct opportunity for adult wish-fulfilment; (ii) veiled outlet for an infantile wish; (iii) plain infantile wish-fulfilment quickly distorted; (iv) distortion of a distressing idea into a "sublimation."

He points out, in opposition to the popular view that the emotion displayed in mania (*i.e.*, irritability and elation) is an expression of poor contact with the environment, that the patient becomes irritable when his flow of thought is interrupted. Campbell (3) attributes the onset of the manic attack to the subject's difficulty of adjustment, this difficulty being much less deeply seated than in dementia præcox. The flight into the psychosis coincides with the relaxation of efforts which are recognized as inadequate to deal with the actual situation. The cessation of the struggle permits the frank expression of repressed elements. In this connection Davenport's (4) proposal with regard to hyperkinesis is of interest. He looks on hyperkinesis as resulting from loss of normal inhibition and hypokinesis as due to over-inhibition. Beyond such reported changes as pigmentation in the cortical cells, (5) various "brain stigmata or focal lesions" (6) (anomalies of convolutions, etc.), a liability to satellitosis (7), or the postulation of such theories as that of toxins circulating in the blood-stream, there is little definite on the physical side.

Correlating these and similar views it is possible to obtain a concept of the modern trend of thought with regard to manic-depressive insanity. The inheritance of a predisposed or special

type of personality is generally accepted. This may depend on physical factors—endocrine balance, general health, etc. The onset of the manic attack is associated with a precipitating cause. The attack is an expression of repressed elements, consequent on the removal of inhibition due to the precipitating cause. The attack is a flight from reality, but the difficulty of adjustment is not as great as in dementia præcox. Influence on the activity of the endocrine glands by emotional states may result in bio-chemical changes, which produce various appearances described by pathologists.

Discussion of the depressive phase is postponed until the following illustrative case has been described.

CASE 2.—Female, æt. 25; training for mission work. Admitted in a maniacal state. Overactive—flinging her arms about, laughed loudly and frequently without cause. Untidy—dress open, hair down. Talking constantly and incoherently. Markedly distractible. This was the third attack. Before the first attack she became abnormally religious and introspective. There was a period of mild depression, lasting several months, after the first attack. In the first and third attacks she was in a highly erotic state. In the second attack she felt she had communed with Christ, that she was a prophetess and that she had a miraculous power to convert people.

On the fifth day from admission she had quietened down and was able to discuss her condition fairly rationally. She was, indeed, spontaneously casting about for an explanation of her recurrent breakdowns. A full account of her history, extending from the time of the first attack, would be far too lengthy for the present purpose, and it is proposed to make a few relevant extracts from the mass of notes relating to her.

With regard to her personality, she was a girl of good appearance, intelligent, active, sanguine and with high ideals. She was very strongly sexed, but well-controlled, in spite of lack of strong sentiments about her calling or the conventions. Control was by direct repression, which was unpleasant to her.

With this make-up as the basis of the trouble, her difficulty appeared to be one of adapting her sex urge to the rest of her activities. Each of the attacks was preceded by events of great emotional import related to her sex life. An account of the circumstances preceding the first attack is given as an example. She was very attached to a man called Christopher, and he appeared to reciprocate her affection. They were young and ardent, but the patient said, "Christopher and I walked arm in arm. That is all. He was very passionate. We had bad struggles I wanted him

badly." In the end, however, he showed he did not love her and became engaged to another girl. Speaking of this the patient said, "You see, the first time I was very unhappy. I was ever so miserable before my attack. I 'kidded myself' and so became happy. In all my attacks I exaggerate the grounds for happiness."

A sample of conversation is now given, with her subsequent explanation :

"Don't forget the hint. The little baby is so sleepy. Well doctor, don't look so sad. We're friends. Shake on it—both hands. I didn't know. Well, never mind. I'm quite sleepy. Oh! My little stone is quite tiny, but maybe it will come out like a little worm out of its chrysalis. He let me go out the door first. That man is clever, so clever that he almost—whew!—I never thought I'd die. It would have been a red death in a milk white sea. (Telephone rang at this point.) Oh! let's answer it. It is so soft and sweet—it is mechanical—bing! biff! Oh!—I'm sorry dear (sighed). Lest we forget. (Smiled and made motion of kissing.) Perfect peace and a baby. . . . I'm not quite so dumb. I guess we had it in the right way. We have a nice little baby with us. Oh! my stomach aches (laughed). I wonder why they were put together with—ssss—and they kissed about it. It is too much when it comes to life like a lily. I always wanted to faint and never could. . . . Well, if they give me a chance like—who was it? Hiawatha—I might be born if you give me a chance. Oh, dreams come true. Mother of my children—four little babies—little babies feel sleepy. . . . We might be like the two fools in the play—two pink tickets—and they stood on their heads on the point of the needle. Make the cut. One little hole—like a doughnut."

This was gone over with the patient, and she was asked for any explanation she could give. Her comments are now recorded :

PHRASE.	COMMENT.
"The little baby is so sleepy."	"Christopher and I were going to have Jesus. We had had spiritual relations. Jesus was inside me."
"My little stone is quite tiny, but maybe it will come out like a little worm out of its chrysalis."	"This refers to the birth of the baby."
"He let me out the door first."	"A doctor in the hospital was trying to convince me he was a Christian."
"I never thought I'd die."	"I felt I had died for a few minutes. My pain was so great that I wanted to die, but had got to live for Christopher's sake."
"It would have been a red death in a milk white sea."	"Christopher and I were to be two prophets and martyrs and very innocent."
"It is so soft and sweet. It is mechanical."	"Having a baby."

PHRASE.	COMMENT.
"Lest we forget."	"That we were having the baby Jesus."
"I'm not so dumb. I guess we had it in the right way."	"Spiritual relations."
"I always wanted to faint, but never could."	"I thought I had had a prolonged faint."
"Well, if they give me a chance like—who was it? Hiawatha."	"I had a great desire to be a free child of nature like Hiawatha—to get away from control."
"Oh, dreams come true. Mother of my children—four little babies—little babies feel sleepy."	"Every time I had an enema I felt I had had a spiritual mechanical baby."
"We might be like the two fools in the play—two pink tickets—and they stood on their heads on the point of the needle."	"There had been a competition for an appreciation of the play 'The Fool'—the winner to get two tickets. I had sent in a criticism. Christopher was like the man in the play, who was my ideal. In the Middle Ages people argued whether angels could stand on the point of a needle. I thought Chris and I were two angels."
"Make the cut. One little hole—like a doughnut."	"The cut to let the baby out."

Thus, in the short sample of the stream of talk recorded there are, according to the patient, references to :

Spiritual relations consummated with Christopher, three times.

Birth of a baby five times. The baby Jesus specified twice. (Christopher the father.)

The idea of death, to escape pain, twice ; a prolonged faint, once.

The idea of innocence (martyrs and angels), three times.

The idea of escaping control, once.

In this attack she imagined Christopher was her lover ; they had had spiritual relations and she was bearing the baby Jesus. The conviction of innocence was held and she toyed with the idea of escaping from conventional control by death, fainting (insensibility), or becoming a free child of nature.

The desires which she satisfied in this attack (which was preceded by a short period of depression, during which her attention was focused on her many causes of misery) were :

(1) The complete fulfilment of her desire for Christopher, including sexual and maternal satisfaction.

(2) This was rendered compatible with her spiritual profession by naming the baby Jesus (*cf.* the manner in which Case I toyed with the idea of the Immaculate Conception) and by making the relations spiritual (also *cf.* Case I).

(3) The idea of innocence was reinforced by imagining that she and Christopher were martyrs and angels and "very innocent."

(4) She toyed with the idea of death as a means of escape from an oppressing environment (*cf.* Hoch's (8) work on *Benign Stupors*, mentioned later).

(5) She escaped from convention by comparing herself to a free child of nature.

Thus she satisfied her sexual desire, her desire to escape from the necessarily marked inhibiting influence of her theological profession and also from her mother's watchful control. She also blinded herself to the fact that Christopher had deserted her. Her attention finally was diverted from these autistic fancies and once more focused on the true facts of her life, when she once more became depressed.

Owing to considerations of space it is only possible to give this extract which seemed the most relevant. In the second and third attacks the patient satisfied similar desires.

In considering this case one cannot help being struck by the resemblances of some of the patient's ideas to those of the previous case. Both cases "feel the presence" of men. Both have "spiritual unions." In both cases the conception of the child is innocent. Both have thoughts put into their heads by others. Both are in conflict with their environment and both have strong sex urges. It is easy to conceive that the difference in the reaction—the chronicity and passivity in one and the acuteness and activity in the other—is due to an inherent difference in personality, the one predominantly passive, the other predominantly active.

However this may be, it seems clear that both have solved their conflict in a like manner, by retiring into a world of phantasy, where they roam fancy-free.

It is possible that one day a new classification of psychoses may arise from a dynamic standpoint, in which we shall not speak of schizophrenia or mania, but rather of a permanent or temporary autism, the reaction being determined by the personality.

According to Hoch (8), the mechanism in cases of stupor formation is not essentially different. The personality is again at fault. In the face of an unpleasant situation the patient loses energy, becomes apathetic and harbours ideas of death. Finally he retires into the stupor which represents death, *i.e.*, into another world, which appears to him a pleasant place.

Cases could be cited to show that in some patients who exhibit a predominantly depressive reaction, the depression itself represents the escape from reality (in contra-distinction to the depressive phases of the predominantly manic cases), the idea of death (*e.g.*, "I'd be better dead") being pleasant to the patient as an escape from reality. Connell (9), in a recent article, seems to put

forward this view, and also observes that depression is associated with vagotonia.

PARANOIA.

The method of procedure in the study of this disease was to gain some idea of the personality of the patient, then slowly, and almost month by month, to go through his life-history with him from his earliest memories to the present date (which, of course, includes a very thorough account of his illness from the patient's point of view). This account was compared with one from outside sources. It is only possible here to give the very briefest summary of one case. Much controversial material is, of necessity, dogmatically stated by this method. Also the account is less convincing owing to the fact that it cannot be given in the patient's own words.

CASE 3.—Male, æt. 44, single; clerk. The self-assertive and sexual tendencies of the patient are more marked than normal. Intelligence above normal. (He has an M.A. degree and has won several scholarships.) Hyperkinetic, impracticable. He believes firmly in the value of abstract knowledge; impatient of practical "spade-work." His power of inhibition of instinctive tendencies (character) was originally above normal. This has weakened of late. His mother represents for him the "ideal woman," and he judges every girl he meets with this idea in mind. He is of a suspicious temperament.

He has systematic delusions of persecution. Girls are speaking disparagingly of him. He has lived in various apartment houses, but people are always immoral in addition to being in league against him. He is convinced they have turned fellow employees in several offices against him. He has objected strongly to this, and used terms such as the following in reference to the offenders—"She has the ethics of a street-walker." In consequence he has lost several positions. He is convinced he has lost these positions by the machinations of his enemies. Before admission he complained to the police that a masseuse in the apartment house in which he lived had arranged a "frame-up" against him with some men friends who were a "tough lot." They were "threatening to castrate him." They might not mean to do it, but "You know what the psychology of the mob is." Thinking he was in real danger he claimed police protection.

In youth he was deeply attached to his mother and strongly influenced by her. He says he has never married because he has not found a girl to "come up to" his mother. He has indulged in sexual promiscuity, and has a low idea of women.

As MacCurdy (10) writes with regard to a subject of mother-fixation:

"He cannot combine mental and sexual regard for the same person. . . . His real trouble is that for him womankind is divided into two classes—'mother' people and prostitutes. Having never learned accurately to objectivate his unconscious sexual motivations, any woman for whom he has respect is so direct a representative of his mother that a sex taboo hangs over her. If he tries to marry there is a domestic tragedy."

On the other hand, the patient speaks sorrowfully of his not having acquired a wife and family, and his single state is the cause of considerable regret.

The patient says he was engaged to a girl who was false to him. This was found to be retrospective falsification of memory, but serves to indicate the direction of his desires. He says he has had to give women up lately on account of their "rotteness." In point of fact many have lately refused his advances.

With regard to his work, he endured extreme penury in youth to gain a university degree and fit himself for social service. He also won many scholarships. When he actually undertook social work, however, he was far too impatient of every-day "slogging" at his job, and wished to revolutionize the work by bringing into play his own abstract ideas. In consequence, he quarrelled with successive authorities and threw up social work, thus wasting all his early efforts. During successive quarrels he showed a tendency to escape from reality in the following ways: (1) By marked sexual excess; (2) by alcoholism; (3) by planning a scheme of "democratic revolution," *i.e.*, altering an unfavourable environment instead of fitting himself to it. He collected a small nucleus of people as a "revolutionary committee." (4) At one time he placed himself in a new environment and took a post as a dishwasher, concealing his whereabouts from his friends. At the same time he indulged in sexual excess. He states he took this post to "study conditions among the working classes."

He afterwards obtained work as a clerk, which was so different from what he had set out in early life to do that he hated it. He explains this hatred by the rotteness, persecution and cheating of the persons with whom he works.

Thus we have a man in middle age who has failed in his aims in two directions—the formation of a family and the building up of a cherished scheme of work. On account of his mother-fixation he has a low opinion of women, and he is of an increasingly suspicious temperament. "At over 40 years of age he finds he is not as attractive to women as formerly." "Girls very infrequently accepted his invitations to theatres."

Havelock Ellis (11) writes: "There are times in a man's life when, in some cases, a recognition of a sudden turn in the road

enters consciousness with disturbing effect. In many cases, I would say, such a period occurs near the age of 38."

He has failed. He knows his intellectual equipment is well up to the normal level. He cannot realize the drag of his early fixation or the impracticability of his aims. He has worked hard and he has good ability. He is self-assertive. He decides the fault cannot lie in him; it must be outside himself. The ego gets satisfaction from this. The more the patient can convince himself of the hardness and unreasonableness of the world, the higher he rises in his own estimation. He has failed in his work owing to the cheating and conservatism of men. Women, as a sex, are frail and unworthy. That they repel his advances confirms his view. They are altogether rotten. He points out that he has to throw *them* up, not they him, and it is on account of their sexual lapses. He hears girls indulging in filthy talk and showing knowledge of perversions. Thus we have the foundation for the gradually increasing paranoid delusions.

The intricacies and involvements of the plot are easily explained. One thing leads to another, and the greater the ramifications of the plots against him the more balm to the ego, the less his feeling of responsibility for his own failure.

This patient was committed to a State Hospital, and he said he was so convinced of the correctness of his ideas that he would rather suffer detention all his life than go out under the protection of a friend or relatives.

In other words, the tension has proved too much, and the patient has taken refuge from it in the formation of a psychosis, which is shown to be perfectly in keeping with the trends he has shown all his life.

This possibility explains the chronicity and fixity of paranoia. Everything is comfortably settled for the patient. He is helpless against circumstances—a martyr in an unjust world. He has quitted the field of battle; conflict is no more. Were he to throw off the delusions he would have to face life again and admit his own imperfections.

CONCLUSIONS.

An attempt has been made to show that the mechanism in all the so-called "functional psychoses" is similar, *i.e.*, the real situation is intolerable owing to the non-satisfaction of the patient's urges and desires, so that satisfaction is acquired in a world of phantasy. This is true for paranoia, schizophrenia and the manic-depressive psychosis.

Whereas those with normal personalities attack the actual environment and attempt to fit themselves to it or it to them, those

who develop a functional psychosis have abnormal personalities, so that they shirk reality when it is unpleasant and retire into a pleasant thought world.

This world is pleasant for the following reasons :

Paranoia.—Failure to achieve is not due to inefficiency on the part of the patient but to the machinations of others. The greater the delusions of persecution, the less the blame attached to himself in the patient's opinion. He is able to overlook his own imperfections and failure to satisfy his desires.

Schizophrenia.—The patient passively retires from his environment and satisfies all his desires in a world of phantasy.

Manic-depressive psychosis.—The patient is much more active and has struggled with environmental conditions. A precipitating cause can often be distinguished, which seems to cause the patient to give up the struggle and secure satisfaction temporarily in a world of phantasy. During the manic attack the affect is one of exaltation owing to the feeling of escape from all inhibitions and the feeling that all his desires have been realized.

The rôle of the personality as the cause of the superficiality of the reaction (as in the second case) or the deepness of it (as in Cases 1 and 3) is again stressed, but the mechanism might be described as the same for all cases, and summed up by the phrase—"Escape into the psychosis."

In conclusion I wish to thank Dr. C. Macfie Campbell, Director of the Boston Psychopathic Hospital, Boston, Mass., for permission to publish particulars of the three cases described.

References.—(1) J. T. MacCurdy, *Psychology of Emotion*, N.Y., 1925.—(2) A. Myerson, *Foundations of Personality*, 1921.—(3) A. M. Campbell, "On the Mechanism of Manic-Depressive Excitement," *Studies in Psychiatry*, vol. ii.—(4) C. D. Davenport, *The Feebly Inhibited*, Carnegie Institute of Washington, 1915.—(5) Southard and Bond, *Proc. of Amer. Med.-Psychol. Assoc.*, May, 1914.—(6) Southard, "Anatomical Findings in the Brains of Manic-depressive Subjects," *ibid.*, May, 1914.—(7) Orton, "A Study of Satellite Cells in 50 Selected Cases of Mental Disease," *Brain*, 1914.—(8) August Hoch, *Benign Stupors*, 1921.—(9) E. H. Connell, "The Significance of the Idea of Death in the Neurotic Mind," *Brit. Journ. Med.-Psychol.*, August, 1924.—(10) J. T. MacCurdy, *Problems of Dynamic Psychology*, 1922.—(11) Havelock Ellis, *Manual of Treatment of Nervous and Mental Diseases*, White & Jelliffe, 1913.

*Endocrine Therapy** By LOUIS MINSKI, M.D., B.S.Durh., D.P.M.,
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York.

In recent years a large amount of literature has been published dealing with the treatment of mental disorders by means of gland extracts, and I take this opportunity of bringing to your notice some of the results I have obtained while treating patients with these extracts. I shall confine my remarks mainly to the treatment of the psychoses with ovarian extract, as, according to some authorities, the results following the administration of this gland extract have been highly gratifying, and we have therefore made use of it to a great extent in suitable cases. It is a well-recognized fact that there is normally a perfect balance between the various endocrine glands, and that any disturbance of this balance tends to produce a disturbance in the mental and physical states of the person so affected. Thus there is a functional harmony and compensatory interaction between the ovaries, thyroid and pituitary glands, the secretion of one gland helping the action of another. It is also found that if the secretion from one of these glands is deficient, one of the other glands in the same series attempts to take over its function by hypertrophying and pouring out an increased secretion into the blood-stream. Thus, after removal of the ovaries, the thyroid and the pituitary gland tend to increase in size in order to compensate for the loss of the ovarian secretion. It is also a recognized fact that the corpus luteum, placenta and mammary gland secretions tend to depress ovarian function, and, therefore, to diminish the ovarian secretion. This is seen during pregnancy, when the ovarian secretion must be held in abeyance; if this were not so there would be an influx of pituitrin into the blood-stream which would cause uterine contractions and the inevitable termination of the pregnancy.

Now, psychoses following pregnancy are quite common, and some of them may possibly be due to deficiency of ovarian extract as a result of inhibition by the corpus luteum, mammary glands or placenta, depending on the time elapsing after the pregnancy before the mental symptoms develop. Acting on the supposition that if the deficient ovarian secretion be administered to the patient, the hormone balance ought to be re-established and the patient restored to normal mental health, we treated this type of case with ovarian extract, and with very gratifying results.

* A paper read at a meeting of the Northern and Midland Division held at Clifton, York, April 28, 1927.

A typical case in this series is as follows :

The patient was a primipara, æt. 22, who had always been in good mental and physical health until five months before admission. The actual labour was quite easy and normal in every way. A few days after her confinement she became depressed, and, on admission, she was depressed, apathetic and showed psychomotor retardation. She had suicidal tendencies, and suffered from the delusion that she must kill her child. Her physical health showed nothing of note except that her menstrual periods were still absent. Ovarian extract was administered subcutaneously to the patient in the form of 1 c.c. ampoules every fourth day, 1 c.c. equalling 30 gr. of whole fresh ovary, the patient having in all 22 injections. After three or four injections the patient became brighter, took more interest in things generally and menstruation became regular, although scanty at first. She gradually improved, and, after about fourteen weeks' stay in the hospital, she was able to return home completely recovered, and has remained well from that time.

On the other hand, some cases do not respond to treatment, and it is possible that in these cases there is another factor at work, perhaps psychogenic in origin. In cases of this kind—those that do not react to treatment by ovarian extract—it is possible that the pregnancy has acted merely as an exciting factor in determining the psychosis, just as any other mental or physical shock might act.

Another series of cases treated with ovarian extract was the climacteric group.

At the climacteric period the ovaries atrophy, the sexual functions decline, and the ovarian secretion no longer passes into the circulation. As a result of these changes the patient becomes upset, owing to the disturbed hormone balance, and, as the late Sir Frederick Mott explained, the "*joie de vivre*" disappears, or at least is diminished. Probably the internal secretions all contribute to maintain the "*joie de vivre*," and disappearance of the ovarian hormone tends to bring on the depression with the usual delusions as a result of rationalizations. On the other hand, the depression may be due to the fact that the unconscious mind is aware that reproductive life is at an end, the conscious expression of which is depression.

At the menopause the thyroid and pituitary glands enlarge, to compensate for the loss of ovarian secretion, and it may be that mental symptoms arise and continue until the compensation for the loss of the ovarian secretion is established by these glands. Therefore, in these cases presenting mental symptoms, the exhibition of ovarian extract supplies the missing secretion, and tides the patient over the critical period.

Some typical cases in this group are as follows :

The patient, æt. 44, had always been robust, and in normal mental health until about six months previously, when she became depressed and anxious, and also expressed delusions of unworthiness. On admission she was still in this mental state, and, in addition, she complained of a choking feeling in the throat and pains all over the body. There was nothing of note in her physical condition except that menstruation was irregular and scanty. Ovarian extract was administered

as before in 1 c.c. ampoules every fourth day. After about six weeks' residence in hospital the patient had quite recovered and was able to return home.

Another case in this group, although differing in the actual form of mental disorder, was that of a patient, æt. 48, and married. She had been in good health until eleven weeks previously, when she became excited and talkative. On admission she was excited, noisy, talkative and incoherent, and, at times, inclined to be impulsive and violent. Physically her condition was poor; she had intestinal stasis, her eyes were sunken and the skin was sallow. In addition she was menstruating irregularly, and was always worse mentally at her periods. As an initial form of treatment she was given a course of Plombières douches and intestinal disinfectants; the intestinal stasis cleared up, but her mental condition remained unchanged. It was then decided to administer ovarian extract as in the previous cases, and, after about nine months' residence in hospital, the patient was discharged recovered.

About 50% of the climacteric cases treated in this way made a good recovery, and in those which did not respond to treatment it was usually found that there was a tainted heredity, or that the climacteric was not the sole cause.

While dealing with psychoses, presumably the result of the cessation of ovarian secretion, I should like to mention the following case as one of interest:

The patient was a typist, æt. 30, and her previous history was as follows: She was normal as a child, got on very well at school, and later took up "typing," at which she became very proficient. Since the age of 19 she had suffered from pains in the head; these had disappeared latterly, however, and were replaced by delusions. For over ten years the patient had been strange in her manner, but four years ago she became very depressed and had ideas of unworthiness following an attack of influenza. She had recovered from this attack and was in her usual mental health until a few weeks prior to admission, when she became depressed and deluded, and developed suicidal tendencies. On admission she was acutely depressed, looked anxious and said she wished to die. She would not speak unless spoken to, and expressed the usual melancholic ideas of unworthiness. She was also agitated, emotional and confused. Her physical health was poor; she was of small stature, 4 ft. 11 in. in height, and weighed 6 st. 11½ lb. Her heart and lungs were normal, but the abdomen was peculiar in shape, being distended below the umbilicus, and more especially towards the middle line. This was apparently due to the unequal distribution of subcutaneous fat, which was present in excess in this region, and which was verified *post-mortem*. Patient had never menstruated, but, in view of her mental condition, no vaginal examination had been made, and no cause could be found for the amenorrhœa. Her secondary sexual characteristics were well developed.

Whilst in hospital her mental condition remained practically unchanged, although, at times, she was a little brighter, whilst at others she was very depressed, resistive and agitated. After seven months' stay in hospital patient died from exhaustion and pulmonary congestion, and on the day of her death temperature rose to 107° F., with a pulse-rate of over 200.

At *post-mortem* examination the following points of interest were found:

The pituitary gland was normal in size and appearance, and the brain-tissue generally, apart from congestion and small hæmorrhages, was normal. The thymus gland was not persistent, and in the abdomen the kidneys were found to be small, and divided into three lobules by two clefts, one at the upper and one at the lower pole. The uterus and ovaries were in an infantile state, and had never developed. The uterus measured 2 in. by 1½ in., but the musculature was well developed; the ovaries were the size of large beans, and the Fallopian tubes were patent and the fimbriæ quite well marked. Microscopic examination of the ovarian tissue showed that it was infantile in type. There were no normal

follicles, although they appeared to be represented by irregularly shaped spaces, which had evidently been lined with cubical epithelium. These were partly filled with a secretion of amphoteric staining properties.

The *post-mortem* findings showed that the ovaries had never functioned, as they were still in an infantile state, and it was probable that the psychosis was the result of disturbed hormone balance following absent ovarian secretion. The patient had been treated with tablets of thyro-ovarian co. (containing ovarian extract $2\frac{1}{2}$ gr., thyroid gr. $\frac{1}{3}$, pituitary whole gland gr. $\frac{1}{8}$, with calcium phos. co. *ad gr. v*), which were given four times a day for some considerable time. No improvement was seen in her mental condition as a result of this form of treatment, and the possible cause of the psychosis may have been an inherent instability in the nervous system.

I wish now to refer briefly to some points in connection with the treatment of the psychosis by means of thyroid extract—a method of treatment which is by no means new, and which is recognized and adopted by most psychiatrists.

Thyroid extract in small doses is used largely in general medicine for various conditions, and also in mental disorders in order to stimulate metabolism by supplying a missing secretion or by augmenting a deficient one. Now in certain cases of mental disorder, *viz.*, those cases which have passed through an acute stage of mania or melancholia and have then drifted into a condition resembling stupor, confusion or secondary dementia, an intensive course of thyroid treatment is often very beneficial. Accompanying the mental state there are usually the following physical symptoms, namely, constipation and faulty digestion, dry skin, feeble pulse, shallow respirations, subnormal temperature, and generally a condition showing sluggish metabolism.

In connection with the technique in this method of treatment it is useful to remember that the patient's weight should be such that he can afford to lose up to about 14 lb. during the treatment, as this often happens. Prior to the administration of the thyroid nourishing diet should be given, *viz.*, eggs and milk in addition to the ordinary diet, and the condition of the intestinal tract should be made as satisfactory as possible. On the first day of the treatment a large initial dose should be given, and, as a rule, 45 gr. of thyroid extract (usually 15 gr. thrice daily) are given.

On the next 5 or 6 days 60 gr. (15 gr. four times a day) are given, provided that the patient's condition is satisfactory. As a rule, reaction to the drug is early and distinct; thus we find that the temperature rises a little and the pulse at once begins to quicken. The pulse-rate must be carefully watched, and any irregularity noted. As long as the pulse remains regular there is no cause for anxiety—no matter how rapid it may be—but any marked irregularity

should act as a danger-signal to stop the treatment. There is often profuse sweating, and the lobes of the thyroid gland become thickened. The patient must be moved as little as possible, and, at the end of the sixth day the treatment is suddenly stopped. Patients who have reacted to the treatment usually look somewhat ill, and have lost weight considerably. It is now necessary to stimulate the patient, and attempt to quickly rebuild the tissues. The diet should be nourishing and liberal, milk being taken in abundance. In addition the patient should be given a strychnine tonic and kept in bed, preferably in the open air.

Two typical cases are as follows :

The patient was *æt.* 20, had always been dull at school, and was dreamy and forgetful. Two years previously to admission he suffered from influenza with hyperpyrexia, and definite mental symptoms developed. On admission he was noisy, violent and incoherent, and, for a time, was alternately elated and depressed. He also expressed the delusion that he was able to revolutionize the world. He remained in this state for about two weeks, when he became quiet, solitary and would not speak ; he was dull and stuporose. As no improvement took place in two months, a course of thyroid was administered. During the treatment he lost 10 lb., but quickly regained this weight. He began to show more interest in things, showed more initiative and talked in a natural manner. Seven months after the course of thyroid treatment he went home recovered, and I saw him two years afterwards, when he was still quite well in every way.

Another case was that of a patient, *æt.* 21, who had previously been under treatment for acute mania, from which he had recovered. He had a bad family history, as his father was insane, his mother was eccentric and his paternal uncle and grandfather were insane. Since his previous attack he had remained quite well until a day before admission, when he became very noisy and excited. On admission he was confused and disorientated, cerebration was sluggish, his memory was impaired and he was incoherent. Physically he was in poor health ; he was flabby, the temperature was subnormal, cardiac action slow and feeble, the skin was dry and the bowels were constipated. He lapsed into a stuporose state, and was given thyroid extract, gr. $\frac{1}{2}$ night and morning, and he became brighter for a time, but again lapsed. He was then given large doses of thyroid, *vis.*, 40 gr. on the first day, and 60 gr. a day for the next five days, and he reacted in the usual way, *vis.*, increased pulse-rate, rise of temperature, loss of weight and profuse sweating. He was kept in bed in the open air and was given nourishing diet, and, after nine months' residence in hospital, he returned home completely recovered and was able to resume his work.

I think these two cases show that the judicious use of large doses of thyroid helps to restore the patient to normal mental health, and, in conclusion, I would like to say that this method of giving thyroid gland—that is, large doses over a period of six days—is always worth a trial in the case of any patient who, after an attack of acute mental disorder, has passed into a stuporose state, and has all the appearance of becoming the victim of secondary dementia and of swelling the numbers of the chronic insane.*

I wish to thank Dr. Jeffrey, Medical Superintendent of the hospital, for permission to make use of the cases quoted, and also data concerning them.

* [This method of treatment was devised by Lewis Bruce some 35 years ago.—Eds.]

The Acetic Anhydride-Sulphuric Reaction for General Paresis.

By A. G. DUNCAN, M.D., B.S.Lond., D.P.M., Assistant Medical Officer, Severalls Mental Hospital, Colchester.

WHILE elaborating a test for cholesterol in the cerebro-spinal fluid, O. H. Boltz (1) observed and investigated a reaction which occurred predominantly in cases of neuro-syphilis, and which he named the acetic anhydride-sulphuric test. To 1 c.c. of spinal fluid was added 0.3 c.c. of acetic anhydride, drop by drop, and after mixing the fluids by shaking, 0.8 c.c. of concentrated sulphuric acid was added in drops, and the mixture shaken again. The development of a blue pink or lilac colour characterized a positive reaction. The test has been studied in this country, and it has been claimed that the reaction is positive in almost every case of general paresis, and negative in almost every other type of mental disorder, except certain cases of non-paretic neuro-syphilis. As this constitutes a surprising degree of specificity of an apparently simple chemical reaction for a single disease, I have carried out the reaction in association with the routine tests in a series of cerebro-spinal fluids with a view to ascertaining its value. One hundred and sixty fluids were examined—a comparatively small number on which to base conclusions, but the results will show that the claims previously advanced for the value of the test require considerable modification.

In carrying out the test as described above certain precautions are necessary. The colour is sometimes very slight, and may easily be missed if the test-tube is examined against a cloudy sky, though quite obvious on looking down into the fluid over a white paper. The sulphuric acid must be added slowly, in drops of about 10 c.mm., the tube being shaken frequently; if added too rapidly, there appears a yellow colour which Boltz considered to be a negative result. The lilac colour has also been described as transient, but I have never observed it to disappear within ten minutes.

In this series the following results were obtained:

	Positive.	Negative.	Total.
Cases of general paresis	27	0	27
Other cases	127	6	133
Total number of cases	154	6	160

Of the 6 negative results, 5 were recorded early in the series, before it was recognized that a slight colour might easily be missed; it may be, therefore, that some of these were really positive.

The cases classified as not general paresis included examples of meningo-vascular syphilis, tabes, epidemic encephalitis, imbecility

and various psychoses. Most, though not all, of the fluids were from insane patients. It is evident that a positive result may be expected in nearly all spinal fluids, whether paretic or not.

It was observed, however, that whereas the paretic fluids invariably gave a well-marked lilac or violet coloration with this test, non-syphilitic fluids frequently showed but slight coloration, and it might be argued that only a certain degree of colour should be accepted as a positive result. The results were therefore classified roughly according to depth of colour. A slight coloration is indicated by "+," and a well-marked reaction by "++." One hundred and forty consecutive fluids could then be classified as follows :

	Negative.	+	++	Total.
Cases of meningo-vascular syphilis	0	4	10	14
Cases of tabes	0	3	1	4
Non-syphilitic cases	1	57	42	100
Total non-paretic cases	1	64	53	118
Cases of general paresis	0	0	22	22

It will be observed that of 75 cases giving a well-marked reaction, only 22 were paretic, and 42 were non-syphilitic. A strongly positive reaction is evidently no indication of general paresis, or even of a syphilitic nervous system.

The acetic anhydride-sulphuric test is thus not associated in any way with the Wassermann reaction. The routine tests to which it appeared to approximate were those for protein. In the 6 cases in which Boltz's reaction was recorded as negative, the average amount of protein was 29 mgrm. per 100 c.c. In the strongly positive cases the protein averaged 64 mgrm. per 100 c.c. In those cases with a slight reaction the average was 33 mgrm. per 100 c.c.

Some simple tests were carried out with paretic fluid to ascertain whether the reaction depended in any way on the amount and nature of the protein present. They showed that (1) boiled cerebro-spinal fluid gives the same reaction as the original fluid. (2) Boiled cerebro-spinal fluid from which the precipitated protein has been separated by centrifuging gives a negative result. (3) This precipitated protein, when washed and re-dissolved in saline, gives as strong a reaction as the original fluid. (4) Fluid from which the globulins have been precipitated by half-saturation with ammonium sulphate and separated gives a negative reaction. (A control showed that the presence of this quantity of ammonium sulphate does not affect the test.) (5) The globulins precipitated in this way, separated and washed, and redissolved in saline, give a positive reaction.

When 10 c.c. of fluid which gave a slight reaction were boiled, the precipitate, washed and suspended in 1 c.c. of saline, gave a very strong reaction.

The reaction, then, appears to depend on the globulins present in the spinal fluid. In the colour constituting a positive result it is not unlike the Hopkins-Adamkiewicz reaction, in which a violet colour is produced by the addition of strong sulphuric acid to a solution of protein in the presence of glyoxylic acid. The association between the two reactions is demonstrated by a further test. Two identical series, each of 15 fluids, were arranged, the first 10 being spinal fluids from various paretic, meningo-vascular, tabetic and non-syphilitic cases. The remaining 5 were solutions of egg-albumin, blood-serum, caseinogen, peptone and gelatin. To one series the acetic anhydride-sulphuric test was applied, on the other the Hopkins-Adamkiewicz reaction was carried out by adding 5 drops of glyoxylic acid solution, and then, drop by drop, 0·8 c.c. of strong sulphuric acid. The two reactions gave identical results. The peptone and gelatin were negative in each case; in the remaining pairs of tubes the colour and degree of colour were practically the same in the two tests.

Conclusions.

The acetic anhydride-sulphuric reaction is positive in almost all cerebro-spinal fluids. As a test for general paresis it is valueless, since many other fluids give just as strongly positive results. The reaction depends on the presence of protein in the spinal fluid, and is probably identical with the Hopkins-Adamkiewicz test.

I am indebted to Dr. R. C. Turnbull, of Severalls Mental Hospital, for permission to publish the results of these tests.

Reference.—(1) Boltz, O. H., *Amer. Journ. of Psychiat.*, July, 1923.

The Time-Sense. By W. WINSLOW HALL, M.D. Edin., M.R.C.S. Eng.

THERE is no lack of evidence that a subconscious measurement of the lapse of time takes place. For example, domesticated animals are often strikingly punctual; some idiots manifest an accurate faculty for time measurement; many men can judge the hour correctly without looking at a clock; others can wake at a predetermined minute; and, as a rule, post-hypnotic suggestions take effect with startling and cryptic punctuality. Investigators are agreed that time-gauging is much more accurate during sleep and trance than in the waking state—in other words, is now more a subliminal than a supra-liminal faculty.

I have experimented on my own time-sense and that of others in three ways: (A) By guessing at the precise minute shown on an unseen watch; (B) by willing, beforehand, to consult my watch at a precise minute; (C) by willing, before sleep, to wake at a precise minute.

Let me report on these in turn:

A. Watch-guessing.

Three methods were tried: (1) A prompt, unreasoning guess was made. (2) The look of my watch-face was deliberately imagined. (3) A deliberate and reasoned opinion was given.

1. A prompt, unreasoning guess was made. To begin with, I and three others agreed that, when challenged, we would give a guess before the lapse of five seconds; later, to get further away from reflection, we agreed that, at a given signal, our guesses should be shouted, and that the first audible guess should be noted. The results of 100 trials following the first plan of challenge may be tabulated thus:

Exact guesses 9%	<i>i.e.</i> ,	Exact guesses 9%
1 min. wrong 11%		Not more than 1 min. wrong 20%
2 " " 8%		" " 2 " " 28%
3 " " 18%		" " 3 " " 41%

A series of 100 guesses on the second plan of challenge gave the following results:

Exact 10%	<i>i.e.</i> ,	Exact 10%
1 min. wrong 17%		Not more than 1 min. wrong 27%
2 " " 6%		" " 2 " " 33%
3 " " 13%		" " 3 " " 45%

These guesses were made at the same times as the 100 reasoned opinions given in A. 3.

Further, it is interesting to note that out of 43 guesses on the first plan of challenge, only 6.9% were exact, while out of 57 guesses on the second plan 15.2% were exact. This suggests that reflection, however brief, confuses the time-sense.

2. The look of my watch face was deliberately imagined. While the watch was still in my pocket I first of all imagined the position of the hour hand; then I imagined the position of the minute hand. While imagining the latter I often felt a conviction (before seeing the hands clearly) that the time was so and so; and then I would see the hand pointing to the right minute. For example, on October 19, 1917, I imagined the hour hand approaching five. Then, on trying to see an image of the minute hand, I had a conviction that the time was twenty-two minutes to five; whereupon I could see, in imagination, the minute hand so placed. On looking at my watch I found that the hands pointed to twenty-two minutes to five exactly.

Two successive centuries of these watch-imaginings were carried out. The results may be tabulated as follows:

First century, April 1 to May 29 inclusive:

Exact 14%	<i>i.e.</i> ,	Exact 14%
1 min. wrong 6%		Not more than 1 min. wrong 20%
2 " " 11%		" " 2 " " 31%
3 " " 11%		" " 3 " " 42%

Second century, May 30 to June 25 inclusive:

Exact 9%	<i>i.e.</i> ,	Exact 9%
1 min. wrong 13%		Not more than 1 min. wrong 22%
2 " " 13%		" " 2 " " 35%
3 " " 12%		" " 3 " " 47%

The two centuries averaged:

Exact 11.5%	<i>i.e.</i> ,	Exact 11.5%
1 min. wrong 9.5%		Not more than 1 min. wrong 21%
2 " " 12%		" " 2 " " 33%
3 " " 11.5%		" " 3 " " 44.5%

One would expect to find that the longer one practised dial-imagining the more accurate one would become. To test this, I have divided the 200 trials into eight batches of twenty-five each, and I find that the exact guesses in each batch come out as follows: 2, 1, 6, 5, 2, 1, 3, 3. From this it is clear that practice caused a sudden improvement in the third and fourth twenty-fives; but that, thereafter, staleness caused a sudden lasting deterioration. Again, one notes that although in the first century 14% of the trials were exact against 9% in the second century, yet, in the second century, 47% of the trials were not more than 3 min. wrong, against 42% in the first. This suggests that though practice diminishes accuracy, it increases approximity.

An isolated experiment in dial-imagining is worth record. On October 10, 1917, I was challenged to come home, without consulting my watch, exactly at 12.15 p.m. by the drawing-room clock. Accordingly, after 8.16 a.m., I looked at no timepiece of any kind. I did my usual indoor work; and then I went out, probably soon after ten, to write in one of the cliff shelters. Several times I imagined the face of my watch, but I did not consult it. At last I felt sure that it was time to go home; and precisely at 12.15 by the drawing-room clock I walked in. Probably no one was so much surprised at my success as I was myself.

3. A deliberate and reasoned opinion was given. The method was as follows: The four experimenters mentioned in A.1 gave, when challenged, a deliberate opinion as to the time shown by my watch while the watch was still in my pocket. The process adopted by each experimenter seemed to me to vary. Thus, while X. inferred from many various data, Y. guessed carelessly and confidently, Z. reasoned as to how my watch would differ from two timepieces which were visible, and W. (myself) tried to imagine the hands on the face of my watch. From the records jotted down at the moment I have worked out the following tables:

(a) Total results from four guessers:

Exact guesses 54%	<i>i.e.</i> ,	Exact guesses 54%
1 min. wrong 26%		Not more than 1 min. wrong 80%
2 " " 10%		" " 2 " " 90%
3 " " 4%		" " 3 " " 94%

(b) Average results from the four guessers:

Exact guesses 13.5%	<i>i.e.</i> ,	Exact guesses 13.5%
1 min. wrong 6.5%		Not more than 1 min. wrong 20%
2 " " 2.5%		" " 2 " " 22.5%
3 " " 1%		" " 3 " " 23.5%

(c) Results from each of the four guessers:

(1) X., æt. 45.

Exact guesses 10%	<i>i.e.</i> ,	Exact guesses 10%
1 min. wrong 21%		Not more than 1 min. wrong 31%
2 " " 14%		" " 2 " " 45%
3 " " 13%		" " 3 " " 58%

(2) Y., æt. 16:

Exact guesses 19%	<i>i.e.</i> ,	Exact guesses 19%
1 min. wrong 13%		Not more than 1 min. wrong 32%
2 " " 12%		" " 2 " " 44%
3 " " 17%		" " 3 " " 61%

(3) Z., æt. 15:

Exact guesses 14%	<i>i.e.</i> ,	Exact guesses 14%
1 min. wrong 13%		Not more than 1 min. wrong 27%
2 " " 17%		" " 2 " " 44%
3 " " 15%		" " 3 " " 59%

(4) W., æt. 54:

Exact guesses 19%	<i>i.e.</i> ,	Exact guesses 19%
1 min. wrong 18%		Not more than 1 min. wrong 37%
2 " " 21%		" " 2 " " 58%
3 " " 13%		" " 3 " " 71%

(d) Results from the first twenty deliberate opinions compared with the last twenty:

(1) The first twenty:

Exact guesses 8%	<i>i.e.</i> ,	Exact guesses 8%
1 min. wrong 5%		Not more than 1 min. wrong 13%
2 " " 4%		" " 2 " " 17%
3 " " 3%		" " 3 " " 20%

(a) The last twenty :			
Exact guesses	13%	<i>i.e.</i> ,	Exact guesses 13%
1 min. wrong	6%		Not more than 1 min. wrong 19%
2 " "	0%		" " 2 " " 19%
3 " "	1%		" " 3 " " 20%
(e) Results from the last twenty deliberate opinions before a break of 53 days compared with the first twenty after the break :			
(1) Last twenty preceding the break :			
Exact guesses	11%	<i>i.e.</i> ,	Exact guesses 11%
1 min. wrong	5%		Not more than 1 min. wrong 16%
2 " "	2%		" " 2 " " 18%
3 " "	0%		" " 3 " " 18%
(2) The first twenty following the break :			
Exact guesses	11%	<i>i.e.</i> ,	Exact guesses 11%
1 min. wrong	7%		Not more than 1 min. wrong 18%
2 " "	0%		" " 2 " " 18%
3 " "	1%		" " 3 " " 19%
Perhaps one ought to add here that personality seems to affect the efficient working of the time-sense. The four tables which epitomize the results of W., X., Y. and Z. suggest this, and confirmation is given by the following experiment: V., <i>æt.</i> 18, was induced to give a deliberate time-guess on 35 occasions, but it was always done scornfully. "Anyone," said V., "can guess the time accurately when the customary routine is going on." Yet V.'s achievement was not in keeping with this assertion. The following tables contrast strikingly with those of Z., Y. X. and W.			
(f) Results of V.'s time guesses :			
Exact guesses	0%	<i>i.e.</i> ,	Exact guesses 0%
1 min. wrong	8.5%		Not more than 1 min. wrong 8.5%
2 " "	25.7%		" " 2 " " 34.2%
3 " "	17.1%		" " 3 " " 51.3%

From the foregoing tables some interesting conclusions may be drawn :

1. That a time-sense exists. For, in 100 trials, one or other of the four guessers hit the exact minute no less than 54 times (see A.3.a). This could not have been due to chance.
2. That deliberation favours accuracy in guessing. For the average accuracies by deliberate opinion (A.3.b) were one-third more than those by prompt guessing (A.1)—that is, 13.5 to 10.
3. That hastiness favours proximity in guessing. For the approximate successes by prompt guessing (A.1) were almost double those by deliberate opinion (A.3.b)—that is, 45 to 23.5.
4. That reasoning confuses the time-sense. For the accuracies in prompt guessing were more than doubled when time for reasoned thought was shortened (see note to A.1)—that is, 15.2 to 6.9.
5. That some process analogous to sense-perception best mirrors the findings of the time-sense. For the methods of forming a deliberate opinion (see A.3) were successful in the following order: (a) Imagining the dial. (b) Careless guessing. This was inferior to (a) only in the approximate successes. (c) Inferences from visible dials. (d) Inferences from all available data.
6. That practice improves time-guessing. For the accuracies in the third batch of dial-imaginings (see A.2) were treble those of the

first batch (6 to 2). Again the accuracies in the last twenty deliberate opinions (see A.3.d) were more than half as much again as those of the first twenty (13 to 8).

7. That staleness may deteriorate time-guessing. For the accuracies in the sixth batch of dial-imaginings (see A.2) were only one-sixth of those in the third batch (6 to 1).

8. Yet a prolonged break in the experiment may not cause greater success on resuming. For a holiday of 53 days (see A.3.e) was followed by exactly the same number of accuracies in the next twenty reasoned opinions as in the twenty reasoned opinions preceding it (11 to 11).

9. That personality affects the efficient working of the time-sense (see A.3.f).

B. Time-willing with a Waking Interval.

The method employed was to will beforehand that, at a precise minute, I should consult my watch; and, while thus willing, I was wont to visualize the face of my watch at the predetermined minute. In the intervals I was absorbed in my usual occupations. Thus at least three processes were involved: 1. The conscious self imposed a task on the unconscious self. 2. The unconscious self was expected to keep count of the passing minutes. 3. The unconscious self was expected to report to the conscious self at the predetermined minute. My strong impression is that the unconscious self always did its work accurately, but that it often failed to win the attention of the conscious self.

During these tests two plans were tried: (1) In 50 trials I chose varying intervals between the time of resolve and the time for acting on the resolve. (2) In 50 trials I chose a uniform interval of 15 minutes. The following three sets of tables give the results:

1. The first 50 trials with varying periods:

Exact 16%	<i>i.e.,</i>	Exact 16%.
1 min. wrong 8%		Not more than 1 min. wrong 24%.
2 " " 20%		" " 2 " " 44%.
3 " " 8%		" " 3 " " 52%.

2. The second 50 trials with a 15 min. period:

Exact 16%	<i>i.e.,</i>	Exact 16%.
1 min. wrong 18%		Not more than 1 min. wrong 34%.
2 " " 8%		" " 2 " " 42%.
3 " " 16%		" " 3 " " 58%.

3. The whole 100 trials:

Exact 16%	<i>i.e.,</i>	Exact 16%.
1 min. wrong 13%		Not more than 1 min. wrong 29%.
2 " " 14%		" " 2 " " 43%.
3 " " 12%		" " 3 " " 55%.

From these trials one can infer:

1. That a time-sense exists. For chance would hardly give exact success in 16% of these trials; still less would chance have

enabled me to be not more than 3 min. wrong in 55% of the trials.

2. That success was exactly the same whether the interval was varied or uniform (16% to 16%).

3. That successes were about half as much again as in watch-guessing (16 to 9 or 10), or in watch-imagining (16 to 11.5); and about one-seventh greater than in deliberate guessing (16 to 13.5).

4. That success was largely due to visualizing.

5. That practice does improve time-willing. For though successes were exactly equal in the two series of 50 trials, yet, when one ranges the trials, chronologically, into batches of 25, one finds that the accuracies in the successive batches come out as follows: 2, 4, 3, 7. Thus, allowing that there was a falling-off through staleness in the third batch, there was yet, on the whole, a rise in efficiency.

c. *Time-willing with a Sleep Interval.*

The method used was as follows: Before falling asleep I willed to wake at a certain minute, and I invariably visualized what the face of my watch would look like at the minute resolved on.

Waking at a predetermined hour is, of course, a common accomplishment. Most regular workers do it. William James, for example, states that he himself, independently of sleep, was in the habit of rising suddenly every morning at the same minute by the clock (*Principles of Psychology*, vol. i, p. 210). Again, Mr. C. E—, a greengrocer, tells me that he always awakes at 5.55 a.m. by his watch, and that he can awake at any unusual hour, e.g., 4 a.m., by thinking of that hour fixedly before he goes to sleep. He does not visualize the watch-face; he just says to himself, "I must wake at 4 o'clock."

I have experimented on myself in relation to (1) night sleep; (2) early morning sleep; (3) early afternoon sleep.

(1) Night sleep: My experiments with regard to night sleep were vitiated by the following two facts: First, that when I went to bed I was often too tired to will at all; and, secondly, that bodily pain almost invariably woke me many times before the resolved-on hour. One experience, however, is quaint enough to be recorded. On July 10, 1917, at 10.30 p.m., I resolved to wake at 4.30 a.m. Pain awoke me thrice before that hour, but thrice I dozed off again. At last I dreamed that I was looking at a dirty, pink handbill, upon which TRUTH was printed in large black letters. Thereupon I woke with the certainty that now was the appointed time. And my watch showed 4.31 a.m. Moreover, on the following afternoon, two handbills, of the exact size, shape and

colour seen in my dream, were pushed under my front door; but (alas!) the "TRUTH" was not in them. My reading of this accurate absurdity is that my subliminal self made use of my visualizing tendencies for signalling purposes; but why my subliminal self used such a ludicrously oblique visualization is more than I can say. A vision of my watch-face would have been much more to the point.

Though, as I have said, my night-results are of little value, I did make 100 trials, and I give the figures for what they are worth:

Results of 100 night trials:

Waking was exact in	18%	<i>i.e.</i> ,	Exact 18%.
15 min. or less wrong	35%		Not more than 15 min. wrong 53%.
15 to 30 min. wrong	22%		" " 30 " " 75%.
30 to 45 " "	6%		" " 45 " " 81%.

Moreover, the number of accuracies in the four successive batches of 25 were 5, 5, 2, 6. The marked drop in the third batch may be accounted for by the fact that during these 25 trials the sudden illness and death of a near relative marred my sleeping. The accuracies in the other three batches are curiously similar in number.

(2) My experiments with regard to early morning sleeping were even more vitiated by my bodily infirmities; so much so that I abandoned them, and the few results obtained are not worth giving.

(3) My only satisfactory experiments were with regard to early afternoon sleep; for then, at the time of willing, I was wide awake and comparatively untired; and I was also so free from pain as to be able to sleep uninterruptedly. The following table gives an abstract of 100 consecutive trials:

Waking was exact in	16%	<i>i.e.</i> ,	Exact 16%.
1 min. wrong	3%		Not more than 1 min. wrong 19%.
2 " "	12%		" " 2 " " 31%.
3 " "	6%		" " 3 " " 37%.

These afternoon trials were made between April 1 and August 9, 1917, and I was conscious, as they proceeded, that exact successes were growing fewer. Having divided the 100 records into four batches of 25 each, I found that in the four successive twenty-fives the accuracies were: 6, 4, 4, 2. No doubt this falling-off was partly due to staleness; but, seeing that oversleeping, and not undersleeping, was the invariable fault in the last batch (23 out of 25), and considering that, just then, I was getting unusually little sleep at nights, I believe that tiredness may have been partly responsible.

In 72% of these afternoon trials an irregular period of sleep was willed; and in 28% a regular period of 15 min. was willed. The results in these two sections compare as follows:—

(a) 72 irregular periods:

Waking was exact in	18%	<i>i.e.</i> ,	Exact 18%.
1 min. wrong	4·15%		Not more than 1 min. wrong 22·15%.
2 " "	11·11%		" " 2 " " 33·26%.
3 " "	4·15%		" " 3 " " 37·41%.

(b) 28 fifteen-minute periods:

Waking was exact in	10·7%	<i>i.e.</i> ,	Exact 10·7%.
1 min. wrong	0%		Not more than 1 min. wrong 10·7%.
2 " "	14·2%		" " 2 " " 24·9%.
3 " "	14·2%		" " 3 " " 39·1%.

The following inferences from my sleep-willing trials are drawn from the afternoon series alone :

(1) That a time-sense exists. For chance would hardly enable one to wake at the predetermined minute in 16% of the trials ; nor would chance enable one to wake within 3 min. of the resolved-on time in 37% of the trials.

(2) Persistent practice tends to diminish accuracies, probably through staleness. This is against the theory that habit accounts for success.

(3) Habit is further discounted by the facts that the afternoon trials were made at ever-varying times, and that, in 72 of them, irregular periods of sleep were willed.

(4) Accuracies were nearly twice as frequent when an irregular period of sleep was willed as when a regular period was willed (18 to 10.71). But tiredness, as well as staleness, may account for this result.

(5) Approximate successes were slightly less in the irregular-period section than in the regular-period one (37.41 to 39.1).

CONCLUSIONS.

These experiments in watch-guessing, in time-willing and in willed waking seem to warrant the following conclusions :

(1) That a time-sense exists.

(2) That the time-sense works best below the threshold of consciousness.

(3) That the time-sense, therefore, is evidence of a subconscious self.

Clinical Notes and Cases.

An Unusual Form of Suicide. By G. A. AUDEN, M.D., Ph.D.,
F.R.C.P.

FROM time to time cases of suicide occur in which the methods employed to bring about death have considerable psychological interest. The following case appears to fall within this category, and to be worthy of permanent record :

X. Y. Z., æt. 24, carried on a fish business in conjunction with his father, who suffered from epilepsy. So far as is known he appeared to be perfectly normal in health, mental capacity and behaviour, belonged to a local football club, and possessed a motor bicycle. On the morning of February 4, 1927, a police constable called at his house to verify his address in reference to an inquiry from the police of a neighbouring town, where he had been reported

as driving a motor cycle without an efficient silencer. No summons was being issued, and "he appeared quite right and jovial." Apart from this trivial incident no anxiety or trouble was known, and he was described as of a cheerful disposition.

On the date above-mentioned his father left the shop early to go on his daily fish sale round, leaving the man in charge of the shop. He was there at 11 a.m., when he spoke to a charwoman from the cellar. On his return at 6.30 p.m. his father found him lying dead in the front bedroom. The body was on its back, with the feet extended away from the bed. Placed across the throat was a woman's high-heeled suede outdoor shoe, which was laced on to a bootmaker's iron boot-last. Upon this was resting a stout piece of wood which was packed into the shoe by means of newspaper. Over the boot-last, and round the base of the wood, was a woman's stocking. Upon the upper end of the wood was balanced the bottom end of a heavy double bedstead, in such a way that the whole weight of the bed was transmitted to the shoe, and so to the throat. The right foot of the bed was resting upon a chair which had fallen upon its side, the left foot being in the air; the chair on which it had rested was lying on its side, having evidently been pulled away. The body was stiff and cold, and the man had evidently been dead for some hours.

Death had resulted from asphyxia due to compression. There were no fractures of the larynx or trachea. The bedstead was perfectly balanced upon the wood, and it would appear that this was the result of careful measurement, if not of previous experiment, for to effect his object it is clear that the length of the wood, together with that of the boot-last and shoe when placed upon the neck, must necessarily have been adjusted so as to be slightly greater than the height of the cross-bar of the bed when resting upon the two chairs, in order that sufficient pressure could be exerted to keep the arrangement in position while he worked the two chairs away with his arms, until the whole weight of the bed was balanced upon it.

The choice of these objects of a woman's clothing for the purpose seems undoubtedly to point to a masochistic impulse, a view which is further borne out by the symbolism of subjection suggested by the shoe pressing upon the throat—a symbolism which is so clear and self-evident that it admits of no doubt as to its meaning. The whole apparatus appears to represent, through the shoe and stocking, a woman's foot and leg, and the implications of the arrangement are indubitable. The evidence afforded by the care with which the apparatus was fitted together and the accuracy with which the bed was balanced upon it rather point to previous

experiment or use to induce some pleasurable gratification. It is not known to whom the shoe and stocking belonged. These were not the property of anyone living in the house, nor to the young woman with whom he was "walking out." So far as could be ascertained, the man's habits were in every way regular, and socially satisfactory. The bedroom was not in general occupation and the bed-clothes were not disturbed.

Though the verdict returned at the inquest was "suicide during temporary insanity," if the above surmise is correct, it is open to question whether death may not have been due to misadventure rather than to an impulse to self-destruction.

*A Case of Pellagra.** By E. BARTON WHITE, M.R.C.S. Eng., L.R.C.P. Lond., Medical Superintendent, Bristol Mental Hospital, and GEOFFREY HADFIELD, M.D., M.R.C.P. Lond., Pathologist, Bristol General Hospital, and Bristol Mental Hospital.

ALTHOUGH still a rare disease in this country, there is little doubt that the incidence of pellagra amongst mental patients is considerably higher than in the rest of the population, and the opportunities for its study have been largely in the hands of the medical officers of mental hospitals. That these opportunities have been utilized is fully borne out by many careful and scientific records published from our mental hospitals since Prof. G. M. Robertson, of the Royal Hospital, Morningside, recognized the first case—a Shetland girl—in this country, in 1909, which case was published by Brown and Cranston Low in the same year. The foundations of our knowledge of the spinal cord changes were laid by the late Sir Frederick Mott, and following this pioneer work, reports of cases from mental hospitals in many parts of the country have been published, culminating in the well-known investigations of Watson, of Rainhill Mental Hospital, who has studied with great care 54 cases occurring in that institution over a period of twelve years. In spite of the fact that the exact cause of the disease is still hotly disputed, the mass of published detail and accumulated experience supports a few legitimate generalizations. Kimber emphasizes a growing belief that pellagra, especially a mild type, is more common amongst the population of mental hospitals than has hitherto been supposed. Most observers have previously been unwilling to diagnose the condition until the skin rash became manifest. Several of Kimber's cases were diagnosed before this sign appeared, its appearance at a later date clinching the diagnosis. The importance

* A paper read at a meeting of the South-Western Division held at Fishponds on April 29, 1926.

of observations such as these cannot be over-emphasized; furthermore, in our opinion, they throw some light on the ætiology of the disease, for the signs in the pre-eruptive stage are mild diarrhœa combined with a sore tongue. These signs are precisely those which, in so many cases, dominate the early clinical picture of Addisonian anæmia, in which recent research suggests that achlorhydria plays a rôle of considerable importance in pellagra.

It is uncommon to read the *post-mortem* records of pellagra without finding some mention of gastro-intestinal atrophy, especially of the small intestine. McCarrison regards this as a sign of avitaminosis, and Cramer reproduced it experimentally in animals deprived of vitamin B, and demonstrated that it was associated with diminished fat absorption and invasion of the superficial layers of the bowel by bacteria. We have found this change in the case we report, and in another reported elsewhere a detailed examination of the small bowel revealed a definite, almost selective atrophy of its lymphoid elements.

There is much to support Watson's view that pellagra should not be regarded as a definite disease entity always produced by the same cause. Our small experience is in accord with his—that in mental hospital patients the disease tends to be of the acute and fatal type and does not respond to treatment, such cases being in sharp contrast to those in which the manifestations are mild and curable.

CASE REPORT.

A married woman, æt. 28. Admitted April, 1925.

Family history.—One of twelve children. Three brothers died in childhood, cause not known; four sisters have died, two of tuberculosis at the ages of 3 and 17 years. Five sisters are alive and well. Father died of tubercular laryngitis, aged 53. Mother alive and alcoholic, aged 65. None of the family have been out of the west of England.

Personal history.—Married eight years—husband a labourer. First child premature and died. Daughter aged 7 years healthy. Son aged 5 years healthy but backward. No miscarriages. Menstruation had been scanty and irregular for two or three years.

She had had no previous illness, but had been getting thin, pale and irritable for several months. There has been no history of mental disorder in the family.

Her certificate was to the effect that she was restless, excitable and confused, and did not know where she was.

Physical state on admission.—She showed signs of recent wasting. Height, 5 ft. 4 in., weight, 7 st. 9 lb. Head and features well shaped and symmetrical. *Complexion:* Hair dark brown and luxuriant growth. Eyes blue and clear. Skin clear, but pale. Temperature was subnormal. *Chest:* Heart and lungs normal. Pulse 90 and regular in force and rhythm. Abdomen was normal; area of stomach resonance normal. Urine: Sp. gr. 1020, acid, no albumen, but a trace of sugar.

Nervous system.—This was difficult to test owing to the mental state.

The knee-jerks were normal, plantar reflex normal, abdominal reflex only slight. Sensation tests could not be relied on, but there was no movement or muscular resistance to pin-pricks on the limbs, but on the trunk and neck these were resented. Muscles generally were flabby and there were signs of general wasting.

The pupils were dilated and slightly irregular in outline. There was a fine tremor of the hands.

Mental state on admission.—She was in a state of confusion, with ideational inertia, and she was quite lost to her surroundings.

She would rouse herself at intervals, when she would mutter, "My mind is gone," and appeared to have hallucinations, seeing her children by her bed. In these clear intervals she showed illusions of identity. Her memory was poor and confused, and with this, accompanied by lack of attention power, she was unable to account for her recent movements. She was emotional on the depressed side. Instinctive action was uncontrolled, and she was inclined to be destructive to her clothing and bedding.

There was periodic motor restlessness and she had to have a room to herself. She resisted all nursing attention and had to be fed with all her food. She slept poorly.

Diagnosis.—A diagnosis of confusional insanity of the depressed form was made, and as such there was a fair possibility of recovery. In two months it was possible to nurse her in a bed on a verandah facing south-west. Though not exposed to excessive heat, she became acutely sunburned about the exposed parts, unlike the other patients on the verandah.

Skin-eruption.—The face, neck and dorsum of hands were affected by an erythematous dusky rash, which in fourteen days became a dry pigmented and scaly eczema with spreading edges on the face and neck. She was removed indoors and the skin was treated with soothing ointments. These had no effect; pigmentation became deeper and the skin was raised and thickened. There was no pain or irritation.

Cracks appeared in the skin chiefly on the forehead, along the naso-labial fold, the anterior border of the sterno-mastoid and over the joints on the dorsum of the hands. Large scales came away, leaving septic surfaces of the hands, containing much pus. Blisters appeared on the finger-tips, containing blood. Owing to septic absorption the temperature rose to 101° F. and abscesses appeared on the chest-wall, back and front. There was also a large abscess immediately above the umbilicus.

Gastro-intestinal disturbances appeared as intermittent diarrhœa. Each attack would last from seven to ten days, the stools being offensive and containing undigested particles of food. The tongue was swollen and red, and there was a large ulcer on the margin. The gums bled readily on cleaning, and there was general stomatitis with ulceration on the buccal mucous membrane.

PROGRESS OF CASE.

The patient lost weight and the mental state remained the same. The skin condition, however, improved in the autumn, and by December showed a reddish-brown pigmentation over the face areas affected, with a dry, pigmented thickening of the skin. The bullæ dried up and the abscesses healed. The hands were left in a dry, scaly and pigmented state—the condition described as dermatogria. The hæmorrhagic blisters on the flexor tips of the fingers dried up, leaving a contracted wrinkling of the skin.

Urine.—About this time it was found that the sugar had disappeared from the urine, but there was a trace of albumin present, which persisted.

Fæces.—Bacteriological examination revealed no dysenteric or other pathological organism and the loose stools continued to contain much undigested food.

Diet.—Consisted of raw eggs and milk, beef-tea, milk pudding and custard. Orange-juice was given at intervals after the mouth had been cleaned.

Drugs.—Small but increasing doses of arsenic and nux vomica were given throughout.

Disinclination for food persisted, and though there was some nausea, there was no vomiting. In February, 1926, her condition was one of extreme emaciation with established diarrhœa. Septic cracks formed in the dried pigmented patches on the face and hands, and small abscesses re-appeared on the back. The temperature, which had fallen to subnormal for two months rose from the septic absorption and she died early in March.

Pathological notes.—During September, 1925, the blood-count was 4,000,000 red blood-cells and 8,000 white blood cells, with hæmoglobin 30%. The fasting blood-sugar was 0.118% and the blood-urea was 36 mgrm. per 100 c.c. urine.



The normal white matter remains deeply stained—blue-black in the section, black in the photograph. Degeneration (d) shown as decolorized areas.

To illustrate paper on "A Case of Pellagra" by Dr. E. BARTON WHITE and Dr. GEOFFREY HADFIELD.

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POST-MORTEM EXAMINATION.

There was practically no mesenteric or other abdominal fat. The spleen was enlarged, bright red, and the substance soft and diffuent. The heart and lungs were healthy. The stomach was slightly dilated and the mucous membrane was thin and pale. The mucous membrane of the small intestine was thin and appeared to be atrophied, and there were a few injected patches, but no ulceration. The mucous membrane of the large intestine appeared to be thin and glistening, otherwise normal.

No naked-eye abnormality was found in the endocrine glands, nor in the central nervous system. The pancreas, thyroid, supra-renal and pituitary were examined microscopically. No changes were found which could not quite well be accounted for by the terminal septicæmia. The first two segments of the cervical cord were examined, and in all sections stained by the Weigert-Pal method a considerable amount of marginal and pseudo-systematized demyelination was found (see figure).

Sections of the skin showed very extensive surface keratinization, underlying which there were acute recent inflammatory changes with much polynuclear exudation and multiple thromboses in the smaller vessels.

The small bowel showed marked thinning of its walls, but a detailed examination of the mucous membrane was impossible owing to *post-mortem* desquamation. An impression was gained that this atrophy affected its lymphoid elements. (In subsequent investigation on another case this impression proved to be correct.)



A Case of Pellagra with Recurring Attacks. By W. J. T. KIMBER, M.R.C.S., L.R.C.P., D.P.M., Medical Superintendent, Hill End Mental Hospital, St. Albans.

THE progress of a case of pellagra under observation for a period of five years, during which time many exacerbations of the pellagrous symptoms were noted, should be of considerable interest.

The ætiology of this condition remains obscure in spite of painstaking efforts by various observers on different lines, and, while a certain amount of hypothesis has been advanced, there is lacking that knowledge which should enable us to eliminate the spurious and co-ordinate the remainder into an intelligible and comprehensive whole.

A brief survey of the main theories as to causation will serve as an introduction to a study of the case-report.

Deficiency in biological value of protein.—According to this theory, the condition is due, not to an absolute deficiency of protein in the diet, which may in fact be present in quantities greater than are necessary to maintain normal health, but to a deficiency of those proteins which contain certain specific side-chains in their molecular composition, particularly tryptophane. This is present in a comparatively large amount in the protein of meat, eggs, peas, beans, etc., and, on addition of these to the diet, early cases of pellagra rapidly improve. Maize protein, consisting largely of zein, is deficient in tryptophane; hence the origin of the now generally abandoned maize theory. In this connection it must be remembered that it is only the amount of protein absorbed that can be

taken into account, and that any conditions which lead to impaired absorption (and these are common in pellagra) reduce the amount of available protein.

Infection.—In America, in 1916 (1), attempts were made to establish the infective nature of the disease condition, and 16 persons for several months were fed on, or inoculated with, the epidermal scales and various bodily secretions of pellagrins, but without the disease being conveyed to them, and belief in the infective nature of the disease was discredited. Infection arising from the gastrointestinal tract may yet prove to be an important factor.

Diarrhœa is an invariable, though not necessarily a persistent symptom of the condition; characteristic tongue changes are the rule; a deficiency of gastric hydrochloric acid is common, and the increased liability to infection and toxic absorption under these circumstances is generally appreciated.

Recently attempts have been made, particularly by Dr. Susman at Manchester, to demonstrate the presence of an organism in the blood, and this has been successfully done by him in a number of cases, including the subject of the present report.

Endocrine deficiency.—Changes in the histological appearance of the endocrine glands, particularly the thyroid, are very commonly, if not invariably, found, and it has been pointed out by Dr. G. A. Watson (2) that the condition occurs in many cases, and is in some way connected with the degenerative changes found in these glands, at the climacteric, and in cases of dementia præcox.

The similarity of many of the manifestations of this condition to Addison's disease, *e.g.*, pigmentation, asthenia, etc., long ago led to the adrenal glands being suspect, and some clinicians have claimed benefit from the administration of adrenalin, but, while degenerative changes in the adrenal glands are usual, the evidence points to these being a stage in the progress of the disease rather than a causative factor.

McCarrison (3) concluded that there was an attempted exercise of an emergency function in the adrenal glands in states of inanition and avitaminosis due to deficiency of vitamins A and B in the diet. The importance of the observation in this connection will be seen later.

Toxic effects.—Degenerative changes and widespread fibrosis amongst the organs suggest a toxæmia, but whether this arises from an organismal infection, or is due purely to metabolic or endocrine disturbance, is not clear. Dr. Susman (4) believes that the toxic material is excreted by the kidneys because peritubular degeneration and subsequent fibrosis are observed. The central neuritis, which appears to be a constant feature, must also be considered a result of toxæmia.

Vitamin deficiency.—In view of recent work on vitamins by Prof. Plimmer (5), it would appear that the possibility of vitamin deficiency playing a part in the production of pellagra must be reconsidered. He has shown that not only a certain minimal amount of vitamin B is necessary to maintain health on a given diet, but that if the diet is increased by the addition of other foods, without increasing the previously adequate amount of vitamin B, deficiency symptoms will result. In other words :

$$\frac{\text{Vitamin B supply}}{\text{Total food}} = \text{a constant.}$$

The changes observed by Prof. Plimmer in chickens with a partial deficiency of vitamin B, and by McCarrison (6) in pigeons completely deprived of it, were intestinal stasis with retention of putrid food residues and absorption of toxic products of putrefaction, the subsequent polyneuritis being attributed to this toxic absorption. Fatty infiltration of the intestines was seen in the case of the chickens on a partially deficient diet. The similarity of these intestinal conditions to those seen in pellagra is striking.

Again, pellagra amongst the Turkish prisoners of war in Egypt was markedly diminished when the protein diet was increased, and this was attributed to the high biological value of the proteins used, chiefly beans and lentils, but it is just these proteins also which are rich in vitamin B.

The following figures are taken from the Report of the South Carolina Pellagra Commission of 1912 :

- 1·37% of those taking milk daily developed pellagra.
- 4·88% " " fresh meat daily developed pellagra.
- 1·37% " " no meat at all developed pellagra.

Daily administration of milk and eggs was insufficient to afford protection. Such figures do not support the contention that deficiency in the biological value of the protein consumed is always an essential factor.

It has been pointed out by Seale Harris (7) that the Great War was, in effect, a repetition of Goldberger's Rankin Farm Experiment of 1914 (8) on a large scale. He observes that with the extremely poor and unbalanced diets of France, Belgium, Germany, Austria-Hungary and England no increase in pellagra was recorded, and in Italy, where the disease was a scourge before the war, there was a great decrease in its incidence, while other diseases associated with nutritional deficiencies, *e. g.*, tuberculosis and scurvy, were rife during the war period.

A similar observation as regards pellagra was made both by

Dr. Watson (9), at Rainhill, and by the author at Hill End (10), but at the time no explanation for it was apparent.

In this connection it should be noted that while the war-time diet was defective in some directions, more especially as regards protein, it contained a higher percentage of vitamin B than many diets normally consumed.

REPORT OF CASE.

K. B—, female, æt. 30. Admitted March 29, 1921; died November 3, 1926.

Diagnosis.—Primary dementia; pellagra. *Causative factors:* None ascertained.

Family history.—No evidence of mental or neurotic disorder was elicited.

Previous history.—Severe periodic headaches began in 1916; some mental instability noticed for five years previous to admission. Recently violent and resistive.

State on admission.—Mentally inaccessible and appears oblivious of her surroundings. Restless at times, tearing at or twisting up her clothing. Gives no reply to questions. Habits defective and troublesome with food. Physical condition moderate. Dental caries, but no other signs of gross disease. Urine contained a trace of sugar, but no albumen or acetone.

Progress.

April 4, 1921: Troublesome with food—hand-fed.

May 30: Very resistive; still requires hand-feeding.

June 25: Slight diarrhœa, with a little blood and mucus.

August 26: Slight diarrhœa for four days.

September 21: Pellagra. Thickened and pigmented skin on back of hands, with bracelets. Impetiginous eruption on face and forehead. Much thinner. Tongue clean. Depressed and restless.

December 29: Dull, idle, seldom talks. No signs of pellagra.

1922 and 1923: Unstable mentally and liable to periods of mild excitement. Looking after herself as a rule, but not doing other work. No evidence of pellagra noted.

March 29, 1924: Pellagrous dermatitis reappearing. Diet increased by one egg and one pint of milk.

December 30: Pellagrous dermatitis, which has persisted in a slight degree, is disappearing.

March 28, 1925: Skin condition shows no pellagrous changes.

August 23: Well-marked pellagrous appearance of both hands with complete bracelets. Tongue clean but not characteristic. No diarrhœa, but bowels rather loose. Reflexes appear normal.

September 29: Rash disappearing. She is at times troublesome with food for a few weeks and then eats well.

August 8, 1926: Thickening and darkening of skin on hands with partial bracelets. Tongue red and denuded. Central nervous system appears normal.

August 16: Diarrhœa. Restless and noisy.

September 10: Quieter, taking food well: rash almost disappeared.

October 15: Well-marked pellagrous dermatitis both hands, with some areas infected and purulent. Septic left heel. Diarrhœa, but no mucus; tongue has aphthous patches. Knee-jerks, wrist and biceps jerks brisk, but not markedly exaggerated. Mentally dull, resistive, defective in habits, but cognizant of her surroundings.

October 18: Taking food better. On yeast 1 drachm *t.d.s.*

November 2: Getting weaker, with slight but persistent diarrhœa. Gangrenous slough on left heel. She has had twitching of face for the last two days.

November 3: Since yesterday morning has had choreiform spasms of upper limbs, more marked in the evening. At 7.40 a.m. she was seized with convulsions of face and upper limbs lasting about ten minutes, at the end of which time she collapsed suddenly, and died at 7.50 a.m.

POST-MORTEM EXAMINATION.

Certified cause of death: Pellagra.

External appearances.—Body thin, small sacral bed-sores. Ulcer of left heel with gangrenous patch. A few old pigmented scars on body and limbs. Symmetrical pigmented areas on dorsum of both hands extending obliquely across the fingers and upwards to wrists, extending a few inches over the lower anterior surface of the fore-arm.

Head.—Dura thick and adherent to skull, especially over right fronto-parietal region. Pia-arachnoid normal in appearance. No congestion. Brain 48 oz. Some flattening of cerebral convolutions over right fronto-parietal region, but no general wasting. On section, distinction between white and grey matter was well marked. Ventricles not distended; ependyma appeared normal. Cord showed no gross changes.

Thorax.—Passive œdema both lungs. No tubercle found. Heart muscle thin and substance friable. No dilatation; no valvular disease. Periostitis was present on pleural surfaces of ribs from about 1½ in. from vertebral joint outwards on 4th to 9th left and 4th to 8th right ribs.

Abdomen.—Stomach: Walls thin, mucosa thin and rugæ very few. Areas of injection, but no ulceration seen. Small intestines: Very thin and atrophic throughout. Valvulæ conniventes were present in upper part of intestine, but were absent from the greater part. Areas of injection were seen in places, but no ulceration. Some specially atrophic areas were noted.

Cæcum: Areas of congestion more marked than elsewhere. Large intestine: Walls thin, mucosa atrophic without rugæ, but no ulceration. The mucosa was a light greyish colour for the greater part. Areas of congestion present. Liver: (51 oz.): Congested plum-coloured appearance. Spleen (2½ oz.): Soft. Kidneys (right 3½ oz., left 4½ oz.): No gross changes. Capsules stripped easily. Ovaries: Hard and deeply crenated. Thyroid: Soft and pale.

HISTOLOGICAL FINDINGS.

Thyroid.—Vesicles largely obliterated by proliferation and give appearance of large masses of rounded or cuboidal cells. On close examination vesicular boundaries are still discernible, although in large areas even these vesicular boundaries are lost, and the cells are in large consolidated masses divided only by fibrous tissue. Very few vesicles are of the usual size and only occasionally do these contain colloid.

Pancreas.—Congested, especially noticeable in a large number of the islets. There has probably been some hæmorrhage. A fair number of islets are considerably enlarged.

Ovary.—Cystic; considerably fibrosed; numerous hyaline bodies. An appreciable amount of functioning tissue left.

Liver.—Portal tracts prominent; liver-cells atrophic; some small fibrous nodules.

Spleen.—Probably some hyperplasia.

Kidney.—Glomeruli of a firm appearance suggesting some excess of fibrous stroma. There is also peri-tubular necrosis well established about the larger tubules.

Stomach.—Mucous membrane atrophic.

Ileum.—Pigment of old hæmorrhage in submucosa.

Colon.—Mucous membrane atrophic.

Heart-muscle.—Atrophy—some fatty degeneration.

Nervous system.—Various parts of the cerebrum, medulla and upper cord were examined and showed changes associated with chronic mental disease, *e.g.*, those usually found in long-standing cases of dementia præcox. There was some chronic thickening of vessels and non-fibril-forming glia proliferation, but no evidence of recent inflammatory reaction.

The question of central neuritis could not be definitely settled, as, owing to the tissues having been inadvertently placed in a chrome fixing fluid for a time, staining by the aniline dyes was unsatisfactory.

The "Betz" cells examined were "ghost-like," as were also some of the larger pyramids, and where a nucleus was visible it was eccentric. The "ghost-like" appearance did not appear to have been due to faulty staining, as other nerve-cells stained fairly well. It seems almost certain that central neuritis was present.

I am indebted to Dr. G. A. Wilson, of Rainhill, for the reports on the histological appearances of the nervous system, and to Dr. W. Susman, of Manchester University, for similar reports on the other organs.

Final Comments.

An interpretation of the pathological findings is not easy. There are changes in the gastro-intestinal tract, in various endocrine glands, in the central nervous system, and in addition an organism was isolated from the blood during life.

Two main questions arise: (1) How far are the changes due to pellagra as distinct from those present in many cases of chronic mental disease, especially dementia præcox? (2) In what sequence do the pathological changes attributable to pellagra occur?

It must be admitted that at present no definite answer can be given to either of these questions, but it is legitimate to advance a theory, remembering always that further observations may disprove, modify or confirm it.

The earliest symptoms in this, as in the majority of cases, were refusal of food, and diarrhœa. Clinically, therefore, there are some grounds for thinking that the oldest lesions are those of the gastro-intestinal tract. On the other hand, alterations in reflexes, as is also usual, were late in appearance, and such are often not very definite, although evidence of central neuritis can usually be obtained histologically. This leaves the endocrine gland changes in an intermediate position.

Hoping to gain some confirmation from a pathological viewpoint for this sequence, *viz.*, gastro-intestinal, endocrine, nervous changes, I sought Dr. Watson's opinion, which he gave as follows: "I cannot say definitely that the order you state is consistent with the pathological findings. This *may* be the order, but there is no pathological proof either in this case or in any other that I have met." On the other hand, as he pointed out, the changes found here may be explicable on the grounds of dementia præcox alone.

So many observations with reference to pellagra are now to hand that tentative efforts to classify and group them in some causal relationship are justified, even though such grouping fails to stand the test of time.

It must, I think, be admitted that in pellagra we are dealing, not with a disease entity, but with a syndrome, which may result from a number of different factors. The whole subject bristles with unsolved problems, and with one final question I must leave it. My question is this: Assuming that vitamin-B deficiency is a causative factor, then under what conditions does beri-beri occur, and what modifications of these conditions produce pellagra?

- (1) Goldberger, J., *U.S. Public Health Reports*, 1916, xxxi, No. 46, p. 3159.—(2) Watson, G. A., "Pellagra," *Eleventh Ann. Rept. Board of Control*, p. 127.—(3) McCarrison, R., "Functions of the Adrenal Glands," *Brit. Med. Journ.*, 1923, i, p. 101.—(4) Susman, W., "Morbid Anatomy: Histology of Pellagra," *Edin. Med. Journ.*, February, 1926.—(5) Plimmer, R. H. A., *Repts. Proc. Roy. Soc. Med.*, xix, Sect. Comp. Med., p. 21.—(6) McCarrison, R., "Relationship of Rice to Beri-beri," *Ind. Med. Res. Memoirs*, No. 2, p. 1, 87, *Ind. Journ. Med. Res.*—(7) Seale Harris, "Food Conditions and Nutrit. Dis. in Europe," *Trop. Dis. Bull.*, 1920, p. 55.—(8) Goldberger and Wheeler, *U.S. Public Health Reports*, 1915, xxx, No. 46.—(9) Watson, G. A., "Pellagra," *Eleventh Ann. Rept. Board of Control*, p. 123.—(10) Kimber, W. J. T., "Pellagra," *Twelfth Ann. Rept. Board of Control*, p. 128.
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Occasional Notes.

*Professor Eugen Bleuler.**

It is both an honour and a pleasure to write an appreciation of the work of Prof. Bleuler on the occasion of his seventieth birthday. The writer became much interested in the work of this eminent psychiatrist in the year 1910, being at that time engaged in the study of the negativistic reactions which many of his patients exhibited. It seemed unsatisfactory to regard negativism merely as a symptom carrying with it the suggestion of an unfavourable prognosis in those cases in which it was observed; it was a form of behaviour, and, as such, it was natural to wish to gain insight into the influences which impelled these patients to assume so curious and disconcerting an attitude towards the environment. Faced with this problem it can readily be understood how stimulating and helpful it was to meet with a series of articles in the *Psychiatrisch-Neurologische Wochenschrift* dealing with the psychological factors concerned in the production of schizophrenic negativism. This penetrating analysis—obviously the production of a great psychiatrist—not only illuminated the obscure problem with which it was immediately concerned, but provided weighty reasons for the investigation of the psychoses along psychological lines.

We associate the name of Prof. Bleuler in particular with the term "schizophrenia," which he suggested might be used to include the group of cases to which the term "dementia præcox" has hitherto been applied. This was much more than a mere change of name; it betokened a change of outlook, and opened up new avenues of approach to the problems of psychiatry. Though we in no sense wish to minimize the great significance of Kraepelin's clinical formulations, it appeared that the term "dementia præcox"

* *Psychiatrisch-Neurologische Wochenschrift*, May 30, 1927.

was not an altogether suitable one to apply to many cases in which its symptoms were exhibited. As Kraepelin himself observed, the assumptions upon which the name "dementia præcox" rested are at least doubtful. The malady, as we know, occurs at all ages; it does not necessarily proceed to dementia; and a certain number of cases attain to complete and permanent recovery. Thus dementia præcox suggests (not altogether justifiably) incurability and deterioration, and for this reason it has been apt to give rise to an attitude of resignation and therapeutic inactivity on the part of the psychiatrist in dealing with cases to which the term appears applicable. The term "schizophrenia," on the other hand, does no more than draw attention to a characteristic feature of a large number of mental cases, and it thus makes it incumbent upon the psychiatrist to regard each case as an entity in itself. The various causal factors have to be elucidated; treatment applied in such directions as may be indicated; and a prognosis assigned according to the nature of the symptoms presented and the history obtained. Furthermore, the conception of schizophrenia has enabled us to free ourselves from the necessity of separating our cases into rigid categories or distinct disease entities, and has thus introduced us to the more psychological notion of "reacting-types." Briefly, Prof. Bleuler has taught us that the form which a psychosis assumes, even an organic psychosis, is dependent in a large measure upon the personal peculiarities of the patient.

Prof. Bleuler's psychiatric studies have not only enriched our knowledge of the workings of the diseased mind, they have also paved the way for an increased understanding of human nature as a whole. We know how in the course of his detailed psychological analyses of schizophrenic patients, he found that many of these had exhibited peculiarities of disposition from an early age. They had been seclusive, had shown inadequate emotional responses, and had been difficult to understand. By thus delineating the pre-psychotic traits of the schizophrenic Prof. Bleuler forged a link between the normal and abnormal, and laid the foundations for a differentiation of human beings in psychological types—the syntonie, cyclothymic or introverted on the one hand, and the extroverted or schizoid on the other hand. We need only refer to the notable work of Kretschmer on *Physique and Character* to show how influential Bleuler's conceptions have been in stimulating investigation along lines which have been fruitful in results.

His teaching is essentially psychological and dynamic. For him a psychosis is not merely a disease; it is the expression of a subtle interplay of conflicting forces, and represents an attempt on the part of its subject to attain a state of psychic equilibrium. He

has shown that the insane are only expressing in their own peculiar way, and in an exaggerated manner, the same desires, ambitions, hopes and fears as animate the whole of humanity. Thus Bleuler counsels us not to remain content to merely describe the symptoms which our patients exhibit, but to make an endeavour to interpret and understand them as well. Those who have followed his teaching cannot have failed to discover that what appears on the surface to be meaningless and irrational behaviour on the part of these schizophrenic patients is no more than a logical reaction to their inner psychic experiences.

Prof. Bleuler is held in the highest respect by psychiatrists in the British Empire, all of whom will join with the writer in congratulating him on the occasion of his seventieth birthday. We all wish him "many happy returns of the day," and hope that he will still continue to make further contributions to psychiatry. The recent translation of his text-book into English will do much to extend still further his sphere of influence. [*Vide* p. 455.]

H. DEVINE.

The Medical Staff of Mental Clinics.

THE above matter and the attitude of the Council of the British Medical Association to it is so fully dealt with in other pages of this number that there is but little need for editorial comment.

We would, however, like to point out that the real reason why the Hospitals Committee of the Council of the British Medical Association made their recommendation to the latter body—a recommendation banning medical officers of county and borough mental hospitals from rendering specialist services at mental clinics—was largely lost sight of at the meeting of the Council of the Association at which it was discussed. Loose argument, prejudice and ignorance predominated and successfully carried the day. We think that this real reason should be recorded. It is reported to be that the whole-time officer employed by the local authority and the hospital superintendent ought not, on general principles which had been enunciated by the British Medical Association from time to time, to be allowed to take these extra appointments, which might very well be left to the part-time appointment of private practitioners if they were properly qualified to carry out the work required.

There is no point in this argument, unless it is contemplated that the specialist staff at mental clinics will be paid officials. If not, then the general practitioner, equally with the whole-time medical officer of a public mental hospital, will devote his spare time to mental clinics. But how many general practitioners are properly

qualified to carry out the work required? This is the real practical point. Did the Hospitals Committee appreciate the fact that a whole afternoon devoted to this work might and often does result in only two or three cases receiving attention? It is conceivable that one case might take up the whole of that time if done properly.

It will be some years before mental clinics will be able to dispense with the services of mental specialists of local authorities. Psychiatry will need to occupy a more prominent position in the medical curriculum, and the general practitioner to be better equipped for this work before this consummation can come about. In the meantime the mentally afflicted are to be penalized in order to carry out a formula!

Contrast the attitude of the Council of the British Medical Association with that of the Royal Medico-Psychological Association in this matter. It is proposed by the latter that the general practitioner shall be invited to attend its Divisional Clinical Meetings, as this is the only way at present in which he can conveniently receive post-graduate education and experience in mental disorders.

Did the general practitioners or the medical superintendents of public mental hospitals first preach the doctrine that if mental cases were adequately treated in their early stages, many would never reach the stage of certification and subsequent detention in a mental institution? We have in mind public asylum reports of eighty years ago in which this was urged. It is a long cry which has lasted from then till now. It has been heard, but only here and there. Is its full realization to be delayed by a shibboleth which disintegrates before the tribunal of common sense? *Carpe diem.*

J. R. LORD.

The New Nurses' Home at Barming Mental Hospital.

It is not vouchsafed to everyone to see the capping-stone put on an edifice he has been erecting during many years of toil and patient adherence to carefully laid plans; yet this may be said of Dr. H. Wolseley-Lewis almost literally and certainly ideally in regard to the new Nurses' Home at Barming Mental Hospital opened on Tuesday, June 7, 1927, by H.R.H. Princess Mary, Viscountess Lascelles.

The building, solidly built of brick and mortar, and well designed and furnished for its purpose, besides being a home is, in its highest sense, a symbol of that special education and training so essential before men and women (however well blessed with all those nursing attributes of heart and mind we hear so much about) can be

considered properly equipped to tend the mentally afflicted—a form of nursing which lays claims to be the highest and most difficult of all nursing.

Without in the least minimizing the homage we pay to those earlier pioneers in this direction, exemplified by Sir James Crichton-Browne, Campbell Clark, Ernest White, Hayes Newington, Elkins, Robertson and others, it will be conceded that, of those who have given inspiration and strength to the movement in recent years, the name of Wolseley-Lewis stands out prominently, and that he was rightly described by the Chairman of the Kent County Council (Lord Cornwallis) as “the master mind” of an effort which was no sudden inspiration, but the culmination of long endeavour.

The new Nurses' Home—for an account of which and its Royal inauguration our readers are referred to other pages of this number (*vide* pp. 504)—may be truly regarded as a “pioneer effort” for it is the first, we understand, which carries out the recommendations made in this relation by the Board of Control (England and Wales) Committee on Mental Nursing, of which Dr. Wolseley-Lewis was a very active and influential member.

We take this opportunity of cordially congratulating Dr. Wolseley-Lewis and the Visiting Committee of Barming Mental Hospital on the success of their efforts to raise the status and standard of the mental nurse.

Child Guidance and Fathercraft.

ALEXANDER TCHEKHOV, a kinsman of the now well-known Russian writer, has published certain scenes and sketches from Anton Tchekhov's childhood which show us what manner of man his father was. “I wonder,” he writes, “if there are many readers and admirers of Tchekhov who know that in the early years of his life fate made him play the part of a boy shopkeeper in a small grocer's shop, kept by his father.” “And one would hardly believe,” he adds, “that Anton, the strict and absolutely honest writer and idealist, was familiar in his childhood with all the methods of false weight and measure and with all the tricks of a little business. Anton was forced to go through that horrible mill, and he remembered it with bitterness all his life.”

The family *régime*, too, was so unfortunate that Anton had no chance of running about, playing and being happy. There was no time for it, for all his time, out of school hours, he had to spend in the shop. Apart from this, his father had placed a taboo on all that sort of thing; he was not to run about, for “you will wear out your shoes”; playing was forbidden, for “only urchins in the street play about”; and Anton had with grief and with tears

to deny himself what is natural and even necessary for a young boy.

From his very early childhood, we learn, owing to the beneficent influence of his mother, he could not look on with indifference when he saw animals being treated cruelly, and almost cried when he saw a driver beating his dray-horse. And when he saw people being beaten, he used to tremble nervously. But in his father's routine, smacks on the face, cuffs on the nape of the neck, flogging, were of the most ordinary occurrence, and he extensively applied these corrective measures both to his own children and to his shop-boys. "Everyone trembled before him and were more afraid of him than of fire."

Anton's mother always rebelled against her husband, but always received the invariable answer: "I myself was taught like that, and you see I have turned out to be a man. One beaten man is worth two unbeaten ones. As you are teaching a fool, nothing but good can come of it. He himself will be grateful to me for it afterwards . . ." Anton's father said this with all sincerity, and he firmly believed in what he said.

Likewise, in everything that concerned church services he was strict, precise and exacting. On great feast days, when the morning mass had to be sung, he woke his boys at two or three o'clock in the morning, and, caring nothing for the weather, he would conduct them to church. There were tender-hearted people, we are told, who used to argue with him and say that it was harmful to deprive young boys of their necessary sleep, and that it was just a sin to compel them to overstrain their young chests and voices, but he held a totally different view, and would answer with great conviction, "Why is running about in the street and shouting at the top of their voices not harmful, and singing in the church harmful? At Mount Athos the boy chanters read and sing for nights on end—yet nothing wrong happens to them. From church singing boys' chests grow stronger, that's all. I myself have sung from my early childhood, and, thank God, I am strong. To work for God is never harmful . . ." He, good man, was never to know, if ever he could have learnt, that the unremitting pursuit of the parental ideal is always devastating to the child.

Nor is this picture of the "terrible father" a characteristic of the ignoble and remote past. From another corner of the journal from which these extracts have been taken there issues a little beam of light on the pathetic Lenglen affair, displaying the "terrible father" again in all his sinister sincerity.*

At Wimbledon, last year, at the supreme moment of her great

* *The New Age*, 1926, xxxix, No. 10.

test, Suzanne Lenglen, the tennis player, as all the world knows, collapsed completely, returning to France under the shadow of public disfavour. If the public, says our contemporary, had any imagination, their disfavour would be transferred to her father. Anyone, it points out, who happens to have read carefully the series of articles in the *Evening News*, in which M. Lenglen describes how he trained his daughter, will know why. Therein he complains that he "neglected nothing" in his endeavour to perfect his daughter's play. She had to practise every conceivable stroke until that stroke executed itself. She had to go in for running, skipping, hopping, and we know not what else. "A healthy mind in a healthy body" was the principle on which he set her these tasks. And behold the result!

One need not depend, says our contemporary, on what he writes alone, but also on the photographs of himself and his daughter in her younger days, which accompanied one of his articles. "She has the look of one who is sacrificing herself rather than disturb her father's obsession with the idea of exploiting her talent. Her father it is who plays the tennis. His face tells you so. She is now a frail racquet cross-strung with nerves stretched to breaking tension. Take her out of the press and she warps. Is it any wonder that she has damned time-tables, committees and everything associated with the accursed game—not excluding even the queens who came to watch it?" It is, indeed, a perfectly understandable reaction, petulant and feminine, against the tyranny of her experience, albeit an infantile reaction, as infantile as the childish terror of the sensitive Anton Tchekhov that remained with him to the end of his days, and he, though a grown man, *trembled* at the sight of suffering.

Sometimes such a reaction assumes a more violent form, with tragic results. Such was the case recently with one Stephen Parrott, a labourer of Homerton, who, when charged at the North London Police Court with wilfully murdering his father, was alleged to have said: "I have done what I intended to do. He has made our lives a misery." He asked the magistrate, according to the *Times* report, to read a signed statement he had made to the police in which he said he had been forced to do what he had done by his father's behaviour towards his mother and himself. Thus the testimony of an unsophisticated labourer, ignorant of cultural pretensions.

Hatred of the father, as we now know, is as old as the herd instinct, probably older, and equally as persistent—sometimes, indeed, stronger; in one form or another it remains among us to-day not merely as a relic of the past, but as a characteristic

feature of modernity whose chief problem is the unhappy flaunting of authority. Everywhere the slaying of the father is manifest, and much of the slaughter is the work of his own hand.

Any movement, therefore, that tends towards a nobler and a saner fathercraft is to be welcomed for the sake of the good of the community. Kensington's effort in this direction is especially to be commended. Under the direction of its Medical Officer of Health, Dr. James Fenton, a small group of men in Kensington have formed a Fathers' Council, devoted to the education of the father in fathercraft. This is the first body of its kind to be established in England, and at the English-speaking Conference on Maternity and Child Welfare held last year at the Caxton Hall in Westminster, Dr. Fenton gave his audience details of its history, purport and endeavour, showing clearly how necessary the new movement was to the better welfare of the mother and her child. It is certainly a movement that should grow and spread, for apart from its obvious physical benefits, it has favours to bestow of a more occult and psychological value.

In the more intensive study of the mental hygiene of the child lies the future of what might be termed preventive psychiatry, and in the establishment of the principles of that study the importance of the father must be estimated justly if we are to avoid the tragedies we have so cursorily surveyed. And there are wider national issues involved. Fathercraft is the essence and basis of statecraft. *L'état : c'est moi*—this, indeed, is the old, old slogan of the wise father, and in the enlightened rule of his own house to-day there still rests the honour of his native land. But it must be an enlightened rule, and therein is the bounden duty and service of the Fathers' Councils.

H. FREIZE STEPHENS.

Part II.—Reviews.

Contre Freud : Critique de toute Psychologie de l'Inconscient. Par JEAN BODIN. Paris : Masson et Cie, 1926. Pp. iv + 99. 14 fcs.

Freud claims for his "psychology" the merit of the most rigid determinism, and while most of his critics are standing on similar metaphysical ground and yet were able to point out the inconsistency and sophistry of Freud's reasoning, the present author enlists Freud's fallacies to plead for a dualistic conception of the psychological relations of body and soul. With the validity of this contention we are not concerned here, but an examination of

his views on, and criticism of, psycho-analysis may yet be useful and instructive.

In the preface the author tells us that he discusses psycho-analysis especially from the psychological point of view. He says: "(1) First I have shown how Freud conceives the general frame of our psychism, how he arrives at the notion of the Unconscious, or, rather, how he starts from it in order to arrive at it. (2) Next I have tried to find with what he fills this frame; there is the rise of Eros. Next what mechanisms he is forced to adjust to all this in order to construct a system. (3) Having attained equilibrium, the system presents itself from two sides, one physiological (materialists call it psychological), the other philosophical. These do not correspond one to another; the system is askew. There is nothing surprising in this, since all the mechanisms are twisted with error. (4) Finally, I expound the necessity of a philosophy where there is no longer question of an unconscious, nor of the Past."

The first chapter deals with the "Unconscious." Criticizing Freud's logic, Bodin says: Numerous examples of the following reasoning will be found:

1. *A* is not certain, but let us admit it for the sake of argument. If *A* is certain, then *B* is true.
2. But *B* is true, hence we have every reason to hold that *A* is certain.

From a hypothetical proposition, so logicians tell us, a valid conclusion can only be drawn by affirming the antecedent or denying the consequent, but Freud draws a conclusion by affirming the consequent. If a watercart passes in the street, the street will be wet: the street is wet: therefore a watercart has passed.

With reference to the use of the association of ideas as a sort of master-key to the unconscious, Bodin remarks that the method has the terrible fault of postulating what it wishes to prove; it would only be of value if the "unconscious" existed, and it (the method) exists only to discover it; from the very start we are here on quicksand. Such paralogism is always the fault of pseudo-scientific and pseudo-psychological systems.

We are told that right through his exposition there will be found mainly criticisms of detail, dealing with certain defective or badly-mounted mechanisms. Of course, continues the author, if we obeyed common sense we should stop a hundred times before coming to a full unfolding of Freud's ideas. But we should be told, "What matter these erroneous parts, if they are justified by the whole," and we should then no longer have to refute the whole, but to judge it. Such subtlety, however, would allow us to follow closely Freud's manner of building up, and this would prove a valuable lesson in the psychology of the imagination.

Discussing three of Freud's cases given in his *Introduction to Psycho-analysis*, the author says: "But as we have seen, our three patients were completely ignorant of the meaning and, *à fortiori*, of the purpose of their obsessions. The first did not know that she coveted her son-in-law, the second that she wished to rehabilitate her husband, and the third that she was in love with her father,

and because they could not know anything of their desires all three employed converted means (*moyens détournés*) to manifest them. We conclude: Freud's research, which is believed to go from effect to cause, is constructed in the inverse manner: (1) The means are converted; (2) hence the desires are unconscious. It is needless to say that this reasoning is valueless, since the first term implies a knowledge of the second. Indeed, how could Freud say the means if he did not already in his thoughts apply them to desires; and how could he say that these means are converted if he did not know already the desires to be unconscious? Similar fallacies are disclosed by Bodin in discussions on Repression and Transfer. Here again the reasoning is as piteous as in the previous cases. Freud has simply noted facts which are well known to physicians and psychiatrists, and tried to force them all into his system.

With regard to the therapeutic value of Freud's treatment he comes to the conclusion that the cures are slow, very painful and uncertain. The treatment seems more a torture than a relief, and resembles further the stakes of Torquemada, in that the patients cannot understand that it is for their good. If a thought or memory of an occurrence were of so revolting a character that it could not be faced and was repressed, how could the bringing back into consciousness, the facing of it again, lead to a cure? Surely it ought to aggravate the trouble.

The second chapter, entitled "Eros," deals with Freud's "Libido" and its outgrowths. After some general criticisms, Bodin discusses "First Infantile Sexual Manifestations," pointing out that Freud confounds "sexual" with "sensual," "Schema of the Development of the Sexual Instinct," "The Œdipus Complex," and "Latent Period and Puberty." He further treats of and criticizes Fixation, Repression, Privation, Sublimation, Introversion, Pathogenic Regression, Conflict, Symptom-formation and Perversions. With regard to these numerous topics he remarks, "Freud keeps his word: he finds in his bag everything he has put into it beforehand."

In the third chapter, "Double-sidedness of the System," Bodin separates the physiological from the meta-physical, both of which he criticizes severely. He holds that there is no analogy between the conceptions of the "Unconscious" of Freud and that of Bergson. The "Unconscious" of Bergson is virtual and has no power; as soon as it obtains power it ceases to be unconscious. Freud's "Unconscious" is the real psyche; it weighs with its whole mass on every one of our acts; one might almost say that consciousness is but a deformed prolongation of it. If it could only creep and curse, says the author towards the close of this chapter, the psycho-analytical philosophy would not deserve so many words; but one is bound to realize that, unfortunately, it is capable of doing harm. Restless minds, always tormented by self-analysis, will come out of it covered with mud. As the theory cannot be effectively refuted unless it is examined step by step in every layer, the initial sophism is not noticed, and it grows like an avalanche. A few applications here and some conclusions there are gathered, and one believes one has got hold of some truths. There are

mature men who, unable to resist, have been led to suicide. Otto Weininger, Schroetter, Tansk and Silberer are cited, and a French case is alluded to.

The fourth chapter, "General Conclusions," deals mostly with philosophical considerations, the necessity of a new philosophical Dualism, and is of minor importance to the psychologist. The criticism of psycho-analysis is to the point, but the author makes one mistake. He says: "Modern psychology made a grievous error when it took the word 'unconscious' seriously; it has filled this empty notion with imaginary mechanisms, and it will get deeper and deeper into the mire if it continues on that road." Surely our author confounds "psycho-analytical hypothesis" with psychology. The general trend of modern psychology, if not to attack the notion of the unconscious, is completely to ignore it; it has no recognized standing.

The book is worth a careful study. The criticisms of details, to which only a few allusions can be made here, are pertinent, but it is to be expected that they will, as usual, remain unanswered by the exponents of psycho-analysis. A. W.

Convulsions et Epilepsie chez les Enfants. Par Dr. ANDRÉ COLLIN.
Paris: Gastoin Doin et Cie, 1926. $5\frac{1}{2} \times 8\frac{1}{2}$ in. Pp. 204.
Price 21 fr.

This is a short monograph upon the convulsions observed in infants and young children. The questions which the author discusses are, first, What is the reason of the greater susceptibility to convulsions of the nervous tissue of the young? And, secondly, Are there any signs by which an observer can say in any particular case whether a convulsive crisis is "benign" and not likely to recur, or is it the first evidence of an early and probably continuing epilepsy? In answer to the first question, he contributes some interesting pages upon the endocrine glandular secretion, the calcium metabolism and certain toxic and other influences, and concludes that the convulsive susceptibility of the nervous tissue of infants and young children depends upon the functional and histological isolation of certain groups or zones of nerve-cells, upon hormonal insufficiency and upon impaired or lessened calcium metabolism.

In the second or clinical section of the book he deals with what are termed the "signs of gravity," by which the physician may be able to distinguish the simple convulsion from the fit of a commencing epilepsy. This is an important clinical matter, from the view-points both of prognosis and treatment. Nothing new, however, would appear to be added by the author to our already existing knowledge of this subject. From the side of heredity he lays more stress on the influence of parental alcoholism or a neuropathic family history than on parental epilepsy.

The book is interesting, and deserves the attention of those who study the nervous maladies of childhood.

W. A. TURNER.

Further Contributions to the Theory and Technique of Psycho-analysis.
By SÁNDOR FERENCZI. Compiled by JOHN RICKMAN.
Authorized translation from the German by JANE ISABEL
SUTTIE and others. The International Psycho-Analytical
Library, No. 11. London: The Hogarth Press, 1927. Royal
8vo. Pp. 473. Price 28s.

It was as far back as 1916 that Ferenczi's first collection of psycho-analytical writings was published in English, and these still retain their special value. Since this author is, after Freud, perhaps the most original worker in this particular sphere, those who are interested in the subject cannot but heartily welcome this large volume, containing ninety disjointed papers (mainly translated from the *Zeitschrift*), which represents his personal contribution to the development of psycho-analysis in the intervening years. They differ much in length. Some are only analytic fragments occupying just a few lines, while others are fairly extensive discussions on important themes. The reader is urged to bear in mind that the papers are not in chronological order, and that each one should be placed in its "period" before being read. They are grouped, however, under the headings of nosology, technique, sexual theory, short papers from the nursery, dreams, symbolism, applied psycho-analysis, medical jurisprudence and religion. A bibliography of Ferenczi's numerous writings to the end of 1926 is appended.

As within these pages the whole field of psycho-analytic work is more or less dealt with, it is not possible to review in any detail, but to dwell upon those subjects to which this author has made special contribution. He himself says that the experiences collected in the course of his practice have become grouped under two heads. "One of these tends to shed some analytical light derived from experience upon certain normal and pathological phenomena which have not been fully explained previously, and attempts to explain the symptoms of hysteria, tic, etc." In this category his analytic research into general paralysis of the insane was published in book form. "The other focus of interest in my work lies in the field of technique: my attempt to speed up the analytic technique by so-called 'active' measures." It is pointed out that this technical innovation has so often erroneously been regarded as replacing the classical Freudian technique, whereas in reality it is only an adjuvant occasionally to be employed in reinforcing the Freudian method. Two important papers appear on this subject—"The Further Development of an Active Therapy in Psycho-Analysis" (1920), and "Contra-indications to the 'Active' Psycho-analytic Technique" (1925).

To the reviewer the conceptions of what Ferenczi terms the disease or patho-neuroses, *i.e.*, those neuroses that supervene upon organic illness or injury, are especially illuminating, in that they throw light on so much in general medicine which otherwise is obscure. In the physically ill "it appears that in very many cases the libido that is withdrawn from the outer world is directed, not towards

the whole ego, but chiefly to the diseased or injured organ, and evokes symptoms at the injured or diseased area that must be referred to a local increase of libido."

Interesting examples are given. Anal erotism is frequently reanimated after bowel complaints; oral erotic or cannibalistic phantasies and a modification of the psycho-sexual attitude may follow dental trouble; irritation in the anal region may be the inciting agent of a paranoia. The puerperal psychoses are certainly not to be traced to "infection" or to "ordinary excitement," but to the unavoidable injury to the central erotogenic zone in parturition. It is important to note that the hypochondriacal sensations of dementia præcox patients so often manifest themselves in the face, or the eyes, and not infrequently in the genitals, *i.e.*, in the very parts of the body which have great narcissistic significance. After discussing a case of hysterical hypochondria which was rapidly cured by psycho-analysis, Ferenczi states that pure hypochondria is incurable, since no transference neurotic components are present. The long and difficult paper on "Analytical Observations on Tic" is of great interest in the endeavour to demonstrate it as a symptom of a narcissistic neurosis and to point out its intimate association with catatonia. It is admittedly rather speculative however.

To the psycho-analytic student there is not a page that will not interest, and from which further knowledge and insight may not be gained. It is presumably needless to state that a considerable acquaintance with the subject is necessary to profit from its reading, but the probability is that the circle of those so equipped is slowly but surely widening. None among these can afford to neglect this work.

C. STANFORD READ.

The Ego and the Id. By SIGMUND FREUD, M.D., LL.D. Authorized translation by JOAN RIVIERE. London: Hogarth Press, 1927. Super-royal 8vo. Pp. 88. Price 6s.

Das Ich und das Es was published in 1923; the authorized translation has now appeared and gives us Freud's present view of the structure of the mind. A much more systematic account than has hitherto been presented is here given of the relations between the parts of the mind involved in mental conflict; former incomplete views are largely superseded and some difficulties and inconsistencies cleared up. On the other hand, parts of the work are most obscure, and, as the author himself states, highly speculative.

The unconscious is no longer regarded as consisting mainly or entirely of repressed tendencies. On the contrary, it is pointed out that, since mental conflict may be entirely unconscious, the repressing forces as well as the repressed material must be unconscious: hence the ego which carries out the work of repression must be in part unconscious. The ego is regarded as having its nucleus in conscious perception of the external world. It embraces

the preconscious and extends down into the unconscious. It forms, however, only the superficial part of the mind. The bulk of mental structure is derived from the instincts, and, in contrast to the ego, is named the "id." Repressed tendencies merge into the id. "The ego represents what we call reason and sanity, in contrast to the id, which contains the passions." Thus the old "conflict between the conscious and the unconscious" is now described as a conflict *in* the unconscious between the ego and the id.

Here, however, a third element comes into play. There are found to be powerful unconscious tendencies which may come into conflict with the ego just as much as do the lower, more primitive activities of the id, but which are of a high moral value, such as self-criticism, conscience, and the sense of guilt. These are ascribed to a differentiated element in the ego—the "super-ego" or "ego ideal." The super-ego is a deposit left in the ego as a result of the passing of the Œdipus-complex. The mechanism of its formation is by a process of identification, in which a lost love-object is taken into the ego and becomes part of it. "Our higher nature is a representative of our relation to our parents; . . . we admired them and feared them, and later we took them into ourselves." The process is one that has occurred not only in each individual's childhood, but also in the primitive history of the race. On account of its origin, however, the super-ego does not become an integral part of the ego, but stands apart from it in relation with both the ego and the id.

In the neuroses, particularly in the obsessional neurosis, and in melancholia, the super-ego manifests itself as a sense of guilt. Since conscience is ultimately derived from the Œdipus-complex, it must normally remain largely unconscious. Hence man is not only more immoral than he thinks—as psycho-analysts have long maintained—but also far more moral.

The complex inter-relations of the three elements of the mind are further considered from the point of view of the author's classification of the instincts into life-instincts and death-instincts, as given in *Beyond the Pleasure-principle*.

In two later papers (published in Freud's *Collected Papers*, vol. ii) the application of these theories to clinical psychiatry is considered. In "Neurosis and Psychosis" a formula for the classification of mental disorders is given. Neurosis results from conflict between the ego (at the dictation of the super-ego and of reality) and the id; in the psychoses (such as schizophrenia) there is a conflict between the ego and reality, and here the ego and the id are in alliance; while in such disorders as melancholia, here named the "narcissistic psychoneuroses," the conflict is between the ego and the super-ego. In the second paper, entitled "The Loss of Reality in Neurosis and Psychosis," compensatory mechanisms are described, bringing this simple formula into closer relation with clinical facts.

A. WALK.

Genius. By ARTHUR C. JACOBSON. New York: Greenberg, 1926. Foolscap 4to. Pp. x + 160. Price \$2.50.

It is well known that many men of genius have been the victims of alcoholism, of drug addiction, or of tuberculosis. We may suppose the general view to be that these geniuses were such in spite of their unfortunate characteristic. In the earlier portion of his book Dr. Jacobson maintains the opposite thesis. He does not contend that the road to genius lies in becoming an inebriate, or in getting infected with tuberculosis. His position is that genius resides in the secondary personality of a person of superior mental endowment, and that the release of the creative power of this secondary personality depends upon some kind of intoxication, with resulting paralysis of inhibitions. As with other works on this subject, there is room for much divergence of opinion as regards the claims to the title of genius of some of those whose cases are treated by the author. Further, the alcoholic habits, and the tubercular infection, of some of the named geniuses are not too well established. Nor must we forget that many of them lived during periods in which drinking habits were more common than is the case to-day, and that tuberculosis is a very widely spread infection.

The author's discussion of the nature of genius is interesting. He is careful to point out the bisexuality which exists in every individual, and he maintains the theory that the creative work of genius is the product of the feminine part of the personality. He declines to entertain the notion that genius is, essentially, insanity, insisting that creative work represents the man at his best. But he regards the genius as being the product of an unstable heredity.

It is not surprising to find that Dr. Jacobson, holding these views, is a strong opponent of certain recent movements in his country. Prohibition excites his strong resentment, and he regards the Volstead law as closing the chapter of American poetic creation. He believes that eugenic measures, were they fully carried out, would result in the complete elimination of genius, and would, therefore, put an end to human progress. The reader's individual complexes will determine his agreement, or otherwise, with these ideas. But there can be no doubt that the "man of plain sense" always tends to be suspicious of the genius, because the latter is always in advance of the thought of his time. Suspicion easily passes into antagonism. There has been many an instance of a succeeding age having to build the tomb of a prophet who was stoned by his contemporaries.

We must make a vigorous protest against the author's description of Spinoza as a *German* philosopher. And there is a cryptic reference to one of the Benson brothers (the well-known British authors) as "succumbing finally to a homicidal mania."

M. HAMBLIN SMITH.

Mind: Its Origin and Goal. By GEORGE BARTON CUTTEN, Ph.D., D.D., LL.D. Yale University Press, and London: Humphrey Milford, 1925. Large crown 8vo. Pp. xiv + 214. Price 11s. 6d. net.

This is one of the semi-popular books, on psychological and allied subjects, of which there has been so large a production in America. The author considers that the study and discussion of evolution have been too largely confined to the physical sphere. The subject of this book is the evolution of intelligence. Dr. Cutten recognizes that part of the objection to the study of mental evolution has been of theological origin; but he considers that the scientists who have insisted upon the continuity of nature have really been the better theologians. He regards the terms "mind" and "soul" as synonymous; he considers that the same mental factors deal with religious as with other experiences, and he declines to reject the theories of the psycho-analytic school merely because those theories assign the origin of our higher mental faculties to the "lowly and humble" element of sex. He lays stress on the fact that inheritance is of two kinds, social and biological, and considers that the progress of man has been mainly due to the former. He holds that the difference between human and animal minds is one of quantity rather than of quality, and he rejects the view that the moral element in mankind is the result of a special creation.

As regards the psycho-physical relation, Dr. Cutten appears to hold a dualistic position, and to regard mind and brain as being interdependent and capable of reciprocal action. He adopts McDougall's classification of instincts, and is quite willing to admit that human conduct is more controlled by instinct, and less by reason, than was formerly held to be the case. At the same time, he recognizes that neither instinct nor intelligence is ever found in a pure state. With regard to morality, he allows that instinct furnishes the impulse for the moral life, but maintains that the development of that life has been guided by reason. He considers that religion is not only natural, but inevitable to man. Some religious beliefs and observances he traces to the instinct of fear. But he seems hardly to recognize how much of the faith and love elements in religion can be assigned to the influence of other instincts.

The concluding part of the book is occupied with the consideration of practical questions. Dr. Cutten dwells much upon the thesis that the United States is breeding almost exclusively from the less intellectual stocks, and is thus frustrating the operation of evolutionary processes. It seems to us that there is need for scientific investigation, but that there is no present occasion for undue pessimism. There is, just now, a marked tendency to lay too much stress upon the findings of intelligence tests. It may well be, as Dr. Cutten admits, that emotional stability is of greater importance than intelligence, and the two do not necessarily go together. But if too pessimistic in this direction, he is certainly unduly optimistic when he asserts that "the feeble-minded can be largely eliminated in a generation when we really decide

to do so." Rash statements of this kind do no service to the cause which they are intended to assist. M. HAMBLIN SMITH.

Text-book of Psychiatry. By Prof. Dr. EUGEN BLEULER; authorized translation by A. A. BRILL, Ph.B., M.D. London: George Allen & Unwin, Ltd. 1924. Medium 8vo. Pp. xviii + 635. 51 Illustrations. Price 25s.

The text-book by Bleuler, to which reference is made by Dr. Devine in his appreciation of its author (*vide* p. 439), made its first appearance in 1916. It is the fourth edition which has been translated into English by Dr. A. A. Brill. Brill, who was Bleuler's assistant in 1907, is also well known as the translator of several of Freud's important works. Though Bleuler takes up a critical attitude in regard to certain aspects of Freudian psychology, he was one of the earliest to recognize the importance of the dynamic approach to psycho-pathology and the value of the psycho-analytical and biological viewpoint, and thus assisted in infusing new life into clinical psychology and psychiatry. Brill was therefore peculiarly equipped for his task, and while his translation strikes the reader as being, in many places too literal,* and makes reading very difficult, he has, taking the work as a whole, been successful in his self-imposed labour. By thus placing within the reach of the English-speaking student and practitioner the teachings of this great physician he has done psychiatry a signal service.

Bleuler's influence on psychiatry in this country will thereby be deepened, which is all for the good. His teachings are by no means incompatible with current British views, for they are in some respects an expansion of those of Clouston, and there is a striking affinity between the psycho-physiological view-point of Laycock, Carpenter and Maudsley, and that taken up by Bleuler.

Another German influence, that of Kraepelin, has for many years now been marked in the moulding of British psychiatry. Here again Bleuler's teachings amplify rather than supplant, for he develops, more than ever Kraepelin did, the interpretive side of psychiatry, the latter psychiatrist being more the master mind of descriptive psychiatry. Bleuler, perhaps more than any other contemporary psychiatrist, has rationalized psycho-analysis and the individual school of psychology of Freud and his followers, and their practical bearings on psycho-pathology has earned for them a more general acceptance by British psychiatrists. In this respect one does not forget the work of Meyer, Hoch, White and others, both in this country and in America.

The text-book by Bleuler is, in some measure, a self-erected

* The motive underlying this is the fear that the original author might be misunderstood by an attempt to translate his native utterances into precise English, for there are shades of meaning in the use of all languages which cannot be adequately expressed in a different tongue; so it is left in the literal translation, and to each reader to arrive at the meaning for himself. This, of course, presents few difficulties to those who are *au fait* with the subject, but to the student it is a serious drawback.

monument to his life's work, and is based upon his long experience as a teacher and clinician in the sphere of psychiatry, and contains "a systematic presentation of his important psycho-pathological formulations and their application in clinical analysis." It gives us also an insight into his philosophy and psychology. Neither the somatic nor the psychological school can claim him wholly, as the psychological introduction to his book, which occupies over fifty pages, amply testifies.

The human psyche is located in the cerebral cortex, but there are still some connections between the basal ganglia and affectivity. The boundaries between the psychic and non-psychic functions of the cortex are indefinite, but only small parts of the former are conscious. A clear distinction is drawn between the stable reflex and the complex and highly plastic psychic reaction, the assumption being that only psychic functions can become conscious and not the reflexes. The psychic machine knows what it is doing, feels the influence of its environment and knows the motives of the reactions, but consciousness is not the essential quality of the psychic processes. It is a quality which, when present, differentiates us from an automaton. It is either present or absent, but its extent and clearness are relative terms. Consciousness is not necessary to purposive actions, for even reflexes may be purposive and such actions occur in automatic states. "Conscious" and "voluntary" actions should not be identified. Thus it is the psychism itself and not a quality or form of it that is involved when we speak of "consciousness of time and place." Really we should say "orientation as to time and place." Orientation may be conscious or unconscious. Similarly consciousness is not essential to ability to remember.

Bleuler then passes in review the more prominent theories, regarding the relationship between mind and matter as bearing on the theory of cognition. He deals with them broadly without any distinction as regards their psychological and cosmological relationships. He concludes that the hypothesis that psychic functions are brain functions, *i.e.*, the so-called hypothesis of identity (the materialistic theory of cognition), has a better foundation than most assumptions, though by no means necessary as a basis for any mental science including psychiatry, in so far as we are not concerned with the study of psychic functions in connection with the brain. Regarding religious opposition to this view he says that "the essential content of the Christian doctrine could be just as easily reconciled with materialism as with dualism," and that idealism would encounter in this respect more difficulties than materialism. He is decidedly sceptical regarding the monistic views of Spinoza as being of no assistance, in fact, faulty, from the view-point of the cognitive theory. A substance with its physical and psychic attributes (in other words, matter, force, and consciousness) cannot be placed side by side in this manner.

"For direct perception is possible only in regard to conscious (psychic) processes. From a part of these we form conclusions (with some probability) concerning external influences, which we call forces. From the grouping of forces we construct

the idea of matter, which needs not necessarily have a corresponding reality. But there is still another difficulty in this theory: It has to conceive everything as conscious, whereas we observe consciousness only in beings similar to us, and cannot conceive of an elementary consciousness without content, which is really connected with a nervous centre. To be sure, nowhere in evolution do we see a point where consciousness may be said to have appeared in man, in the amœba, or in the atom. And the ubiquity of consciousness is so readily accepted just because one cannot conceive of something new suddenly appearing in evolution. There is really no basis whatsoever for the assumption that the psychic and the physical are so very different. We neither know what the psychic, nor what the physical processes are, and consequently nothing about their relationship or difference. *To be sure, for the being endowed with feeling, consciousness is something very special, and the only thing of importance.* It is a matter of entire indifference to us whether the world exists, the only thing of importance being whether that which is conscious, our ego, is happy or unhappy."

He rightly rejects pure idealism as leading to solipsism.

The theory of psycho-physical parallelism, he says, does not help us "in regard to the theory of cognition, though he admits that it might have some meaning within the monistic conception of Spinoza "inasmuch as the conscious side of substance has knowledge of the physical part, which is really substantially identical with it."

He sums up the whole question in a commonsense fashion by stating:

"In the dispute between idealism and materialism, one senses an uncertainty regarding the *value of reality* of these two series. But if one only follows up the thought, this question can be very easily settled. Only its own psychic processes have absolute reality for every psyche (it is not in their "contents," *i.e.*, we *perceive* the light or the rose, but not the light, the rose). If I feel a pain, *I* feel the pain. This is so certain that it can only be expressed tautologically. Since there are also hallucinated pains, this pain need not necessarily have a corresponding process in the aching part of the body. But if a sceptic does not wish to believe that I feel pain, it will be impossible for me to prove it. *The psychic series therefore has absolute, or better, indisputable reality, but only for the psyche in question. This reality is therefore subjective.* But for the existence of the external world there are no proofs. That the table which we see has existence is only an assumption, even if of practical necessity. But if I once take for granted the existence of the table, and that of other people, and the external world, then this table can be shown to these other people. Like myself they can perceive it with their senses. *The reality of the physical world is therefore uncertain and relative, that is, it is not possible to prove it, but on the other hand, it is objectively demonstrable.*"

Bleuler's "unconscious" differs from that taught by Freud. Only a small part of what we perceive comes into consciousness, but the rest is not lost to the psyche. Many perceptions are late in reaching consciousness. Sometimes the unconsciousness is correct when the conscious is mistaken. Everything in our conscious can take place unconsciously, and in the latter case has the same value as conscious psychisms (lacking only conscious quality) as a link between thought and action. There are no special laws for unconscious thinking.* Actions may be responses to unconscious perceptions, which, in fact, may be the decisive element.

He goes on to say:

"To be sure one may place into a special unconscious the mainsprings of our strivings and actions which are also hidden from our introspection. This includes

* *Vide* later when his "Autistic Thinking" is considered.

not only the congenital impulses, but also the unconsciously acquired paths of the strivings.

"Such impulses are particularly striking when they are contrary to the conscious strivings through which they attain the same pathogenic meaning as the repressed tendencies.

The unconscious also contains the paths upon which the psyche influences our secretions, the cardiac vasomotor and other activities, even if exceptionally they sometimes become conscious and are accessible to the will in the same sense as we move our limbs consciously and unconsciously."

Latent memory pictures (engrams) are not to be included among the unconscious functions; they are dispositions without actual functions, while latent but unconscious psychisms are actual functions, as valid as those that are conscious. Psychic functions are either conscious or may become conscious under different circumstances, but they become conscious only when in direct associative connection with the "ego complex." If this is not the case, then they follow an unconscious course. There are many transitions from consciousness to semi-consciousness and to the unconscious. Bleuler's "unconscious" then is what some term the "subconscious."

Bleuler belongs to the associationist school of psychology only in a restricted sense. Association is a means to an end rather than a driving force or active determinant of our actions. He describes how in psychic activity, as in other nervous functions, there is a centripetal reception of stimuli or of material, *i.e.*, sensations and perception, then an elaboration (apperception, concept formation, ideas, association, etc.) and a partial transformation of the material into centrifugal functions (decision, actions).

Of course the whole takes place within the psyche and must not, like nervous process, be understood in the spatial sense. Here occurs one of those passages in the translation the meaning of which it is difficult to put simply: "It is perhaps only to a very slight degree, if at all, that there is an elaboration sufficient to lead the incoming psychokym by performed mechanisms into centrifugal paths, a process surely not quite correctly assumed in the reflexes." The elaboration occurs in such a way that even new psychic processes are created. The perceptions arouse ideas which combine together in thinking and only the resultant as a whole determines action.

The qualities of memory and affectivity accompany all psychic processes. Every psychic process leaves behind it permanent traces ("engrams"), which later manifest themselves in the form of memories, practiced movements, etc., by being revived ("ekphorized").

Apperception embraces the narrower term perception. Concept formation is likened to type photography—a kind of mosaic. Sensations of colour, shape, size, etc., gives us the concept of the strawberry. By further experience we arrive at fruit—a firmer engram structure. Concepts of activity are similarly formed, also the higher abstract concepts, say virtue. Necessary to the formation of concepts are selection of material, inhibition and abstraction.

Ideas are ekphorized memory pictures of (*a*) everything which has been perceived by the senses and (*b*) of psychic structures

which have never been so perceived, such as combinations of sensory images, phantasies, wishes, abstractions, etc. Ideas compose everything as far as they can become actual in time by ekphorization, and not by sense-perception, *i.e.* ideas are imagined not perceived.

Association is a state as far as engrams are connected with one another and a process "through the connection of simultaneous experiences, through the generation of one idea by another as in thought, and above all through the influence of one psychism upon another." There is a certain selection in the process of association for primarily we revive only experiences which in themselves have an importance for us.

The principal trend of thought is determined by impulses and affectivity—we wish to reach a definite aim. Momentary and general constellation play a noticeable part in the trends of thought. The course of ideas is determined by both immediate and former experiences, and the aim of thought is a whole hierarchy of a systematized trend of ideas. The influence of affective needs accounts for disturbances and even direct falsification of logical thinking.

The foundations of intelligence lie in the process of association and the greater the intelligence, the more use is made of elaborated thought material, but clearness of ideas does not depend upon the number of possible associations.

A memory is an ekphoria of an engram. Every experience, conscious or not, leaves behind it an engram. Forgetting is not, as a rule, due to the disappearance of engrams, but to an inability to revive them (ekphorization) directly as memories or by association.

Affectivity comprises the affects, the emotions, the feelings of pleasure and displeasure, and includes somatic as well as psychic manifestations. Feeling is really a bad term because it is used in many different connections. Affectivity determines our actions directly by way of thought (ideas). It also possesses great associative power and a tendency to spread to other associative experiences. It is the general side, while intellect is the local side, to the same psychism. Only a part of the psychic organism partakes in intellectual processes. Affective processes signify an assumed attitude of the whole person and every affect has a tendency to act in a definite direction.

Attention is also a manifestation of affectivity, and is not conative, a marked difference to McDougall's teaching. Suggestion is greater in its influence than the conscious will and is closely linked with affectivity. "The greater the emotional value of an idea, the more contagious it is." The suggestion of the masses is of infinitely more importance in the ordinary life of man than is the suggestion of individual.

Before we are in a proper position to criticize and evaluate Bleuler's psychological teachings it is necessary to summarize his views on thought other than logical and casual thought, on the personality or ego, and on the centrifugal functions. In regard to

what he terms "dereistic thinking" reference must be made to an elaboration of his views in this connection contained in an important paper on "Autistic Thinking," published in the *American Journal of Insanity*, 1913, vol. lxi. All this is a necessary preliminary to a review of his psychiatric teachings.

J. R. LORD.

(*To be continued.*)

Practical Clinical Psychiatry for Students and Practitioners. By EDWARD A. STRECKER, A.M., M.D., and FRANKLIN G. EBAUGH, A.B., M.D. Philadelphia: P. Blakiston's Son & Co., 1925. Demy 8vo, pp. xvi + 375. Illustrated.

To essay a practical manual of psychiatry is a venture which requires some courage in the present disturbed knowledge of the subject, but the need for such a manual cannot be denied. As to how far our authors have succeeded, time alone will show. The drawback to such publications in regard to advancing sciences like psychiatry and neurology is that they soon tend to fall out of date, and repeated revisions are necessary, but it can be said of the present effort that it presents alike to the student and practitioner of medicine a very useful and genuinely practical book, each chapter of which makes a bold bid for some stability by being supported by an array of references showing the care taken in the selection of facts.

After a very helpful introduction and a foreword by Dr. Charles W. Burr, three chapters are devoted respectively to the practical side of general ætiology, diagnosis, prognosis and treatment, the classification of mental diseases and the methods of examination. Quite rightly stress is laid upon the practical value of a correct historical account of the case, and the necessity for a thorough estimate of the physical state before any evaluation of the mental state is attempted. Some of us would go further as regards the latter, and say that any gross physical handicaps should be removed, or be on the way to removal before it becomes possible to arrive at the basic factors underlying the morbid mental state.

As regards the clinical chapters which follow, the case method of presenting the subject has been adopted, and though there may be drawbacks and dangers consequential to this course, it appears to us to be the one most likely to achieve the object in view, which is to put the student and practitioner in possession of a definite framework of the more prominent and common types of mental disorders, around which they can centre the facts of the cases they actually meet for comparison and discussion in regard to similarities and differences, and subsequent diagnosis, prognosis and treatment. Such frameworks wear out in time and need condemning, supplementing or renovating in the light of experience and advancing knowledge. The danger contemplated by Sir Maurice Craig when he wrote that "the description of isolated cases may be very

misleading, disorders being largely coloured by the individual characteristics of the patient," is thoroughly appreciated by our authors, who say that "whenever it is possible the personal equation is stressed. Thus, the student is taught to anticipate the departures from the usual descriptive syndrome, which are so common and yet so puzzling in practice." The cases presented as frameworks are genuine cases, which are clearly and adequately described and then discussed in all their practical bearings.

This method is commonly adopted in teaching clinical medicine, and without such frameworks the clinician would be at sea, without any anchorage—a fact fully appreciated by Sir Thomas Clouston, a most successful teacher of clinical psychiatry.

The classification adopted is taken from the 1923 edition of the *Statistical Manual*, published by the Bureau of Statistics of the National Committee for Mental Hygiene, New York City, the explanatory notes (the lack of which vitiates in a great measure the usefulness of the corresponding Classification of Mental Disorders Table of our Association) being inspired by those prepared for this official manual by Dr. George H. Kirby. It is not so much a classification of mental disorders as a carefully defined assemblage of twenty of the most common syndromes and clinical entities. If it has any basis at all it is in regard to the grouping of the psychoses ætiologically as organic, toxic and functional (psychogenic). Though we prefer the classification associated with the name of Dr. Beaton, yet these two classifications are not incompatible, and perhaps that most suitable for general use would be a judicious combination of the main features of both, which seems to us to be a perfectly feasible proposition.

The book is neatly bound, the paper exceptionally good and the print all that can be desired—indeed, the whole production is one British publishers could well emulate.

J. R. LORD.



Mental Diseases. [Catechism Series.] Edinburgh: E. & S. Livingstone, 1926. Paper. Crown 8vo. Pp. 78. Price 1s. 6d. net.; postage 2d.

The fame of Livingstone's Catechism Series of brochures is not limited to Scottish, and especially Edinburgh, medical students; they have a widespread and well-deserved popularity at medical schools generally. They are carefully compiled digests of the essentials of the subjects with which they deal, and have greater educative value than merely cram-books for examination purposes. The "question and answer" method of teaching was much in vogue in regard to all subjects during the early part of the nineteenth century and has much to commend it. The master-mind puts the question and then answers it to his own satisfaction. The very roots of the subject in hand are thus exposed and demonstrated, thus saving the student from irrelevancy and wasting his time over non-essentials, which are more prone to confuse the mind than essentials.

This method of teaching is especially applicable to the study of mental disorders, for few subjects present greater difficulties in arriving at the essential facts. Messrs. Livingstone, recognizing this, have recently included mental disorders in their Catechism Series and have thereby added to the multitude of students who, during many years, have good reason to be grateful for the assistance thus afforded them in their professional studies.

The author of the present volume, as in others of the series, is not revealed, but its contents show that he has a thorough and up-to-date knowledge of his subject, and the capacity, which few possess, for conveying in a few well-chosen words a good deal of meaning. This has enabled him to deal with the subject in a remarkably comprehensive fashion, and both author and publisher are to be congratulated on the production of a really useful and reliable work.

J. R. LORD.

Report for the year 1925-26 of the Commissioners of Prisons and the Directors of Convict Prisons. London: H.M. Stationery Office. Price 1s. 6d. net, postage 1½d.

The annual report for 1925-26 provides some sidelights of no little sociological interest, and a rough outline whereby the social state of the community can be gauged. Thus there was a daily average prison population of 10,509 (a reduction of 241 on the previous year), or a proportion of 110 per 100,000 of the population. Of these 66% of the men and 86% of the women were recidivists.

As a guide to the actual extent of the antisocial element in the community these figures are somewhat misleading, for they include large numbers of short-sentence prisoners. As the Commissioners state, "The short sentence remains an outstanding defect in our penal system, and a difficulty in prison administration. The highest administrative and judicial authorities have taken the same view, and have drawn attention to the uselessness of the short sentence." The great difficulty of the short sentence is that it prevents proper classification and impedes the efficacy of any scheme of training. To meet this difficulty Wakefield Prison has been set aside for men with sentences of six months or more, while Wormwood Scrubs is to be utilized for men who have not been in prison before. In both "a vigorous scheme of training, physical, industrial, mental and moral," has been established.

But the real interest of the report lies in the evidence which it affords of the relationship of mental inferiority to anti-social action. 2,285 persons were remanded to prison for mental observation, though some justices have followed the very mistaken policy of convicting with a view to a mental examination. 198 mental defectives were reported to the Courts and dealt with under Section 8 of the Mental Deficiency Act, while in addition 52 prisoners were certified under that Act.

The following table shows the total number of prisoners dealt with under the Lunacy Acts :

Certified Insane.

Undergoing sentence	98	Convict prisoners	8
Awaiting trial	230	Borstal inmate	1
On arraignment	19		—
Guilty, but insane	36	Total	392

The reports of the medical officers of the local prisons supply some interesting comments. Thus the Medical Officer of Birmingham Prison draws attention to the important question of the character changes occurring after encephalitis, and the urgent need of some form of institution for their detention and care. He goes on: "It is becoming clear that defect of intelligence is not to be compared in importance to emotional abnormality. It is to the estimation of these emotional abnormalities that our work must now be directed. . . . The problem can only be solved by the careful and intensive investigation of individual cases, and this implies the provision of the necessary investigators." The Medical Officer for Brixton writes: "The border-line case of persistent delinquent tendencies should be secluded until there is a reasonable prospect that he will not resume his anti-social habits. More prolonged experience merely confirms me in the opinion that further legislation is needed for the treatment of these delinquents." Lincoln reports on similar lines on the evil result of the aggregation of these borderline cases in prison in the encouragement of an inferiority complex. On the other hand, Wandsworth remarks: "The wide publicity given nowadays to psychological questions, and the prevailing fashion of producing evidence of some kind or other at a trial in the presence of a prisoner to shelter him from the natural consequences of his actions, are distinctly harmful. It is not only harmful to have had it instilled into his mind that he is different from other wrong-doers, but it is harmful to the reformative and deterrent effects of prison discipline."

Once more from various prisons come reports of the totally useless method of treating the female chronic drunkard by terms of imprisonment. Thus Holloway reports: "A large part of our population is made up of the alcoholic, noisy woman. These women frequently commit acts of violence, more especially on the night of their reception, or the following day." A similar report comes from Manchester: "The recidivist population among women is very high here. . . . The personnel* of the women prisoners is dreadful to behold. It is nothing to see women with fifty, or even more convictions. There are many women who literally make a home of this prison and many who come from six to ten times in a year." The remedy would appear to lie in the education of the public in general and of the magistrates in particular, but without this education *quis custodiet ipsos custodes!*

* This term is not applicable, the author obviously means "appearance."

Part III.—Epitome of Current Literature.

1. Neurology.

The Columnar Arrangement of the Primary Afferent Centres in the Brain-stem of Man. (*Journ. of Nerv. and Ment. Dis.*, March and April, 1927.) Freeman, W.

A tendency has developed, especially among the American school of anatomists, to consider the brain-stem as a column, thus likening it to the spinal cord. The bulb is divided into somatic and visceral afferent, and somatic and visceral efferent columns, separated by a sulcus limitans. The author indicates that the fifth, seventh, ninth and tenth cranial nerves are similar in construction to the spinal nerves. Each one (a) innervates a certain cutaneous area with general exteroceptive cutaneous sensation, (b) innervates a certain area of mucous membrane with general interoceptive sensation, (c) supplies motor fibres to certain muscles which spring from the visceral motor system originally surrounding the alimentary canal, (d) carries proprioceptive fibres from the muscles it innervates, (e) contains segmental reflex fibres. The afferent divisions upon entering the brain-stem divide into two main portions, a ventral division carrying exteroceptive fibres and segmental reflex fibres, and a dorsal division carrying interoceptive and proprioceptive fibres. When the location of the columns is compared at various levels it is seen that a constant relationship is maintained, and that the relationship is practically identical with that observed in the spinal cord.

G. W. T. H. FLEMING.

2. Clinical Psychiatry.

Lethargic Encephalitis and Tremors [*Encéphalite léthargique et tremblement*]. (*Bull. Soc. Clin. de Méd. Ment.*, December, 1922.) Colin, Henri.

The author remarks on the varying character of the tremors in certain cases of lethargic encephalitis. The tremors were different in type in each of the three cases described. The first was comparable to that of disseminated sclerosis and was not under control of the will. In the second patient the tremor was under control of the will. In the third case the patient, who was also a somnambulist, suffered from a continuous generalized gross tremor, which ceased in the somnambulistic state. The existence of an associated hysterical factor in such cases is emphasized.

J. S. ANNANDALE.

Post-traumatic Psycho-neurosis associated with Epilepsy. Gustatory and Genital Aura [*Psycho-névrose post-traumatique et comitalite associées. Aura sensito-gustative et génitale*]. (*Bull. Soc. Clin. de Méd. Ment.*, December, 1922.) Briand, M.

A description of a case in which a fall from a motor cycle, with injury to the head, was followed by disorder of memory, with

marked pessimism and phobias. There also developed vertiginous attacks, each of which was preceded by an aura—peculiar sensations of taste and smell, and eroticism. The author concludes that the psycho-neurosis was due to the emotional shock occasioned by the accident, while the epilepsy was the result of actual cerebral commotion.

J. S. ANNANDALE.

Two General Paralytics—Railway Servants, one a Guard, the other a Pointsman [*Deux paralytiques généraux; l'un aiguilleur, l'autre conducteur de train dans les grandes Compagnies de Chemins de fer*]. (*Ann. Méd. Psych.*, July, 1924.) Pactet, M.

The two patients concerned were carrying on at work almost to the date of their admission to hospital, their mental deterioration having escaped notice. M. Pactet has previously drawn attention to the dangers that may ensue in such cases, and points out that although arrangements are in force for the physical examination of railway employees, no means are taken regularly to ascertain their mental state.

J. S. ANNANDALE.

Another Case of Fatal Status Epilepticus in the Course of Treatment by Gardenal [*Sur un nouveau cas d'état de mal mortel au cours du traitement par le gardenal*]. (*Bull. Soc. Clin. de Méd. Ment.*, October, 1924.) Trenal, M.

In this case the incidence of the seizures was on the whole greatly lessened over a long period, but the patient eventually died of *status epilepticus*. The *post-mortem* findings were very indefinite. In the course of discussion stress was laid on the fact that *status epilepticus* is no more frequent during treatment by gardenal than with the older drugs, but that in many instances diminution of the number of seizures was followed by equivalents, such as outbursts of excitement, violent and impulsive acts.

J. S. ANNANDALE.

Sudden Arrest of a Maniacal Attack as a Result of Arterial Thrombosis. Recurrence of Manifestations on return of the Circulation [*Arrêt brusque d'un accès maniaque à l'occasion d'une thrombose artérielle. Reprise des manifestations avec le retour de la circulation*]. (*Bull. Soc. Clin. de Méd. Ment.*, February, 1926.) Claude, Henri, and Badonnel.

The maniacal symptoms in a case of periodic insanity ceased suddenly on the development of a thrombo-arteritis. The arteritis was accompanied by a considerable rise of temperature. The authors incline to attribute the sudden amelioration of the symptoms to the alterations in the proteins of the blood during the thrombotic process and suggest that the effect is akin to protein shock. They cannot ascribe the beneficial results to the coincident rise of temperature, as in a recurrence of the maniacal symptoms artificially produced fever was of little service.

J. S. ANNANDALE.

A Case of Acute Epidemic Encephalitis of Mental Type [*Un cas d'encéphalite épidémique aiguë à forme mentale*]. (*Bull. Soc. Clin. de Méd. Ment.*, January-February, 1926.) Rayneau, L., Marchand and Deshayes.

A description of a case of acute epidemic encephalitis without lethargic symptoms which ended in death on the sixth day of the disease. The mental symptoms partook of the nature of an acute delirium with occasional intervals of lucidity, and were very severe. The ocular symptoms, myoclonus, rigidity and the *post-mortem* findings, of which a report is included, leave no doubt as to the accuracy of the diagnosis.

J. S. ANNANDALE.

Loss of Memory from Penetration of the Frontal Lobes. (*Attempted Suicide following Homicide by Revolver Shot.*) *Recurrence of Similar Impulses from Alcoholism, and Amnesic Condition* [*Amnésie par transfixion des lobes frontaux.* (*Coup de revolver après homicide, tentative de suicide.*) *Rechute d'impulsions similaires à la suite d'éthylisme. État comitial et amnésique*]. (*Bull. Soc. Clin. de Méd. Ment.*, January-February, 1926.) Marie, A.

The patient shot and killed his wife, after which he attempted suicide by shooting. The bullet passed through the frontal lobes. There was complete amnesia for these acts. Ultimately the patient developed epilepsy and, in a state of excitement following an alcoholic debauch, attempted to murder his mistress. There was loss of memory for this act too. The singular repetition in the epileptic state of the previous impulsive action and the amnesia in both instances is commented on.

J. S. ANNANDALE.

Marked Paralytic Symptoms with Minimal Alteration in the Reactions of the Body Fluids [*Syndrome paralytique très accusé avec syndrome humoral au minimum*]. (*Bull. Soc. Clin. de Méd. Ment.*, March, 1924.) Dupouy, R., Schiff, P., and Réquin, F.

A description of a case with very marked physical signs of general paralysis, but in which the serological tests were negative with the exception of a slightly positive colloidal benzoin reaction in the cerebro-spinal fluid. In the ensuing discussion opinion favoured a diagnosis of organic dementia of non-syphilitic ætiology, and the risks in diagnosing such cases as general paralysis unsupported by positive reactions in the blood and cerebro-spinal fluid was strongly commented on.

J. S. ANNANDALE.

Delusion of Pregnancy in a Persecuted Megalomaniac [*Délire de grossesse chez une persécutée mégalomaniaque*]. (*Bull. Soc. Clin. de Méd. Ment.*, December, 1922.) Adam, E.

An account of the development of a delusion of pregnancy in a patient suffering from a delusional condition of chronic type. The formation of the false idea occurred at the menopause, and was due to the misinterpretation of the cessation of the menses.

J. S. ANNANDALE.

Epileptiform Attacks, Mental Confusion and Signs of Focal Lesions Rapidly Cured by Mercurial Treatment [*Crises épileptiformes, obtusion intellectuelle et symptômes de lésion en foyer rapidement guéris par le traitement mercuriel*]. (Bull. Soc. Clin. de Méd. Ment., December, 1922.) Vernet, P., and Merland, A.

The patient, a girl of syphilitic parentage, developed a complete right hemiplegia, motor aphasia, numerous epileptic seizures and a state of profound mental confusion. A diagnosis of a gumma in the vicinity of the left motor area was made. Mercurial treatment effected a rapid cure.

J. S. ANNANDALE.

Mental and Respiratory Disorders following Epidemic Encephalitis [*Troubles psychiques et respiratoires consécutifs à l'encéphalite épidémique*]. (Bull. Soc. Clin. de Méd. Ment., November, 1922.) Roubenovitch, J., Barük and Bariety.

The patient, a child, after an attack of acute encephalitis lethargica, showed the usual alterations in character, and became mischievous, disobedient, querulous, restless and violent. The respiratory disorder was of the nature of paroxysmal polypnoea lasting for about two minutes at a time, and followed by a period of apnoea. The respiratory rhythm was deranged, expiration being longer than inspiration, and of a sighing character. The authors are unable to make any adequate suggestion as to the pathogenesis of the respiratory manifestations.

J. S. ANNANDALE.

A Case of Amaurotic Family Idiocy, Late Infantile Type (Bielschowsky), with Clinical Picture of Decerebrate Rigidity. (Arch. of Neur. and Psychiat., December, 1926.) Hassin, G. B.

The author describes the case of a girl, æt. 7½, a Hungarian-American. In its late onset (at 3½), protracted course, presence of cerebellar atrophy and the absence of the racial element and macular changes, it resembled the type described as late infantile by Bielschowsky and as cerebellar by Jansky. The micro-chemical changes are given in great detail. Clinically the outstanding feature was decerebrate rigidity, which occurs more frequently in amaurotic family idiocy than in any other disease. The Magnus de Kleijn neck reflex which occurred in this case closely resembled that occurring in the tonic phase of an epileptic seizure.

G. W. T. H. FLEMING.

Somnolence: Its Occurrence and Significance in Cerebral Neoplasms. (Arch. of Neur. and Psychiat., January, 1927.) McKendree, C. A., and Feinier, L.

Somnolence may occur in cerebral neoplasms apart from the anatomical region involved, and before any definite signs of increased intracranial pressure manifest themselves. It may occur without demonstrable gross changes in the ventricles or gross hyperplasia of the region involved and without ventricular distension.

Somnolence was most constantly found in cases exhibiting marked internal hydrocephalus. On the other hand, the degree

was often slight compared with other instances in which there was little or no distension of the ventricles. The majority of this series of cases showed undoubted signs of increased intracranial pressure, and the authors believe that this factor with or without ventricular distension operates directly or indirectly in slowing cerebral circulation, diminishing conscious receptivity of environmental stimuli and producing somnolence.

G. W. T. H. FLEMING.

Psycho-galvanic Studies in Schizophrenia. (*Arch. of Neur. and Psychiat.*, December, 1926.) *Syz, H. C.*

The average electrical resistance in catatonic stupor was found to be more than twice as high (280,000 ohms) as it is in normal persons (111,000). The average resistance of paranoid schizophrenics was similar to normal persons (120,000). In a group of 15 depressives the average resistance was high (216,000). In considering the galvanic reactions the author recognized direct reactions occurring in less than 4 secs., late reactions in 4-8 secs., and disconnected reactions after 8 secs. Disconnected waves of lesser amplitude and occurring in groups were classed as spontaneous waves. Spontaneous and disconnected waves occurred in almost all paranoid schizophrenics (78%), and also in a fair number of catatonics (38%) and depressed patients (32%). Direct reactions occur less frequently (22%) than in normal persons (34%). In depressed patients they are only 19% and in catatonic patients 5%. In paranoid schizophrenics there are fewer reactions closely connected with outside stimuli, but many waves appear spontaneously, quite independent of environmental influences. In catatonic stupors there is greatly diminished galvanic activity. In one case even sensory stimuli like pin-pricks and sounding a motor horn did not cause a deflection of the galvanometer string. The galvanic records of persons of the same reaction type show features which are typical and fairly consistent.

G. W. T. H. FLEMING.

Manganese Toxæmia; with Special Reference to the Effects of Liver Feeding. (*Brain*, March, 1927.) *Charles, J. R.*

The clinical manifestations of manganese poisoning are lack of energy and mental languor, bodily fatigue on exertion, emotional instability with excessive smiling and hilarious laughter. The face at rest shows a Parkinsonian mask, although sometimes on this is superimposed a set, spastic smile. The voice is low in tone and monotonous. There is marked rigidity in all the muscles of the limbs and trunk. The patient walks with a stiff gait on a wide base. Retropulsion is almost constant in advanced cases. There is atrophy or alteration in the electrical reaction of the muscles. Tremors of a coarse type are seen in the head and limbs. These vary from fine twitching of the hand to rhythmical movements of the head, limbs and trunk. No changes in sensibility were noticed, but cramps were common. The deep reflexes are increased.

Because of the association of cirrhosis of the liver and lenticular degeneration, some of these cases showed hepatic inefficiency, and feeding with raw liver was tried. The results, although not startling, suggest that benefit had accrued from the treatment. The author thinks that there may be a hepatic hormone which has a beneficial action on the cells of the nervous system.

G. W. T. H. FLEMING.

3. Treatment.

The Malaria Treatment of General Paresis. (Journ. of Nerv. and Ment. Dis., March, 1927.) Ferraro, A., and Jong, T. C. C.

Three methods are given for transporting the malarial parasites :

(a) Sodium citrate method : 5 c.c. of malarial blood are mixed in a sterile tube with 5 c.c. of 5% sodium citrate solution. Tube closed with a rubber cork and hermetically paraffined.

(b) Agar blood method : 10-15 c.c. of malarial blood are defibrinated with small glass balls, then transferred to a tube containing agar blood distributed on an inclined plane. Closure of tube as in (a).

(c) Gelatinization method : 2 c.c. of malarial blood are put in 10 c.c. of sterile chemically pure gelatin. The gelatin must be dissolved at 30° C. in a water-bath. The blood and gelatin must then be shaken for a few minutes and left to solidify.

The average number of malarial attacks allowed was 12 ; in some cases as many as 20 were permitted. Of the 120 cases treated, 26% have shown very good remissions, 27% a marked improvement.

When the different types of cases were considered, the authors found the greatest number of good remissions in the expansive-paranoid type ; next in order came the depressed type and then the manic type. The demented type showed the least improvement. Gerstmann found the best results with the simple demented cases, Kirschnaum, Pilcz, Herzig and Joosmann and Stienaerts with the manic cases. The older the patient the less probability there is of improvement from malarial treatment.

There is quite a marked prolongation of life in the unimproved cases. Serologically the authors found between two and three years after treatment that 86% had a negative blood Wassermann and 68% a negative fluid Wassermann. The pleocytosis is the first element to show improvement ; this occurs a few days after treatment. The globulin reaction and the colloidal gold reaction are more persistent. The parietic curve tends towards the syphilitic type.

Within 35 months there is a close correlation between the serological and clinical improvement. In four cases there followed on the treatment a typical "præcox" reaction, with auditory hallucinations, paranoid ideas, mannerisms and a more or less pronounced negativism. Generally speaking the reflexes did not show any great improvement ; in the unimproved cases they were often worse after treatment. Co-ordination, ataxia, tremors and speech

defects were all very favourably influenced in the good remission series.

The authors are inclined to attribute the improvement to the high temperature. They found that from a serological standpoint, a parallelism exists between the number of febrile paroxysms and the improvement. Bunker and Kirby regard the improvement as due to a form of foreign protein therapy acting on a nervous system which has not been too badly damaged.

G. W. T. H. FLEMING.

Intravenous Treatment of Some Epileptics with Calcium Chloride and Glucocalcium. (*Journ. of Nerv. and Ment. Dis.*, April, 1927.) Klein, E., and Forcione, E.

The authors used calcium chloride and gluco-calcium on two groups of fourteen patients. They found no benefit from the use of calcium over four- and five-month periods. If anything there was a tendency towards an increase in the number of fits. There was no advantage in the use of gluco-calcium over calcium chloride, and no increase in the calcium concentration of the blood-serum after the injection of one-half to two grains of calcium salts.

G. W. T. H. FLEMING.

4. Psycho-Pathology.

The Syndrome of Mental Automatism and Its Rôle in the Formation of the Chronic Systematized Psychoses. (*Journ. of Nerv. and Ment. Dis.*, April, 1927.) Bailey, P.

It is to de Clerambault that we owe the conception of mental automatism and its rôle in the development of paranoia and paraphrenia. The automatism is a triple one, comprising phenomena of three sorts, (a) sensory, (b) motor and (c) ideoverbal. It includes all the processes described under the name of hallucinations, but includes many illusions and other phenomena of a negative character. The sensory group consists of hallucinations and illusions which are familiar enough. The motor group consists of hallucinations of kinæsthetic sensibility, especially of the vocal musculature.

The ideoverbal automatisms are allied to the psychic hallucinations of Baillarger or the pseudo-hallucinations of Kandinsky, and are considered by de Clerambault to be most important. They are either positive or negative. The positive phenomena include psychic hallucinations, ideorrhœa, mute procession of the past, substitution of thought, pressure of thought, false recognition, passage of an invisible thought, echo of thought, enunciation of acts, anticipation of thought and flight of thought. The negative phenomena include arrest of thought, seizure of thought, absence of thought, disappearance of thought and sudden forgetting. To these Henyer and Lamache have added thought-reading. De Clerambault considers that all the phenomena of mental automatism have their origin in a physico-chemical alteration of the cells of

the central nervous system. The effects of intoxications and infections on the central nervous system follow several laws: (a) The effects of each toxin differ; (b) in general the cells are more susceptible the higher their position in the hierarchy of function; (c) the cells defend themselves more easily the slower the attack; (d) the latent period is important; (e) the nervous cells defend themselves better as the patient grows older—at least until the onset of senility.

De Clerambault divides the pure chronic systematized psychoses into constitutional and degenerative psychoses. In the constitutional psychoses hallucinations are absent; in the degenerative group deliria are absent. Most chronic psychoses are made up of a mixture, e. g., the chronic hallucinatory psychoses. The constitutional psychoses present, as it were, a hypertrophy of some one trait. Serieux and Capgras recognize three main groups, the passional, the interpretative and the imaginative psychoses. The patient reacts to the initial phenomena by the formation of a systematized delirium, the nature of which depends on many factors: (a) The strangeness of the phenomena; (b) the intellectual make-up of the patient; (c) the nature of the hallucinatory process and its concordance with the character of the patient; and (d) his affective tone.

G. W. T. H. FLEMING.

The Conception of Dissociation. (*Brit. Journ. of Med. Psychol.*, March, 1927.) Hart, B.

Janet's conception of dissociation was that mental elements and processes could preserve an independent existence apart from the main stream of consciousness, and by this conception he explained the phenomena of hysteria and hypnosis. There are considerable objections to Janet's cut-and-dried conception, for dissociation does not separate the mind into compartments. The various systems are all related and work together, perhaps with a different gear as it were. Hart believes in a functional conception of dissociation, and would extend it to cover cyclothymia and the manic-depressive psychosis, to the mechanism of hallucinations, to elaborate delusional systems which do not interfere with conduct, and even to the logic-tight compartment mechanisms observed in everyday life. Freud's conception of the unconscious is a conceptual construction, created in order to explain not facts, but what are really inferences. Janet's conception is a classification of observed phenomena.

In Freud's conceptions of the ego and the id a further division of the mind is formulated. He regards the ego as "the connecting organization of the mental processes in an individual," centred in the perceptual system of the psychical apparatus. The remainder of the psyche is the id. Perception plays in the ego the part which instinct plays in the id. This again is a conceptual construction. The whole of Freud's concepts are too fluid and plastic to be of much value from a methodological standpoint. The psychoanalyst very largely avoids the question of multiple personality and dissociation.

G. W. T. H. FLEMING.

The Psychology of Religion. (*Brit. Journ. of Med. Psychol.*, March, 1927.) Jones, E.

According to Dr. Jones the attributes of power and taboo connected with supernatural beings and the varying emotional attitudes, notably those of dependence, fear, love and reverence, are all direct reproductions of the child's attitude towards his parents. The child's sense of the absolute as expressed in its original pre-emptive self-regard is, when impaired by contact with reality, partly continued as the anthropocentric view of the universe implicit in all religions, and partly displaced, first on to the parents, and then, when this also fails, on to divine beings. The earthly father is replaced by the Heavenly Father.

The conflicts with the parents lead to repressed death wishes against the parents, with a consequent fear of retaliation, and from this comes the familiar religious impulse to propitiate the spirits of the dead ancestors or other spiritual beings. The accompanying love leads to the desire for forgiveness, reconciliation and succour.

All the emotional problems surrounding death arise, not from the philosophical contemplation of dead strangers, but from the ambivalence towards the person's loved ones. The themes of death and castration are extremely closely associated. The primal self-love and self-importance of the child is displaced on to a selected portion of the mind called the super-ego—an ideal of what the ego longs to be as the result of its moral education.

The sense of inadequacy in coping with life commonly called the inferiority complex takes its origin in the sense of sin or guilt aroused in the child in his endeavour to make all his impulses conform with adult standards. From this the author suggests that all manifestations of inadequacy can be allayed by dealing with their origin by religious means.

G. W. T. H. FLEMING.

5. Pathology.

The Endocrines in Epilepsy: A Histological Study. (*Brain*, March, 1927.) Schon, H. I., and Susman, W.

The authors, after reviewing some of the previous results of other workers, examined the endocrine organs in six cases. They found no distinctive lesions in the genital glands. In the thyroid there was a distinct lesion: active degeneration was present in one gland out of four, in another there was a pronounced fibrosis. In the adrenal there was a slow chronic inflammation. The pars glandularis of the pituitary was enlarged in every case and usually to a very pronounced degree. In both the adrenal medulla and the anterior pituitary the destructive agent has a preference for the chromophile cells, producing a similar type of large cell with a very large nucleus, which frequently showed signs of degeneration. In the pancreas there was acinar degeneration, interacinar fibrosis and extremely enlarged islets, *i.e.*, a similar condition to that found in diabetes, but the hypertrophied islets are very much more common

than in diabetes without the actual degenerative lesions of that disease.

The parathyroids were enlarged, showed abundant oxyphilic cells, and a few contained areas of degeneration. This shows strain thrown on the parathyroids. In only one case was the liver examined, and this showed small, widely-scattered inflammatory foci in various stages. All organs examined in the first five cases gave ample evidence of perivascular necrosis.

The authors draw attention to the fact that (a) hypertrophy was a feature of the parathyroids, the pituitary and the islets of Langerhans; (b) the liver, the islets of Langerhans, the pituitary and the adrenals are concerned with carbohydrate metabolism—these and the acinar tissue of the pancreas all showed lesions; (c) the pathological agent has a selective action on the chromophile cells; (d) a toxic necrosis is present in the perivascular channels of all the organs examined, if the case has been a severe one.

G. W. T. H. FLEMING.

The Experimental Study of Pachymeningitis Hæmorrhagica. (*Journ. of Nerv. and Ment. Dis.*, March, 1927.) Putnam, T. J., and Putnam, I. K.

The authors define two chief types of hæmorrhagic membrane—the non-traumatic, idiopathic or vascular type, and the traumatic, or, better, reactive type. The former type is frequently seen in chronic alcoholics and in the insane. The latter type follows injury to the head, and is characterized histologically by the presence of irregular blood-filled spaces much larger than the giant capillaries of the idiopathic type.

The traumatic type is always preceded by a subdural hæmorrhage; the idiopathic type may be found either with or without hæmorrhage. Experimental investigation showed that the lesions seen after the subdural injection of blood and after operation are not progressive although they resemble the progressive lesion in appearance.

G. W. T. H. FLEMING.

The Neuropathological Findings in a Case of Acute Sydenham's Chorea. (*Journ. of Nerv. and Ment. Dis.*, March, 1927.) Ziegler, L. H.

The author found chromatolysis of practically all the cells of the central nervous system, with swelling of nuclei and displacement, destruction of some neurons (especially of the sixth nerve and calcarine cortex, where glia cells were much proliferated), neuronophagia; fatty deposits in the large cells of the motor cortex and pallidum; fat in the perivascular spaces and petechial hæmorrhages in a small area near the dorso-medial aspect of the restiform body of the medulla.

G. W. T. H. FLEMING.

Encephalitis Periaxialis Diffusa. Report on Three Cases with Pathological Examinations. (*Brain*, March, 1927.) Grainger-Stewart, T., Greenfield, J. G., and Blandy, M. A.

The authors call attention to the difficulty of diagnosing Schilder's encephalitis from disseminated sclerosis. They found that in

Schilder's encephalitis there is often complete loss of vision and hearing. In disseminated sclerosis vision may be impaired, but as a rule only one eye is affected, and usually only temporarily. Complete deafness is never met with in disseminated sclerosis except as the result of an independent ear affection.

Pathologically the two diseases resemble each other closely, except that in disseminated sclerosis the plaques are sharply defined. Still more important is the fact that in Schilder's encephalitis the lesion is only periaxial in the very early stages, and soon destroys the axis-cylinders, with consequent Wallerian degeneration of the peripheral part of the fibres.

G. W. T. H. FLEMING.

An Attempt to Identify the Central Cells Mediating Kinæsthetic Sense in the Extrinsic Eye Muscles. (*Arch. of Neur. and Psychiat.*, March, 1927.) *McLean, A. F.*

The cells of the third, fourth and sixth nuclei of the dog can be separated into two distinct sizes, hitherto unrecognized, both having the "motor" type of tigroid substance diffusely intermingled throughout the nuclei. In the dog their sizes correlate roughly with the sizes of fibres in the peripheral trunks, more especially in the case of the third cranial pair. The author suggests that the smaller cells described in the central nuclei of the dog mediate the kinæsthetic sense of the extra-ocular muscles.

G. W. T. H. FLEMING.

The Nature of the Cerebro-spinal Fluid. (*Arch. of Neur. and Psychiat.*, March, 1927.) *Fremont-Smith, F.*

The author considers that there is no proper evidence of secretion. The variations in pressure of the fluid can be accounted for by the changes that occur in capillary pressure in the choroid plexus or in the osmotic pressure of the plasma. The chemical composition of the fluid as far as all the major constituents are concerned is exactly what would be expected from a simple membrane equilibrium, and can be reproduced outside the body by simply dialyzing plasma through a suitable collodion membrane. The laws which characterize this equilibrium hold true in many parts of the body, and determine the composition of pleural, ascitic and synovial effusions, also the chloride exchange that occurs between red cells and plasma.

G. W. T. H. FLEMING.

The Circulation of the Cerebro-spinal Fluid from the Standpoint of Intraventricular and Intraspinial Therapy. (*Journ. of Nerv. and Ment. Dis.*, December, 1926.) *Rigquier, C. C., and Ferrard, R.*

These authors give the following conclusions: The existence of a descending current from the ventricular cavities towards the sub-arachnoid spaces seems to be established by the experiments of Quincke, Lafora, Ahrens, Prados Such, Stern, Gautier and others. The fluid introduced into the ventricular cavities passes into the subarachnoid spaces by way of the foramina of Luschka and

Magendie, or by way of the functioning membrane described by L. Weed. Besides this pathway, according to the studies of Monakow, a drug introduced into the cerebral cavities may pass through the cerebral parenchyma, directly reaching the nervous elements by way of the perivascular and perineuronal spaces. The ventricular fluid reaches the central spinal canal when free of obstructions by direct communication. A drug introduced into the spinal sub-arachnoid spaces may reach the cerebral parenchyma. In these cases the displacement of the fluid is due to the ascending current mentioned in the experiments of Quincke, Ahrens, Dandy and Blackfan, Solomon, Thompson and Pfeiffer, Marinesco and Draganesco.

A drug introduced into the subarachnoid spaces may reach the central nervous parenchyma, passing from the exterior toward the interior, as shown by Marinesco, Draganesco, Lafora, Prados Such, Dixon and Halliburton, Syursberg, Fleischmann and Weed. Such a penetration is greater if the medicament is introduced under a high pressure or after the use of intravenous injections of hypertonic salt solutions. Furthermore, Kramer claims the existence of an ascending current in the central spinal canal, so that the fluid reaching this canal from the subarachnoid spaces may transport upward any drug present in the fluid.

The fluid may reach the arterial circulation indirectly by way of the perineural lymphatics, or by venous absorption as emphasized by Weed.

From the theoretical point of view, intraventricular and intraspinal therapy is justified by the experiments of many authors who have established the possibilities of a dye reaching the nervous parenchyma. From a practical point of view intraspinal therapy allows a medicament to reach the nervous tissue directly and immediately.

G. W. T. H. FLEMING.

General Paralysis: The Histopathology of the Basal Ganglia, Corpus Callosum and Dentate Nucleus in Four Cases. (Arch. of Neur. and Psychiat., February, 1927.) Houlton, T. L.

In four cases the author examined the basal ganglia and dentate nucleus and found very constant pathological changes, consisting of perivascular infiltration with small-cells, plasma-cells and large lymphocytes. Satellitosis was often present with neuronophagia. Rod-cells were common. Many nerve-cells contained no nucleus and the cytoplasm stained faintly. The author thinks that the speech disturbance, the expressionless facies and the fine tremors about the eyes and mouth may be due to the changes in the basal ganglia.

G. W. T. H. FLEMING.

Malignant Hypernephroma Coincident with Arterio-sclerosis in Children. (Fourn. of Nerv. and Ment. Dis., January, 1927.) Dieterle, R. A.

A female child, *æt.* 4½, had convulsions alternating with a semi-stuporous condition. The blood-pressure was 145-160 mm. Hg.

systolic, and 90-100 diastolic. The spinal fluid was negative. X-ray verified the presence of an abdominal tumour, and operation revealed a malignant hypernephroma at upper pole of right kidney. The patient died. Autopsy showed a very small fibroid thymus. The lungs showed secondary deposits. Section of the tumour revealed a complete absence of normal suprarenal tissue. Some areas resembled a suprarenal cortex, others a medullary carcinoma; others still resembled an angiosarcoma. The ovaries showed, on section, an unusual number of large cystic follicles, but no evidence of menstruation. The brain on examination showed small areas on the surface which appeared softened. The basilar artery showed a small patch of thickening of its wall, and on section some splitting of the elastic layers. The intima was irregularly thickened with a glistening refractive substance, which Herxheimer fat stains showed to contain heavy deposits of lipoids. This patchy intimal thickening partly occluded the vessel lumen. The pia was thickened and cellular, the veins congested and their walls thickened. All the vessels in the cortex showed a marked sclerosis. There were small areas of softening. After discussing possible relations between brain development and the adrenals, and pointing out the association of tuberose sclerosis with hypernephroma and adenomata of the adrenals and of Alzheimer's disease with hypothyroid states, the author wonders, had this case lived, would it have developed into one of Alzheimer's disease?

G. W. T. H. FLEMING.

The Anatomico-Pathological Basis of the Parkinsonian Syndrome following Epidemic Encephalitis. (Brain, December, 1926.)
McAlpine, D.

In a preliminary summary of the published accounts of the pathology of the Parkinsonian syndrome, the author points out that the consensus of opinion favours the substantia nigra as the chief area affected.

He then gives a summary of present knowledge of the anatomy of the substantia nigra, quoting Foix and Nicosesco. The pigment does not make its appearance until after the first few years of life, and is not abundant until after 20. There are two parts, the zona reticulata, consisting mainly of cell processes, and the zona compacta, which comprises the main body of the substantia nigra. The cells are large and are grouped in three islets—external, middle and internal. The cells of the inner group are small compared with the other two. The pigment is generally grouped into a mass which lies towards one of the poles of the cell. It is from this pole that the axone arises. The efferent fibres fall into two groups. The first comprises those fibres that penetrate into the midst of the pyramidal fibres, and then turn downwards, linking up with the centres lower in the mid-brain. The second group contains those fibres that form the peduncle of the substantia nigra. Some of these fibres mingle with those of the posterior commissure, and serve as commissural fibres between each substantia nigra. They

may also connect the substantia nigra with other nuclei on the opposite side of the mid-brain. Foix and Nicolesco think that some fibres of the peduncle do not cross in the posterior commissure, but descend and come into relationship with grey masses lower down in the brain-stem. In regard to afferent fibres, descending fibres come from the corpus striatum, particularly the globus pallidus. There may be fibres from the cortex, but these are unimportant. In his series of eight cases of encephalitis lethargica the author found that the cortex, thalamus and corpus striatum were practically normal. The substantia innominata of Reichert, the corpus Luysii and upper part of the red nucleus were normal, or only showed a slight increase in glial content. In the mid-brain, the area occupied by the substantia nigra was poorly delimited and appeared paler. In some cases the cells had almost disappeared; those that remained showed chromatolysis. In other cases groups of cells were to be found, some of which were normal. In some cases quantities of pigment were lying free in the parenchyma. There was, except in one case, an increase in the number of glial cells. The gliosis was practically confined to the substantia nigra and the peri-aqueductal grey matter in the pons and mid-brain. Neuroglial fibres were especially plentiful in the region of vessels. Marked cuffing of the vessels only occurred in two out of the eight cases. The capillaries were present in excessive numbers. The nerve-fibres in Weigert-Pal sections showed alterations in their myelin sheaths. In some cases there was a thinning out of the fibre network; in others the fibres were interrupted in their course, the myelin sheath appearing as a series of beads. The pons showed a gliosis in the grey matter underlying the aqueduct of Sylvius; this process spread out laterally and often involved the *locus caeruleus*. In two cases the cells of the *locus caeruleus* were almost entirely destroyed on one side. In some cases there was depigmentation with chromatolysis of some of the cells of the *locus caeruleus*. The author thinks the changes in the *locus caeruleus* may be responsible for some of the symptoms attributed to the vegetative system.

G. W. T. H. FLEMING.

6. Mental Deficiency.

The Nature of Hereditary Mental Defect. (Proc. Amer. Assoc. for the Study of the Feeble-minded, 1926.) Davenport, Charles B.

Concerning the exact nature of inheritance in the feeble-minded we are, says Dr. Davenport, still very ignorant. "If," he writes, "we adopt the hypothesis that prehistoric man had not gained all of the mental capacities that have appeared in some of his descendants, it is possible that he has left other descendants that remain more nearly on his intellectual plane."

As to the specific question whether mental defect is inherited in Mendelian fashion, Dr. Davenport is of the opinion that the subject deserves further study. The need, he maintains, is for more methods of measuring mentality. When these have been evolved

and applied in a large number of families, "then we may hope to learn just how far special limitations in intellectual capacity appear as family traits, and to learn of the particular laws of their distribution in the family and of their recurrence in successive generations."

H. FREIZE STEPHENS.

Researches in Feeble-mindedness. (Proc. Amer. Assoc. for the Study of the Feeble-minded, 1926.) Reported by Myerson, A.

This is a summary of researches undertaken under the general direction of Dr. Myerson, of Boston, details of which are to appear in subsequent papers. The belief is held that the problem of feeble-mindedness is a problem *sui generis*, and that the subject-matter of feeble-mindedness must be broken up into groups, and each clinical group studied intensively as a problem in itself.

Two general conclusions emerge from the work already done :

(1) That feeble-mindedness, when inherited, appears to have no relationship to anything but feeble-mindedness; that, therefore, as a biological problem, feeble-mindedness is distinct from the mental diseases and epilepsy.

(2) That unsuspected birth trauma and infections of the encephalon occurring early in life account for a good deal of the feeble-mindedness in non-hereditary cases.

H. FREIZE STEPHENS.

Cerebral Accidents of Childhood. Relationship to Mental Deficiency. (Proc. Amer. Assoc. for the Study of the Feeble-minded, 1926.) Smith, Groves B.

Fifty cases were studied. They were not selected, being the first fifty histories with this diagnosis from the files of the Henry Ford Hospital at Detroit for the past three years. Of these, 88% were found to be mentally defective—morons, 26%; imbeciles, 40%; and idiots, 22%.

H. FREIZE STEPHENS.

Glycuresis in Mental Defectives. (Proc. Amer. Assoc. for the Study of the Feeble-minded, 1926.) Bronfenbrenner, A. N.

The metabolic mechanism of aments has its peculiarities. Routine urine examinations, a number of basal metabolism tests, etc., made on the population of a large institution for mental defectives showed failures in metabolism. This paper, as the first of a series of articles reporting the results of this work, deals with "the metabolic phenomenon suggested by the ability of urine to reduce a copper salt"—"glycuresis," as mentioned by Benedict, being a better term than "glycosuria" for this phenomenon. It was found that, as a general condition, the quantity of the circulating glucose is a factor in assimilation itself, and, as a fact, the feeble-minded individual requires more carbohydrate food than the mentally normal person, "in order to make up for the extravagant and wasteful way in which his metabolism works."

H. FREIZE STEPHENS.

Intelligence of Mental Defectives with Congenital Syphilis. (Proc. Amer. Assoc. for the Study of the Feeble-minded, 1926.) Dayton, Neil A.

The writer finds that "when congenital syphilis initiates the pathological process resulting in mental deficiency, it is less severe because a higher average of intelligence is attained than in cases with other ætiology."

H. FREIZE STEPHENS.

The Neuropsychiatric Import of the Personality Reactions of Mental Defectives. (Proc. Amer. Assoc. for the Study of the Feeble-minded, 1926.) Heldt, Thos. J.

The significance of the personality reactions of aments is only partially understood, and all too common is the habit of regarding their actions and reactions as simple and obvious. There are similar reasons for delinquency in aments as there are in the normal. Psycho-pathologists lay much stress on our instinctive urges, yet, Dr. Heldt complains, when confronted with mental defectives in whom sex-urge, aggression and fear may stand out prominently, many are the psycho-analysts who exclaim "We can analyse only the intelligent." Without desiring to be unduly critical, Dr. Heldt would "emphasize the need of ways and means of interpreting the behaviour of the mental defective. Motivation and rationalization studies are sorely needed."

H. FREIZE STEPHENS.

Defects in the Zone of Language (Word-deafness and Word-blindness) and their Influence in Education and Behaviour. (Proc. Amer. Assoc. for the Study of the Feeble-minded, 1926.) McCready, E. B.

The aphasias of childhood, while they occur in children of normal and even superior intelligence, are far more common in aments. Such conditions, especially word-blindness, leading to backwardness in school are frequent sources of behaviour difficulties, while inevitably the emotional life of the individual is affected. Their recognition, therefore, as the writer points out, is of tremendous importance not only in avoiding an unjust diagnosis of amentia, but also in the application of proper educational methods to the training of such mental defectives. "Even the minor degrees leading to delayed and impaired speech and difficulties in reading and number work should be recognized in order that appropriate special training may be given." It is the writer's opinion that the conditions of juvenile aphasia in varying degrees of severity are quite common in aments, and that teachers and others should know this and modify their methods of instruction accordingly.

H. FREIZE STEPHENS.

7. Sociology.

The Classification of Delinquents. (Medico-Legal Journ., New York, July, 1926.) Richmond, Frank C.

The Psychiatric Field Service of Wisconsin came into being in July, 1925. It aims at making a physical and mental examination

of all persons admitted into penal institutions, and of all inmates thereof who apply for parole. During a period of eleven months, 4,324 cases were examined. The results of these examinations are not given. The object was to individualize delinquents, with a view to the adoption of suitable measures for their rehabilitation, where that process was possible. Some system of classification was found to be necessary. The system which has been devised is outlined in this article. The classification is adequate, but is, perhaps, unduly elaborated. There are eight main groups, which include a large number of sub-headings. Like all other classifications, the grouping is open to criticism. For example, the "sexual pervert" type is placed in the "mentally degenerate" class of the "mentally defective" group. But cases of this kind will often be found within the "psycho-neurotic" class or the "mental conflicts" type. Any system of classification is better than none, but we fear that many offenders would have, ultimately, to be placed in the "atypical" or "unclassifiable" group, which ends the list. An intelligence quotient below 70 is assigned as the standard for mental deficiency. Dr. Richmond declares strongly against what he terms the "mechanical theory of human organism."

M. HAMBLIN SMITH.

Why Alienists disagree in Legal Trials. (Medico-Legal Journ., New York, July, 1926.) Tepley, Leo V.

The disagreement of medical witnesses is an old topic for comment and for sarcasm, although it is probable that they exhibit no greater divergence than do other kinds of expert witness. The phenomenon is more common in America than in this country. This is due, as the article points out, to the pernicious practice of regarding the medical witness as being, necessarily, a partisan, and to the use of the "hypothetical question." From this latter nuisance we are, in this country, comparatively free. So far as criminal trials are concerned, we also have the advantage of possessing, in the medical officers of our larger prisons, a body of experts, whose evidence is always recognized as being strictly impartial. The author despairs of any solution, save that of trying every criminal as to his guilt, leaving the investigation of his mentality to an "impartial board of alienists."

M. HAMBLIN SMITH.

8. Mental Hospital Reports.

ENGLAND.

London County.—In the annual report of the Council for the year 1925, it is shown that the actual accommodation for mental patients at present is a total of 19,290 beds (excluding Claybury Hall), but when certain works now in hand are completed the total number of beds available will be 19,792 (males 8,303, females 11,489), and to this figure must be added the 429 beds at Ewell Colony, which have now been handed back to the Council by the Ministry of

Pensions. The actual number of patients resident on January 1, 1926, was 18,876 (excluding Claybury Hall), and in addition to these over 500 patients were boarded out under contract in various County and Borough mental hospitals. The total admissions (direct and indirect) to all the mental hospitals for the year were 3,622, varying from 688 at West Park to 318 at Horton, and the total number under treatment was 22,127. The recovery-rate for the different mental hospitals varied from 33% at Claybury to 10% at West Park, though the relationship of the different hospitals is quite different when all the discharges are counted in, including those discharged under section 79 (Lunacy Act, 1890). As might be expected in such an area as that controlled by the London County Council, the number of patients chargeable to the County is considerable (491 in 1925), and includes patients from all parts of the world.

It is an increasing practice for the various hospital sub-committees to make use of section 55 (Lunacy Act, 1890) to give "prolonged trial" to a certain number of mental cases of suitable type, allowing them such money allowance (within prescribed limits) as may be necessary to provide for their maintenance, and in this work the service of the Mental After-Care Association is made full use of. This Association has been able to place 88 cases in situations, send 171 for convalescent care to its homes, and help 396 other cases in various ways.

Of the Maudsley Hospital, which publishes its report as a separate document, the Council reports :

"The Maudsley Hospital has now commenced its fourth year of work. We are of opinion that during its existence it has fully proved the utility and value of such an establishment for the treatment of cases of early mental breakdown or incipient mental trouble."

Contained in this report is a list of the contributions to medical literature, published by members of the medical staff of the mental hospitals of the County of London, all of them showing distinctive scientific work of sterling quality.

Lady Chichester Hospital (Brighton).—This hospital, whose valuable pioneer work is so well known, celebrates its coming of age this year (1926), for it is twenty-one years since Dr. Helen Boyle and the late Dr. Mabel Jones took the first steps in its foundation for the treatment of cases of early nervous breakdown. At this stage they were fortunate in enlisting the sympathy and support of a considerable number of influential and large-minded people, and the Countess of Chichester became the patron of the movement. A sum of £200 was collected, "and with that small sum and an immense faith" a house was taken with beds for 10 patients. From this small commencement has sprung the great work achieved by this now widely known institution, based, as such work ever is, on the insistent ideals of a few deeply thinking and far-seeing people. In the past twenty-one years patients have come to this small hospital from all parts of the British Isles, from Belgium, Russia, Nigeria and New York, and from many of the London

hospitals. In the past six years as many as 806 patients have been received, and the applicants have numbered 1,480, while the recovery-rate is something in the neighbourhood of 50%—a record of work well done, of which any institution may be justly proud, and on which Dr. Helen Boyle and her collaborators and supporters are to be congratulated. Many clinics have sprung up since the date of the foundation of the Lady Chichester Hospital for the early treatment of mental disease, and it is to be hoped that still more will arise; of this, public opinion is the governing factor.

"Thus, the original idea of the founders of the Lady Chichester Hospital that the same prompt and free treatment should be provided, as a matter of course, for nervous and mental illnesses as for physical illnesses has taken firm root. The idea is accepted, but the provision made for these cases is still terribly inadequate, hundreds of lives are still being wasted, asylums kept filled, and an immense amount of unnecessary misery caused by the impossibility of treating all nervous and mental illnesses in their early stages, when there is hope of their complete recovery."

SCOTLAND.

Aberdeen Royal.—At the commencement of the year 1926 there were 815 (males 376, females 439) certified patients on the register of the hospital, and 794 (males 357, females 437) on December 31. These figures do not include voluntary boarders, of whom 32 were admitted during the year, or over 36% of the total number of private patients admitted.

The admissions for the year were the lowest since 1865, and 56 of the total admissions (131) were of the private class. The admission-rate for certified cases to the hospital seems to show a moderately steady fall for some years, which Dr. Dods Brown attributes to the operation of the Mental Deficiency Act, and increasing number of voluntary patients. Of the forms of mental disease in those admitted, about 33% were cases of dementia pæcox and some 17% cases of infection-exhaustion psychosis; venereal disease and alcoholic excess were the causes assigned in 4 cases each; pellagra was associated with the mental symptoms in 2 cases.

As regards treatment, Dr. Dods Brown has had encouraging results from heliotherapy and organized occupation on craft lines.

The report is concluded with a short *résumé* of the recommendations of the Royal Commission on Lunacy.

Edinburgh Royal Hospital (Morningside).—In the report for the year 1926 it is shown that there were on the register of the hospital at the end of the year 867 patients—an increase of 29 during the year. The number of admissions for the year was 249, discharges 162 and deaths 58. Prof. Robertson, probably intentionally, shows no "recovery-rate," but as the basis upon which this is usually calculated is so variable, the data so uncertain, and the result so hopeless, the omission is probably rather an advantage.

The managers of the hospital have opened still another nursing home, the sixth, in the vicinity of Edinburgh, this chiefly for convalescent patients. These Homes are appreciated greatly both

by the public and the medical profession, by the former chiefly because they deal with very early cases of mental deviation and avoid the "hateful process of certification," and by the latter because the family doctor can still continue his attendance on the patient in the home should he wish to do so—a course adopted by over fifty doctors during the year.

In addition to this the managers are also providing an out-patient clinic and psychopathic hospital as a separate block with a separate entrance and approach in connection with Morningside, to deal with the treatment of the "mentally sick on voluntary lines in the very same way that the Royal Infirmary cares for those suffering from physical disease." The Clinic will be free and held daily and will form part of the Department of Psychiatry of the University, in addition to the mental out-patient clinic which is attached to the Royal Infirmary.

Prof. Robertson's remarks upon the Report of the Royal Commission are worth quoting *in extenso* :

"Strange as it may appear, the existing Lunacy Laws, particularly those of England, seem to have been devised with the perverse object of obstructing anyone desiring to obtain medical relief. In other forms of ill-health the patient can go voluntarily to a hospital to seek advice and treatment, and, naturally, he goes as early as he possibly can. In the case of mental illness, however, the laws of England enact that patients applying for treatment voluntarily must be refused admission to mental hospitals that have been erected by the ratepayers for the express purpose of treating this form of illness. To treat patients in these hospitals in this way is illegal; it is a misdemeanour for which the physician renders himself liable to a heavy fine.

"Further, no one can be admitted to a public mental hospital until his disease has become thoroughly established or his conduct has become a public nuisance or a scandal. Even then he is not permitted to receive treatment till his application for admission has been dealt with after the manner of the detention of a criminal, namely, by a legal order or authority. Such a method of treating a sick person and of handling a question of public health is cruel, and an abomination to anyone inspired by medical sentiments and ideals.

"One result of these evil methods is that hospitals for the treatment of mental disease have not unnaturally fallen into disrepute. Although specially designed for the treatment of mental disease, although equipped at great cost with all the resources that science demands, they are the very last places in the world to which the public will send patients for treatment. Yet, there is no form of hospital in which more devoted or more self-denying work is done; work, however, that receives scant public recognition, and is patiently undertaken, often under unmerited abuse.

"The Lunacy Laws were framed with an intention that was not the outcome of a knowledge of disease, or of sympathy with the sick, but of something very foreign to the spirit of healing. A short practical test discloses the weakness of these Acts, but such is the difficulty of getting medical views accepted, so great is Parliamentary inertia, that, though often promised redress, we have waited for it in vain. The appointment of a Royal Commission was therefore hailed as a Godsend, and we all look forward to the initiation at last of a happier era."

Although all are prepared to admit that the work of the Royal Commission was exceedingly well done, many who had chafed for years under the old order had hoped for bolder recommendations in connection with the law associated with the admission of patients, and at least a recognition that the discharge of a patient on recovery was a purely medical function.

Glengall (Ayr).—During the year 1926, 153 patients were admitted, males and females being in nearly equal numbers, 60% being over 40 years of age and 54% between the ages of 25 and 50. Excluding congenital cases, only 18% of the first admissions had shown mental symptoms for a period of less than three months, whereas 62% of the men and 55% of the women had shown mental symptoms for over a year prior to admission.

“ From such figures, it is evident that the general public still cling to the belief that the mental hospital is *not the place to send a patient* until his condition has been deemed incurable. While it may be true that some cases are successfully treated at home or in the ordinary hospitals, it is undoubtedly foolish that such a large proportion of mental invalids do not get the chance of special hospital care until their malady has run a course of, at least, twelve months. In this connection it is pitiable to observe that, instead of facing facts, the public merely discard one obsession to adopt another—the terms ‘neurasthenia’ and ‘nervous breakdown’ having now given place to ‘loss of memory,’ and so the toll of fatal endings to neglected cases of mental disease keeps piling up in the daily press, and our curative hospitals are improperly employed for the accumulation of incurable cases. Before that far-off Utopian ideal—*The Prevention of Insanity*—materializes, it would surely be more profitable to take advantage of the means already available, as soon as the disease manifests itself.”

Among the admissions, heredity was ascertained in 45% of the cases; 40% showed some associated form of “bodily disease”; “recent alcoholic indulgence” was present in 9%.

“ But that alcohol is an infrequent cause of insanity is borne out by the remarkable fact that, whereas alcoholic excess had diminished during the past decade in the ratio of 6 to 1, there is no falling off in the number of patients admitted to this hospital.”

The recovery-rate for the year was 38.5% of the admissions.

The death-rate was 14%, and it is to be noticed that 12 men and 2 women died within a month of admission, 6 patients died within a week, and one case of general paralysis within seven hours—“an index that the sending of a patient to hospital was more a matter of convenience than a question of cure.”

Amongst the deaths, general paralysis showed a phenomenal increase as compared with previous years, which may have been attributable to the reckless excesses coincident with the flood of uncontrol which occurred especially in the earlier years of the war period, but Dr. McRae submits another explanation :

“ In explanation of this, I suggest that reliance on the newer methods of anti-syphilitic treatment and the practice of contraception, fallaciously and mischievously termed ‘birth control,’ are an encouragement to sexual incontinence, with dire effect. In former days, for the woman the fear of pregnancy, for the man the dread of disease, were wholesome aids to continence. Who that remembers the widespread horror that was evoked by the wholesale slaughter of modern warfare can still calmly contemplate the insidious destruction of human life by the misuse of scientific knowledge among so-called civilized races. It seems to have been forgotten that prevention of disease in the proper sense of the term means avoidance, not of results, but of causes. The whole matter, first and last, is one of self-control, which must be exercised by every individual for the benefit of his fellows.”

Dr. McRae is able to speak with a high degree of satisfaction of the nursing staff of the hospital, both as regards their work and their appearance at the examinations of the Association.

INDIA.

Bihar and Orissa.—The report for the year 1925 is of special interest as it concerns the opening of the new mental hospital at Kanke (Ranchi) by the transfer of large numbers of patients from the existing institutions at Patna, Berhampore and Dacca—a total number of 1,226. The organization necessary to safely effect the transport of such large numbers can be better imagined when it is stated that the distance, for instance, from Dacca is some 300 miles, and involves a journey of 51 hours by steamer and rail and road.

"A contract was made with the Eastern Bengal Railway to furnish five bogies fitted with prison bars and with sitting accommodation to suit my requirements under my instructions, all latrine doors being removed and a continuous corridor constructed running throughout the entire length of the five bogies. Extra locking arrangements and alarm signals were also provided. A similar contract was entered into with the Bengal Nagpur Railway to supply similarly improvised bogies on the narrow gauge.

"Patients were taken from the hospital to the steamer in motor cars. All the excited cases were securely accommodated in specially constructed cubicles on the boat and seats were allotted to the patients according to the nature of their diseases, and they were well looked after by the accompanying hospital and police staff."

Great credit is due to Capt. Dhunjibhoy and those who assisted him, in that the transport of this large number of patients was carried out without hitch or mishap.

Since the opening of the new mental hospital there has been a considerable amount of sickness, chiefly malaria (106 cases), dysentery and other intestinal diseases—much of the malaria was undoubtedly introduced amongst the transfers from Berhampore, where it had existed in epidemic form for the last six months.

No table is given showing the forms of mental disease amongst the admissions, but it is to be noted that amongst the ætiological factors in the cases admitted to Kanke during the year, excessive use of alcohol and gunja was regarded as responsible in 101 and 143 cases respectively.

With the closing of the mental hospitals at Berhampore and Dacca only two mental hospitals now remain in Bengal, the observation ward at Bhowanipore, and the mental ward at the Albert Victor Leper Asylum at Gobra (Khulna). All certified patients are now sent to Ranchi, where the climate is better, and the facilities for treatment are in advance of what was possible in the old asylums.

EGYPT.

Abbasiya and Khanka.—These two hospitals, which provide accommodation for the whole of Egypt, are built for a total of 2,143 patients, but have been compelled during the year 1925 to maintain a daily average of 2,641. The number of cases treated during the year was 4,024 and the admissions were 1,406—a proportion of admissions to accommodation only comparable to that of the Syrian Mental Hospital at Asfuriyeh. Inasmuch as both these mental hospitals are at Cairo, considerable distances have to be

travelled by some patients, with the result that many are maintained at home and treated by quacks or not treated at all. It is suggested in the report that the time cannot be far distant before new hospitals must be erected in the neighbourhood of Alexandria and Asyût; equally urgent is the necessity for separating out the criminal patients and providing a new asylum for the sick only.

A considerable degree of overcrowding exists at Abbasiya; there are, however, in residence 213 paying patients, and 124 patients were discharged recovered. Large numbers, however, have to be discharged relieved and not improved to make accommodation for more urgent cases.

There were eight voluntary patients admitted during the year, and free advice as to treatment was given to a considerable number of cases applying at the out-patient department attached to the hospital.

It is worthy of note that persons accused of offences in whom there is a suggestion of possible mental deviation are here sent to the mental hospital for observation and examination—a procedure which appears to have some merit—and during the year under consideration as many as 176 men and 9 women were admitted for this purpose, of whom 39 men and 2 women were returned for trial as not being insane.

At the Khanka Hospital, in which there is accommodation for 640 patients, there has been an average of 1,000 patients in residence. It is proposed during the ensuing year to make certain adaptations with a view to reduce overcrowding. The epidemic of malaria which broke out and was traceable to a considerable area of marshy ground in the immediate vicinity of the hospital is now showing definite signs of abatement following draining and drying up of this area. The medical director is not prepared at present to give any statistics as to the effect of this epidemic on the cases of general paralysis of the insane.

Seventy-nine cases of pellagra were admitted during the year, making a total in the hospital of 175, of whom 25% were admitted from Upper Egypt and the remainder from Lower Egypt. In connection with the occurrence of pellagra the medical director propounds the following view :

“ Continued work in connection with this problem has led us to take up an entirely fresh attitude as regards the ætiology of this disease. We now regard this condition as a disturbance of metabolism, and presenting a picture very much the opposite to that of another well-known disease of metabolism—diabetes. To go further, we now believe that there is an enzyme deficiency which disturbs the sugar metabolism and that patients suffering from pellagra require dextrose. The hypertrophy of the parotid glands is then to be regarded as a compensatory hypertrophy endeavouring to replace a pancreatic deficiency. The intractable diarrhœa associated with the disorder would be explained by the inability on the part of the body to reduce carbohydrates to their end-products, and the emaciation to the failure of glycogen production and storage. The incidence of pellagra can be explained by the paucity of dextrose in the diets of countries where pellagra is rife, and the spring recrudescence of the disease would then be satisfactorily explained by the depletion of glycogen from the liver during the winter months by cold, than which factor there is none more powerful in robbing the liver of this

substance. The relation of maize to pellagra is explained by the inferiority of this cereal to all others, especially as regards dextrose. Treatment along these lines has commenced and is yielding satisfactory results."

The following case recorded is of more than usual interest:

"This was the case of a blacksmith who had been certified as suffering from insanity of an epileptic nature. Shortly after admission it was discovered that we were dealing with a case of tetanus, and upon daily injections of anti-tetanic serum (30,000 units) being given, the patient steadily improved and will soon be convalescent."

Part IV.—Notes and News.

THE ROYAL MEDICO-PSYCHOLOGICAL ASSOCIATION.

A QUARTERLY GENERAL MEETING of the Association was held on Thursday, May 19, 1927, at 2.30 p.m. in the Council Chamber of the British Medical Association House, Tavistock Square, London, the President, Lt.-Col. J. R. Lord, *C.B.E.*, *M.D.*, *F.R.C.P.E.*, occupying the Chair.

The several Standing and Special Committees met on the previous day at the same place. The meeting of the Council was held on the morning of the day of the Quarterly General Meeting.

LETTERS PATENT OF THE NEW COAT-ARMOUR.

The PRESIDENT said that before the official business commenced he would like members to examine the original Letters Patent granting to the Association a Coat-armour, with the Arms of the principal Officers of State who, in the King's name, authorized its issue, and the Seals of the various Heralds. It had occurred to him that there might be some members who, cherishing the traditions of the Association, might like to have a photograph of this document, and therefore he had had one prepared, and copies could be purchased for a few shillings on application to Messrs. Adlard & Son.

MINUTES.

The minutes of the last meeting, having already appeared in the Journal, were accepted as correct. They were approved and signed by the President.

OBITUARY.

The PRESIDENT said he regretted to announce the death of two members.

The late Dr. J. C. G. Reed.

One, which occurred on August 2, 1926, was that of Dr. J. C. G. Reed, who was Medical Officer at the Old Manor, Salisbury. He was not at the moment in possession of the facts of his career and death, but an obituary notice would appear in the Journal in due course.

The late Dr. Horace Eyres Haynes.

The other was that of Dr. Horace Haynes, on March 12, 1927, who was well known to many members, and much esteemed by them. He not only took a great interest in the work of this Association and in psychiatry, but was a man of wide sympathies in many directions. Quite early in his career he took up vigorously the volunteer movement, and was awarded the Volunteer Decoration. He was keenly interested in the local activities, particularly those of a charitable nature, and was a Justice of the Peace for his county. He had for many years been closely associated with the work of Littleton Hall Mental Hospital, Brentwood.

He was sure members present would wish to show their regret at the sad news

he had conveyed to them, and authorize letters of condolence being in each case sent to the relatives.

This was agreed to, members rising in their places as an expression of their sympathy.

THE GASKELL PRIZE AND MEDAL.

The PRESIDENT said it was his pleasant duty to present to Dr. G. de M. Rudolf the Gaskell Medal for 1926. (Applause.)

Dr. Rudolf advanced to the Chair and received the Medal and the cordial congratulations of the President.

The PRESIDENT said he also had great pleasure in announcing that the winner of the Gaskell Prize and Medal for 1927 was Miss Elizabeth Casson, M.D., Ch.B., of Bristol University, and D.P.M. Assistant Medical Officer at Holloway Sanatorium. She was the second lady to win this distinction.

That morning the Council had decided that, as a new Seal was necessary for the Medal of the Gaskell Prize, which would cost 25 guineas (estimated), the opportunity would be taken to re-model the Medal, and the head of the Founder of the prize would be depicted on the obverse side. (Approved.)

THE ANNUAL MEETING AND THE CENTENARY OF THE DEATH OF PHILIPPE PINEL.

The PRESIDENT said members would have learned from the *Journal of Mental Science* that in 1926 there had fallen the centenary of the death of Pinel. It was celebrated at the Congress of Alienists and Neurologists of France and French-speaking Countries at Geneva and Lausanne on August 4-7, 1926. The Medico-Psychological Society of Paris had postponed their celebration until this year—an event about which he would speak later. It had been considered appropriate for the Royal Medico-Psychological Association, at their Annual Meeting, which would take place in Edinburgh in July, to celebrate this centenary, and Prof. George M. Robertson and others had arranged a suitable ceremony at the West House of the Royal Hospital, Morningside, where was to be found the only bust of Pinel which existed in the United Kingdom, namely, at the entrance to the Pathological Department of that famous hospital.

The Annual Meeting this year promised to be of more than usual interest. There were to be three very important debates in conjunction with the Mental Diseases Section of the British Medical Association, and from them he felt sure great enlightenment would proceed. A discussion on sepsis and mental disorders would be opened by Dr. William Hunter, C.B., F.R.S.E., whom many of them felt had not received adequate recognition as one of the chief pioneers in regard to the importance of chronic sepsis in nervous disorders. Dr. Henry A. Cotton, from the United States, and Dr. Graves, from Birmingham, and others much interested in this subject had promised to speak. There would also be a debate on encephalitis lethargica, and Prof. G. M. Robertson would open a debate on the subject of certain aspects of the Report of the Royal Commission on Lunacy and Mental Disorders. There was a very full programme for lady visitors, and everything possible was being done to make the meetings a success in every way. He reminded members that hotel and other accommodation was limited, and that it was desirable to secure what was required—especially garage accommodation for cars—as early as possible. Dr. Buchanan could be of great assistance to members in these matters.

Reverting to the centenary of the death of Pinel, at the celebrations in Paris May 30-June 1, the Council had appointed as delegates for the Association Dr. C. Hubert Bond, Prof. G. M. Robertson, Dr. Hamilton Marr and Dr. Donald Ross, and he felt sure the Association could not be more worthily represented. (Approved.)

THE PRESIDENT-ELECT FOR 1927-28.

The President who would succeed Dr. Hamilton Marr was Prof. Joseph Shaw Bolton, D.Sc., M.D., F.R.C.P. (Applause.) It was expected of a President that he should either have done some signal work and led the way in regard to some matter of scientific or clinical psychiatry or psychology, or have been conspicuous in his labours for the welfare of the Association. If by any chance he could

be placed in both of these categories he would be all the more acceptable and honoured as President. Such a combination of recommendations was, however, not usually found in their Presidents. In regard to the first recommendation members of the Association would take off their hats to Prof. Shaw Bolton, for there were few men living who had done more to illuminate the difficult problem of the relationship of mind and brain. His research work in regard to the morphology of the cerebral cortex and basal ganglia and the pathology of dementia and amentia, which had brought him a world-wide recognition, and that fine Maudsley Lecture of 1925—these alone would have rendered him worthy of the highest honour it was within the power of the Association to confer, namely, the occupancy of its Presidential Chair. (Renewed applause.)

THE REPORT OF THE COUNCIL.

Those who had read the Bye-laws knew that the management of the affairs of the Association was delegated to the annually elected Council, but from time to time the Council liked to return to the Association in general meeting for encouragement and support, especially in regard to broad policy and the expenditure of sums not exceeding £50. Several matters of great interest had been dealt with by the Council that morning to which he would like briefly to refer.

The Journal of Mental Science.

The Editors of the *Journal of Mental Science* have arrangements in hand to commence a series of monographs. The first would probably deal with the subject of "Sinusitis and Mental Disorder." If this proved a success, others would follow. (Approved.)

The Nursing Certificate.

The REGISTRAR had reported to him a fact which the Association could congratulate itself on, namely, a marked increase this year in the number of candidates for the Preliminary Examination for the Nursing Certificate. That fact showed that the Nursing Certificate of the Association was held in still higher esteem by the local authorities and nursing staff of the mental hospitals of Great Britain and Ireland generally.

The Education Committee.

The Education Committee had suffered regrettable losses by the resignation of its officers, to which it was his duty to refer. Dr. John Keay, giving as his reason long service, had asked to be relieved of his duties as Chairman. The resignation had been accepted with very great regret. He had held the position for many years, and had carried out its duties with conspicuous success. The resignation of Dr. Collins as Vice-President had been keenly felt. Few were as able as Dr. Collins to look at questions in a detached manner, which had made his views and counsel extremely valuable. Another resignation was that of the Committee's most painstaking and conscientious Secretary, Dr. Daniel. All these tried and trusted officers would be difficult to replace. Dr. F. R. P. Taylor had been nominated Chairman and Dr. Donald Ross Vice-Chairman, and it was hoped that Dr. W. J. T. Kimber would undertake the duties of Secretary. [Subsequently Dr. Kimber intimated his readiness to be elected.]

The Research and Clinical Committee.

The Provisional Research and Clinical Committee had met yesterday, and he was very pleased with the progress made in regard to the arrangements for the future working of the Standing Committee when appointed. He thought the success of the re-established Standing Committee was assured.

Creation of the Office of Honorary Librarian.

The Council thought that some member of the Association, living within a convenient distance of the Library, should be asked to take a constant interest in its administration, good order and usefulness. The Council, therefore, that morning had appointed Dr. J. R. Whitwell, Temporary Honorary Librarian. He had already rendered valuable service in this connection. For the permanent creation of this office an additional Bye-law would be required. An application

in respect of this would be made to the Privy Council in due course. The Bye-laws needed revision in other directions, and all these points could be dealt with at the same time. (Approved.)

Establishment of Divisional Clinical Meetings.

The General Secretary had sent a circular letter to all mental institutions in England and Wales conveying the resolutions of the November meeting (Horton) 1926, on this matter. He (the President) had also circulated a letter on this subject which he thought might be helpful to medical superintendents in enlisting the sympathy and support of the Visiting Committees (*vide* p. 500). The movement seemed to be progressing satisfactorily, and as far as his information extended already over a dozen local authorities had given their approval to all these resolutions.

In this connection the Council thought it important that the Divisional Clinical Committees should be appointed at an early date to facilitate and supervise the carrying out of these resolutions. The Research and Clinical Committee concurred in this view. (Approved.)

The Book-Plate.

He had authorized Mr. Mussett to submit to the Royal Academy his, Mr. Mussett's, drawing of the Association's Coat-armour, *i.e.*, the Association's book-plate. The drawing was at first accepted, but later crowded out by other exhibits. It would be re-submitted next year. (Approved.)

Legal Charges.

The Council had approved of the payment of certain legal charges in respect of the investment and transfer of the Association's Funds and of alteration of documents relating thereto, necessitated by the alteration in the title of the Association, etc., also some final solicitors' fees in connection with the granting of the Charter, in all amounting to £29. (Approved.)

The General Index of the Journal of Mental Science.

The Council had that day been delighted to have very tangible evidence placed before it of the continued vigorous mental activity of one of its oldest members, namely, Dr. T. W. MacDowell, who had notified to the speaker a short time ago that he had ready for publication a further instalment of the General Index of the *Journal of Mental Science*, covering ten volumes. This index was of considerable usefulness, and the annual meeting would be asked to grant a sum (to be arrived at) in respect of its publication. (Approved.)

The Re-Cataloguing of the Library.

Before the Library could be really effective, it was necessary that its contents should be carefully sifted and an index made of such books as were worth retaining, and that book-plates should be inserted. An opportunity had occurred of having this work done at a very favourable rate, and as a matter of urgency the Council had ordered it to be commenced. The cost (about £50) would be reported to the Annual meeting. (Approved.)

Divisional Prizes.

The Council had considered a report prepared by the speaker on the need for the revision of the regulations relating to the granting of Divisional Prizes in respect of papers read at Divisional Meetings. Time being short, his report was referred to the Provisional Research and Clinical Committee for examination.

Only one paper was submitted for a prize during 1926, and for a competition there must be two or more papers forthcoming. The Council had debated whether something should be done in such a case, as the one paper submitted might be deserving of recognition. It was decided in that event that a prize not exceeding £10 should be given. (Approved.)

The First Session of the Congress of Alienists and Neurologists of France and of French-speaking Nations at Blois, on July 25-30, 1927.

Dr. Donald Ross would again be the Association's delegate at this Congress, and the Council had sanctioned the usual grant of £15 towards his expenses. (Approved.)

CONGRATULATIONS TO DR. R. PERCY SMITH.

On hearing of the successful termination of a legal case in which Dr. Percy Smith was one of the defendants, he had sent to that gentleman a letter conveying the Association's cordial congratulations. (Loud applause.)

THE MEDICAL STAFF OF MENTAL CLINICS.

A very important matter had been raised by the Council of the British Medical Association since the last meeting, and one which was very regrettable. His feeling was that had this matter received deeper consideration and the right people been consulted a different action would have resulted. Those who had read the supplement of the *British Medical Journal* of April 30 would have seen an amazing recommendation of that Council which had been referred to the various Divisions and Branches for their consideration. It was as follows: "That it be recommended to the Representative body that specialist's work in connection with the treatment of patients suffering from mental disease in its early stages, whether at hospital or clinics, should not be carried out by all-time medical officers of public health or Local Government Board authorities, but on a part-time basis by medical practitioners who have special knowledge of psychology, but who need not necessarily be devoting their whole time to such work." It amounted to this: Those whom the Council of the British Medical Association considered should be excluded from taking any part in the treatment of early and recent cases of mental disorder at the mental in- and out-patient departments of general hospitals and at special mental clinics, which no doubt would be established in due course, were the medical officers of the county and borough mental hospitals. Apparently the ban did not apply to whole-time medical officers of private mental hospitals, Royal, and registered hospitals. Letters on the subject had been received from Dr. B. H. Shaw and Dr. W. J. T. Kimber. His, the speaker's, correspondence with the former had been circulated to the Council prior to its meeting that morning. Dr. Shaw had written to the General Secretary of the British Medical Association on the subject, and the General Secretary, in his reply, stated that the Council of his Association, in agreeing with this recommendation, considered that "They did not want to see a new type of whole-time specialists set up to deal with early mental cases at clinics—a procedure which would tend to take away another class of work from the general practitioner." Dr. Shaw remarked in his letter, that this seemed "letting the cat out of the bag with a vengeance." The Council of the Royal Medico-Psychological Association regarded the matter as a very serious one, and took great exception to the recommendation as being ill-founded and retrograde, and against the best interests of the treatment of early cases of mental disorder. They desired that every member of the Association, in a position to do so, should strongly oppose its adoption by the Division and Branches of the British Medical Association, to which it had been referred, by attending the meetings of the latter and voting against the recommendation. He believed members of their Association would agree with him that there was only one criterion as to the suitability of physicians to hold posts of the kind under discussion; namely, their capacity to recognize and treat early cases of mental disorder. Whether such physicians were employed by public or private mental hospitals, or whether they were or were not in private practice, was a secondary matter, and one of purely local expediency (*vide* p. 500). The Council had directed that a letter of protest should be sent to the Council of the British Medical Association, and, if necessary, discuss the matter with them by deputation. (Agreed.)

Dr. W. F. MENZIES said that when he saw the recommendation which the President had read, he went to the meeting of his, the speaker's, Division of the British Medical Association (North Staffordshire) at which it was discussed and spoke against its adoption, and that Division unanimously resolved to instruct their representatives to oppose it at the meeting of the Representative Body at

Edinburgh. He was asked by the meeting for a reasoned argument against the recommendation, which he had supplied, and it would be delivered by the Divisional representatives at the Edinburgh meeting.

Dr. E. Casson said she did at Windsor the same as Dr. Menzies had just reported, and carried the whole meeting with her. It was arranged to bring the subject again before a special meeting of the Division to instruct their representatives at the Edinburgh meeting.

The **PRESIDENT** pointed out that this recommendation was contrary to the policy in regard to the admission of voluntary patients to public mental hospitals recommended by the British Medical Association in its evidence before the Royal Commission on Lunacy. That Association had strongly recommended such a course. If it were inadvisable for the medical officers of public mental hospitals to treat early cases in mental clinics it must surely also be inadvisable to treat them when in public mental hospitals.

Dr. W. J. T. **KIMBER** said he also had taken up the subject at a meeting of his Division of the British Medical Association, and it was made clear that the recommendation did not refer to mental clinics attached to mental hospitals under the control of the local authorities, but to clinics run in connection with the local hospitals, where the appointments would be in the hands of the visiting medical staff. The feeling was that the recommendation of the Council of the British Medical Association should be turned down. When at that meeting he referred to mental out-patient departments it corrected the impression formerly held; namely, that such clinics would be on a par with maternity and tuberculosis clinics.

The **PRESIDENT** said he was glad to hear that individual members had already taken action in the matter. Some of the arguments advanced by members of the Council of the British Medical Association in support of the recommendation were surprising. One member argued it would operate against the success of a mental clinic if it were associated with the medical staff of a mental hospital. "A wrong atmosphere would be created" and people would not come. Another said that the medical superintendents of mental hospitals and their colleagues never saw the beginnings of mental disease, and therefore were not so versed in mental disease in its early stages as were those general practitioners who had made a speciality of the work. Another gentleman suggested that medical superintendents of mental hospitals were not as competent to treat early mental disorder as general practitioners. It would therefore seem that a prejudiced and ill-informed attitude on this matter predominated at that particular meeting.

ELECTION OF NEW MEMBERS.

The **PRESIDENT** nominated Dr. T. C. Mackenzie and Dr. Douglas McRae scrutineers for the ballot.

The following candidates were unanimously elected ordinary members :

WATERHOUSE, AMYAS THEODORE, M.A., M.D., B.Ch.Oxon., M.R.C.S., L.R.C.P. Lond., Honorary-Physician, Neurological Department, Radcliffe Infirmary, Oxford; Clinical Assistant, Skin Department, St. Thomas's Hospital; House Physician and House Surgeon, Radcliffe Infirmary, Oxford. Address: 35, Beaumont Street, Oxford.

Proposed by Drs. T. S. Good, R. Worth and G. Warwick Smith.

STEWART, FRANCIS MELVILLE, M.B., Ch.B.Edin., Second Assistant Medical Officer, Mental Hospital, Littlemore; late Assistant Medical Officer, Mental Hospitals, Hawkhead and Rainhill.

Proposed by Drs. T. S. Good, R. Worth and G. Warwick Smith.

GAMBLE, MARGARET, M.B., B.S.Lond., Assistant Medical Officer, Hatton Mental Hospital, Hatton, near Warwick.

Proposed by Drs. A. T. W. Forrester, H. B. Leech and R. Worth.

STEEL, JOHN P., M.D., Ch.B.Edin., Deputy Medical Superintendent, St. Luke's Hospital, Middlesbrough. Address: South Lodge, St. Luke's Hospital, Middlesbrough.

Proposed by Lt.-Col. J. R. Lord, Drs. F. M. Rodgers and J. E. Nicole.

The meeting then adjourned until 3.30, when it re-assembled in the Great Hall to hear the Maudsley Lecture.

THE MAUDSLEY LECTURE.

The Eighth Maudsley Lecture was delivered by Lt.-Col. EDWIN GOODALL, C.B.E., M.D., F.R.C.P. It was entitled, *Dealing with Some of the Work done to Elucidate the Pathology of Disease Falling to be Considered under the Rubric 'Insanity.'*

The PRESIDENT said he had first to announce apologies which had been received from a number of eminent neurologists and psychiatrists and others for their inability to be present. They included Sir Humphry Rolleston, Sir John Rose Bradford, Sir James Berry, Sir William Willcox, the Rt. Hon. Neville Chamberlain and others. A letter had been received from a very old member of the Association, Dr. G. E. Shuttleworth, who was approaching his eighty-fifth year, and whom they would have liked to see present.

The privilege of introducing the Maudsley Lecturer to the Association and its welcomed guests had fallen to him for the second time. The first of the Lectures was delivered in 1920, by Sir James Crichton-Browne, and though that gentleman's successors might not all have been able to emulate him in elegance and nicety of diction, or reached his rare heights of eloquence, yet their utterances on those occasions had not fallen below his in interest and importance; they had ever been substantial pronouncements illuminating those subjects which were so near the heart of the Founder of the Lectures. The Lectures had been alternately popular and scientific, and the popular Lecture of last year, delivered by Prof. George M. Robertson, was still fresh in their minds. For this year's scientific Lecture members would agree that the Council made a wise choice in inviting Lt.-Col. Edwin Goodall to do honour on this occasion to the name of Henry Maudsley, for as a pathologist, research worker, commentator and clinician, Colonel Goodall long ago attained a place in the foremost ranks of British psychiatrists. It was with great pleasure he called upon him to deliver the Eighth Lecture. (*Vide p. 361.*)

On its conclusion the lecturer received the cordial congratulations of the President on a most important pronouncement in regard to subjects which were about to receive much greater attention from the Association than they had been given by that body for some years, namely, research and clinical psychiatry.

A vote of thanks was proposed by Dr. R. Percy SMITH in a speech eulogistic of Col. Goodall's life's work and career.

It was seconded by Dr. T. C. GRAVES, and carried with enthusiasm.

Tea was afterwards served in the restaurant.

SOUTH-EASTERN DIVISION.

THE SPRING MEETING of the South-Eastern Division was held, by the courtesy of Sir George Wyatt Truscott, Bt., and other members of the Visiting Committee, at the City of London Mental Hospital, Stone, near Dartford, Kent, on Thursday, April 14, 1927. There was a large attendance of members and the invitation had been most kindly extended to a number of relatives or friends of members. In addition to Sir George Wyatt Truscott, Bt., the City was represented by A. C. Stanley-Stone, Esq., C.C., and Walter Fortescue, Esq., C.C.—both members of the Visiting Committee. The meeting was graced with the presence of Mrs. Waller, Mrs. Robinson and Miss Edith Lord, and among other guests, the Rev. R. W. H. Dalison, the Rev. L. Dudley Brown, and Messrs. T. M. Cuthbert and M. B. Savory.

The members were shown round the hospital and grounds and were then entertained to luncheon, at the conclusion of which Sir GEORGE WYATT TRUSCOTT welcomed the S.E. Division of the Royal Medico-Psychological Association in an extremely cordial and entertaining speech. He touched on the fact that the City was ever ready to encourage such forward movements in the medical treatment and humane care of the mentally afflicted, as the Royal Medico-Psychological Association stood for. As representing the City he was fortunate in having present with him Mr. A. C. Stanley-Stone, Senior Commoner of the City of London, and Mr. Walter Fortescue. He recalled the able work done in the past by Lt.-Col. Ernest White, and more recently by the late Dr. Robert Hunter Steen, and paid a well-earned tribute to the work of Dr. W. Robinson, the present Medical

Superintendent. Lt.-Col. J. R. LORD, the President of the Association, replied, and proposed the health of their hosts, coupling it with the names of Sir George Wyatt Truscott and Mr. A. C. Stanley-Stone. Mr. STANLEY-STONE replied in a very witty and amusing vein, paying tribute to his colleague, Mr. Fortescue, on his supervision of the hospital farm, with a special reference to the prize herd of pigs.

The President (Lt.-Col. J. R. Lord, C.B.E.) presided at the meeting which followed at 2.30 p.m.

The minutes of the last meeting, having appeared in the Journal, were taken as read. They were confirmed and signed by the President.

Dr. Noel Sergeant was re-elected Honorary Divisional Secretary, and Drs. Hubert J. Norman, James R. Whitwell, R. C. Turnbull, N. R. Phillips and E. Casson were elected Representative Members of the Council.

Drs. James R. Whitwell, E. Casson and James Flind were elected Members of the Divisional Committee of Management.

The following candidates were unanimously elected Ordinary Members of the Association:

MARK FOOTERMAN, M.R.C.S., L.R.C.P.Lond., Assistant Medical Officer, Hill End Mental Hospital, St. Albans, Herts.

Proposed by Drs. W. J. T. Kimber, E. D. T. Roberts and Noel Sergeant.

HUGH ARROWSMITH GRIERSON, M.C., M.B., B.S.Lond., Medical Officer, H.M. Prison, Brixton, S.W. 2.

Proposed by Drs. W. Norwood East, John J. Landers and Noel Sergeant.

ELLIS STUNGO, L.R.C.P.&S.Edin., L.R.F.P.S.Glasg., 50, Northgate, Regent's Park, London, N.W.

Proposed by Drs. F. Dillon, F. R. King and Bernard Hart.

It was left for the Secretary to arrange the date and place of the Autumn meeting.

The Secretary was instructed to apply for power to elect Representative Members by show of hands.

PAPERS.

"Prognosis in Mental Disease," by Dr. T. D. POWER, Assistant Medical Officer, Essex County Mental Hospital, Brentwood.

The PRESIDENT thanked Dr. Power for his suggestive paper. The subject was an immense one, and next to treatment, was of the greatest practical importance. The prognosis in mental disorder would only be made more reliable by more systematized clinical examination of these cases. He had pointed that out in his Presidential Address, which strongly advocated team work where possible in mental institutions.

He had not time to discuss the oft-debated question, "What is recovery?" He thought, however, that much confusion arose in confusing recovery from insanity in the legal sense with recovery from mental disorder. In practice these were not parallel terms. He was one of those who held that insanity was a legal term. According to the law everybody was sane, however mad he might be, until the law pronounced him insane. Similarly, the mere breaking of the certificate of insanity made a person legally sane. Thus a recovery-rate in regard to legal insanity or certifiable states of mind was a different matter from a recovery-rate in regard to a diseased mind, which might not be certified or certifiable. This difference would be emphasized when it becomes the practice to admit voluntary patients to the public mental hospitals. As to whether there was a state of mind which could be called insanity in a medical sense, he was not quite sure. He had more than a suspicion that there was such a state which might be known as "the dethronement of the reason," the difficulty was to define it.

The more general acceptance of Breuler's teachings of the syntonetic and schizoid types of reactions had considerably clarified the dementia præcox question. His (the speaker's) experience was that the latter type responded to treatment more readily than the former, and recoveries resulted in a good number of cases. He could not but feel that though many of the manic-depressive type of cases recovered and remained well for long periods (well enough anyhow to retain a position in the outside world), this was not as much a response to treatment as in the schizophrenic. At the same time he thought there was a good deal of truth

in Prof. G. M. Robertson's statement that when the better brain broke down mentally there occurred a manic-depressive case, and the brain not so good became that of a case of dementia præcox. In the former there was a constitutional functional disorder, the basis and nature of which largely eluded them. Treatment in those cases was limited largely to the physical state. In the latter case we now knew more of the nature of the disorder, which was a mental disintegration to which treatment could be definitely directed in addition to dealing with bodily symptoms. He was glad the speaker managed to introduce the subject of occupation therapy and distinguished it from mere instruction in handicrafts. He thought that the first occupational therapist (in the former sense) in England had been appointed at Horton and the results of her labours had been very encouraging.

The discussion was continued by Drs. BOYCOTT, E. CASSON, E. MAPOTHER, N. R. PHILLIPS and NOEL SERGEANT.

A DISCUSSION

on "The Induction of Abortion in the Treatment and Prophylaxis of Mental Disorder," introduced by Lt.-Col. J. R. LORD, C.B.E., M.D., F.R.C.P.E. (For opening remarks, *vide* p. 390).

Dr. W. A. DUNCAN (Hellingly) said that in only two cases of insanity had he found it necessary to induce abortion. One was a case of eclampsia and the other a severe case of chorea. In the latter case the chorea cleared up wonderfully soon afterwards.

Dr. A. N. BOYCOTT (St. Albans) said that the question of inducing abortion in cases of insanity or threatened insanity should be dealt with in the same way as it would be in the diseases in which it was recognized that the inducing of abortion would probably save the life of the patient. These include vomiting of pregnancy, chorea, albuminuria, eclampsia, cancer of the cervix and contracted pelvis. It was doubtful whether the induction of abortion would save an insane woman's life or even help to cure her insanity, but it was quite possible that in some acute cases of insanity the condition of the patient might be so critical that it might be considered that the induction of abortion would save her life. The question of saving the life of the child should not have any weight in the decision. As regards the question of inducing abortion in cases of insanity where the bodily condition of the patient was fairly good or in cases in which it was feared by the patient or her relatives that insanity was threatened, it did not appear that it would be justifiable to induce abortion only on a mere supposition that it would help to alleviate or cure the insanity or obviate the threatened insanity.

Dr. E. MAPOTHER (London) stated that he had never known a case of severe psychosis where the induction of abortion was seriously considered for the purpose either of saving life or terminating the mental symptoms. In saying this he was, of course, referring to the cases of many colleagues as well as himself, and he believed that his own experience would probably be that of most of those present. He had not seen cases where induction of abortion had been performed merely on account of the occurrence of a previous attack and the possibility of a recurrence. Recently, however, the question was raised in the case of a patient who had been as a voluntary boarder in Bethlem Hospital during a previous attack. She was pregnant at that time, developed an obsessional state, which had persisted practically unchanged through that pregnancy, into a second pregnancy existing when she was seen. There seemed no such probability of an exacerbation as would justify interference. Personal views concerning the ethical aspects of abortion were entirely independent of those which one held as a psychiatrist, while the law remained in its present condition. This hardly seemed the place for the discussion of the ethical aspects. The views of some might come nearer than those of the President to what he had termed the Teutonic standpoint.

Dr. R. C. TURNBULL (Colchester) said that two cases had been brought to his notice comparatively recently, in which it was proposed to induce abortion in order to prevent an attack of insanity at childbirth. In both these cases he gave an opinion that the induction of abortion was not justifiable, and in both cases labour had taken place under normal conditions without any undue mental disturbance. He also had knowledge of a case of acute anxiety melancholia associated with pregnancy where abortion had been induced in the hope

that the operation would prevent the certification of the patient, but in spite of that operation it had been necessary to certify the patient. That patient's mental condition, instead of being improved by the operation, became definitely more acute, with the development of definite delusions of unworthiness connected with the nature of the operation performed.

Dr. A. HELEN BOYLE (Hove) remarked that two difficulties met one in regard to the question of the induction of abortion as a preventive measure in patients who had had attacks of insanity connected with one or more previous pregnancies. Firstly that abortion was in itself a disturbing event, and might be followed by mental trouble as at delivery at full term and for much the same reasons. Secondly there was in many cases a definite mental conflict aroused by the interference with pregnancy, most women having a feeling of guilt in regard to it, even though they might greatly have desired it to be done.

Dr. G. W. SMITH and Dr. NOEL SERGEANT also gave their experiences.

Other members, in informal conversations, expressed their disapproval of abortion as a preventive measure in recurrent cases of mental disorder.

The PRESIDENT, in concluding the discussion, said that if the views on this subject expressed by various speakers at that meeting were representative of the views of the Association, then he thought it might go forth that in the opinion of the Association the weight of evidence told definitely against the growing practice of inducing abortion for the prevention of mental disorders, and that those practitioners who favoured it might be unwittingly doing harm to the social organism. Fear of exposure, shame, depression, even misery following the breaking of the moral law should not be confused with the symptoms arising from the disordered mind; such were the reactions of the normal mind—in fact were direct evidences of it. He was glad he had been instrumental in bringing the subject before the notice of the Association, for he saw great danger ahead for both the profession and the community unless some authoritative opinion in the matter was forthcoming and heed given to it.

Members were then entertained to tea at the kind invitation of Dr. Robinson, and this concluded a most instructive and enjoyable meeting.

SOUTH-WESTERN DIVISION.

THE SPRING MEETING of the Division was held, by kind invitation of Dr. T. S. Good and the Committee of Visitors, at the City and County Mental Hospital, Littlemore, Oxford, on Thursday, April 28, 1927.

Twenty-seven members were present at the business meeting. Letters of apology were received from the President (Lt.-Col. J. R. Lord), Lt.-Col. E. Goodall, Drs. Eager, Peachell, Rutherford, Barton White and others.

Dr. J. G. Soutar was voted to the Chair.

The minutes of the last meeting were read, confirmed and signed by the Chairman.

Dr. W. Starkey was elected Divisional Secretary, and Drs. R. Eager and J. G. Soutar Representative Members of Council. Drs. W. F. Nelis and T. S. Good were elected members of the Committee of Management in place of Drs. N. R. Phillips and J. Rutherford, who retire in rotation.

The date of the Autumn Meeting was fixed for Thursday, October 27, 1927, the place to be arranged by the Divisional Secretary.

A circular letter from the General Secretary *re* proposed Clinical Meetings was read and discussed. The meeting expressed its general approval of the suggestion, but decided that any further action should be deferred until after the May meeting of Council.

The CHAIRMAN referred to the suggestion made at the last Quarterly meeting of the Association that a Vice-President should be appointed for each Division, who should also be Chairman of the Division. He was strongly in favour of the proposal, and urged that, if approved at the General Meeting, such would be in the interest of the Division.

During the morning members were given the opportunity of inspecting the whole of the Institution, and saw many features of interest, including an exhibition of work done by the patients.

The members and visitors, who included the Chairman of the Visiting Committee and several members of the consulting staff, were most hospitably entertained to lunch in the recreation hall.

After lunch a clinical meeting was held, at which over forty were present. Dr. STEWART showed: (1) A case of cerebral syphilis with unusual complications; (2) a case of progressive muscular atrophy. Dr. DAVIES JONES showed (1) a case of acromegaly and (2) symbolic drawings by a case of delusional insanity. Dr. T. S. GOOD showed three cases of encephalitis (hyperkinetic form), and suggested that many cases admitted as examples of confusional insanity, or as the acute phases of dementia præcox, were really post-encephalitic in origin.

All these cases gave rise to discussion, and the meeting was a most interesting and instructive one.

Dr. and Mrs. Good afterwards entertained the members to tea, and were accorded a hearty vote of thanks for their hospitality.

NORTHERN AND MIDLAND DIVISION.

THE SPRING MEETING of the Division was held, by the courtesy of Dr. J. I. Russell and the Committee of Visitors, at the North Riding Mental Hospital, Clifton, York, on Thursday, April 28, 1927, at 2.15 p.m.

Twenty members and four visitors were present. Letters of apology were received from the President (Lt.-Col. J. R. Lord) and others.

The members had an opportunity of being shown over the hospital and laboratory in the forenoon, and also saw many examples of the patients' handicrafts.

Dr. Russell entertained the members to lunch, and a cordial vote of thanks was moved by Dr. Bedford Pierce and carried unanimously.

Dr. Russell was voted to the Chair.

The minutes of the last meeting were read, confirmed and signed by the Chairman.

The death of Dr. E. S. Simpson, of Beverley, was sympathetically referred to by Dr. M. A. Archdale, and it was agreed that the Secretary should send a message of condolence to his widow.

Dr. J. B. Tighe was elected Secretary to the Division in succession to Dr. J. R. Gilmour, who had resigned.

Drs. H. Dove Cormac, N. Macleod and M. A. Archdale were elected Representative Members of Council.

The meeting agreed to take no action with regard to applying for powers under Bye-law 26.

Dr. ARCHDALE then proposed that a clinical centre should be formed at Newcastle, and Dr. MIDDLEMISS brought forward a similar motion regarding Leeds. A prolonged discussion took place upon the whole question of the formation of centres throughout the Division. It was considered very desirable that these local committees should be established, but it was finally agreed to postpone any action until some general scheme had been formulated by the Association.

Dr. LOUIS MINSKI then gave a paper on "Endocrine Therapy," which was discussed by several of the members present.

Dr. J. A. GILFILLAN read a paper on "Environmental Factors in Mental Diseases." In this he traced the influence of environment in the causation and development of various groups of symptoms and delusions. He gave an account both of his observations in mental hospitals and also of several cases he had observed and noted while in a prisoners' camp in Germany.

Dr. W. FRASER read a paper on "Blood-Sugar Estimation" in several groups of mental illness.

It was left to the Secretary of the Division to fix the place and date of the Autumn Meeting.

SCOTTISH DIVISION.

A MEETING of the Scottish Division of the Royal Medico-Psychological Association was held at Stirling District Mental Hospital, Larbert, on Friday, June 10, 1927.

There were 23 members present.

Dr. R. D. Hotchkis, Divisional Chairman, occupied the Chair.

The minutes of the last Divisional Meeting were read and approved, and signed by the Chairman.

Apologies for absence were submitted from Drs. H. C. Marr, Patrick Steele, H. de M. Alexander, Chislett, Easterbrook, Connell, Aidan Thomson, Donald Campbell, L. C. Bruce, George Gibson, T. C. Mackenzie, J. H. Skeen, Dods Brown, and Donald Ross, Sir Hugh Arthur Rose and the President.

Dr. R. D. Hotchkis was unanimously re-elected Chairman of the Division for the ensuing year.

Drs. R. B. Campbell and Neil T. Kerr were unanimously re-elected Representative Members of Council for the ensuing year, and Dr. Wm. M. Buchanan as Divisional Secretary.

The following candidates after ballot were unanimously admitted as ordinary members of the Association :

GOVINDARAJPURAM RAMAPATTAR PARASURAM, B.A., L.M.S. Madras, M.R.C.P.E., Deputy Medical Superintendent, Government Mental Hospital, Calicut, Malabar District, Kalpathi Post Office, South Malabar, India.

Proposed by Drs. J. Keay, C. A. Crichlow and R. Bailey.

IVY MACKENZIE, B.Sc., M.A., M.D., F.R.F.P.S.Glasg., Consulting Physician to the Glasgow District Board of Control; 10, Woodside Terrace, Glasgow, C. 3.

Proposed by Drs. Hamilton C. Marr, W. K. Anderson and W. M. Buchanan.

It was unanimously resolved to recommend Drs. Douglas McRae and W. M. Buchanan, and Miss McCabe and Miss MacCallum to the General Nursing Council for Scotland for appointment as examiners for the medical and nursing sections of the Council's Final Written Examination in Mental Nursing.

It was also unanimously resolved to recommend the reappointment of the original panel of medical and nurse examiners for the practical and oral part of the General Nursing Council's Final Examination for Mental Nurses.

There was nothing further to report regarding the Asylums Officers' Superannuation Act Amendments.

After consideration it was unanimously agreed not to take advantage of Bye-Law 26 of the revised Bye-Laws of the Association, whereby on an application by a Divisional Secretary the Council may authorize elections to be held by show of hands instead of by ballot, and the Secretary was instructed to write to the General Secretary intimating that the Scottish Division desired to continue holding elections by ballot.

Dr. D. K. HENDERSON called attention to the fact that foreign journals received by the Association, and sent out for review in the *Journal of Mental Science*, were not required to be returned for filing in the Library of the Association. He considered that the Association should have all psychiatric literature in its Library for members. The meeting agreed with the views expressed by Dr. Henderson, and the Secretary was instructed to communicate with the Secretary of the Library Committee in the matter.

Members then broke up into groups and were shown over the hospital by Dr. Campbell and his assistants.

Members were entertained to lunch, after which Dr. HOTCHKIS expressed the cordial thanks of the Division to the Stirling District Board of Control and to Dr. Campbell for the arrangements made in connection with the meeting and for their kind hospitality.

On the meeting reassembling, Dr. J. S. I. SKOTTOWE, M.B., Ch.B., D.P.M., read a most interesting and instructive paper on "Methods in Vogue at the Boston Psychopathic Clinic," and indicated the advantages and disadvantages of the intensive method of case study there adopted. The paper was discussed by Drs. D. K. HENDERSON, W. D. CHAMBERS, W. McALLISTER, R. MARY BARCLAY and W. McWILLIAM.

A vote of thanks to the Chairman terminated the business of the Meeting, after which members were entertained to tea at the Copse by Mrs. Campbell.

IRISH DIVISION.

THE SPRING MEETING of the Irish Division was held on April 7, 1927, at Elmhurst, Glasnevin, by the kind invitation of Drs. Henry and W. Eustace.

There were 14 members present.

Dr. Henry Eustace occupied the Chair.

The minutes of the last meeting were read, approved, and signed by the Chairman.

Letters of apology for unavoidable absence were received from Dr. Owen Felix McCarthy and Dr. M. J. Nolan, Downpatrick.

Correspondence with the Irish General Nursing Council was read in which it was intimated that holders of the R.M.P.A. Certificate were still eligible for registration, at a fee of £2 2s., for some months pending the holding of examinations by the Irish General Nursing Council.

A lengthy communication was read from the President (Lt.-Col. J. R. Lord), *re* the regulations for divisional prizes. It was the unanimous sense of the meeting that any alterations in these regulations would be desirable which tended to increase the number of competitors for these prizes among the younger psychiatrists in these countries, and the meeting cordially endorsed any measures to bring this about. The proposition that joint authors should compete appeared doubtful, but on a vote being taken, it was, on the whole, the sense of the meeting that dual authorship should be accepted.

Lt.-Col. Dawson said that these regulations interested him greatly, as the original draft of these regulations was drawn up by the Irish Division some years ago.

On a ballot being taken, Dr. J. O'Connor Donelan and Dr. Keane being appointed scrutineers, they declared that Dr. Richard R. Leeper was re-elected Hon. Secretary, and that Dr. M. J. Nolan and Dr. J. O'Connor Donelan were elected Representative Members of Council for the ensuing year.

Lt.-Col. W. R. Dawson, O.B.E., and Dr. R. R. Leeper were elected Examiners for the ensuing year for the Certificate in Psychological Medicine.

Election of new members: The following candidates were balloted for and unanimously elected ordinary members of the Association:

ALFRED SHERIDAN, L.R.C.P.&S.I., Resident Medical Superintendent, co. Mayo Mental Hospital, Castlebar.

Proposed by Drs. John Mills, D. L. Kelly and R. R. Leeper.

KATHLEEN CAREY, M.B., Ch.B.N.U.I., Assistant Medical Officer, Farnham House, Finglas.

Proposed by Drs. H. R. C. Rutherford, George Keane and R. Thompson.

CHARLES HERBERT WILSON, M.B., B.Ch.Dub., Assistant Medical Officer, St. Patrick's Hospital, Dublin.

Proposed by Drs. R. R. Leeper, R. Thompson and Robert Taylor.

It was decided to accept Dr. J. O'Connor Donelan's kind invitation to hold the Summer Meeting at Portrane District Mental Hospital, Donabate, on Thursday, July 7th, 1927.

It was decided to hold meetings of the Division on the following dates: Thursday, November 3, 1927, at the Royal College of Physicians; Thursday, April 5, 1928; Thursday, July 5, 1928; Thursday, November 1, 1928.

Dr. C. B. MOLONY then read a paper entitled "An Account of an Unusual Mental Hospital Epidemic" (*vide* p. 397).

This paper was of much interest, and the various points raised by the writer were discussed by all the members.

The CHAIRMAN said all present felt very grateful to Dr. Molony for his interesting communication, and regretted that a more exhaustive bacteriological examination of the cause of the parotitis was not available.

The meeting having learned with regret that Dr. Owen F. McCarthy, of Cork, had recently lost one of his family, a letter of condolence was directed to be written to him, conveying the sympathy of the members of the Division.

A cordial vote of thanks to Drs. Henry and William Eustace, for their great kindness in entertaining the Division, was proposed by Dr. J. O'CONNOR DONELAN, seconded by Dr. T. A. GREENE, and passed by acclamation. This terminated the proceedings.

MEMORANDUM RE MEDICAL STAFF OF MENTAL CLINICS.

(Circulated by the General Secretary, June 5, 1927.)

A RESOLUTION expressing strong disapproval of the following recommendations of the Council of the British Medical Association (*vide British Medical Journal*, April 30) was passed unanimously at the last Quarterly General Meeting, May 19, 1927:

"That it be recommended to the Representative Body that specialist work in connection with the treatment of patients suffering from mental disease in its early stages, whether at hospitals or clinics, should not be carried out by whole-time medical officers of public health or local government authorities, but on a part-time basis by medical practitioners who have special knowledge of the subject, but who need not necessarily be devoting their whole time to such work."

It was decided that all members of the Royal Medico-Psychological Association who were also members of the British Medical Association should be asked to attend the Divisional Meetings of the latter Association, to which this recommendation stands referred, and to oppose its adoption as ill-founded and retrograde and against the best interests of the treatment of early cases of mental disorder.

The view taken was that, though it is desirable for general practitioners to be closely associated with the work of these clinics, there should be no such discrimination as in the British Medical Association's recommendation, but that the criteria for such appointments should be ability to treat early mental cases and local expediency as to how such treatment can be best provided.

 CIRCULAR LETTERS RE DIVISIONAL CLINICAL MEETINGS
(April, 1927).
From the General Secretary (Dr. R. Worth).

At a General Meeting of the Royal Medico-Psychological Association held in November last a resolution was unanimously passed urging the Medical Superintendents of mental hospitals and other psychiatric institutions—

- (a) To afford facilities for Clinical Meetings to be held under the auspices of the Divisional Executives of the Association.
- (b) To encourage the attendance thereof of medical officers.
- (c) To approach the Committees of Management concerned with a view to sanctioning travelling and other reasonable expenses to medical officers in connection with such meetings.

It was pointed out that the Board of Control of Scotland had already recommended this course and that it had been adopted in that country.

The Board of Control (England and Wales), in a recent letter on this subject addressed to the President of the Association, states that—

"it would be in the interests of the patients that the medical staff should be encouraged to attend Clinical Meetings by payment of reasonable expenses, the Sub-Committees of the Hospitals visited providing light refreshments."

The attendance at these Clinical Meetings will not be limited to members of the Association, but medical officers who are not members and neighbouring medical practitioners will be cordially welcomed.

I feel I need not stress the value of such meetings in the furtherance of clinical psychiatry, and the help and encouragement they would afford to individual medical officers.

Should the views expressed in this letter meet with your approval I would be glad to know, for the information of other Medical Superintendents, the result of any action taken to put them into practice.

From the President (Lt.-Col. J. R. Lord).

In a circular letter of this month's date from the General Secretary in respect of a resolution of the Association passed at the November Quarterly General Meeting, 1926, on the holding of Clinical Meetings, three points, (a), (b) and (c), were brought to your notice.

As supplementary to this and also to that section of my Presidential Address dealing with this matter I venture to send you the memorandum on the reverse side of this which I trust may be helpful in enlisting the sympathy and support of the Visiting Committee, especially in regard to (c).

Memorandum.

(1) The meetings are not intended primarily for the education of individual medical officers.

(2) They are not for the purpose of improving the pay, conditions of service or the professional status of the medical staff.

(3) They are for the purpose of stimulating scientific psychiatric work; and to further the better treatment of cases of mental disorder, individually and collectively, especially of the recent and acute type.

(4) They will be of great benefit to the patients examined, especially those presenting difficulties in diagnosis, prognosis or treatment.

(5) They will permit of the wider study of groups of cases presenting similar symptoms and the better ascertainment of the result of treatment spread over a larger number of cases. Clinical papers are more illuminating and instructive when accompanied by a demonstration of the actual cases to which they refer.

(6) In a sense the medical officers attending will be on duty, *i.e.*, doing medical work.

(7) It is hoped to have not less than 12 such meetings a year in each area. Large meetings for clinical purposes are not desirable; gatherings from 6 to 24 persons are more effective.

(8) Divisions will need subdividing into convenient areas having regard to the number and situation of the mental hospitals and so reduce the amount of time spent in travelling. Another scheme is for each mental hospital in turn, at a month's interval, to hold a clinical meeting for all mental hospitals within say a 30-mile radius.

(9) The general practitioners who care to attend will have a further opportunity for psychiatric education and experience which will in time go to lessen the number of mental patients requiring institutional treatment.

(10) It is hoped that such meetings will foster the holding of regular clinics at the larger hospitals and encourage team work.

(11) As regards the capacity of the medical staff to finance the scheme, the position has changed since the war. Instead of medical officers being for the most part single men, the opposite is now true. Many have also to provide for growing-up and expensive families.

(12) The local authorities have now a opportunity of helping to raise the level of medical work in their mental hospitals. The isolation of mental hospitals has been one of the great drawbacks to the advancement of psychiatry. By the proposed scheme the work of each hospital will frequently be brought into close touch with that of every other mental hospital in its area. With the local authorities behind it, the scheme is assured of success; without their assistance it cannot become of general applicability.



MENTAL AND GENERAL HOSPITAL RECIPROCITY AND AFFILIATION.

LT.-COL. J. R. LORD, *C.B.E.*, speaking as President of the Royal Medico-Psychological Association at the Annual Dinner of the Medical Society of London on March 12, took the opportunity of pleading for affiliation and reciprocity between mental and general hospitals. He said:

"It must be known to some of you that any obstacles there may have existed in the past to such a tenure are in the process of removal or have been removed, and that as between public mental hospitals on the one hand and general hospital and medical schools on the other, schemes of working affiliation and reciprocity are now practical propositions."

Illustrative of this we are now in a position to report the schemes adopted by the London County Council and the Springfield Mental Hospital Committee, and

both bodies are to be congratulated on the important steps they have taken in this matter.

ABSTRACT FROM THE MINUTES OF THE LONDON COUNTY COUNCIL, NOVEMBER 16, 1926.

Affiliation to General Hospitals—Appointment of Consultants.

We have had under consideration from time to time the desirability of securing, if possible, the affiliation of the mental hospitals to general hospitals, and we have come to the conclusion that it probably would facilitate attainment of the object in view to deal only, in the first instance, with the question of the appointment of consultants, leaving further arrangements to develop as may be found mutually advantageous to the mental hospital and the general hospital concerned.

The proposal is that the following consultants should be appointed, *viz.*, (i) a physician, (ii) a surgeon, (iii) a gynæcologist, (iv) an ophthalmologist, and (v) a throat, nose and ear surgeon, and, as a first step in this direction, arrangements have been made for consultants from the London and Guy's hospitals to attend Claybury and Bexley mental hospitals respectively at an honorarium, in each case, of £4 14s. inclusive of travelling expenses. We propose that during the first year of this arrangement the total expenditure should be limited to £400, £100 in 1926-27 and £300 in 1927-28, which will permit of 42 visits being made at each hospital during this period. There is no provision for this expenditure in the annual maintenance votes, 1926-27, because it was not expected, when the estimates were prepared, that negotiations then about to be instituted would progress so speedily as they have since done. The arrangement which is now possible is, however, of such manifest advantage that we feel justified in putting forward recommendations to permit of its immediate adoption.

(Agreed.)

[COPY.]

MEMORANDUM OF AGREEMENT OF CO-OPERATION BETWEEN WESTMINSTER HOSPITAL SCHOOL OF MEDICINE AND THE COMMITTEE OF VISITORS OF SPRINGFIELD MENTAL HOSPITAL.

1. (a) That the Visiting Staff of Westminster Hospital (a list of whom is appended) will act as Honorary Consultants to the Springfield Mental Hospital.

(b) The Consulting Staff will be available when required for attendance at the Springfield Mental Hospital and to act as deemed necessary.

(c) The Pathological and Bacteriological Departments will give such assistance as may be required from time to time.

(d) The question of a grant to cover the travelling expenses in connection with the visits of Officers of the Westminster Hospital to Springfield Mental Hospital will be a matter for mutual arrangement.

2. (a) The Springfield Mental Hospital will nominate a Medical Officer to attend the Out-Patient Mental Clinic at the Westminster Hospital and act as Joint Lecturer in mental diseases at the Hospital School of Medicine if so desired.

(b) The Springfield Mental Hospital will undertake to provide the course of instruction in mental diseases specified in the curriculum of the University of London to the medical students of Westminster Hospital.

(c) Facilities will be given to the Staff of Westminster Hospital to demonstrate cases of physical disease at the Springfield Mental Hospital.

(d) The members of the Medical Staff of Springfield Mental Hospital shall have the same authority and control over the students as is held by members of the Visiting Staff of Westminster Hospital.

3. That subject to the requirements of Springfield Mental Hospital, the Medical students of Westminster Hospital shall, at fixed times, enjoy the privileges of the sports ground of the Springfield Mental Hospital, and shall co-operate with the staff of Springfield Mental Hospital in the promotion of sport.

We are of opinion that co-operation on the lines suggested above will unquestionably be to the advantage of both hospitals, and should lead to developments in the future in many directions, including the possibility of interchange of nurses, and the appointment for short periods of students as Resident Clinical Assistants at Springfield Mental Hospital.

4. This co-operation between the two hospitals to be subject to termination by six months' notice by either Hospital authority.

Dated this 8th day of March, 1927.

(Signed) AUSTIN TAYLOR, Chairman,
Westminster Hospital.

(Signed) A. S. WOODWARK, Dean,
Westminster Hospital School
of Medicine.

(Signed) CHARLES L. ATTENBOROUGH,
Chairman of Springfield Mental Hos-
pital Committee.

(Signed) R. WORTH, Medical Superintendent,
Springfield Mental Hospital.

JOINT BOARD OF RESEARCH FOR MENTAL DISEASE (CITY AND UNIVERSITY OF BIRMINGHAM).

ANNUAL REPORT OF THE LABORATORY FOR YEAR ENDING MARCH, 1927.

(Abridged.)

AFTER commenting on the loss the Board and Laboratory sustained by death of its first director, Sir F. W. Mott, and announcing the appointment of his successor, Dr. F. A. Pickworth, the Report continues as follows :

"**Bacteriological.**—As in previous years, a large number (one-third) of the specimens of fæces show organisms other than *coli*. *B. typhosus* has been found on one occasion, dysentery *Flexner Y* on two occasions, and dysentery *Shiga* on one occasion. Many organisms have been found resembling very closely the typhoid-dysentery organisms, but giving no marked agglutination with the pathogenic antisera available. A large number of *B. Friedlander* is found, and streptococci are occasionally numerous. Another case of bacteriæmia, occurring during the acute phase of mental disorder, has been found. The organism gave the cultural and fermentation reactions of *Bacillus alkaligenes* and was found on two different occasions at an interval of 10 days in the blood in pure culture. This organism was also present in the fæces, together with streptococci, but not in the urine, which contained streptococci only. The blood showed a negative agglutination to *B. fæces alkaligenes*, but a strongly positive (50 Oxford units) to paratyphosus A. The blood became sterile coincident with physical and mental improvement of the patient's condition."

"Streptococci have been found in one case in the brain *post-mortem*; being, as previously found in other cases of positive brain swabs, of the *Streptococcus mitis* class."

"A complete bacteriological examination of a few cases shortly after death has been made, and such work is being continued. The examination of swabs, taken by the Visiting Gynæcologist, with special aseptic precautions, from the interior of the cervical canal confirms our previous findings of the presence of diphtheroid organisms, gram-positive diplococci and various streptococci in the majority (two-thirds) of the cases. In this connection it may be mentioned that in only one case have we found *B. coli*. Material from the nasal sinuses is being investigated by dark-ground illumination and by special bacteriological technique which at present is yet in the experimental stage. Five *per cent.* of diphtheria swabs have been positive. Serological agglutination tests have now been done on specimens from nearly all the patients in the Birmingham mental hospitals; and in the course of the research upon the antibody-forming capacity of patients treated by vaccine for special therapy."

"**Basal metabolism.**—Work during the past year consisted largely in the investigation of the basal rate of normal subjects under varying conditions. This was rendered necessary by the very low results occurring with patients when tested by the new method. Metabolic rates of the normal subjects investigated differed

widely from the published standards, and this discrepancy (which we consider entirely due to the successful elimination of certain factors consequent upon the use of the bag methods, such as slight degrees of fear, increased attention and interest, and the difficulty caused by the mechanical arrangements and valves), marks a distinct advance in this wide field of medical research. Work on the determination of the basal rate of patients during sleep is now in steady progress; this requires a considerable amount of night work, since it is necessary to study the metabolism during sleep. The results of the work done with normal subjects have been collected, together with a complete description of the method, and presented to the Royal Society by Professor Haldane, and published in their proceedings."

"*Histological.*—The investigations of the action of hypnotic drugs have been collected and published in the *British Journal of Experimental Pathology*. The systematic examination of *post-mortem* material has been initiated, and various staining methods, fixing reagents and histo-chemical tests have been tried with a view to determine the relation of certain chronic infectious processes to changes in the central nervous system. A number of published methods for the detection of Gram-negative bacteria have been tested, all of which have proved more or less unsatisfactory for our purpose, so that it has been necessary to evolve a new method. This has now been completed and bacteria demonstrated deep in the tissues in the neighbourhood of septic foci, e.g., peritonsillar tissue. The investigation of some of the more recent histological technique is in progress."

"*Post-mortem* work has shown further cases of nasal sinus disease: One case showed a long-standing perforation of the sphenoidal sinus into the pituitary fossa. The pituitary was surrounded by a mucinous septic fluid, and there is evidence of considerable extension subdurally of this septic process."

"*Chemical.*—Dr. Strecker has continued his work, and has carried out over one hundred determinations of the permeability of the brain membranes to potassium bromide, the results of which are now being collected for publication. Mr. Woodhouse has done further work to eliminate errors in the determination of the fat-lipoid cholesterol ratio of endocrine glands, and a method has now been evolved which yields suitable results with test mixtures."

NEW NURSES' HOME AT BARMING MENTAL HOSPITAL.

HER Royal Highness Princess Mary, Viscountess Lascelles, had a great popular welcome on her arrival by motor at Barming on Tuesday, June 7, 1927, at 2.30 p.m., to open the new Nurses' Home and Training School at the Kent County Mental Hospital. Crowds of people lined Hermitage Lane, where the new Home is situated, facing the west side of the Hospital buildings, while a large company of ticket-holders, in addition to those who were to take part in the ceremony, stood in the forecourt and quadrangle of the Home.

The Princess, accompanied by Miss Kenyon-Slaney, lady-in-waiting, was received at the small centre gate, over which the Union Jack floated, by the Marquis Camden (Lord Lieutenant), who there presented to Her Royal Highness Sir Henry Lennard, Bart. (Chairman of the Committee of the Hospital), the High Sheriff (Mr. F. C. Tiarks), Lord Cornwallis (Chairman of the Kent County Council), Lord Sackville (Vice-Chairman of the Kent County Council), Sir Coles Child, Bart. (Chairman of the Kent Mental Hospitals' Committee), and the Mayor of Maidstone (Alderman A. T. Epps), who wore his robes and chain of office.

Lining the pathway to the south-east entrance to the Home were drawn up about sixty female nurses, made up of charge and staff nurses and probationers, in hospital uniform of white and blue, and escorted by Sir Henry Lennard, the Princess proceeded through this Guard of Honour to the Home, where she inspected the lecture and silence rooms and nurses' recreation room, passing therefrom on to a dais under a portico in the quadrangle. The borders of the pathways leading to the dais were tastefully decorated with pots of pink and white spiræa, the roof of the portico being covered with a profusion of pink clarkiasias.

On entering the Home the following members of the Mental Hospital Committee and Staff were presented to Her Royal Highness: The Rev. J. D. Jones, Messrs. W. Cobbett Barker, J. A. Bennett, George Day, G. J. Gully, J. Harlow, Randall

Mercer, F. Walter Payne, A. J. Penney, L. Pink, J. Tomlin, H. J. Bracher (Clerk), H. Wolseley-Lewis (Medical Superintendent), Miss E. L. Macaulay, *O.B.E.* (Matron), Drs. W. E. Collier (Senior Assistant), T. R. Forsythe, J. W. Smith, C. F. J. Baron, S. Wyndham Davies, F. T. Travers (Consulting Surgeon), and Mr. R. G. Farrington (Dental Surgeon).

CEREMONY OF OPENING.

The Princess, having taken her seat in a gilt chair on the dais, Sir Fredk. J. Willis, Chairman of the Board of Control, asked Her Royal Highness to declare the Home open. There had been, he said, many changes in connection with the treatment of insanity in the last half century, and mental institutions were now hospitals in the truest sense of the word, and they now no longer looked upon nurses as keepers, but as nurses. In the last twenty-five years they had been trying to improve the standard of the nurses, and Dr. Wolseley-Lewis had been one of the leaders of the movement. It was very important to do everything to make the nurses happy and comfortable, and the beautiful Nurses' Home would be a lasting monument to Dr. Lewis's great endeavours to improve the mental hospital nursing service.

The Princess then declared the Home open: "I have much pleasure in declaring the new Nurses' Home open," she said, in a clear, distinct voice.

Miss Stella Wolseley-Lewis, the little daughter of Dr. and Mrs. Wolseley-Lewis daintily attired in white, then advanced to present the Princess with a beautiful bouquet of pink carnations and maidenhair fern, following which the Bishop of Rochester (Dr. J. R. Harmer, D.D.) pronounced a special dedicatory prayer.

Lord Cornwallis then, on behalf of the local authorities of Kent, proposed a vote of thanks to the Princess. Addressing Her Royal Highness, he said:

"We all know the interest you take in nursing, and the practical knowledge you have of the subject, and appreciate the great advantage that interest brings to the profession. We hope your Royal Highness will be impressed by the value of the improved provision made for the tuition and well-being of the nursing staff, which we desire shall be equal to that found in other forms of hospitals and training schools, and so remove an ancient prejudice against this branch of the profession. We look for our reward in a continuance of that devoted service we always receive from our staff, who have been eager to seize the opportunities of better training.

"We welcome the presence of Sir Frederick Willis and others as evidence of the sympathy and encouragement of the Department in securing that all nurses shall be fully equipped for their delicate task, which requires intelligence, initiative and judgment of the highest order, and the power to apply their knowledge to the individuality of each patient—no easy task.

"This effort is no sudden inspiration; it is the culmination of long endeavour, in which our Medical Superintendent, Dr. Wolseley-Lewis, the master mind, has had the sympathetic support of successive Chairmen, the late Sir Charles Whitehead, Sir Coles Child, and Sir H. Lennard and the Committee. That endeavour has its crowning reward in the presence of your Royal Highness to-day. All concerned feel it a great inspiration, and the Local Authorities, the Medical Staff and Staff generally, both male and female, will be greatly encouraged to persevere in this difficult work."

Sir Henry Lennard, seconding the vote of thanks, in the course of a brief speech, said: "On behalf of the Committee of Visitors and the whole staff of this Mental Hospital, I wish to tender to you our grateful thanks for coming down to-day to open our Nurses' Hostel. My Committee have long realized the necessity of the mental nurses being as highly trained as possible, and also wished as many as possible should have the general training of a hospital nurse as well. We hope that we shall have the assistance, not only of Matrons of Hospitals, but that of those who are now teaching the younger generation, in showing that a new career is opening for those who seriously wish to help their fellow creatures and perform a duty which will bring the greatest happiness in its wake. We all know how much we owe to the nursing world in general, and how very grateful patients should be to those who aid them to recover in such a bright and sympathetic way, and I most sincerely second the vote of thanks to your Royal Highness for opening our Hostel to-day, and thus showing your appreciation of the work that nurses perform."

Major W. H. Robinson, F.R.I.B.A. (architect), Mr. A. E. Palmar (contractor) and Messrs. A. Abnett and E. C. S. Gasson (representatives of the workmen) were presented to the Princess, who then inspected other parts of the Home.

VISIT TO THE MENTAL HOSPITAL.

Her Royal Highness next proceeded, *via* the side entrance in Hermitage Lane, to the Mental Hospital. She walked through the infirmary and other wards on both male and female sides, and visited the outdoor solaria and operating theatre. Next, passing through a guard of honour of male nurses in the Hospital Grounds, the Princess visited the Chapel, where she evinced much interest in the carving in the chancel, executed some years ago by a patient in the Hospital.

Her Royal Highness expressed her great admiration of the new Nurses' Home and the great work that was being done for the patients.

A guard of honour of about 800 Girl Guides and Brownies lined the route back to the Nurses' Home, where the Princess partook of tea before proceeding on her return journey.

NEW BUILDING DESCRIBED.

The new Home, which has cost £40,000, will fill a great want, for the accommodation of the female nursing staff, alike for educational, domestic and other purposes, had long been very inadequate. Approached by broad pathways and surrounded by grass plots and flower-beds, the building is an imposing structure, forming a square, with a central court, to which access is gained through an archway, on either side of which are the two main entrances to the building itself. It has been so designed as to contrast, as much as possible, with the Hospital buildings, and provide a complete change of environment for the occupants when off duty. The elevations are simple in character, but true to traditions of the Renaissance period, the architect relying on colour and proportion for effect rather than ornate detail. The walls are faced with plum-coloured bricks, relieved by light red brick dressings. There are stone porches to the main doorways. The roof is of tiles, being pierced at intervals by dormer windows, breaking up what otherwise would be a large plain surface. The central feature is the tower, placed above the archway leading to the quadrangle, and containing the tanks which supply water to the building.

The building is planned on four sides of a quadrangle. On the ground floor, facing north, is the kitchen, servery and dining-room, the kitchen being furnished with electric cooking apparatus. Facing west is the large recreation room, which can be divided at will by a movable partition. Facing south are rooms provided for the sisters, for writing, a library and lecture-room. On the east are the main entrances, lobbies, cloakrooms, etc.

The two upper floors are reserved for sleeping quarters, etc., there being altogether 133 bedrooms, with estimated accommodation for 150 nurses, the night nurses' bedrooms being sequestered at the top of the building for the purpose of quietude. Each bedroom is simply furnished on up-to-date and convenient lines. Each has its own toilet requisites with hot and cold water laid on. There are also box-rooms, recesses in the corridors containing gas-rings for the purpose of making refreshments, bath-rooms, and, what the nurses will undoubtedly regard as a great boon, a shampoo-room. There are 80 bedrooms on the first floor and 53 on the second floor. There are two self-contained flats for the Matrons, on each side of the Archway and facing inside the quadrangle. The floors are of fireproof construction; there are four staircases, artificial lighting throughout is by electricity, and the rooms on the ground floor and all the corridors are heated by hot water.

The building is set back from Hermitage Lane about 80 ft., and is approached by a carriage-drive through two gateways, and there is a wicket-gate entrance for the daily use of the nurses. The courtyard, or quadrangle, has been laid out with stone paving and grass plots, and a central feature, with seats, providing a shady and sheltered spot in which those inclined may loiter when off duty. The building has been planned with a view to obtaining the maximum amount of sunshine and air in all the rooms.—(Abbreviated: from a report in the *South-Eastern Gazette*, June 7, 1927.)

OBITUARY.

JOHN CHARLES GROSCORT REED, M.R.C.S.Eng., L.R.C.P.Lond.,
Assistant Medical Officer, The Old Manor, Salisbury, and an Ordinary Member
since 1924.

Dr. REED was born in 1873, and after a scholastic career he entered Guy's Hospital as a student, and in 1896 qualified in medicine and surgery. He then studied for a commission in the R.A.M.C., but was advised to enter the Royal Navy, which he subsequently did as surgeon. He served for twenty-seven years in different parts of the world, but chiefly in China, and in the Grand Fleet during the Great War. In September, 1923, he was put on the retired list and given the rank of Surgeon-Captain. On November 5 of the same year he was appointed an Assistant Medical Officer to the Old Manor, Salisbury, where he remained until the day of his death.

Dr. Reed was a cheerful and agreeable colleague, fond of games and travel, and, considering his age, a good lawn tennis player.

He passed away peacefully in bed in his sleep on August 2, 1926. He appeared to be in his usual health the previous day.

He leaves a widow and two sons, one of the latter being in the medical profession.
S. E. MARTIN.

HORACE EYRE HAYNES, V.D., L.S.A., M.R.C.S.Eng., J.P.

Ordinary Member since 1900.

WE regret to record the death, in his eighty-first year, of Dr. H. E. Haynes on March 12, 1927.

He was educated at Epsom College and St. Bartholomew's Hospital, of which he was a Senior Scholar. He qualified in medicine and surgery in 1869 and then joined his father and eldest brother in practice at Evesham. During the thirty-one years he was in practice there he took a leading part in the public life of the district. He was a Justice of the Peace, Mayor of Evesham for two years and one of the originators of the local hospital. He was also President of the Worcestershire Medical Society. A keen volunteer, he eventually retired with the Volunteer Decoration and the honorary rank of Lieutenant-Colonel. He also won the county rifle-shooting championship (N.R.A. Bronze Medal) on one occasion. As a young man he was a keen cricketer and follower of the hounds. Increasing deafness caused him to leave Evesham in 1900, and he became the licensee firstly of Bishopstone House, Bedford, and afterwards of Littleton Hall, Brentwood; at the latter he was joined by his eldest son.

He returned to Evesham some four years ago, and renewed some of his former activities both on the magisterial bench and on the local hospital committee. Throughout his life he had been an active supporter of the benevolent work of Epsom College, for which he had collected some £1200, and of which he was a vice-president.

He had also been President of the Old Epsomian Club.

His last illness was brief, pneumonia rapidly supervening after an operation for intestinal obstruction.

H. G. L. HAYNES.

HONOURS, ETC.

Dr. EDWARD FARQUHAR BUZZARD to be K.C.V.O.

Dr. EDWARD MAPOTHER to be F.R.C.P.

APPOINTMENT.

DAVIE, THOMAS MACNAUGHTON, M.C., M.D., D.P.M., Medical Superintendent, East Riding Mental Hospital, Beverley, Yorks.

KIMBER, W. J. T., M.R.C.S., L.R.C.P.Lond., D.P.M., Medical Superintendent, Herts County Mental Hospital, Hill End, St. Albans.

NOTICES OF MEETINGS.

The *Annual General Meeting* for 1927 will be held at Edinburgh during the week commencing July 18, in conjunction with the Section of Mental Diseases of the Annual Meeting of the British Medical Association.

It will also be the occasion of the celebration of the centenary of the death of Pinel.

South-Western Division.—October 27, 1927, at Northwood House, Winterbourne, Bristol.

Irish Division.—July 7, 1927, Portrane District Mental Hospital, Donabate; November 3, 1927; April 5, 1928; July 5, 1928; November 1, 1928.

Continued from page ii of cover.

Anniversaire de la Mort de Pinel, par *Dr. René Semelaigne.*

Mental Deficiency (two papers), by *Dr. John Bostock.*

On the Influence of Asphyxia upon the Action of Convulsant Dyes, etc.
Psychogalvanic Studies in Schizophrenia. Observations on the
Unreliability of Subjective Reports of Emotional Reactions. All by
Hans C. Syz.

Books received for review :

Practical Methods in the Diagnosis and Treatment of Venereal Disease,
by *Dr. David Lees.*

The Mysterious Kundalini, by *Vasant G. Rele.*

Psycho-pathology: Its Development and its Place in Medicine, by *Dr. Bernard Hart.*

Mental Handicaps in Golf, by *Dr. Theo. B. Hyslop.*

The Modern Mental Hospital, by *Dr. Robert Hunter Steen.*

The Abilities of Man: Their Nature and Measurement, by *Dr. C. Spearman.*

A Text-book of Psychiatry for Students and Practitioners, by *Dr. D. K. Henderson and Dr. R. D. Gillespie.*

The Psychology of Murder, by *Dr. Andreas Bjerre.*

The Science of Mind, by *Ernest Shurtleff Holmes.*

Segregation and Autogamy in Bacteria, by *Dr. F. H. Stewart.*

Freudian Essays on Religion and Science, by *Cavendish Moxon.*

Post-encephalitic Respiratory Disorders, by *Dr. Smith Ely Jelliffe.*

Magnetism and Magic, by *Baron Du Potet Du Sennevoy.*

Nursing Mental and Nervous Diseases, by *Dr. A. C. Buckley.*

Les Syndromes Névropathiques, par *A. Hesnard.*

Vom Liebes- und Sexualleben, von *Dr. Ludwig Frank.*

Experimental-Deskriptive Psychologie der Bewegungen, Konfigurationen
und Farben, by *Dr. Kur Haack.*

Die Grundlagen der Psychoanalyse, von *Dr. Heinz Hartmann.*

Die psychokathartische Behandlung nervöser Störungen, von *Dr. Ludwig Frank.*

Die psychischen Heilmethoden, herausgegeben von *Dr. Karl Birnbaum.*

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OCTOBER, 1927.

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EDITORS

J. R. Lord, C.B.E., M.D. G. Douglas McRae, M.D.
Thomas Beaton, O.B.E., M.D.



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THE ROYAL MEDICO-PSYCHOLOGICAL ASSOCIATION.

"THE CLINICAL STUDY OF MENTAL DISORDERS."

By LT.-COLONEL J. R. LORD, C.B.E., M.D., F.R.C.P.E.

Being the Presidential Address for 1926.

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"Colonel Lord's address is one which all who are concerned with the prophylaxis and treatment of mental disorder should make a point of reading."—THE BRITISH MEDICAL JOURNAL, April 30, 1927.

"The book will especially appeal to psychiatrists attached to State Mental Hospitals." "To adopt the author's suggestions would mean a complete breakaway from the present customs, but it would be welcomed by all medical officers attached to State Government Mental Hospitals."—THE MEDICAL JOURNAL OF AUSTRALIA, March 16, 1927.

"This book should be in the possession of all who presume to discuss modern psycho-therapy."—THE MEDICAL RECORD, December 10, 1926.

". . . gives the reader a most thorough insight into the present position of the study and practice of psychiatry or psychological medicine."—MENTAL WELFARE, October 15, 1926.

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LETTERS PATENT RE COAT OF ARMS.

Photographs of the above can be purchased from Graham, Epsom, price 7s. each.

The following annual Mental Hospital and Mental Deficiency Institution Reports for the years 1926-1927 have been received :

Barnwood House.	Lebanon Hospital.
Besford Court.	M.A.B. Mental Hospital.
Birmingham City.	Perth Royal.
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Also the following Reports, Reprints, etc. :

- The Dream in the Light of a New Conception of Consciousness, by *Dr. John Bostock.*
- Les Accidents de la Ponction Lombarre et leur Traitment, by *Drs. Targowla and Lamache.*
- Sur une Névrauxite infectieuse épidémique, etc., by *R. Targowla et Mlle. Serin.*
- Doctors and the Public, by *Dr. E. Graham Little.*
- Lengthening of Human Life in Retrospect and Prospect, by *Irving Fisher.*
- The Scholastic and Character Classification of Mental Defectives, by *Dr. John Bostock.*

Continued on page iii of cover.

Members of the Royal Medico-Psychological Association and subscribers to the Journal who desire to purchase reprints of the discussions (with or without opening papers) which took place at the Annual Meeting at Edinburgh, July, 1927 (jointly with the Section of Mental Diseases of the British Medical Association Meeting), should send their orders not later than December 31 to the Printers of the Journal—

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THE
JOURNAL OF MENTAL SCIENCE

[Published by Authority of the Royal Medico-Psychological
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VOL. LXXIII.

EMIL KRAEPELIN,*

Psychiatrist.

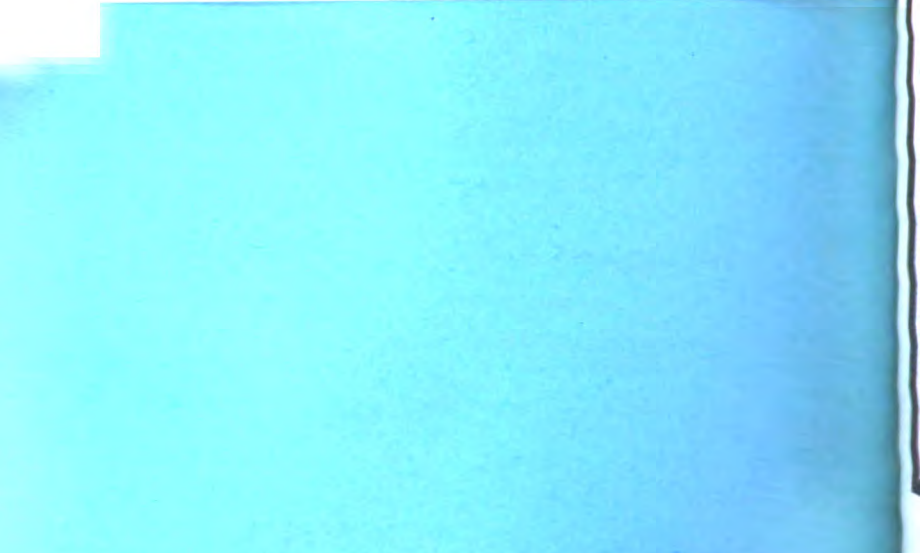
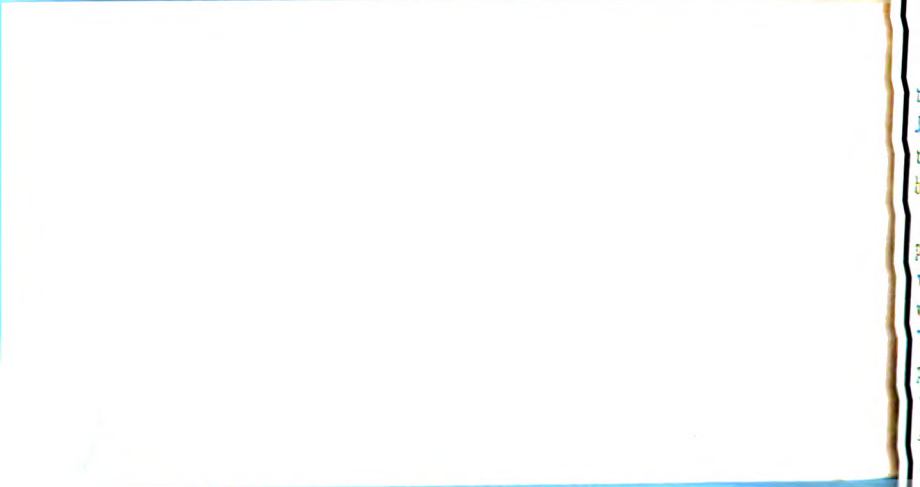
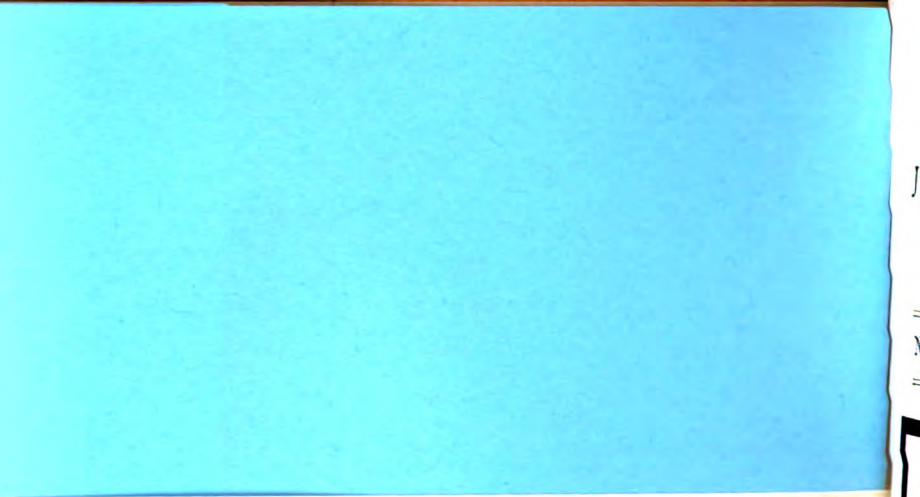
EMIL KRAEPELIN was born at Neustrelitz in 1856. It is said that his interest in psychology was first aroused by reading Wundt's *Menschen und Tierseele* during his last year at school, and that this led him to adopt medicine as a career with the definite aim of becoming a psychiatrist.

While still a student at Wurzburg he gave much thought to philosophic problems, and during his spell of military service wrote an essay upon the treatment of criminals, containing ideas which were considerably ahead of those usually held at the time. These ideas (notably that of replacing vindictive punishment by protection of society against the criminal, and the criminal against the consequences of his own tendencies) have been developed by Aschaffenburg, who was one of Kraepelin's pupils, and they are affecting German legislation in increasing measure.

In 1876, while studying at Wurzburg under Rincker, he wrote a prize essay entitled "The Influence of Acute Illness in the Causation of Mental Disorders." About the same year he was greatly impressed by a holiday course of lectures given by Wundt at Leipzig.

Soon after qualification he worked for short periods as assistant to Gudden and to Flechsig in their respective psychiatric clinics. He appears to have been discouraged by the comparative sterility of their method—a premature attack upon the problems of psychiatry with the concepts and technique of the neurologist. He abandoned clinical work in favour of research in Wundt's laboratory for a time, and contemplated doing so permanently. From this project he was dissuaded by Wundt himself, and in 1883 returned to the Munich Clinic.

* For photograph see frontispiece to July Journal.



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EMIL KRAEPELIN,*

Psychiatrist.

EMIL KRAEPELIN was born at Neustrelitz in 1856. It is said that his interest in psychology was first aroused by reading Wundt's *Menschen und Tierseele* during his last year at school, and that this led him to adopt medicine as a career with the definite aim of becoming a psychiatrist.

While still a student at Wurzburg he gave much thought to philosophic problems, and during his spell of military service wrote an essay upon the treatment of criminals, containing ideas which were considerably ahead of those usually held at the time. These ideas (notably that of replacing vindictive punishment by protection of society against the criminal, and the criminal against the consequences of his own tendencies) have been developed by Aschaffenburg, who was one of Kraepelin's pupils, and they are affecting German legislation in increasing measure.

In 1876, while studying at Wurzburg under Rincker, he wrote a prize essay entitled "The Influence of Acute Illness in the Causation of Mental Disorders." About the same year he was greatly impressed by a holiday course of lectures given by Wundt at Leipzig.

Soon after qualification he worked for short periods as assistant to Gudden and to Flechsig in their respective psychiatric clinics. He appears to have been discouraged by the comparative sterility of their method—a premature attack upon the problems of psychiatry with the concepts and technique of the neurologist. He abandoned clinical work in favour of research in Wundt's laboratory for a time, and contemplated doing so permanently. From this project he was dissuaded by Wundt himself, and in 1883 returned to the Munich Clinic.

* For photograph see frontispiece to July Journal.

The chance that he would achieve his ambition—the chair of psychiatry at one of the universities—then seemed somewhat remote, and it was certainly not improved by his forced acceptance during the next three years of posts at asylums for chronic patients. Nevertheless he first reached his objective in 1886, when he was appointed Professor at Dorpat, at the age of 30. An increasing reputation led to his transfer within four years to a similar position at Heidelberg. His teaching and writings during the following fourteen years which he spent there had raised him already to a unique position among psychiatrists, when in 1904 he accepted the position of Director at the newly opened Munich Clinic, carrying with it the Chair of Psychiatry at the University. These appointments he continued to hold, until in 1922, at the age of 66, he relinquished them in order to devote himself exclusively to the creation of the *Deutsche Forschungsanstalt für Psychiatrie*.

Space compels the most cursory reference to all but the three main aspects of Kraepelin's work. One can only just mention, among practical matters, his devotion to the crusade against alcoholic excess, and amongst theories, his advocacy of the conception that many symptoms seen in both transitory and progressive psychoses as well as in congenital mental deficiency represent regressions to earlier stages in the development of the race. He was profoundly interested in the comparative psychology of different races, had undertaken journeys to investigate the mentality of inferior races in Java, India, Mexico and North America, and was, in fact, about to start on another extensive journey in the East at the age of 70 when he died.

The work which Kraepelin personally carried out in the laboratory, especially during his earlier days, consisted mainly in the application to those suffering from mental disorder of the methods of experimental psychology which he had learnt from Wundt. By these methods he endeavoured to elucidate the effects of different intoxications, and particularly those of alcohol in various doses. He studied the influence of these and of many other factors upon the capacity for work. Some of this research has considerable interest in its relations to industrial psychology which has been growing up in the last few years. On the whole the application of the methods of experimental psychology to the abnormal has not yet proved so fruitful as Kraepelin hoped, but it was at least a forward step in developing psychiatry into a scientific study. It served as hardly anything could then have done to emphasize the need of substituting the laborious and critical accumulation of observed fact for uncontrolled generalization on the strength of a few instances.

In order to appreciate the epoch-making influence of Kraepelin's thought upon psychiatry, it is necessary to indicate briefly the state of affairs when he started his work about fifty years ago. Psychiatry had then recently emerged from the stage when metaphysical speculation was regarded as the proper method of attack upon its problems.

The triumphs won in other fields of medicine by the application of the methods of natural science, and the enunciation of the axiom that mental disease was brain disease, had led to two forms of over-reaction. The more credulous among the neuro-psychiatrists of the time had accepted this aphorism as a sort of licence to indulge in what has been termed "brain mythology"—a reference of normal and abnormal mental processes to definite cerebral structures, and to derangements of their alleged functions in a manner hardly more supported by observation and experiment than the extravagances of their metaphysical predecessors. More sceptical minds had taken refuge in an unduly helpless agnosticism regarding functional disease, in an ostentatious limitation of interest to those types in which obvious causes, or clear cerebral changes, could be identified. They adopted an attitude of despair as to the prospect of devising for practical purposes, in respect of the great mass of functional cases, even a provisional working hypothesis, until developments of technique had made it feasible to submit these also to the methods of neurology. Bernhard Gudden, who was Kraepelin's teacher, made it his almost invariable practice to answer "I don't know" to all questions about functional psychoses.

Such classification of functional syndromes as existed was based solely upon the principle of grouping under one head all cases presenting at the time of observation, one salient anomaly, without regard to causation or course.

Kraepelin, from the first, addressed himself to the problem of bringing order out of chaos by the isolation of definite diseases from the mass of functional cases. How far he succeeded is even now disputable, but there is no doubt whatever of the abiding value of his recognition of certain syndromes, *i.e.*, of the tendency for certain extremely diverse symptoms to coexist, and for certain clinical pictures (between which it would be hard to see logical links) to succeed one another, in cases constituting distinguishable groups.

Kraepelin sought, of course, to go farther. The aim of at least his early work was to establish practically constant correlation between certain syndromes and their course. Naturally he felt that any clinical unit, in respect of which such coincidence could be established, would be entitled to rank as a "disease" in the full

sense. Since course is determined by causes, one might assume that a constant ætiology of such a "disease" awaited discovery, and that there was a probability of ascertaining a material pathology related not merely to the form of the symptoms, but to essential causation.

From Kraepelin's early attempts to extract clinical unities from the mass of the graver functional cases, which constitute the population of an asylum, there emerged the concepts of dementia præcox, manic-depressive psychosis and paranoia—terms used by Kraepelin in a far narrower and more defined sense at that time than later.

Kraepelin's views met with the usual reception of innovations, and this passed through the customary phases.

In Germany, under the personal influence of Kraepelin and his pupils, acceptance spread fast and wide. Elsewhere the resistance included the traditional objections that the proposed views, so far as they were new, were not true, and so far as they were true, were not new. It was easy to point to the fact that Kahlbaum had propounded the principle of correlating the current symptoms in patients when first seen with their previous history and subsequent course, in order to find the basis for ætiology and pathology. Kahlbaum had not carried into practice this relation of transverse to longitudinal section. It was easy, on the other hand, to show that Clouston had vividly described certain of the clinical pictures grouped by Kraepelin under "dementia præcox," but Clouston had combined cases of such form under the term "adolescent insanity" with others arising about the same age, but approximating rather to Kraepelin's manic-depressive type; he had, moreover, failed to indicate clearly the different frequencies with which these syndromes followed certain courses.

To depreciate Kraepelin's attempts to establish correlation by laborious clinical observation on such grounds was as superficial as to dispute the originality of Darwin, because others had suggested the idea of evolution before he did the twenty-five years' work leading to the publication of *The Origin of Species*.

Nevertheless, in 1908, over twenty years after Kraepelin had started teaching, and more than ten years after he had systematized his views in the fifth edition of his *Lehrbuch*, it was possible for one of the most prominent English psychiatrists, after a meeting of the Medico-Psychological Association for discussion of the concept of dementia præcox, to express his personal conviction that this concept might now be regarded as buried. Naturally some of his junior colleagues silently disagreed. Fifteen years later at a similar meeting to discuss the pathology of this lively corpse, some of them had the satisfaction of hearing the same psychiatrist, now still

more eminent, refer to "the epoch-making conception of dementia præcox which we owe to the genius of Kraepelin."

Most of the rebel juniors had by then naturally reached the age when the innovation which they had supported in youth seemed the limit of sound progress; meanwhile Kraepelin had moved steadily on—the customary second phase.

Once the shock of novelty had passed, the crudities of Kraepelin's early categories had proved irresistible to those with a taste for such simplicities, and had been stereotyped in text-books, which emphasized rules and distinctions, and minimized, if they did not ignore, the great mass of exceptions and intermediates. The application of any one of the terms "dementia præcox," "paranoia," "manic-depressive psychosis" implied belief in the all-importance of endogenous causes, and a sort of fatalism regarding prevention, and anything but symptomatic treatment. The two former terms tended to become a synonym for hopelessness; the term "manic-depressive psychosis" was reserved for those examples of syntonics anomalies that spontaneously show complete intermission and recurrence.

Kraepelin's early descriptions had largely been of striking types *e.g.*, of those dementia præcox patients who arrest attention by steady progress of the disease, as well as the depth of their final degradation, and of those manic-depressives who do so by the contrast between the severity of their attacks and the completeness of recovery.

Everyone could find in his experience instances showing "typical" correspondence between symptoms and course; it was easy to forget the mass of cases that inconveniently refused to fit the frames. Nothing could have been more remote from Kraepelin's own method. From beginning to end of his life he taught as the foundation of knowledge unfailing readiness to disregard all previously expressed opinion, including his own, and to submit all concepts afresh to correction by clinical experience. His method was to insist upon a record in every new case at the Clinic of his own initial judgment as to the symptomatic category and the prognosis, upon a similar record of his assistants' views, and upon a comparison of these opinions with progress both during stay and later.

Kraepelin, even as he neared seventy, steadily progressed in his views—in fact it might be said that he obtained his position of unique authority in virtue of opinions which he profoundly modified later. He came eventually to apply the term "manic-depressive" to all syntonics anomalies that were mainly of endogenous and psychogenic origin, regardless of intensity and course. Within the schizophrenic-paranoid series he tended to multiply subdivisions in what seemed

rather a useless way. But he had, in a large measure, come to appreciate that the differences were merely expressions of the personality at the date when derangement became manifest, and thus depended to a great extent upon the patient's age at onset. He entirely rejected the speculative psycho-analytic reference of differences to deviations of infantile sexuality, whether innate or provoked by experience. He had also approximated to the modern view that all type-forms represent syndromes which may be combined in varying measure, and that any syndrome may run every possible course, though a statistical correlation exists between certain forms and courses. The value of distinction of the main forms of reaction remains untouched; it was the starting-point of every important advance in clinical psychiatry within recent years.

In these generalizations, as well as in vivid presentation, Kraepelin showed the imagination of the artist. But his insistence on complete objectivity in collection of facts and upon an optimism unspoilt by self-deception, and his contempt for uncontrolled speculation, made the Munich School a model in scientific method.

Kraepelin combined in rare degree the gifts of the administrator with those of the pure scientist, and these he spent in the development, first of the Munich Clinic, and later of the Deutsche Forschungsanstalt für Psychiatrie.

The work already done at the Clinic and future contributions of both to knowledge will form a growing monument when, as is inevitable, his own scientific work is regarded as a historic stage in progress.

As a result of his organizing gifts the Clinic became in all ways a model for the world. In respect of the kindness and skill lavished upon the patients as well as the material equipment for treatment it remained unsurpassed. The number of doctors actually engaged in clinical work was always great, because Kraepelin insisted upon the necessity for combining this with research, and so, for such leisure as made the combination possible. He created a training centre to which post-graduates of every kind resorted, and particularly instituted an arrangement whereby every state of the German Reich contributed to the laboratory, so that constantly one medical officer in its asylum service at least should have the opportunity of work there.

In addition Kraepelin had gathered round him a more permanent staff of brilliant men as teachers and directors of research in various branches. At Heidelberg he had already attracted Franz Nissl, one of the founders of the histo-pathology of the brain, and at Munich, Alzheimer, Spielmayer, Brodman, Plaut, Rüdin and Jabnel. He succeeded in keeping them by his great gifts for the handling of

people, and by untiring effort to obtain for his chosen band of workers the material conditions that made their co-operation possible.

As a teacher his success was based on conscientious preparation rather than upon flashy brilliance. His life was one of unceasing work, and spent almost solely in the pursuit of one great aim. Age left him unchanged: to the end he was full not only of wide visions of the future, but of zest for the daily struggle involved in pursuit of immediate ends.

In manner he was rather stiff and impersonal, but none who had seen him with his patients doubted that this covered a real capacity for sympathy. He did not suffer fools gladly, and demanded of all his associates a high standard of interest, both in the welfare of their patients and in the scientific aspects of their work; he could exhibit a cold rage with those whom he considered lacking in either, and he occasionally displayed a somewhat caustic humour.

In the Museum of the Clinic was a chamber of horrors containing obsolete apparatus for restraint, labelled to show their sources and dates—mostly a century old. Prominent among these exhibits was a photograph showing a patient in a bed covered with a net. This was labelled "From the Clinic of Professor X, 1920"—the outward sign of a feud that had persisted since their association just after Kraepelin was qualified. Such vindictiveness was, however, exceptional.

Though he was intensely patriotic, his one feeling after the war was the need for the restitution of scientific relations between all countries. The writer has vivid memories of the courtesy with which he was treated, and with which all information was placed at his disposal during a week spent at the Clinic in 1921. Munich was still suffering badly from the war and the Red Revolution which had followed it, and bitterness might have been excusable.

To few is it given to attain so early an unquestioned and universal recognition that is really justified by achievement. At the end, however, one of his chief ambitions remained unfulfilled—the foundation of the Deutsche Forschungsanstalt für Psychiatrie.

Such an institution for pure research had already been contemplated before the war, and the necessary funds had been laboriously accumulated, but the subsequent economic disasters of Germany rendered the sum quite inadequate. Slowly and painfully Kraepelin had managed to restore the possibility of realizing this dream, and he was on the eve of its materialization when he died of heart disease on October 7, 1926.

EDWARD MAPOTHER.

Part I.—Original Articles.

*Dante and Rabelais: An Account of Two Mediæval Physicians, with a Summary of their Philosophy.** The Presidential Address at the 86th Annual Meeting of the Royal Medico-Psychological Association, held at Edinburgh, July 18–22, 1927, by HAMILTON MARR, M.D., F.R.F.P.S.Glasg., Senior Medical Commissioner of the General Board of Control for Scotland.

UNTIL the XVIIIth Century it was the custom in Montpellier University for each candidate for the degree of Bachelor of Medicine to wear a gown which, by tradition, was said to have been worn by Rabelais when he received his degree. As each candidate took a little piece away as a souvenir the gown gradually disappeared.

There is ample reason for giving Rabelais the title of physician. Not only was he qualified to practise medicine, but actually did practise it in the city of Lyons, and while there wrote on medical subjects. The dependent nature of the physician of that time is shown when it is recorded that Rabelais was dismissed his post of physician in the great hospital at Lyons for being absent for two days without permission. To call Dante a physician requires some explanation. He was ascribed to the Art of Medicine and of the Apothecaries—one of the greater Arts of the Republic of Florence. In a list of the members of this Art, begun in the year 1297 and carried on to the year 1300, one reads the name of "Dante D'Aldighieri degli Aldighieri poëta fiorentino."

No one could hold office in the Government of the Republic unless he were a member of one of the Guilds or Arts. Boccaccio reproves Dante for his political ambitions in that he thereby uprooted himself from the solitary life of the studious. Politics, Boccaccio believed, were quite unsuitable for one who had been brought up, nourished and taught at the sacred breast of philosophy.

In 1295 Dante completed his studies at the age of 30 years—an age which was required before a man could exercise political rights.

It is not unusual in modern times for anyone who wishes to join an art or guild to do so by giving an exhibition of his skill in the particular guild or art he desires to join, and this method of entrance was much commoner in the early days of the Arts and Crafts.

Did Dante choose the art of medicine because of his special

* Delivered in the Hall of the Royal College of Physicians, Edinburgh, July 19, 1927.

qualifications? There is no record that he ever practised medicine, nor is it contended that he did so. There is much internal evidence to show that he was a student of medicine, and qualified himself in a high degree to be a practising physician.

In commenting on the lines—

“ Io aveva una corda intorno cinta,
E con essa pensai alcuna volta
Prender la lonza alla pelle dipinta.”*

Inf., c. xvi, 106–108.

one of the most ancient biographers† of the poet informs us that this cord was that of the Order of St. Francis. In his youth Dante was a brother of the Order, but left it before making profession. His reason for joining the Order was apparently to study medicine, and not to prepare himself for the Church.

There was no university in Florence in Dante's day, but there was, in all likelihood, the germ of the university—a school of the Cathedral and Monastery to which were attached a scholasticus, who taught the junior pupils grammar and philosophy, and the theologicus, whose duty it was to teach the senior pupils.

It must have been in such a school that Dante studied the purely medical works with which he was so intimately acquainted, namely, those of Galen and Dioscorides.

In the poet's earliest work, *La Vita Nuova*, written when he was twenty-seven years of age, he shows himself familiar with the threefold conception of life underlying Aristotle's philosophy—the nutritive and reproductive life of the plant, the sense life of the animal, and the intellectual life of man—and the reference in the second chapter of *La Vita Nuova* to the natural, animal and vital spirits is wholly taken from Galen.

Who but a student of medicine would be conversant with Dioscorides, whom Dante describes as “ the good collector of qualities ” on account of the treatise he wrote on *materia medica*, wherein an account is given of all the materials then used in medicine and of their supposed “ qualities ” or virtues?

I have referred to Dante's knowledge of the works of two physicians, but he was conversant certainly with those of the Arabian physicians, Averroes and Avicenna. His study of the work of these physicians was probably more of the nature of research into the philosophical teachings of Aristotle rather than for their purely medical matter.

It is not necessary to put forward extravagant claims for Dante—that he was not only a philosopher, but a physician well in

* I had a cord girt round me; and with it I thought sometime to catch the Leopard of the painted skin.

† *Vita di Dante*, Fraticelli ch. 4, Note 6, Francesco da Buti.

advance of his time ; that he knew, for instance, of the circulation of the blood—a claim resting on the line which records the effect that the wolf had upon him :

“ Ch'ella mi fa tremar le vene e i polsi.”*

Inf., c. i, 90.

There are numerous references in his works which show his practical knowledge of medicine, his accuracy and scientific methods of observation. Here are two instances:

“ Qual è colui, ch' ha sì presso il riprezzo
Della quartana, ch' ha già l'unghie smorte,
E trema tutto pur guardando il rezzo.”†

Inf., c. xvii, 85-87.

Again speaking of the diviners, those who pretended to foretell the future—

“ Come il viso mi scese in lor più basso,
Mirabilmente apparve esser travolto
Ciascun tra 'l mento e 'l principio del casso ;
Chè dalle reni era tornato il volto,
Ed indietro venir gli convenia,
Perchè il veder dinanzi era lor tolto.
Forse per forza già di parlasi
Si travolse così alcun del tutto ;
Ma io nol vidi, nè credo che sia.”‡

Inf., c. xx, 10-18.

It is a matter of dispute whether the poet Chaucer ever met Petrarch when he visited Florence fifty years after the death of Dante, but I have no doubt that Chaucer had studied the manuscripts of *La Commedia*, for, in his description of the Parish Priest, he uses the exact words Dante applies to St. Francis of Assisi :

“ Predicò Cristo e gli altri che il seguìro.”§

Par., cxi, 102.

The sketch that Chaucer gives of the physician in the Prologue to the “*Canterbury Tales*” is so drawn that it appears as if he had had Dante in his mind.

In the first place, it was essential for a “*Doctour of Phisik*” to have a knowledge of astrology and astronomy. The chapter in *La Vita Nuova*, already quoted, is an evidence that Dante had studied astrology and was acquainted with the phenomenon now known as “the procession of the equinoxes,” and the Ptolemaic system is the basis of the universe of the *Commedia*.

* For she makes my veins and pulses tremble.

† As one who has the shivering of the quartan so near, that he has his nails already pale, and trembles all, still keeping the shade.

‡ When my sight descended lower on them, each seemed wondrously distorted, (between) the chin (and) the commencement of the chest ; (for) the face was turned towards the loins ; and they had to come backward for to look before them was denied. Perhaps by force of palsy some have been thus quite distorted ; but I have not seen nor believe it to be so.

§ “*But Chrístes loore, and his apostles twelve He taught.*”

Chaucer's Parish Priest, *Canterbury Tales*.

Dante was a firm believer in the influence of the stars on human destiny. Born when the sun was in Gemini, he alludes to the significance of this belief in the stars in the advice given to him by his old teacher, Brunetto Latini :

“ Ed egli a me : ‘ Se tu segui tua stella,
Non puoi fallire al glorioso porto,
Se ben m'accorsi nella vita bella :
E s' io non fossi sì per tempo morto,
Veggendo il cielo a te così benigno,
Dato t'avrei all' opera conforto.’ ”*

Inf., c. xv, 55-60.

The astrologers of the time were of the belief that children born when the heavenly twins were in the ascendant were so influenced by these stars as to be gifted in writing, in science, and in wisdom.

On the green enamel of the plain in Limbo, the second circle of the Inferno, Dante enumerates the great intellectual spirits in the very manner that Chaucer has followed in describing his physician's library, numbering among them five of the fifteen medical names used by Chaucer. Further, the description of Chaucer's physician's diet is a poetical version of what Boccaccio writes of Dante :

“ Of his dietè mesurable was he,
For it was of no superfluitee
But of greet norissyng and digestible.”

The pathetic and humorous statement with regard to the “ Doctour of Physik ”—

“ His studie was but litel on the Bible ”—

is the only one which cannot be applied to Dante, for his knowledge of the Scripture manuscripts was delicate and profound.

The French critic, St. Beuve, is of opinion that in forming a judgment on the author of a book and the book itself, especially if the work treats of subjects of general importance, we must know what were the author's virtues and what were his vices.

It is essential to a clear understanding of the philosophy of both Dante and Rabelais that we should know something of their lives, something of their virtues and their vices, but what seems to me more important is to ascertain what effect the times in which they lived had upon them. This is a consideration which I believe is more important than any other.

Dante was an exile from his beloved Florence for political reasons ; Rabelais was subjected to persecution for his classical tendencies. Dante typified the man who would go to the stake for his opinions. Rabelais would express his opinions *au deça du feu*. The one had

* And he to me : “ If thou follow thy star, thou canst not fail of glorious haven, if I discerned rightly in the fair life : and if I had not died so early seeing heaven so kind to thee, I would have cheered thee in the work.”

to pass through the hard path of exile and learn how salt it was to eat another's bread, how hard it was to climb another's stair.* The other had to shroud his philosophy in allegory, to pretend to be a buffoon and a drunkard, and to use a cloud of words and sayings which descended to the lowest depths and were quite independent of his philosophy. Having reference to his wisdom, the words which were spoken to Job out of the whirlwind might be applied to Rabelais—"Who is this that darkeneth Counsel with words devoid of understanding?"

Ronsard and du Bellay did not laugh as you and I do at the humour of Rabelais' description of the Limousin scholar who came "de l'alme inclyte et célèbre Académie que l'on vocite Lutèce"—words which, when explained, mean "from the sweet, glorious and celebrated University of Paris." The pretentious, solemn and obscure speech of useless words made Pantagruel, who did not understand the language, open his great eyes and threaten to skin the scholar who, finally, in fear, asked mercy in good Limousin patois—mercy which Pantagruel accorded to him on the understanding that when in France he should speak French.

The Pleiade school of poets felt the shafts of satire and ridicule. Ronsard was the leader in coining new words of Greek and Latin origin. Does he not address the lady he loved in these words: "N'etes-vous pas ma seule Entéléchie"? *Ἐντελίχεια* is a Greek word which means the best that is in each one of us.

Ronsard did not attack Rabelais while he was alive. It was only after his death he called him a buffoon and a drunkard and gave him that character which has since clung to him.

The humour and temperament of Rabelais were of a type which does not leave him wholly excusable on the ground that his life would have been endangered had he not resorted to a verbal embroidery of uncleanness and impurity. He had an impish disposition, and was wont to play on words in such a manner as to overstep the bounds of decency.

He was probably the author of one of the Sotties or Moralities which it was the custom of the students of those days to play at Montpellier University, and this illustrates the boisterous type of his humour:

"It was a matter," said Carpalim (*Pantagruel*, Bk. 3, Ch. 34), "of a husband who had married a deaf wife. The husband wanted her to speak. She spoke through the art of a doctor and surgeon, who cut the little fillet beneath her tongue. Having recovered speech, she spoke so very much that her husband went back to the doctor to ask for a remedy to make her silent. The doctor did not

* Par., c. xvii, 58-60.

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To illustrate Dr. HAMILTON MARR'S Presidential Address (*vide* p. 516).

know of any one, and suggested that he should make the husband deaf. The remedy was applied and succeeded. The wife, seeing that her husband no longer heard and that she spoke in vain, became very angry. The doctor then asks for his fee. The husband answers that he is deaf and does not hear what he is asking. The doctor then throws on the back of the husband some kind of powder, by virtue of which he makes him mad, then the mad husband and the angry wife join against the doctor and surgeon and leave him half dead." Molière has remembered this scene in his *Médecin Malgré Lui*.

Dante was obviously of a different temperament: he was captain of his soul, and where he uses words—and he rarely does this—which are unseemly, they correspond fully with the matter of which he treats; they are fitting to the quality and character of the persons he describes, and are used as a consummate artist would employ them. The type of humour he exhibits is different from that of Rabelais. It is whimsical. In his work *De Eloquentia Vulgaris* he argues that to man alone was the gift of speech given. If it be replied to me, that the serpent in the Garden of Eden and Baalim's ass both spoke, I should answer that they both used speech, but it was the angel in the ass who spoke and the devil in the serpent. The ass was only braying, and the serpent hissing.

And just as Rabelais was not the traditional fool and wine-bibber, so Dante was not the grim, stern and pensive man of popular belief.

When living his fame was spread abroad through his published works. "Walking with a friend," writes Boccaccio, "the poet passed before a door where a number of women were seated. One of the women said quietly (but loud enough to be heard by Dante and his friend) to the other women: 'Look at him who goes into the Inferno and carries back news of those who are down there.' To this one of the other women said: 'In truth you are right. Do you not see how crisp his beard is and how brown his colour through the heat and the smoke that are down there.'" Which words, the poet hearing and recognizing that they were said in all sincerity, pleased him, and he smiled and went on his way.

After death a cast was taken from Dante's face, and we have thus an authentic record of his features.

The giggling caricature which is placed as the portrait of Rabelais in the frontispiece of some of the earlier editions of his works certainly bears no resemblance to him. The real Rabelais is probably revealed in a painting at the School of Medicine of Montpellier University. It shows him of noble and majestic bearing, with regular features, a fresh and florid complexion, a fine golden beard

and a spiritual physiognomy. His eyes are full of sweetness and fire at the same time, and he has a gracious, though grave and reflective air.

Most important of all we have pen drawings of each of the two authors from contemporary sources.

Writing of Dante, Boccaccio says, the poet was of medium height, and when he arrived at mature age he walked somewhat bent and his walking was precise and meek. All his clothes were very good, in that dress which was suitable for his age. His face was long. The nose aquiline and the eyes rather large; the jaws were large and the upper lip protruded over the lower. His colour was dark, his hair and his beard thick, black and curly; he was always thoughtful and melancholic in appearance. In public and domestic customs he was wonderfully composed and ordered, and in everything, more than any other person, courteous and civil. In his eating and drinking he was most moderate, both in taking food at regular hours and not trespassing—the sign of necessity—nor had he any gluttony either in food or drink. He praised delicate things, but ate mostly substantial food, blaming those who study much to have choice fare and pay great attention to it. He affirmed that such people did not eat to live, but rather lived to eat. He spoke very seldom unless asked, and at those times in a weighty manner and with a voice suitable to the matter of which he spoke. He was most eloquent and fruitful at the best.

Pierre Boulenger,* a doctor of Poitou, who had personally met the author of *Pantagruel*, thus apostrophizes him: "Under this stone lies the first of the sayers of trifles. He will be an enigma to posterity, for whoever lived in his time knew how this Rabelais was known and loved by all. Perhaps people may see in him a buffoon, a player who spoke fine words to gain a good dinner. No, no! He was not a buffoon, nor a charlatan of the market-place, but a man—thanks to the penetration of his chosen spirit—who seized the ridiculous side of human things, another Democritus, who laughed at hopes not less vain, at the vulgar and great in the world, as well as the anxious labours which filled this short life. Yet one could not have found a wiser man than he, leaving aside raillery, if it pleased him to enter into serious affairs. He had solidity at his back. When he was concerned with solving the most difficult questions you would have said that Nature had opened for him alone its mysterious bosom. All that Greece and Italy had produced was familiar to him, and his eloquent discourses struck the

* *Hippocratis aphorismorum Paraphrasis poetica*, Paris, 1587, by Pierre Boulenger.

admiration of all those who had never discerned the wise man under his biting satires and masterly ironies.

Before soaring into the atmosphere which was the life of their philosophy each of the two writers tested his powers in short literary flights. Dante closes his earliest work *La Vita Nuova*, where we are throughout in the region of pure poetry, with a vow to write of Beatrice "what ne'er was writ of woman," and gloriously he fulfils this in the "Divine Comedy" * which he finished a few years only before his death.

After the death of Beatrice there appeared to him the vision of The Lady of the Window—philosophy or learning in person, a vision like to that which soothed and comforted Boethius when in prison.

This vision raised in Dante the great missionary ardour of bringing the delights of knowledge within the reach of those of his fellow countrymen who could not read Latin and thereby walk in the way of wisdom. The great thoughts of Aristotle—the "Master of them that know"—were available only in Latin, and had come from Greece through the medium of the Arabic versions of Averroes. Dante knew Latin and possibly Arabic, but he did not know Greek, otherwise he would not have referred to Plato as one of the philosophic throng surrounding Aristotle, and would certainly have used more than the one quotation he uses of the noblest of philosophers. So Dante began the *Convivio* or Banquet in the vernacular. The *Convivio* took the form of a commentary on his lyrical poems, which dealt with the subjects of philosophy and virtue.

The *Convivio* remained unfinished, and was abandoned when the political outlook on which Dante's hopes were based were dashed to the ground by the death of the German Emperor Henry in 1313. He left the world of action for that of ideas and resumed his great theme of the *Commedia*, † of which he had written the first seven cantos some thirteen years before, and now he carried it to its conclusion. ‡

In the life-work of Rabelais, his earliest literary work, excluding medical translations, was written to gain a livelihood. He took to the making of almanacs—the most profitable source of literature then in vogue. Of his works in this direction his Pantagrueline prognostications were the most important. Rabelais himself informs us that one of these books—it may have been the *Chronicle*

* Note.—The word "Divine" was applied to *La Commedia* long after Dante's death. Dante called this work *La Commedia*, because he said it begins sadly amid the horrors of the Inferno and ends brightly in the perennial sunshine of Paradise.

† Io dico, sequitando, Inf. c. 8, 1.

‡ See Note (a), p. 170, "Vita di Dante," where it is related how the first seven cantos were sent on to Dante, then in exile at Lunigiana.

of *Gargantua*—was so popular that more copies were sold in two months than Bibles in a year.

The first two volumes of *Gargantua* and *Pantagruel* were published in 1533, but their sale was prohibited by the Faculty of Theology in Paris. For thirteen years, like Dante, no work of Rabelais appeared.

In the destiny of men, illness has often caused a complete change in the sick person, precisely because he is removed from his common everyday life and his mind is confronted with the problems of Eternity. So these thirteen years of stress and strain borne by Dante and Rabelais had taught them to distinguish between true and false philosophy, to discern the substance from the shadow, and to record their experiences and thoughts—the one in poetical form which soars to the highest flights, the other in prose, which has never been excelled.

Like Telephus and Peleus, when each of the two is poor and in exile, they "cast aside their swellings and words a foot and a half long, for they now cared to touch the heart of their audience with their complaints."*

Both writers cloak their philosophy in allegory. You can have no better idea of what allegory is than that given by Dante in the well-known *Epistle to Can Grande*:† "The sense of this work (he refers to the *Paradiso*) is not simple . . . it is of more senses than one; for it is one sense which we get through the letter, and another which we get through the thing the letter signifies, and the first is called literal, but the second allegorical or mystic . . . although these mystic senses have each their special denominations they may all, in general, be called allegorical, since they differ from the literal and historical, for allegory is derived from *alleon* in Greek, which means the same as the Latin *alienum* or *diversum*."

The literal aspect of the *Commedia* is the state of souls after death. The allegory is man in this world using his freedom of will for evil or good, earning punishment or reward from the Divine justice.

In the third volume of Rabelais' work we read of Panurge asking Pantagruel if he (Panurge) should marry, and if he married, would his wife deceive him, and the reader has difficulty in following the labyrinthine means and voyage undertaken, as it were, at random, to answer these questions. The questions of Panurge, from the point of view of allegory, resolve themselves into a defined plan and reasoned attempt to find out what is the destiny of man.

* "Proicet ampullas et sesquipedalia verba
Si curat cor spectandis tetigisse querella."

Ars Poetica, 96.

† *Espist.*, x.

We are told by Dante in the *De Monarchia* that man is ordained for two ultimate ends—blessedness of this life, which is figured in the Earthly Paradise, and blessedness of life eternal, which consists in the fruition of the Divine aspect in the Heavenly Paradise. How to gain the latter of these beatitudes is the office of spiritual teachings.

The former, blessedness of this life, may be reached by following philosophical teachings in accordance with the moral and intellectual virtues. It is the utmost limit of the only province through which the psychologist and psychiatrist may travel in the voyage of life. In the company of Rabelais we pursue it from the time Panurge asks if he should marry to the end of his great work, to the rendering of the oracle of La Dive Bouteille; we travel to attain it, with Dante, through the Inferno and Purgatorio, until human reason crowns and mitres mankind, and leaves him with his impulses sound and wholesome, and fitted to enjoy the delights of the Earthly Paradise.

The moral treatise of the Inferno where the effects of sin are witnessed is modelled on the *Ethics of Aristotle*. On the other hand, the Order of Purgatorio is Platonic, and the faults are considered, not according to their effects, but according to their causes. Human wisdom, as personified in Virgil, who is Dante's guide through both these regions, does not always suffice in life's journey to lighten the darkness of intellectual bondage, and so we have the intervention of the heavenly messenger before the Gates of Dis and, at times, uncertainty of the way in Purgatory is shown by Virgil.

The truly impenitent are within the Inferno proper. The trimmers, the Laodiceans, those who are neither hot nor cold, are, with those angels who were neither for God nor against him when Satan was cast from Heaven, within the Gates of the Inferno. But Dante has no place for them, either in Heaven or Hell; they do not cross the river Acheron, like the unbaptized children and the virtuous heathen. Unlike the latter, they do not spend their Eternity in the noble castle of Limbo—that exquisite symbol of human knowledge, girded by its seven walls typifying the seven moral and speculative virtues or seven parts of philosophy defended by the fair stream of eloquence, with its seven gates, each representative of a liberal art—the arts of the trivium and quadrivium, and its green meadows crowded by the philosophic throng. From Limbo the shade of Virgil had to come to lead Dante from the Wood of Error, to Limbo he returns when his mission is accomplished.

The true Inferno begins in the second circle, where Minos sits and awards punishment according to the nature of the sin.

Aristotle divides evil actions which prevent man from attaining

earthly bliss into incontinence, brutishness, and malice or vice. Virgil, in describing the Aristotelian evil actions, takes no notice of Dante's first and sixth circles of the Inferno. The former has been referred to; the latter is the place where Dante has the heretics and those, such as the Epicureans, who denied the immortality of the soul. Virgil—a heathen like Aristotle—did not recognize sins of unbelief. In the journey through the Inferno we pass through the circles for the incontinent, the brutish, and finally those for the fraudulent, who are placed in the lowest part of the Inferno, since fraud, being peculiar to man, is the most heinous crime.

Thus Dante, with his guide, travels through zone after zone of blacker vice, of intenser torment, to the centre of the Earth, the very centre of the Universe, the point in cold and darkness furthest removed from the light and love of the celestial dwelling-place.

In the punishments of the Inferno we are given graphic pictures of the mental agony of human souls which have chained themselves and have refused to leave the darkness of ignorance and vice, who waste their powers on fleeting material attractions. Throughout their life they remain in the Wood of Error—the *Selva oscura*; they may have had glimpses of light; they may have caught a sight of the hill-top lit by the morning sun, as Dante did, but like him they turned back into the darkness, for to climb and reach the light they would have had to pass the three wild beasts—the leopard, the lion and the wolf, symbols of pride, avarice and envy. But, unlike the poet, they do not find the true path out of the Wood, for they refused the guidance of earthly wisdom.

Among the incontinent are Paolo and Francesca, condemned for carnal sin to be continually tormented and driven before a terrific whirlwind. Yet amidst this torment there is to Francesca no greater grief in misery than to remember a happy time when she was alive.

Filippo Argenti, noted for his brutal anger in life, and others who thought themselves great kings in the world, lie like swine in the mire of the Stygian marsh.

Pope Nicholas the Third, guilty of simony, is fixed head downwards in a hole, one of many, in the fiery rock of one of the dens of Malebolgia, with flames of fire perpetually running on the soles of his feet. "How much money did our Lord ask of St. Peter when he gave the keys into his keeping?" the poet demands of him, and not waiting for an answer, tells him, "Nothing but follow me." And here we may note the meticulous accuracy of Dante, for the glowing cauldron of the Pope is neither greater nor less than one of the baptismal fonts of the beautiful Church of St. John, one of

which Dante himself broke to save an infant who was drowning therein.

The hypocrites go the round of their allotted place, wearing gilded mantles, but these are not what they seem—they are all lead within :

“ O in eterno faticoso Manto.” *
c. 23-67.

Time will not permit me to give you more than another example. It is the circle where the traitors are embedded like straws in ice. Ugolino is seen at his loathsome feast on the head of Archbishop Ruggieri, but leaves it for the moment to tell the pitiful story of the Tower of Famine.

The dominating note of the Purgatory is ethical, and as it is the express function of human reason or philosophy to guide man to earthly blessedness, consisting of the exercise of the moral virtues typified in the Earthly Paradise, Virgil remains Dante's guide.

Beneath the gate of entrance to Purgatory are those spirits who neglected to repent until the extremity of their life, and they are placed under the guardianship of Cato, who opposed all negligence of duty.

Though Cato, the stoic—the ideal representative of moral liberty—committed suicide, Dante does not place him in the wood of the suicides of the violent against themselves in the Inferno. He regarded his act as symbolical, as analogous to the act of crucifying the flesh that the spirit might be made free. He (Cato) was the type of man whose judgment and will were free, because he did not allow them to be swayed by appetite, and his moral excellence brought him the equivalent of that revelation in which Christians rejoice.

The seven Kingdoms of Purgatory are the seven states of those spirits who were slow to repent and were sinners up to their last hours in one of the seven disordered states of love—three excessive, one defective and three perverted. The spiritual purgation shows itself in the souls doing sensibly acts of love opposed to the sins they have committed. The most perverted disorder of love (pride) is punished in the lowest terrace, the least excessive (luxury carnality) in the highest, and as Virgil appears to Dante in a wood—the dark Wood of Error—so he leaves him in a wood, but of a very different nature—the Divine Forest of the Earthly Paradise. There the sun shines on Dante's brow, and the tender grass, the flowers and the shrubs can be seen, and there Beatrice, the emblem of heavenly wisdom, awaits him—Beatrice who is henceforth to be his guide.

* “ Oh weary mantle for eternity.”

I shall cite the order of one of the terraces only. Take that where the proud purge themselves. They creep round the terrace bearing heavy masses of stone. They meditate on examples of humility graven on the rocky wall, the image of the Virgin Mary, King David dancing before the ark, all sculptured in white marble, so that not only the artists of Greece, but Nature there would be put to shame. As the humble are exalted on the rocky wall of the terrace, so the proud are depicted laid low on the pavement, from Lucifer and Briareus to Cyrus and Holofernes. In their round of the terrace the proud repeat the Lord's Prayer and bless those who are poor in spirit. It is not the sins that are committed that are the causes of one being placed in the Inferno and another in Purgatory. The poet's master, Brunetto Latini, who taught him how man makes himself eternal, could not temper his lust, and because of his impenitence he walks in the Inferno in a burning sandy plain under a perpetual rain of fire.

Guido Guinicelli had likewise failed to restrain his carnal appetite within the limits of the social institutions of humanity and Nature's laws, but he repented of his sin and purges himself in a fiery furnace so that he may be pure in heart.

Guido Buonconte, of Montefeltro, is in the Inferno, for though in life he had repented of his sins and become a monk, he gave evil counsel to the Pope, who told Guido that he could shut and open Heaven and would therefore absolve him from his sin; but the Devil took Guido at his death, saying that he, the Devil, was a logician, that it was not possible for a man to repent and will an evil thing at the same time.

Buonconte's son, mortally wounded in battle, is in Purgatory, for before he died he repented, and as the Angel of God took his soul the Devil cried, "Why robbest thou me? Thou bearest away the eternal part of this man for a little tear."

As MacConnachie is the unruly half of Sir James Barrie, so Panurge represents the disorderly side of Rabelais. It is Panurge who is the linguist, who speaks thirteen different languages at an inopportune and inexpedient time; it is Panurge who is guilty of much mischief; it is Panurge who begins the day poor and ends it rich. In visiting the Churches of Paris he puts a little piece of money in the confessional box and takes out a big piece, excusing himself for not taking a hundredfold, for above the boxes he reads that whatever one gave would be restored to him a hundredfold. It is Panurge who gives his bonnet to a page and asks him to go into the courtyard and swear for him for a short half hour; it is Panurge who acts as physician to Epistemon and restores him to life; it is Panurge who is the coward in the storm; and, finally, it

is Panurge who asks the advice of Pantagruel as to his marriage, and if he married would his wife deceive him. *πανουργος* is a Greek word meaning ready for anything, mostly in a bad and knavish sense. It is derived from *παν* = every, *εργον* = work. Human energy, unless it is directed by wisdom, drifts hopelessly on the sea of life. As Virgil guides Dante, so Pantagruel advises Panurge.

Pantagruel is contemplative and always maintains a moral greatness. To him classical learning would be meaningless if it did not teach something. Did it not form, as it were, a stepping-stone to higher things, to confirm one's faith in the progress of the human race, to add to one's confidence in the future of humanity, to arm one against dallying in the journey of life with the deceptions of the moment.

The question of the marriage of Panurge is a general one—no woman is named. Indeed, in all Rabelais' writings, references to women are singularly absent, and only once does he have a passing sympathetic reference to them. In his *Abbey of Thélème* he has a place for women beloved and deserving to be loved. The question of Panurge is allegorical, and as the plan of Pantagruel is unfolded, the object of the marriage is revealed—it is the vision of Dante's Lady of the Window; it is the search for my Lady Philosophy.

Frère Jean advises Panurge to consult the clocks of Varennes. What do they say? They repeat the experience of the widow who consulted her *curé* as to whether she should or should not marry her valet. "Consult the clocks," says the *curé*, after hearing her arguments for and against the marriage. "Marry," said the clocks, but after some months she returned to the *curé* and complained that she should never have married, and again the *curé* advised her to consult the clocks. "Do not marry," said the clocks. This consultation of echoes failing, Pantagruel advises Panurge to try the Virgilian lots—that is to say, to open three times at random the works of Virgil or of Homer, and to take as an answer the first verses which strike the eyes.

Pierre Amy, the Franciscan and friend of Rabelais, we are told, consulted Virgil after a search conducted in his rooms and in those of Rabelais, and Virgil answered:

"Heu fuge, crudeles terras fuge littus avarum."*

This counsel he followed and came happily out of the affair. Panurge uses dice in selecting his verses from Virgil, but gets no satisfaction.

Dreams are resorted to on the ground that when the body is asleep and when the functions of digestion are completed, nothing

* Flee this greedy bank and these cruel lands.

being required until awakening, the soul frolics and reverts to its own country, which is Heaven, and notes there future things and carries them back to its body, making them to be known by the senses and organs to which it has communicated them. Panurge dreams that he is married to a charming woman, who, in loading him with caresses, grows two pairs of horns on her brow. Then all changes; he finds he is transformed into a tambourine and the lady into an owl. The beginning of the dream makes him happy, the end perplexes him, and he is no nearer an answer to his questions. Let us consult the "Sybil of Panzoust," says Pantagruel. Having found her the Sybil writes her oracle on leaves and throws them to the wind. From reading the scattered leaves Pantagruel reads that Panurge will be deceived by his wife if he marries. Panurge interprets the leaves in a contrary sense. "One thing is clear," says Pantagruel; "it is that the oracle is not clear." Then in turn the dumb, the dying, and Her Trippa (the astrologer) are consulted: none of the three is satisfactory.

The dumb communicates by signs, reminding one of the famous contest by signs of the philosopher and the man blind of an eye. Finally, the theologian, the doctor and the lawyer are asked their opinions, but none of them is competent to give a clear answer. They are full of words, but their words are devoid of matter.

Pantagruel, seeing Panurge thoughtful, advises him now that he has consulted all the wise to ask advice of a fool, and tells how easily a fool decided the dispute between the proprietor of a cookshop and a porter. The former demanded money from the latter because he stood where he could smell the dinner, and the fool decided that the porter should pay the keeper of the restaurant by letting him hear the rattling of the few sous he possessed.

Triboulet, the King's fool, is consulted, but only three words can be drawn from him liable to favourable and unfavourable interpretation. The man of instinct has failed them—they set out to consult La Dive Bouteille.

Superstition teaches nothing; it only confirms the wisdom which holds that the world is not ruled by caprice but by precise laws. There is no virtue in inanimate things whereby the future can be unrolled, nor have animate beings in their dreams, by magic, by their signs, in instinct, in the hour of death, in their reading of the stars, any gifts of revealing the future, and therefore a voyage is undertaken to La Dive Bouteille.

In setting out on their voyage Pantagruel and his companions make a great provision of pantagruélien. The charming and lively description of hemp, from a scientific point of view, has gained the approval of botanists as a work of prime importance. According

to Rabelais, this plant *plantagruélion* is the ideal and example of all joyous perfection. If its merits had been known when the trees thought of choosing a king (Judges, x, 8-15), Le Chanvre, he believed, would have been elected.

Above all it is its uses in mechanics and navigation which attract Rabelais' praise. Through it the powers of man are exemplified in the form of sails and ropes, in that the most distant peoples are brought into relationship. He prophesies that through it man may be able to raise himself into celestial space, and be enabled to discover the hidden causes of phenomena which at present astonish us.

To take a great provision of *pantagruélion* is to furnish courage and boldness in the long and venturesome voyage about to be undertaken in the search of truth.

The first steps of the voyage are to islands where the five senses are seen in action, and here Rabelais in allegory uses somewhat similar symbols to Bunyan in his Holy War, but the misuse of the senses in the islands visited, and of the faculties of mind in those reached later, are more allied to the sculptures, engravings and warnings witnessed on the terraces of Purgatory; they are all intended to strengthen and uphold the mind in its endeavour to rid itself of all that is false, of all that may lead it astray from the narrow ways of true philosophy. Rabelais, when he writes seriously, never writes at random: each island visited conveys its message and each episode is used to encourage the voyagers to persevere to the end. The well-known narrative on which the proverb "*Les Moutons de Panurge*" is based is told just after the island of *Médamothi*—the island of appearances and ostentation—has been visited. In *Médamothi* Pantagruel acquires a chameleon, great as a young bull, with the horns and feet of a stag, and clothed like a bear. It was not the skin which changed colour but the hair. Thus the chameleon became grey when near Panurge, scarlet beside Pantagruel, and white near the Pilot. Abandoned to itself it had the colour of an ass.

The chameleon is the prototype of the inhabitants; they abuse the faculty of sight. On leaving *Médamothi* the incident of the sheep takes place. Panurge buys a sheep of a merchant with whom he has had a quarrel; he throws the sheep overboard, and its comrades follow into the water and drown themselves because of this servility. Even Dindenault, the owner, in attempting to save one is carried overboard by it. It is natural of the sheep to follow the first wherever he goes, and there is danger that they may drag the shepherds with them. The sense of smell is in evidence at *Ennasin*, taste at *Chéli*, touch among the *Chicanous* at *Tohu-Bohu*. The sense of hearing is satisfied with melted words (*paroles*

dégelées). Antiphanes compared the teachings of Plato to children to words which, carried into northern countries, freeze, or subsequently melt if taken into a warmer country. The teachings were not understood at the moment when children receive them; they re-awaken and melt later in their minds as they grow older. The voyagers are in the neighbourhood of the Arctic Sea, when frozen words fall on deck as dragées, which melt in the warmth of the hand. The travellers hoped that the words of the past would contain an interesting revelation, but the melted words only spoke of battles. The history of the past is full of them. The strongest ends by crushing the weak. Man has used his liberty badly in the past. The history of battles and wars may at the most warn us of what we should shun; it throws no light on the questions which the travellers set out to answer.

It is easy to find in the voyage illustrations of the seven capital sins in action in the many islands visited, but while the passions and emotions are most powerful in diverting from the truth, there are vices of the intellect which also lead one from the true way.

In the island of Entéléchi the inhabitants are full of exaggerated politeness; they will not warn you of danger lest they might contradict and be impolite. After dinner they have a *bal*, which is the game of chess played by living persons, and their pleasures, like their work, are pedantic and *précieuse*.

In the island of Satin, where one sees *au naturel* all kinds of unnatural wonders, we are in the country of printed and spoken lies and of deceptive legends. Here *Oui Dire* (Hearsay) reigns—*Oui Dire*, the father of history, the narrator of the true and the false. He is a little, old, and hunchbacked man with his throat split to the ears. Within the throat are seven tongues. Each tongue is split into seven parts. All seven parts of each tongue give vent to different propositions and diverse languages. *Oui Dire* has also on his head and on the rest of his body as many ears as formerly Argus had eyes. Otherwise he was blind and paralysed in his limbs. It is interesting to us in Scotland to know that one of his Court was Eneas Sylvius Piccolomini, that same Pope Pius the Second who made the historical pilgrimage to the White Kirk, near Dunbar, in the reign of James the First of Scotland. Pope Pius the Second is placed here, for, as a theologian, he had fought against the infallibility of the Pope and maintained infallibility energetically when he became Pope himself.

Finally, the voyagers reach the islands of the Lanterns, and to one of these they are conducted by the priestess Bacuc to *La Dive Bouteille*.

La Dive Bouteille is a kind of jar placed in a hexagonal fountain. Bacbuc leads Panurge forward and asks him to listen.

Panurge heard the word of the bottle, "Drink." "Is the bottle broken or cracked?" he cried. Is our search a deception? Is the last word in the journey of life the philosophy of the Epicurean, the finding of Ecclesiastes? "Drink thy wine with a merry heart. Whatsoever thy hand findeth to do, do it with thy might, for there is no work nor device nor knowledge in the grave whither thou goest."

This is not the conclusion of Rabelais, for the priestess has a later word—somewhat oracular too—but the general sense of which is clear. It is work, seek, study, instruct yourselves. In carrying on the work of your predecessors you will go further than they. Each age brings new knowledge. Truth is the daughter of time, but in seeking truth do not isolate yourself from your fellow men. Love each other. To perfect the way of knowledge and of wisdom—all philosophy, all wisdom have recognized the necessity for the guidance of God and the company of men. "Go," said the priestess, and Pascal has used her famous saying as the text of a sermon—"Go, my friends, in the protection of this intellectual sphere (which we call God), and of which in all places is the centre and in no place is there any circumference."

In his Republic Plato symbolizes his theory of knowledge in the image or myth of the Cavern.

The majority of mankind are pictured as prisoners in a subterranean cave, chained with their backs to a fire, looking on the shadows thrown by it on the rocky wall and mistaking them for realities.

The turning round of some of these prisoners to the light, the toilsome ascent up the slope to the mouth of the cave, and the gradual training of their eyes, bewildered in the sunlight, to see the real things in the upper world, and finally to look up to the sun itself, represent the education of the philosopher.

When Dante arrives in Purgatory he sees the angel pilot bringing to its shores the saved souls, and as the vessel approaches he hears them singing the psalm, "In Exitu Israel" ("When from Egypt out of Bondage"). Before Pantagruel and his companions set out on their voyage they sing the same psalm.

Both writers recognize the bondage of the intellect—the one has painted it in the glowing colours of the impenitent in the Inferno, the other in its servility to superstitious customs, to unseen powers to foretell the future, to that introspection which pretends to plumb the depths of any human mind.

Both have told us how easy it is to descend to perpetual darkness ;

how difficult it is to cast off intellectual bondage; how painful to ascend to the light—to purge ourselves of the “blossoms of passion,” those “gay and luxuriant flowers,” which deceive us by their brightness, but bring death in their odour.

Both lead us to an earthly paradise, where, drinking of the streams of Lethe and of Eunoc, the memory of evil is lost, and the good, which was overlaid and withered, is resurrected, and—like Dante himself—Philosophy is rendered “Puro e disposto a salire alle stelle.”*

* Pure and disposed to mount to the stars.

Purg., c. 33-145.

The Provisional Treatment Order of the Royal Commission.† By GEORGE M. ROBERTSON, M.D., Hon. F.R.C.S.Edin., President of the Royal College of Physicians, Edinburgh; Professor of Psychiatry in the University of Edinburgh; Physician-Superintendent of the Royal Hospital, Morningside.

Introductory.

THE Lunacy Acts of England and of Scotland are in urgent need of amendment. The parent Act for Scotland dates back to 1857, since when great changes affecting its serviceableness have taken place in the social life of the country as well as in the scientific world. It, however, definitely recognizes the paramount position of the medical profession in the treatment of mental diseases, for under its provisions no layman or magistrate is called upon to interview the patient before he is placed in a mental hospital, and no layman or visiting committee is held to be responsible for his removal when recovered. Medical men discharge these and all similar duties, and to this feature must be ascribed the success of the Scottish system. It has gained the confidence of the people and in place of misgivings and suspicion, there is pride in our mental hospitals and in their management. No case of improper detention has ever been recorded in the law courts. The Act of 1857 has served its day and generation well, and its principles of medical responsibility and of reliance on the honour of the medical profession are established in Scotland.

The Lunacy Acts for England and Wales were consolidated in the Act of 1890.

From the legal and administrative points of view it is a complete

† Being the address which opened a discussion on “Points in the Report of the Royal Commission on Lunacy and Mental Disorder (England and Wales) at the Annual Meeting of the Association held at Edinburgh July 22, 1927 (conjointly with the Section of Mental Diseases of the British Medical Association).”

logical and well-drafted instrument. Its very perfection in these respects has been a calamity to the person sick in mind. That the treatment of insanity is primarily a medical question, that insanity being a disease must be treated like other diseases and treated early if its cure is to be effected, were minor considerations in the building up of this Act. They were overshadowed by legal problems connected with the liberty of the subject and with the haunting fear of improper detention. As a result of this, an Act designed for the welfare of the insane person has turned out in practice to be in many respects to his detriment.

The present is an opportune time to discuss the problems of lunacy legislation. A thorough and impartial inquiry by a Royal Commission has just been concluded and an exceptionally able report has been presented, pointing out existing defects and making valuable suggestions for the future. One gratifying and immediate result of the investigations made has been to allay all anxiety in the minds of reasonable people as to the improper detention of sane persons in mental hospitals in England. Such cases have not been found, and in future, legislation should not be dominated, as it has been in the past, by unjustifiable suspicions and fears that have prevented the patients from receiving proper medical treatment.

The problems are summed up by the Royal Commission in the following paragraphs :

“ The problem of insanity is essentially a public health problem, to be dealt with on modern public health lines ” (Par. 50).

“ The keynote of the past has been detention ; the keynote of the future should be prevention and treatment ” (Par. 42).

“ The Lunacy code should be re-cast with a view to securing that the treatment of mental disorder should approximate as nearly to the treatment of physical ailments as is consistent with the special safeguards which are indispensable when the liberty of the subject is infringed ” (Par. 104).

According to the Royal Commission, the basic classification of cases requiring mental treatment should be the voluntary and the involuntary.

The arrangements suggested for voluntary treatment are, on the whole, satisfactory. This form of treatment will ultimately become by far the most important and popular. Its advantages are manifold : Earlier treatment, willing co-operation, a shorter stay, more numerous recoveries and the absence of all annoying formalities and legal difficulties. The effect of these on the contentment of the other patients, on the atmosphere of the mental hospital and

on the attitude of the public towards mental hospitals is invaluable. Already in the Scottish Royal Hospitals the admissions of voluntary patients paying the higher rates of board amount to two-thirds of the total number. As the principle of voluntary treatment meets with universal approbation and differences of opinion exist only on matters of detail, discussion on this subject would serve no useful end at present and is, therefore, avoided.

With regard to involuntary patients three procedures are recommended by the Royal Commission.

The simplest of these is the Emergency Order signed by a relative, or friend, or public official on one medical certificate, which, let it be noted, is not a certificate of insanity. This Order remains in force for seven days. Nothing need be said regarding the Emergency Order, which is satisfactory. It will be found most useful.

We now come to the two remaining procedures recommended by the Royal Commission, namely, the Provisional Treatment Order and the Reception Order. They differ in three respects.

To obtain the Provisional Treatment Order, one doctor only is called in to advise, instead of two, as in the Reception Order; secondly, the single doctor makes a recommendation in the Provisional Treatment Order, while the two doctors give certificates of insanity in the Reception Order; and thirdly, the authority of the Provisional Treatment Order lasts from one to six months only, while that of the Reception Order is indefinite in duration. Both these Orders are obtained through the personal intervention of a layman.

A Recommendation by One Doctor only.

The Royal Commission is to be congratulated on adopting the principle in the Provisional Treatment Order, that an insane patient, whose recovery is expected, may be detained and treated on the recommendation of a doctor, without being certified to be insane, thus relieving the patient and his relatives of the stigma of certification, which is so acutely felt by them.

The Provisional Treatment Order is supported by the recommendation of one doctor only; this is a mistake. In so important "a matter which is the most difficult, delicate and indefinite in the whole range of medical practice," according to Mr. Justice M'Cardie, two doctors should without doubt have been consulted. In every great profession there may be a weak or an unworthy member; doctors, like other human beings, suffer in health and may make mistakes or be deceived, but the possibility of two doctors falling simultaneously into one or other of these categories or of acting in collusion is a very remote contingency. As a

safeguard and as a second witness, apart from the value of another medical opinion, the employment of a second doctor must meet with the approval of everyone. Light may be thrown on the failure to recommend two doctors by question 4055: "Do you think a second certificate of sufficient importance as a safeguard to justify the expense in pauper cases?" Two medical certificates have been employed in all pauper cases in Scotland, a much poorer country, for seventy years, and should be employed in England in all such cases as well. Moreover, the Provisional Treatment Order applies to private cases as well as to paupers. A niggardly economy where the liberty of the subject is concerned is indefensible, and it is particularly objectionable to the medical profession when the failure to employ a second doctor is, as we believe, partly responsible for the repeated visitations of a sick person by laymen, and these will certainly not make for economy. It has been estimated that the addition to the cost of lunacy in England would amount to a sum of about £20,000 if a second doctor were employed, but probably much more than this sum would be saved if the repeated visitations by justices and their followers were abolished.

The Difficult Question of Prognosis.

Another very debatable point is the basis upon which the two classes of patient—namely, those to be placed under the Provisional Treatment Order and those to be placed under the Reception Order are to be selected. This involves the question of prognosis, notoriously the most difficult and uncertain problem in psychiatry. It has to be solved in the first place by the general practitioner, who can scarcely be expected to have the necessary experience; and secondly, by the justice, who has had no medical training at all. The Provisional Treatment Order applies to those cases only in which "there is a prognosis of early recovery"; and the Reception Order applies to those patients only who are not likely to recover within six months. Those who have already been under provisional treatment for six months naturally come under the second category.

The difficulty regarding prognosis may be illustrated by a recent experience. A very eminent surgeon treating a melancholic patient regarded the prognosis of the mental condition as hopeless, because the patient was intensely suicidal. A suicidal tendency is the most anxious symptom a patient can exhibit; but as regards prognosis it is of no more significance than an ingrowing toe-nail. The surgeon was astonished when he was told this truth, but he now knows better, for he saw the patient make a rapid recovery. A Justice under similar circumstances might very naturally and excusably make the same blunder and refuse to sign the Provisional

Treatment Order. It is obvious that prognostication and forecasting the date of recovery is not one of the easiest tasks in psychiatry, and should not have been selected in sorting out Provisional Treatment cases from Reception Order cases, even though it is desired, and very properly desired, that all patients who make early recoveries should receive the benefit of the Provisional Treatment Order.

The happiest laws regulating practical affairs are not the fine product of learning, but are fashioned by the friction of circumstance and the shock of facts in the rude school of experience. And were the recommendations of the Royal Commission regarding involuntary patients passed into law, every doctor would place every patient, not hopelessly and incurably insane, under the Provisional Treatment Order. What experienced doctor will give a bad prognosis at the beginning of an obscure illness? If thirty-five years ago Sir Thomas Clouston objected to the term "dementia præcox," simply because of the malign influence of a pessimistic nomenclature on the endeavours of the physician, what are we to think of the evil consequences of a serious prognosis given solemnly on oath as a preliminary to treatment? When remedies are forthcoming for incurable and fatal diseases like general paralysis of the insane, what doctor, in the early stage of any illness, in cold blood, is in vulgar language going "to throw up the sponge"? Every successful doctor is an optimist; to be anything else is fatal to the prospects of his patients and to his own success. Gloomy deans may have a vogue, but not gloomy doctors. It may be safely assumed, if the recommendations of the Royal Commission be passed into law, that every patient not a long-standing chronic or absolutely hopeless case will receive the benefit of the doubt and will be treated under the Provisional Treatment Order. In other words, all recent and recoverable cases of mental disorder will certainly be given the chance of recovering within six months without being certified and registered as lunatics. No harm will be done, if incurable cases by mistake also enjoy this privilege; for it is clearly better to err on the side of granting it to too many than to too few. The self-reproaches of a family doctor who had certified a patient to be insane under the Reception Order, may be left to the imagination should the patient make a perfect recovery in the course of three or four months. His services would be dispensed with to a certainty.

When it designed the Provisional Treatment Order, the Royal Commission had the Scottish Schedule "G" in mind, for the powers granted under this schedule can be applied to the treatment of a patient for six months, when "the malady is not confirmed," and

"with a view to his recovery." This condition is better expressed in the schedule than in the Provisional Treatment Order, for the intention can be honestly remedial, however faint the hope of recovery; it avoids such a strain on the conscience as a declaration on oath that recovery is likely to take place within six months when the outlook is quite uncertain, and when a definite diagnosis has not been made. Seeing that similar results can be obtained in a simpler, surer, and more honest way than by speculative prognosis and hazardous assessment of the date of recovery, it would be better to drop the dubious procedure of prognostication altogether and give every patient, not a chronic and absolutely hopeless case, the benefit of the Provisional Treatment Order for six months, in order that he may be treated "with a view to his recovery."

After a patient has been treated under a Provisional Treatment Order for six months and is not likely to recover soon, and in obviously incurable and chronic cases, full certification of insanity and a Reception Order is a procedure to which no objection can be taken, seeing that custodial and not remedial treatment is its main object. If a patient under a Provisional Treatment Order has not recovered within six months, but is expected to recover soon, it should be possible, with the approval of the Board of Control or other competent authority, to extend the duration of the Provisional Order to a year, or even longer.

Personal Intervention of the Justice.

We note, with profound regret, that the Justice, a layman, must intervene personally in order that temporary medical treatment may be obtained under the Provisional Treatment Order. Quasi-medical duties and responsibilities are also imposed upon him. Such a recommendation is astonishing in a report that records no case of improper detention, and that breathes medical aspirations and professes therapeutic and preventive ideals on almost every page. It is clear from the evidence submitted to the Royal Commission that legal formalities have in the past been the chief impediment to early treatment and have prohibited preventive measures altogether. The treatment to be given under the Provisional Treatment Order is only temporary and is essentially remedial; it is quite different from that given under the Reception Order, which is unlimited and is predominantly custodial. There is, therefore, little reason for judicial intervention in the Provisional Treatment Order, and this intervention would be still less necessary if two medical men were consulted instead of one.

The judicial authority, we are told, is employed for two reasons: Firstly, as a safeguard against improper detention; and secondly,

because it is a principle of English law that the liberty of the subject may not be infringed without the intervention of some judicial authority.

With regard to the first reason—namely, as a safeguard against improper detention, if improper detention ever happens, it is never the result of malicious intention. So long as human nature remains as it is, and circumstances seem to conspire, mistakes may occur; but when we recall that miscarriages of justice such as the Adolph Beck and the Edalgi cases have occurred even in our courts of law, and that no cases comparable to them have occurred in our mental hospitals, then it must be admitted that the record of the medical profession is beyond all praise and one to be proud of. Further, when we consider that in Scotland for seventy years thousands of insane persons have been placed in mental hospitals without being seen by any Magistrate, and that no case of improper detention has ever been found in our courts, it is clear that the honour and vigilance of the medical profession are no mean safeguards.

A Medical Safeguard.

There is a safeguard, not judicial, the value of which the Royal Commission does not appear to have realized—the medical appeal. The subject is in Scotland safeguarded against improper detention in an asylum by the right of appeal to two independent doctors for examination. The judicial authority is the sheriff, whose strictly legal functions will be described later. He considers in private the written medical evidence only and makes no quasi-medical investigations himself, nor does he invade the privacy of the sick-room. His Reception Order is wholly given on the written opinions expressed by the two medical men first called in, but complete and speedy protection is afforded the patient, should these two have made a mistake, by the right of appeal to two independent doctors for examination. This right is enjoyed by the patient, by any relative, by any friend, by the Sheriff, and by the General Board of Control, so the machinery can be easily set in motion and in many ways. A patient is detained in a mental hospital on the certificates of two doctors, and what two medical men have done, two others can undo, if wrong has been done or a mistake has been made. If the first opinions are confirmed by this independent and unbiased testimony, the opposition of all reasonable persons is silenced. No layman, no judge, no committee, not even the General Board of Control itself can act independently of the opinions of these two independent medical men, who form the supreme and, for the time, the final court of appeal. We thus have in Scotland a purely medical system that affords complete protection, that has stood

the test of time, and that satisfies public opinion. The personal intervention of a Justice is therefore not necessary as a safeguard against improper detention if this tribunal exists. An appeal is not often made, for frivolous appeals are discouraged by the authorities, and a sum of £30 a year apparently suffices for the payment of those cases of real doubt in which no other funds are available. In those cases in which funds exist, an appeal may be made periodically.

The Liberty of the Subject.

In the second place, it is stated that "it is a principle of English law that the liberty of the subject may not be infringed without the intervention of some judicial authority." (Par. 107.)

The object of the Lunacy Acts is to authorize violations of personal freedom for the benefit of the patient and others under certain circumstances and formalities. Between 1845 and 1890 we were informed, on the authority of Dr. J. C. Bucknill, a Lord Chancellor's Visitor (England), that "any one of the Queen's subjects may be deprived of his liberty, captured, confined and detained by the proprietor of a licensed house or his servants, upon the order of any person whatsoever, either a British subject or an alien, either an adult or an infant, either a relative or a stranger, either an equal in social rank or a menial substitute; the only condition being that he has seen the alleged lunatic within one month of making the Order, and that is supported by the certificates of two men qualified to practise and practising the medical profession."* In spite of this absence of any judicial authority the Select Committee appointed in 1877 to inquire into the subject of improper detention under the Act of 1845 report: "Assuming that the strongest cases against the present system were brought before them, allegations of *mala fides* or of serious abuses were not substantiated." It would therefore seem that the infringement of the liberty of the subject without the intervention of a judicial authority is not without ample and striking precedent in the treatment of mental disease, and that it was freely practised in England for forty-four years without the occurrence of serious abuses. It is still practised in Ireland without abuses arising.

Judicial intervention creates difficulties and causes delay at a time of great trouble and emergency. But, if there must be some form of judicial intervention, then the Scottish procedure has much to recommend it. It preserves the integrity of the medical ideal, it respects the sanctity of the home, and it introduces the legal

* *The Care of the Insane and their Legal Control*, p. xxx.

element in a purely judicial capacity. The Sheriff, who signs the Reception Order, is an experienced barrister and a salaried judge. He never sees the patient; he does not make any quasi-medical examination. The application and medical certificates are presented to him, and if these be in order, and if the facts observed by the doctors indicating insanity satisfy him, he invariably signs the order. No one could discharge these duties better than this highly-trained judge; no legal intervention could be less objectionable than the one he practises.

The Prison-stigma.

It is, however, undesirable that the Provisional Treatment Order conferring certain powers should be granted by a Justice, a Magistrate or a Judge, because these are the officials who sentence wrong-doers and delinquents to detention of a totally different kind. It is not right that remedial detention or restraint in a hospital, which is an essential part of medical treatment for mental disorder, and is prescribed for a sick patient with the object of curing his malady, should be confused or associated in the minds of the public with the detention of criminals and others, which is a punishment. The sick patient is irresponsible and has done no moral wrong, and if detention be an element in his treatment, it should be imposed by a different authority from that which sentences delinquents to punitive detention in a prison because they have done wrong. Every sensitive and reasonable person must appreciate this distinction. If a differentiation be not made, then a prison-stigma will assuredly attach to treatment under the Provisional Treatment Order, which the Royal Commission had hoped to avoid.

The question therefore arises, Is judicial intervention necessary? In Scotland it is quite superfluous. The inspection of the application to see that it is in order and the examination of the medical certificates to discover if they truly indicate insanity, which is all that the Sheriff does, are in every case as carefully performed by the General Board of Control as by the Sheriff. If an Order must be signed by a fourth party, there is no reason why it should not be signed by the General Board of Control, as is already done by the Board in the case of patients who are boarded out in private dwellings, and the Sheriff be allowed to drop out altogether. The Sheriff is only a fifth wheel to the coach. It is more appropriate that a permanent body that has medical as well as legal members on its staff, that is competent to examine patients as well as to scrutinize legal documents and weigh written evidence, should perform the duty of signing the Order. This was the view held

at one time by the General Board of Lunacy, which questioned "whether the magisterial authority is not in reality supererogatory." The Royal Commission contemplate that ultimately "the participation of a Magistrate will no longer be considered necessary." For these and many other reasons it is considered that the Board of Control should take the place of the Justice and should sign the Order, if it be considered necessary that a party, other than a relative, friend or public official should sign the Order.

The Drama of Judicial Intervention.

ACT I.

Let us now dramatize the procedure that has been recommended by the Royal Commission before a sick man can obtain medical treatment for his illness. The proceedings are not medical, for a layman is the presiding authority. The stage on which they are enacted is a distracted household, for nothing, not even excepting death, upsets a family so much as the occurrence of insanity in one of its members. Their only consolation is the comforting and encouraging words of the family doctor. The application is signed, not without perturbation, the recommendation filled in, and now word is hurriedly sent to the Justice. This unwelcome official must interview the sick patient within seven days. Not being a doctor and at the beck and call of sick patients, and having other matters to attend to, he may be somewhat dilatory and cause inconvenience. We must not then be surprised if recourse is very frequently had to the certificate of emergency. The Justice is recommended to visit the patient in the patient's own home, and this, in the country, involves an expedition probably by motor car. His medical examination is to be no perfunctory performance, as was so often the case in the past. As those Justices who have a natural or acquired gift for this delicate duty are to be selected, it may be assumed without offence that all do not possess the necessary accomplishments. Then the relatives are to be interviewed, and if this be judicially done, both those "for" and those "against." The kinsmen of patients are often trying, and some are to be met who refuse ever to see any signs of insanity, because they say there has never been any in their family. If the Justice be in doubt, he is to confer with the doctor, so he, as well as the relatives, have to put their time at the disposal of the Justice, however inconvenient this may be to all of them. More than one visit may be considered necessary.

The Justice is now to exercise what has been described as "a directed discretion." For example, if delusions have been alleged,

he may deem it necessary to investigate these further, and how much further afield these may take him no one can tell. All sorts of inquiries may have to be set afoot and many witnesses interviewed. Then he has to decide whether the patient is to be informed of these allegations. To experts this is, perhaps, not a difficult decision to make—but how often has one been asked by a perplexed layman: “Doctor, should I agree with everything he says, and if I contradict him, will he get excited?” This layman has, in addition, two medical problems placed upon him which he must solve by a personal examination and on his own responsibility. He has to decide, firstly, “Is the patient insane or not?” And secondly, “If insane, is there a prognosis of early recovery?” How a layman without any medical training or experience can answer the latter question it is impossible to conceive. If he has to rely on the doctor's opinions, and is guided by him, why bring a layman on the stage at all? We will here drop the curtain on the first act of this drama.

ACT II.

The second act opens after an interval of only one month. The scene is laid at the place, whether mental hospital or otherwise, where the patient is being treated. The Justice again visits the patient, and has to decide whether the patient may be expected to recover in five months or not. He again has the assistance of a medical recommendation, probably from the doctor who is now treating the patient. If he agrees with the doctor, he extends the duration of the Provisional Treatment Order to a further period of five months. These two acts, at an interval of a month, could with advantage be run into one and the recommendations from the two doctors obtained simultaneously and at the beginning, instead of successively with an interval of a month.

ACT III.

The curtain rises on the third act, six months after the patient has been placed under the Provisional Treatment Order, if he has not recovered.

The question of placing him under a Reception Order has now to be considered. Two doctors are called in to assist and give certificates of insanity. The Justice may now have the assistance of the Clerk to the Justices. The patient may now appoint someone to represent his interests, and there is nothing to prevent him employing a solicitor whom he has found amenable to his instructions. The court is thus carefully and fully prepared for a formal

hearing of the case, but the adoption of a forensic procedure is deprecated by the Royal Commission. Those who conduct these proceedings are advised to drop, so far as they possibly can, judicial ceremonial and alarming formalities. The Justice requires to see and examine the patient again, but no instructions are given as to whether the patient is to be present at this "trial" or not. If the solicitor, to earn his fee honourably, defends his client, the patient can hardly with justice be excluded from the proceedings during all the time. Nor can the solicitor be denied such access and such facilities of getting up his client's case as he considers necessary, and this almost certainly would involve the evidence of other patients. Lively scenes, it may be surmised, will sometimes occur. Irresponsible allegations will at times be flung about, and the Commissioners have very wisely recommended that all parties must be sworn to secrecy. But there is one tongue over which they have no control, and possibly not even its owner can curb it—the tongue of the patient. We know how fond manic patients are of revelling in scurrilous and intimate disclosures, and how they love to pose before an audience.

Criticism of Judicial Procedure.

What are we to think of these recurrent judicial performances? Within six months, a sick man needing medical treatment is interviewed three times by a lay official who prescribes what is to be done for his illness. The Royal Commission discovered that the problem of insanity was primarily a medical one, that its treatment should approximate to the treatment of physical ailments, yet we have a scheme proposed in which a layman fills the principal rôle on at least three formal and set occasions, and decides at his own discretion difficult and delicate medical problems. Compare this blaze of limelight, these anomalous duties and these repetitions with the analogous proceedings in the excellent septuagenarian Act for Scotland, in which the judicial authority is invisible, acts wholly on medical evidence, and acts once for all. Who is rash enough to predict for these newborn proposals a success equal to that of the Scottish Act of 1857?

It may be said that the picture presented above is overdrawn, but the more nearly judicial intervention is judicial in character the truer will the picture be to what will occur. The perfunctory way in which these duties were sometimes performed in the past, as by one-minute interviews in taxi-cabs, may possibly have been a saving grace. It is a pity that such disclosures did not lead logically to the abolition of personal intervention, instead of to its reinforcement and rehabilitation, a most unfortunate decision.

Whether non-existent, as in England between 1845 and 1889, whether performed perfunctorily, as was so often the case there, or whether performed in the purely legal way without seeing the patient, as in Scotland, judicial intervention or non-intervention seems to have made little difference one way or another, and neither Select Committee nor Royal Commission has found any person improperly detained in our mental hospitals. It is clear that adequate protection exists and is afforded by other means. To us in Scotland, who have never had any experience of the personal intervention of a layman, this form of amateur medicine seems a monstrous and intolerable invasion of the sphere of the physician, and nothing less than a caricature and a mockery of medical science and practice. The reason why the medical profession in England has acquiesced in it, has been the hope that the personal intervention of the Justice would relieve medical men of some responsibility and reduce or abolish the risk of legal actions. That hope has not been fulfilled, although according to Mr. Justice M'Cardie the medical certificate is no more than "a mere opinion," devoid in itself of operative force, and that the Reception Order is the effective authority.

Further, these recurring judicial proceedings also lead to expense. According to the Royal Commission, if a patient has been ill for six months, four doctors have to examine him, and they have to appear four times as witnesses before the Justice. The Justice himself has to visit the patient three times or oftener, and he may be accompanied by the Clerk. Relatives have to appear times without number as witnesses, and a friend or lawyer has to act for the patient. In comparison with the simple and inexpensive medical procedure in Scotland, where the family doctor is joined by one outside doctor and by no other person, the programme set for this multitude appears fantastic. Is all this heavy armour needed for the protection of liberty on the south side of the Tweed, when in the north so little danger is run or feared, that precautions are few and simple, yet so appropriate and adequate? Has its total cost ever been estimated?

Conclusions.

The Provisional Treatment Order based on a recommendation and no certificates of insanity forms the most striking departure from precedent of all the proposals contained in the Report of the Royal Commission. Voluntary treatment has existed for a long time, and no facilities are offered that are not already enjoyed in Scotland, where certifiable as well as rate-aided patients can be treated voluntarily. The Emergency or Urgency Order has always

existed, but it has been greatly improved by not requiring a statement to the effect that the patient is insane. The Provisional Treatment Order is the offspring of Schedule G of Scotland,* but it is a much greater concession, for Schedule G applies only to private patients. Patients without volition but non-resistant, a class for which it was very desirable that special provision should be made, were associated somewhat incongruously with voluntary patients in one clause of the Mental Treatment Bill. The Provisional Treatment Order has done much more, for it has conferred the privileges it contains, namely, treatment without certification and in a choice of places, not only on patients of the class referred to, but also on volitional and resistant patients, provided they are deemed recoverable in six months' time. In effect, these privileges will apply, as they were intended to apply, to all cases of recoverable insanity.

Having said so much for the aims of the Provisional Treatment Order, we must add that its benefits will be sacrificed, on account of the discredited and out-of-date machinery that has been adopted for working it, unless much of it be scrapped. The new wine of medical ideas has been put into the old bottles of legal procedure. The legal formalities of the existing law, along with certification, have been the cause of its failure as an instrument for medical treatment. Certification is abolished in the Provisional Treatment Order, but the legal formalities are made, not less but more stringent, exacting and numerous than ever before, and that for no discoverable reason. We want to see the Order a working success, conferring the great benefits that it was intended to confer, and with this object in view we make the following recommendations. They are all of a simple nature, and nearly all have been proved to be workable by the supreme test of experience.

Recommendations for Improving the Provisional Treatment Order.

1. **Two doctors should give "Recommendations" instead of one.**
2. **A right of appeal to be examined by two independent doctors should exist in all cases of doubt.** This privilege exists in Scotland and renders improper detention almost impossible.
3. **The personal intervention of the Justice should be abolished.** It becomes unnecessary for the judicial authority to visit and examine the patient if a second medical recommendation be required and the right of appeal to two independent doctors be granted. In support of this we point to the results of seventy years' experience of this procedure in Scotland and think it conclusive.

* See Appendix.

The visitation of the Justice perpetuates those legal formalities that have in the past delayed treatment, frustrated attempts at prevention and differentiated mental disorders from other illnesses.

4. **The Board of Control should replace the Justice.** It is accustomed to examine patients when necessary, and is already engaged in scrutinizing application forms and medical certificates.

5. **The two conditions for coming under "Provisional Treatment" should be that the malady is not deemed to be incurable, and that the patient requires treatment with a view to his recovery.** This change would make no difference to the patients concerned, but it would confer relief to their physicians, who would find prognosing and forecasting the date of recovery on oath beset with great difficulties.

6. **The duration of "Provisional Treatment" should be for a period not exceeding six months.** It is hoped, however, that full opportunity will be given to the patient to recover under "Provisional Treatment" by an extension, if necessary, of the duration of its operation.

EPILOGUE.

An ideal and time-honoured solution—Lord Shaftesbury's.

There is a still simpler procedure which those engaged in the treatment of mental disorder consider much the best. Others who have not had this practical experience may possibly require further education and enlightenment before they also approve. This procedure is based on that of the Emergency or Urgency Order, which in the past has proved so useful.

The Emergency Order is signed by a relative, friend or public official, and there is a certificate accompanying it given by one doctor. On the strength of these two documents a patient may be treated in an approved place for seven days. That the duration of the Order lasts seven days only is a comparatively small matter beside the important fact that the patient has been deprived of his liberty and been placed under treatment away from home.

Emergency or Urgency applies to any event or state requiring immediate action, and the Urgency Order has been in consequence much employed. In Scotland, 90% of all certified patients admitted to the mental hospitals are cases of emergency. The certification of a patient and his removal from home are usually delayed on sentimental grounds till the last moment, by which time removal has often become a very urgent matter. It is impossible to eradicate this excusable human weakness.

It is suggested that the Provisional Treatment Order, like the Emergency Order, should be signed by a relative, friend or public

official, but that it should be accompanied by the recommendations of two doctors. The employment of two doctors in place of one would give it much more than double the guarantee of safety of the Certificate of Emergency, and it would not therefore be amiss to allow such an Order to hold good for a month. Copies of the documents would, of course, be sent at once to the Board of Control, which would, as at present, check irregularities of procedure and inquire into cases of doubt. At the end of a month, if the doctor having charge of the patient and having opportunity for close observation sent a third recommendation, the Provisional Treatment Order might on the strength of these three recommendations be extended to the full period of six months. Such a procedure would be simple and safe, it would avoid lay formalities and consequent delays, and in many cases it would with advantage take the place of the Emergency Order, of which it appears to be a logical development. The machinery here suggested is similar to the ordinary procedure for private patients of the 1845 Act, which did yeoman service for forty-four years, and for the retention of which Lord Shaftesbury with unerring insight and philanthropic zeal fought so hard against legal dogmatism but failed. It also resembles the procedure under the existing Irish Act.

APPENDIX.

Schedule (G). (20 & 21 Vict. Cap. 71. Scot. 1857.)

I, *L. M*—, a Medical Person duly qualified in Terms of the Act (*specify this Act*), certify on Soul and Conscience, that *C. D*— (*name and design the patient*) is afflicted (*state the nature of the disease*), but that the malady is not confirmed, and that I consider it expedient with a view to his recovery, that he should be placed (*specify the house in which the patient is to be kept*) for a temporary residence of (*specify a time, not exceeding six months*).

*Chronic Sepsis as a Cause of Mental Disorder.** By WILLIAM HUNTER, C.B., LL.D., M.D. Edin., F.R.C.P., Consulting Physician to London Fever Hospital and to Charing Cross Hospital.

THE part played by sepsis in producing nervous and mental disorders of all degrees of severity and the degree to which these can be prevented, checked, or controlled by antisepsis are singularly opportune subjects for discussion on an occasion marking the

* Being the opening paper of a discussion at the Annual Meeting held at Edinburgh, on July 20, 1927 (conjointly with the Section of Mental Diseases of the British Medical Association meeting).

centenary of the birth of Lister. We are not only commemorating past achievement, but inaugurating a new campaign against sepsis in one of the greatest domains of medical diseases—that which bears the ill-omened title of insanity.

It is the first time this subject of sepsis and antisepsis in relation to mental disorders has been before this Association. The types of mental disorders more especially concerned are those that bear the titles of dementia præcox, manic-depressive insanity, paranoid conditions, psycho-neurosis, and toxic insanities. These constitute the great proportion of the admissions into our mental hospitals—on an estimate kindly supplied me by our President: dementia præcox about 20%, manic-depressive insanity about 50%, paranoid conditions about 10%, psychoneurosis about 5%, and toxic insanities about 15%.

The sepsis with which medicine is concerned is that originally described by me in 1900 under the title of "oral sepsis," and other forms of focal sepsis as a cause of medical diseases—namely, the sepsis in teeth, the tonsils, nasopharynx, nasal sinuses, stomach, intestine, colon, and sometimes elsewhere in the genito-urinary tract: "oral sepsis," "tonsillar sepsis," "nasal sepsis," "septic gastritis," "septic enteritis," "septic colitis," as I then termed the several conditions.

The call I then made (1900) on behalf of this sepsis was that:

"Sepsis in medicine is playing a greater part in producing medical diseases than it is now doing in surgical affections. A great field of prevention is opened up by the exercise especially of oral antisepsis against oral sepsis, the worst and parent source of most other forms of focal sepsis, especially that in the tonsils, stomach, intestine and colon—a field that can be worked in with the most surprisingly satisfactory results by the doctor, the surgeon, the throat, nose, ear, and eye specialist, and, most of all, the dental surgeon."

This call included a special appeal for attention to this sepsis in the realm of nervous disorders, as presented in ordinary general practice, its neurites, its neurasthenias, its mental depressions, or its more severe so-called "nervous attacks" or "nervous breakdowns."

One of the conditions I specially called attention to I termed "toxic neuritis." Cases of this kind "open up a new field of inquiry" as regards the possible rôle of oral sepsis in causing nervous effects such as those I described under the title of "toxic neuritis" (1900).

Now, after twenty years, I am glad to think that the response to that call has come at last. It has come first of all (1919-23) from the American side at the hands of Dr. Cotton, the director of the New Jersey State Hospital, Trenton, who four years ago (1923) set forth very fully his results before the Royal Medico-Psychological

Society at its annual meeting, as fully detailed in the *Journal of Mental Science*, October, 1923. Dissatisfied after some fifteen years' experience of mental work with the results obtained, he began from 1918 onwards a desperate frontal attack with horse, foot and artillery—namely, medical recognition of the importance of oral and focal sepsis, surgical help for its removal, and bacteriological support for both—on the whole field of the sepsis presented by his cases (1400 in number), in the teeth, the tonsils, nasal sinuses, stomach, intestine and colon, and the genito-urinary tract, with the result of doubling the number of his discharges, and reducing the average stay in hospital from ten months to three months.

Since then the subject has received steadily increasing attention at the hands of English psychiatrists, and has been before them at three of their annual meetings as a subject of great interest and increasing importance in the treatment of the insane.

As might be expected, the very force of this attack on the problem of sepsis in mental diseases has produced equally strong counter-attacks, chiefly at the hands of American psychiatrists—especially the studies by Kopeloff, Kirby and Cheney (1922-23), of the New York State Psychiatric Institute. But the net result has been the satisfactory one that, however much they may agree that no importance is to be attached to focal sepsis as a cause of mental disorder, they are all "whole-heartedly in favour of eliminating all focal infection in psychotic patients." That is a great advance on what has hitherto obtained.

SEPSIS IN MEDICINE.

If on the present occasion the President and officers of this Section have kindly invited general physicians and surgeons to take part in this discussion, it is owing to the circumstance that the past twenty-five years have furnished a large experience as to the part played by sepsis in general diseases other than nervous or mental—an experience now available in relation to the whole subject of mental disorders. The result of that experience may be best described in the words of others, since it was first set forth by me before this Association at its Oxford meeting in 1904, and so fully confirmed by many others, especially William Willcox and Chalmers Watson in this country; Frank Billings, Lewellys Barker, and Charles Mayo in America.

"One of the great advances in medicine of the past twenty years. . . . The effects of oral sepsis have been worked out, and prove to be so wide-spread, so multiple, and frequently so grave as to make us ashamed of our previous blindness to a common source of blood infection staring us in the face all those years. . . . An addition to our knowledge of the first magnitude."—Dr. Mitchell Bruce, Address in Medicine, British Medical Association, 1910.

"No one circumstance in the last fifteen years that has so changed the aspect

of the practice of medicine as the doctrine of focal sepsis."—Prof. Thayer, Johns Hopkins University, 1914.

"The most interesting chapter in modern medical history, profoundly affecting medical and dental practice, epoch-making in its effects."—American dental literature.

"A profound and permanent influence on general medicine, rendering Lister's hypothesis which governs the practice of surgery at least of equal importance in relation to medicine. Infection in medicine is responsible for a vast number of diseases—a fact that has received far less attention than it ought to have had. . . . The immediate ravages of oral sepsis may prove serious enough, but the remote complications, seemingly so unrelated to their true cause, are a grave menace both to health and life."—Sir Berkeley Moynihan, 1927.

These appraisements may serve to indicate at once the chief site (the teeth), the apparently negligible character, but nevertheless the actual supreme importance of the foci of sepsis with which medicine as distinct from surgery is specially concerned; with which also, however, the surgeon has learnt to be equally concerned as a great potential and actual source of much of the septic infection in his surgical cases.

The sepsis with which the surgeon has been concerned is something obvious, manifested by recognizable effects such as inflammation, suppuration, death of tissue, fever and septicæmia—common effects producible by a large range of organisms, but chiefly those of the staphylococcal and streptococcal groups, or, in the case of the alimentary tract, the *B. coli* group. But he is not specially interested in the character of the organisms; his whole concern is that no organisms of any kind invade his wounds in the course of his operations.

But the features of the sepsis operating in medicine are of a different and more complex character. Its foci are small, hidden, chronic, and cause generally no local effects drawing attention to themselves. The organisms concerned are mostly of the same character, but the predominant one is the streptococcus. These are not of one, but of many strains—sixteen or more. Their characters are represented, not by their cultural features or by their behaviour towards sugars, but by the different effects they produce in the different systems or tissues of the body—in short, by their selective action on the different systems of the body.

Rosenow (1914-16) has obtained remarkable results in this relation. Strains isolated from the mouth and tonsils of patients suffering from particular diseases—rheumatism, myalgia, arthritis, nervous diseases, such as paralysis—were found to have a remarkable specificity in their action; those from rheumatic cases producing arthritis deformans, arthritis and myositis; those from ulcers of the stomach showing a marked affinity for the mucous membrane of the stomach and duodenum; those from the gall-bladder producing cholecystitis in the animals into which they were

injected. Most interesting of all was the specificity and selective action of strains isolated from the mouth and tonsils in various nervous diseases, such strains being always recovered with special frequency from the class of nervous tissue affected by the disease.

These studies of Rosenow, confirmed by others, appear to have all the elements of a romance in revealing this extraordinary elective specificity in the action of different strains of streptococci. But the results are only in accord with the actual clinical facts observed in disease—namely, the extraordinary variety of ill-effects associated with conditions of oral sepsis and other forms of focal sepsis, and the equally remarkable effect which the removal of such foci has in arresting, controlling or entirely banishing the ill-effects presented in the case.

Among the chief and most common of such ill-effects are the neurotoxic effects of sepsis presented in mental disorders, as illustrations of which I now describe the two following cases:

SEPSIS IN MENTAL DISORDERS.

Just as my whole original thesis of oral sepsis as a cause of disease arose out of the study and record of one single case of pernicious anæmia in 1890, and was driven home by the description of one case of "septic gastritis" (1900), so now, in the case of mental disorders and their relation to oral and focal sepsis, the relation may best be illustrated by the following case recorded by Dr. Cotton:

A single woman, aged 55; father died of melancholia, aged 64, mother of paralysis at 80.

Her mental trouble followed the death of her mother in August, 1916; she became excited, talkative, and in September was much depressed, agitated and self-accusatory.

Admitted to hospital in October, 1916. It was noted at the time that her upper teeth were missing, and that her lower teeth were badly decayed. But nothing was done for her, and she was transferred to the chronic ward, where she remained for nearly two years, till 1918.

In September, 1918, eleven bad teeth were extracted. She improved rapidly during the next few weeks.

On November 9, 1918, she was discharged as recovered and has remained perfectly well ever since.

In this case, as Dr. Cotton points out, the neglect to remove the bad septic teeth on admission, although their presence was noted, was responsible for her residence of two years in the hospital, for there seemed to be no other infection or any other physical disturbance except the infected teeth. As he also comments, the hereditary taint in the patient's history (father dying of melancholia at the age of 64) did not affect the recovery of the patient. Lastly, and most interesting of all, she recovered, and was fit to

be discharged within two months from the time of the removal of her infected teeth.

By itself this case might be regarded as an exceptional one in which merely by coincidence recovery happened to follow in a few weeks the removal of some septic teeth. But taken in conjunction with the evidence given above as to the part taken by similar sepsis in producing all sorts of medical ailments and conditions, such as anæmia, rheumatism, etc., a case of this kind would alone, in my opinion, serve to arrest the attention of everyone concerned with mental disorders. The case may be regarded as of definite historical interest: in the date of its first admission into hospital (1916), when, as Dr. Cotton describes, his interest in oral sepsis and its possible effects had not been aroused; his observations of the septic condition of the teeth without any action on his part; the action he took two years later (in 1918), when his belief in the importance of sepsis and its removal was strengthened; and lastly, the remarkable and immediate recovery that followed in a few weeks' time.

All the usual ætiological factors to which importance is attached in mental disorders were present in the case: the death of the patient's father from melancholia (the *heredity factor*); the onset of her trouble after the death of her mother (the *psychogenic factor*, to which from the point of view of psychology it has hitherto been customary to attach an almost exclusive importance in explaining mental disorders). Each of these factors might be regarded, singly or combined, as accounting for the patient's mental breakdown. Neither of them could be altered by any measure of treatment, and two years of hospital treatment in the best surroundings had failed to alter the psychology of the case. Nevertheless, what all other measures failed to effect was effected in a few weeks' time by the removal of what might well seem to be the most unimportant and most uninteresting feature of her trouble—the removal of eleven septic teeth.

In reality the factor producing her mental trouble was not her hereditary history, nor yet the mental anxiety following the death of her mother, both of which might in some degree predispose her to some mental instability, but the presence and toxic action of a severe though apparently negligible septic infection arising from the teeth. On removal of these the whole mental cloud was lifted from her. Her psychosis was, in short, a "septic psychosis," as I would now term it. Fortunately in her case these seem to have been the only septic foci present. If other septic foci had been present in the tonsils or nasal sinuses, or in the ears, or in the stomach, intestines, or colon, or cervix, as is often the case, her recovery might well have been neither so sudden nor permanent. Each of these

would have called for removal, or for appropriate measures of treatment as far as possible.

Another case from the same source, but from a later period (1921), illustrates the result of recognizing and removing all septic foci immediately on admission:

A girl, aged 17, admitted March 21, 1921. Paternal cousin insane (hereditary factor). Onset of trouble one month before admission, ostensible cause given being a love affair (psychogenic factor).

Mental features.—Violent, excited, destructive, breaking windows and furniture. On admission markedly dishevelled in appearance, irrelevant, and volunteered the information that her teeth hurt her. Teeth and gums in bad condition and tonsils also infected.

For a month after admission she continued in an excited condition, destructive to furniture, loud, noisy, and very impulsive, untidy, paying no attention to herself, passing excretions unnoticed into the bed; conversation irrelevant and much confused; hallucinations of sight; refused food, had to be fed, and to be secluded in a single private room, so excited and non-co-operative that X-ray photographs could not be taken of her teeth.

Nine days after admission (March 30) her tonsils were removed, without any effect on the mental condition. On April 19, about a month after admission, the resident dentist diagnosed impacted third molars, and the four were extracted under a general anæsthetic. She slept well, and next morning asked the dental surgeon to come in and see her. This was the first relevant observation she had made since she had come into the hospital. On the same day she asked for permission to go to the bathroom and look after herself. There was a marked change in her conduct; her conversation became quiet and fairly relevant. On May 9 she voluntarily made the remark that "since the extraction of my back teeth I have felt entirely different," and she realized that from that time her improvement continued.

On May 16 she was able to give a very clear account of herself. Her mental state at this date showed no evidence of confusion; her memory was good for recent and remote events, except for the first three weeks of her residence in hospital; sight and judgment were perfect; she realized that she had had a serious mental attack.

She was discharged on June 21, three months after admission, although she had practically recovered after her impacted and infected molars were extracted, one month after admission.

This case illustrates, according to its recorder, the effect of impacted third molars in producing these confused mental states which so closely resemble dementia præcox. For such teeth are always, in his experience, found to be infected. It shows how the removal of some particular focus of infection, such as the tonsils in this case, may fail to improve the mental condition, and the necessity in such an eventuality for seeking for other possible foci—in this case the impacted teeth. It also indicates the difficulties presented to the full investigation of patients owing to their excited state, and their refusal to allow any examination of their mouths or throats radiographically or otherwise.

The problem is whether to wait for weeks, possibly months, till the violence of the mental symptoms subsides; or, on the other hand, to face what appears to be the risks, and carry out operations such as dental extractions, while the patient is still excited.

Every case of this kind must be considered on its own peculiar

features of urgency and severity. It is a matter which specially requires the judgment of the physician in charge of the case. I may give my own experience that any such apparent risks can be safely run.

The existence and possible importance of impacted and unerupted teeth in mental cases, here noted by Dr. Cotton, are, in my judgment, observations of interest in revealing the earlier dental history of such cases. Thus in 120 cases recorded by Kopeloff and his fellow workers (1923), I find that 15 cases (or 1 in 8) showed 49 such teeth—an average of 3 such teeth to each case. If such teeth become infected, as in cases of long-standing and severe sepsis they are most likely to be, the neurotoxic action of such sepsis enclosed in the alveolus of the jaws is likely to be very severe, as in the case above recorded.

The existence of such teeth in 1 in 8 cases of dementia præcox and manic-depressive insanity emphasizes, in my opinion, the importance of the earlier dental history of all cases of this character, especially in young people and young adolescents. I have had cases in which I have been able to trace a continual history of severe dental infection from the time of dentition at the age of 2 onwards.

In my judgment the dental history and the high degree of sepsis present in the last-mentioned case would probably be found, if fully investigated, to represent approximately the dental history and degrees of sepsis of most cases of the severe and prognostically grave mental disorders affecting juveniles or young adolescents. I draw special attention to the matter as one worthy of investigation and inquiry in every case of this character.

SEPTIC PSYCHOSIS.

If, as I am satisfied from my own clinical experience as a physician is the case, this wide-spread septic infection is also in particular cases causing wide-spread and various psychotic effects, the title from now onwards that would, in my judgment, best connote this form of psychosis would be the one I would now suggest of "septic psychosis."

This commonest form of psychosis, produced by long-standing chronic septic infection, exists sometimes alone, but more frequently along with and complicating other forms of psychosis, intensifying and aggravating the more special mental features belonging to these latter psychoses. The extent to which it is present in any case can only be determined by removing it, and the best hope that any psychotic patient can have is that it may prove to be largely, or possibly entirely, of the nature of a septic psychosis, and therefore one which may possibly be cured by the removal of the septic foci underlying it.

The term "septic" here given to this psychosis accurately connotes the ætiological factor underlying it, whether present as a principal or as a contributory factor in mental disturbances. The title will I hope facilitate its future study.

In dealing with it let me put in one plea. Do not let it go forth that sepsis is the cause of all forms of insanity. That is the sort of statement that will only serve to put the clock back. Let us be content to know on new evidence, that chronic sepsis is undoubtedly capable of producing very marked psychotic disturbances, and that a new and more hopeful era has been opened up for the prevention, amelioration, or possible arrest of various mental disturbances and disorders by surgical removal of the sepsis which so commonly besets the mental patient.

As regards the possible importance of this "septic psychosis" in psychiatry, perhaps the most judicial opinion is that pronounced by Dr. Adolf Meyer, Professor of Psychiatry in the Johns Hopkins University.

The evaluation of focal infections is an outstanding contribution of twentieth century medicine. If means could be made available to carry out the removal of these focal infections, psychiatry would make another large contribution of importance far beyond its own special sphere of mental hygiene, and relieve a group of patients of one of the insidious influences sapping humanity, thus offering a free field to work with the many other features which are bound to play a rôle.

INCIDENCE AND SITES OF FOCAL SEPSIS.

The incidence and sites of the focal sepsis found in mental disorders are well brought out in the table on p. 558 of 200 cases treated successfully by Dr. Cotton, and found afterwards on visit to have remained well.

In his experience in the case of men the teeth were found infected in all cases, and in every form of psychosis, the tonsils in 76% of cases, the stomach in 83% (all of them requiring treatment with vaccines), the seminal vesicles in 2%, and serious lesions of the colon in 10%. In the case of women, the teeth were found septic in all cases, the tonsils in 73%, the stomach in 76% (requiring treatment with vaccines in 71%), the cervix in 80%, and serious lesions of the colon in about 30% of the cases.

As regards the incidence in different forms of psychosis, there was little or no difference between them in the case of males, but in the case of women the colon was operated on in 13% of cases, as compared with only 1% in males, 9 of the cases being among 66 cases of manic-depressive insanity.

*Table showing Incidence and Sites of Focal Sepsis treated successfully in 100 Male and 100 Female Patients.
(Dr. Cotton.)*

Mental disorder.	Total.		Teeth.		Tonsils.		Gastric.		Vaccine.		Vesiculo- tomy.		Cervix.		Colon.	
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
	Manic-depressive insanity . . .	49	66	49	66	39	47	41	50	41	46	1	8	—	—	—
Dementia præcox . . .	18	8	18	8	13	7	13	7	13	7	—	5	—	—	—	2
Paranoid condition . . .	15	9	15	9	11	6	14	5	14	5	—	1	—	—	1	1
Psycho-neurosis. . .	7	10	7	10	7	6	6	7	6	6	1	2	—	—	—	—
Toxic psychosis . . .	11	7	11	7	6	7	9	7	10	7	—	4	—	—	—	1
Totals . . .	100	100	100	100	76	73	83	76	84	71	2	20	1	1	13	13

Interesting data regarding the incidence and seats of focal sepsis are also supplied by Dr. Graves, the Director of Rubery Hill and Hollymoor Mental Hospitals of the Birmingham Corporation, the first of the hospitals in this country to supply data of this character :

No. of cases.	Teeth.	Tonsils.	Nose.	Ear.	Cervix.
296	230	—	—	—	—
258	193	—	—	—	—
123	—	48	18	39	—
249	—	104	20	106	—
139	—	—	—	—	99

These figures yield the following incidence of septic foci in different seats :

Oral sepsis	76%
Tonsillar sepsis	40%
Nasal sinusitis	10%
Ear	39%
Cervix uteri	71%

The figures show the wide-spread character of the sepsis present in the mental patient.

The percentage incidences for the teeth and tonsils (76 and 40) are considerably lower than those found by Dr. Cotton (100 and 76) respectively ; but they are interesting in confirming the high incidence of cervix infection—namely, in 71% of women. They draw attention to the incidence of nasal sinusitis in at least 10% of cases, but most of all to the high incidence of ear sepsis in 39% of cases.

The relative importance of the various seats of focal sepsis, I would point out, is not dependent on the relative incidence of such infection in the various seats—teeth, tonsils, nose, cervix, etc. ; it is determined far more by the amount of sepsis which may be harboured in each seat, and by the conditions favouring its chronicity and by its virulence. In this relation oral sepsis (dental sepsis) is by far the more important, for the number of foci which the teeth may harbour depends not only on the number of septic teeth which may be present, but also on the number of septic sockets connected with these teeth. Thus the presence of four septic molars each with three roots means the existence of twelve septic foci, and may thus be the equivalent of eight incisors and four canines which have only one root each.

I have been much impressed by the degree of infection in the sockets of infected teeth in many cases, cultures which I myself have taken with extremest precautions from the apices of the teeth immediately on their withdrawal, and planted on sloped agar tubes,

growing hundreds of colonies of streptococci sometimes in almost pure culture (90%).

The degree of oral sepsis cannot be expressed in terms of "infected teeth" as some observers do (Kopeloff, 1923). It must have regard to all the other conditions present—of septic gingivitis, tartar deposit, ulceration and pocketing, pyorrhœa; of periodontitis and osteitis shown by recession of gums or looseness of teeth, or by thickening of alveolar margins; number of carious or necrosed teeth; number of devitalized teeth (nerves destroyed); number of teeth with gold caps or porcelain crowns, gold bridges (a very potent form of sepsis, especially in regard to its neurotoxic effects); and finally, to conditions revealed by radiographs of apical abscesses and granulomata, of buried roots, of impacted or unerupted teeth.

When regard is had to all these conditions, the ordinary degrees of oral sepsis usually found—slight, moderate or severe (1° , 2° , 3°), as I am accustomed to designate them—will often, in my experience, be found to be so severe (especially in mental cases) that it can only be expressed by degrees varying from 5° up to 10° .

The amount of infection created by all these various conditions is far greater than anything ever found in connection with infected tonsils; and also far more virulent, since it is all in connection with bone tissue, which always enhances the virulence of a septic infection.

It is this latter circumstance that adds to the virulence of nasal sinusitis and ear infection, which also can be very severe in mental cases.

NEW ERA OF ANTISEPSIS IN MENTAL DISORDERS.

In the foregoing I have endeavoured to give a glimpse of the character of this subject of sepsis in relation to mental disorders from the point of view of a general physician well acquainted with the characters and potentialities of the sepsis concerned, rather than from that of the psychiatrist, to whom many other questions of interest arise.

The same applies to matters of surgical interest arising out of this new aspect of mental disorders: the work required from the dental surgeon, from the radiographer, from the throat, nose and ear surgeon, from the abdominal surgeon in connection with the surgery of the intestine and colon, from the genito-urinary surgeon in connection with the prostate and seminal vesicles, and lastly from the gynæcological surgeon. I see no reason why the help of the surgeon in dealing with conditions of sepsis presented in mental patients should not be warmly welcomed, in the hope of restoring sanity to a disordered mind, just as readily as it is placed at the

disposal of any other who by some accident or other might require such help.

Discovery of the part played by sepsis in mental disorders introduces an entirely new era into the whole subject of the nature of many of these disorders, and the possibility of controlling and preventing them. They make clear, in my judgment, that it is septic infection that underlies many mental disturbances hitherto regarded as denoting or foreshadowing permanent damage, or contributes to the severity of such disorders even when permanent damage has been done.

This "septic psychosis"—as I would now term it—is produced by the action of toxins derived from small and apparently insignificant septic foci, chiefly in the teeth and tonsils and elsewhere. On the removal of these the whole mental disturbance may be profoundly affected, and may in many cases be made to disappear. By the removal of such septic foci with the attendant psychosis the control of mental disorder and insanity in many of its forms and manifestations is rendered possible to a degree never before attainable. The degree of disorder may be of such a character and duration—for example, that presented in dementia præcox, or in severe manic-depressive insanity—as to suggest permanent damage to the higher brain centres, and to appear, therefore, incapable of being influenced by the removal of slight septic foci. But the clinical facts show that this is not the case, and the extent to which the degree of sepsis present in each case is affecting the character and degree of the mental features of the case in causing a "septic psychosis" can only be determined by the removal of that sepsis.

The removal of the sepsis in all cases of mental disorder and insanity is therefore called for as a matter of urgency and as a first measure of treatment in every case. The amount of chronic sepsis present among the mental patients, who to the number of 133,000 and more occupy the mental hospitals and asylums of this country, is far greater than that to be found in any other group of inmates of our hospitals. The removal of that sepsis in their case is imperative to a degree, as the first and most important measure of treatment applied to them. For in their case the evidence already available makes it clear that however much ordinary people in health may be able to resist, and do successfully resist, the deleterious action of the varying degrees of similar sepsis which they carry, the sufferer from mental disorder *cannot afford to have any such sepsis unregarded*. He is playing for the highest stakes—the preservation of his brain-power and his sanity. He can run no risks. And, inasmuch as in his case the control of his illness is out of his hands, in his own interests, it is all the more incumbent that every possible measure

of treatment should be available and should be applied for his benefit.

Each mental hospital should therefore be as fully and as well equipped for surgical work as it has hitherto been for medical or nursing care. Its staff should include visiting surgeons concerned with dental, throat, nose and ear, abdominal and gynæcological surgery. All the public authorities responsible for our magnificent mental hospitals will gladly provide that every mental hospital under their charge should, so far as they are not already equipped, be forthwith supplied with every arrangement for surgical work. This involves the provision of a fully equipped dental department and surgical theatre for every mental hospital, with visiting staff of a dental surgeon, a general surgeon, and throat, nose and ear specialists, with the necessary radiographic and bacteriological departments. In making this provision they will, I feel sure, have the whole-hearted support of the public, rightly concerned for their mentally afflicted more than for any other class of sufferers.

The possible standard of increased relief which this class of sufferer may receive is that their chances of recovery may be doubled, that the duration of the stay in hospital may be materially reduced, and that on discharge the chances of remaining well, both physically and mentally, will be greatly improved by the removal of the sepsis if that *removal is carried out at the first onset of the trouble before permanent damage is done.*

But it is in the realm of prevention that this new application of antisepsis will find its greatest triumphs—namely, the cutting short of all sorts and degrees of nervous and mental disturbances that in most cases precede and herald the onset of the graver mental disorders.

Bibliography.—HUNTER, WILLIAM: "Dental Diseases in Relation to General Diseases," Odontological Society, February, 1899.—"Pernicious Anæmia: Relation to Infection from Mouth and Stomach," *Lancet*, January, 1900.—"Oral Sepsis as a Cause of Disease," *Brit. Med. Journ.*, July, 1900; and *Clin. Journ.*, July, 1900.—"Oral Sepsis as a Cause of Septic Gastritis, Toxic Neuritis and other Septic Conditions," *Practitioner*, December, 1900.—"Oral Sepsis as a Cause of Disease in Relation to General Medicine," *Brit. Med. Journ.*, November, 1904.—"The Rôle of Sepsis and Antisepsis in Medicine" (Montreal Address), *Lancet*, January, 1911.—"Oral Sepsis in Relation to Septic Anæmia," *Practitioner*, February 1914.—"The Coming of Age of Oral Sepsis," *Brit. Med. Journ.*, June, 1921.—"The Nervous and Mental Features of Severe Anæmias in Relation to their Infective Lesions and their Blood Changes," *Proc. Roy. Soc. Med.*, October, 1922.—"Chronic Sepsis and Mental Disorders," *Journ. Mental Science*, October, 1923. COTTON, HENRY A.: "The Rôle of Focal Infections in the Psychoses," *New York Med. Journ.*, March, 1919.—"The Relation of Oral Infections to Mental Diseases," *Journ. Dental Research*, 1919, vol. i.—"The Relation of Focal Infection to Mental Diseases," *New York Med. Journ.*, April, 1921.—*The Defective Delinquent and Insane*, Princeton University Press.—"The Ætiology and Treatment of the so-called Functional Psychoses (Four Years' Experience)," *Amer.*

Journ. Psychol., October, 1922.—“The Relation of Chronic Sepsis to the Functional Psychoses,” *Journ. Ment. Sci.*, October, 1923. GRAVES, T. C.: “Chronic Sepsis and Functional Mental Disorders,” *ibid.*, October, 1923—“Incidence of Chronic Infective Processes in Mental Disorder,” *ibid.*, October, 1925. BILLINGS, FRANK: “Chronic Focal Infections in Relation to Arthritis and Nephritis,” *Arch. Int. Med.*, 1912, vol. ix, p. 484.—“Chronic Focal Infections as a Causative Factor in Chronic Arthritis,” *Journ. Amer. Med. Assoc.*, 1913, vol. lxi, p. 819.—“Focal Infection in the Etiology of General Disease,” *ibid.*, 1914, vol. lxiii, p. 899. WILLCOX, SIR WILLIAM: “Infective Arthritis and Allied Conditions,” *Brit. Med. Journ.*, June, 1921.—“Systemic Effects of Periodontal Diseases,” *Brit. Dental Journ.*, June, 1923.—“Nasal Sinusitis as a Cause of Toxæmia,” *Practitioner*, September, 1926. ROSENOW, E. C.: “The Newer Bacteriology of Various Infections,” *Journ. Amer. Med. Assoc.*, vol. lxiii, p. 903.—“Elective Localization of Bacteria in Diseases of the Nervous System,” *ibid.*, September, 1916. KOPPELOFF, CHENEY and KIRBY: “Focal Infection and Mental Disease,” *Amer. Journ. of Psychiat.*, 1922-23. WATSON, CHALMERS: “The Role of Auto-Intoxication or Auto-Infection in Mental Disorders,” *Journ. Ment. Sci.*, January, 1923.—“Chronic Sepsis and Mental Psychoses,” *ibid.*, October, 1923.

(For discussion, *vide p. 717.*)

*Chronic Sepsis and Mental Disorder.** By T. C. GRAVES, B.Sc., M.D., F.R.C.S., Chief Medical Officer, Birmingham Mental Hospitals Committee.

THIS subject should not be discussed, least of all in Scotland, without a tribute being paid to the work of Dr. Lewis Bruce, of Murthly, whose book, *Studies in Clinical Psychiatry*, published twenty-one years ago, is devoted to a consideration of the toxæmic causation of mental disorder.

At the present time what more fundamental conception can be advanced than is contained in the following paragraph from his book: “The bacterial toxæmias of insanity are chronic, and indicate that the real disease lies deeper than the mere toxæmia, the disease being rather a failure of the patient to form antibodies.”

The persistence of chronic infections in which there is an eventual failure of the local tissues to respond to the invasions of organisms and their toxic products, *i.e.*, in which the local tissues become poisoned, undoubtedly has a profound effect upon the mental processes of the individual.

The study of one case may be more valuable than striking an average over a large number of cases, since each is a problem by itself. I would therefore ask your consideration of the details of a case which illustrate a method of stimulating a favourable reaction to chronic toxæmia by non-specific protein therapy and surgical treatment of the septic foci.

Female, single, born December 5, 1906; fifth and youngest child, born when mother aged 44. Great grandmother suffered from “nerves.” Mother had

* A paper read at the Annual Meeting held at Edinburgh, July 20, 1927.

"nervous breakdown," depression, insomnia and refusal of food—not certified—at ages of 26, 41 and 59, and is now a mental and physical invalid, with constant headache and irritability. She had some fits at the birth of the third child, and until a year ago suffered with gross oral sepsis. Two brothers have chronic nasal disease, and her sister—the brightest of the younger members of the family—probably does so too.

The patient, at the age of 3, had scarlet fever with left otitis media, since when the left ear continued to discharge until she reached eight years of age, when it apparently ceased, but recommenced again in her teens. At school she reached Standard VII at the age of 14. She was reserved, did not make friends readily, but had initiative and thought for others, quiet, liked reading, played the piano and passed some examinations in music. However, she always seemed somewhat "lost," was never on the alert, and replies to questions were generally given after a long latent period.

Menstruation irregular, once at each of the following ages: 16, 17, 18 and 18½, about the last age the ear discharge became more profuse and she had to leave work.

Six months later a mastoid operation on the left ear became necessary. Performed on December 20, 1925, following which menstruation became regular 4/28 days. She was to have returned to hospital for further treatment of the recognized nasal sinus disease, but did not do so, as she became depressed, developed persecutory ideas, showed lack of interest, and on one occasion put her head in a gas-oven.

During May, 1926, she improved, and early in June went back to work; her weight had increased, but she complained of an unpleasant taste in her mouth in the morning. Later in June she became exalted, showed loss of appetite and wandered away from home. Auditory hallucinations developed early in July, and after a week of more acute confusion and hallucinatory conduct she was certified and admitted to the mental hospital on July 13.

On admission she showed complete disorientation, was wandering in conversation, noisy, restless, faulty in habits, mischievous, erratic and, at times, violent. Vivid auditory hallucinations were shown to be present by her answers to the "voices," during which she turned her head to the left; she also imagined her doctor was under the bed. She exhibited catatonic manifestations and waxy flexibility.

She menstruated for five days following admission; the acute symptoms necessitating certification were therefore coincident with the pre-menstrual phase.

Temperature 98.2° F. Apex beat fifth space, 4½ in. from middle line; no heart murmurs; pulse-rate 80. Peripheral circulation poor, face pale; coarsely pored skin with scattered chronic papular staphylococcal eruption of the face. Lungs and other viscera appeared healthy; urine negative. Mastoid scar satisfactory; discharge from left ear. Tonsillar glands palpable on both sides; tonsils small and septic; pus in right nose. Left antrum darker than right.

Later there was found redness of the endocervix, with a muco-purulent discharge containing Gram-positive diplococci, short Gram-negative and positive bacilli. Wassermann reaction negative in the blood. Widal negative to typhoid, paratyphoid A, B, and C, Ærtrycke, Shiga and Flexner Y, but positive 31 Oxford units to Gaertner. A carious tooth was extracted.

The severity of the chronic septic toxæmia obviously precluded any physical improvement, and as her mental symptoms also showed no alleviation, it was decided to treat the condition by non-specific protein therapy. A course of eight (five-day interval) intravenous injections of T.A.B. vaccine (B. W. & Co.) was given during August. There was no immediate mental improvement, but she ceased to lose weight.

The serological agglutination tests now showed a rise of titre to maxima of typhoid 6, paratyphoid A 100, Gaertner 625, Ærtrycke 20 Oxford units; paratyphoid B remained negative. Ærtrycke rose early to its maximum; paratyphoid A and Gaertner maxima were synchronous, but later, whilst the very low figure of 6 for typhoid was late in appearing at the time when the values for the other organisms were falling. Much later Flexner Y became positive, giving a maximum of 14 units and then falling. Towards the end of this treatment a test of the permeability of the brain membranes to bromide was carried out, the value obtained being 3.64—a

distinct decrease of normal permeability. In September her weight slowly rose, she became more composed and better behaved, although depressed—a reversion to an earlier mental phase. Menstruation occurred for four days during August and again in September, but was absent in October. This may be considered as the clinical positive stage following the protein therapy.

On October 27 a general sinus examination and irrigation (Watson Williams' technique) was carried out under local anæsthesia. The left sphenoid sinus and the left antrum contained pus; some muco-pus was also present in the right antrum. Following this sinus wash-out an acute exacerbation of the facial eruption occurred and a similar eruption over the whole trunk and limbs appeared. The papules became pustular, hæmorrhagic, and so irritating as to cause the patient to pick them—the "picking sores." A similar process affected the soft tissues adjacent to the nails, causing an acute onychia of the left thumb (the nail of which was shed) and the left ring finger.

The gynæcological state was treated.

On November 14 the tonsils were removed by dissection and both antra were again washed out. Following this the skin eruption improved considerably, and at the end of December it had practically disappeared from the face; the onychia also cleared up, the nails showing no deformity. Scars on the limbs and trunk, due to the deeper injury inflicted by picking, remained for some time, as shown by the photograph dated February 16, 1927. At this period she had gained a stone on her admission weight, and although some mental depression was still manifest, she began to show interest, especially in music. At this time the bromide permeability test gave a normal figure—3.02. Catamenia had not returned, although aloes and iron had been given. A second course of non-specific protein therapy was given and ultra-violet light was commenced in January.

The agglutinin reaction to this second course was similar to the first. No abnormal organisms were found in the fæces. Catamenia returned in February and continued regularly afterwards. The nose, however, continued to show some sepsis, and intra-nasal drainage of both antra was performed; following this the ear discharge diminished.

A much more definite physical and mental improvement now followed and she recovered to the extent that she was sent out on trial on May 12. Later her doctor's, visitor's and relative's reports were satisfactory, and she was discharged recovered. Her sister reported that she had never known her so well and so alert.

Discussion of Case.

(1) In this case definite heredity can be traced. The patient developed mental disorder, and became certifiable at an age earlier than that at which it was exhibited in the parent, thus fulfilling the "Law of Anticipation."

These facts, together with the progressive nature of the symptoms culminating in a catatonic, confused state, suggest a bad prognosis. Nevertheless substantial recovery—"she was never so well before"—occurred after treatment of septic foci. Are we not, therefore, justified in considering psychotic heredity as being in part, if not wholly, made up of other components? In this case chronic sepsis was present in the mother and in the younger members of the family, as well as the patient. I suggest the term "septic heredity," which connotes the effect of the maternal toxæmia upon the child *in utero*, and possibly offers a more hopeful prospect. Another component which must not be disregarded is "transmissible familial infection."

(2) The progressive nature of the long-standing septic process results in a progressive deterioration of mental capacity. Starting from scarlet fever and otitis media, the septic process later involved nearly all the nasal sinuses. On the mental side the aprosexia of Guye was manifested, to be later followed by melancholia, exaltation, confusion and catatonia. The hallucinations were referred to the more diseased side of the head.

(3) The effect of the toxæmia on the reproductive mechanism: It is well known that menstruation has an effect on nasal disorders and conversely. This case illustrates the serious effect of sinus disease on the reproductive function. In ordinary cases of sinus disease there may be a marked deterioration, in the severe cases it may be totally abolished.

(4) The exacerbation of the skin infection following sinus wash-out and its improvement after removal of the diseased tonsils and further wash-out indicates that there was, and had been, a general dissemination of infection from the portals of entry—the mucosa of the head—to the portals of exit—the skin and mucosa of the cervix—producing there low grade chronic inflammatory states.

It is interesting to compare this skin reaction with that recently described by McCrea in "Retinal Petechiasis."

(5) The poor typhoid-agglutination response as compared with the high titre given to the food-poisoning group indicates the probability that at some period she had had a ptomaine infection, with its neurotoxic possibilities. What relation the septic infection bears to the food-poisoning infection is a matter which we are studying.

(6) The improvement in the brain membrane permeability values associated with an improving mental state following surgical treatment of the septic foci is interesting.

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References.—*Studies in Clinical Psychiatry*, by Lewis Bruce, M.D., F.R.C.P.E., MacMillan & Co., Ltd., London, 1906.—*Diseases of the Nose and Throat*, by Sir StClair Thomson, M.D., F.R.C.P., F.R.C.S., third edition, Cassell & Co., Ltd., 1926.—"Retinal Petechiasis," by H. Moreland McCrea, O.B.E., M.D., *Lancet*, June 13, 1927.

*Epidemic Encephalitis.** By IVY MACKENZIE, M.D., F.R.F.P.S.
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HAPPILY it is not expected that in opening a discussion the speaker should make a systematic survey of the subject under review. He may assume that those who may take part are already familiar with the main facts and features of the subject, and it is his business to make appropriate and, if possible, provoking remarks, thus focusing attention on some of the problems suggested by his own experience.

In seven successive years, from 1918 till 1924, the attention of the profession in Glasgow was directed to a "new disease," accounts of which had come during the same period from various parts of the world, and a description of which had already been given a year earlier by von Economo in Austria. That it was new admits now of no question, for there is nothing in the literature of medicine to compare with the phantasmagoria of disorder manifested in the course of this strange malady. There is scarcely a sign or symptom of nervous derangement which did not at one time or another make its appearance during the epidemics. Into the maze of contradictory phenomena it seemed almost impossible to read anything like a rationalized order of events which might be termed a disease entity. Profound and prolonged torpor, protracted and resistive sleeplessness, paralysis, violent jactitation, chorea, athetosis, and convulsions, pains referable to the head, limbs, and internal organs, every conceivable anomaly of movement of the external and intrinsic muscles of the eye, giddiness and rotatory displacement of the body, abnormal reactions of alimentation, circulation, and respiration, delirium, maniacal excitement and fever, comprise some of the outstanding features of this picture of chaos.

The original attempts to interpret the phenomena in the light of nosological principles took various directions. An anatomical basis was soon established in the non-purulent form of encephalitis which was discovered in every case which came to *post-mortem* examination. One result of this discovery, however, was to transfer the confusion to another field of discussion. Non-purulent encephalitis had been described in a variety of diseases. It was present in the cephalic form of poliomyelitis, in the cerebral paralysis of children,

* Being one of the opening papers of a discussion at the Annual Meeting held at Edinburgh on July 21, 1927 (conjointly with the Sections of Mental Diseases and Neurology of the British Medical Association meeting).

in Wernicke's syndrome, and as a sequel of a number of acute infections, chief among these being influenza.

The prevalence of influenza at the time of the outbreak lent colour to the view that the new disease was associated with that infection. There were others who, inspired either by aversion to "new diseases" or by doubt as to the existence of anything which might be termed a "disease entity," sought refuge in the proposal to regard the phenomena as a form of polio-encephalitis. Objection, moreover, was taken to the term "lethargic encephalitis," because, on the one hand, lethargy was not invariably present, and, on the other hand, the morbid reaction was not always confined to the encephalon.

Classification of symptoms, pathological anatomy and logical disputation failed individually and collectively to unravel the tangle which the initial stages of the epidemic presented. The efforts of the laboratory were no more successful, for examination of the cerebro-spinal fluid and bacteriological investigation afforded no data of importance, and experimental research gave no results. It is a striking commentary on the nature of morbid processes, and on the part which the clinician plays in their interpretation, that the disease had to reveal its own identity in the course of time before it could be even partially understood. It soon became apparent that, however obscure the microbic origin, however bizarre and baffling the preliminary disturbances, the tendency of the human organism to preserve its identity found expression in the long run in sequelæ which constituted a fairly reliable standard of reference. It is just this issue of encephalitis in peculiar and characteristic sequelæ which justifies its recognition, not only as a disease entity, but as a new disease.

For what is it that constitutes a "disease entity" or a "new disease"? The physician is concerned, not, like the naturalist, with a wide range of different organisms theoretically adapted in an average way to an average environment, but with a single organism, the human subject, striving to preserve its identity in adverse circumstances. In this struggle all those tendencies and activities which are stabilized in the processes of normal life assert themselves. The conflict is not confined to the part first affected. The unity of the organism provides for the participation of a variety of immediate and distant reactions in the attempt to maintain or restore order. If the initial assault be severe, as in an acute infection or a cerebral hæmorrhage, confusion and disorder are likely to prevail. If this stage be survived, the course of events will be determined by the extent of the damage, and by the efforts of the organism, successful or otherwise, to restore a state of equilibrium.

It is the organic substratum to the chaos of disease that has a deciding influence on the course of the morbid process; it determines the tendency of disease to manifest itself only in a limited number of ways, and it also determines the more or less constant features of each manifestation. These tendencies are exhibited to advantage in disorders of the great integrating systems of the organism, and especially in the nervous system; it is just these tendencies that render possible the classification of disease.

There enter into the concept of a disease other considerations which have reference to its incidence, as well as to its course. In the case under review we attribute its origin to an infective agent; we interpret the initial symptoms as due to the irritation and destruction of nervous elements for which the poisons of the infective agent have a special affinity; we explain the late and permanent symptoms as expressions of partially successful or unsuccessful efforts of rehabilitation.

In claiming for lethargic encephalitis the status of a new disease entity it is contended:

1. That while nothing is known of the toxic agent except that it produces encephalitis, it is not the toxic agent of influenza or of poliomyelitis or of herpes.
2. That the sites of toxic reaction in the central nervous system are peculiar to lethargic encephalitis, and are distinct from the sites involved in other forms of encephalitis, such as cerebral influenza, polio-encephalitis, Wernicke's disease, and the cerebral palsies of children.
3. That the sequelæ of encephalitis, while they are the hall-mark of the disease, are not phases of progressive infection, but phases of attempted adaptation.
4. That the history of the successive epidemics in Glasgow indicates a change of type which is not recognized in any other infection of the central nervous system.

These contentions are based on an experience of the disease extending over nine years. During this period about six hundred cases have been examined, and two hundred of these have passed through my own wards in the Eastern District Hospital and Victoria Infirmary. The brain and spinal cord of 40 cases which came to *post-mortem* examination have been examined. Through the courtesy of Dr. Chalmers and of Dr. MacGregor I have been in constant touch with the Health Department, where a very thorough and extensive investigation of the problem has been carried on from 1918 till the present time. I have also had the advantage of regular collaboration with my colleague Dr. Marshall.

1. *The Toxic Agent.*

I cannot pretend to be conversant with the literature on this aspect of the problem, but there does not seem to be any reason to believe that the site of infection or the character of the organism have been recognized.

2. *Pathological Anatomy.*

The usual feature of the *post-mortem* evidence was the absence of change visible to the naked eye. This was all the more striking in view of the pronounced character of the clinical disturbance. Apart from general congestion, nothing abnormal was noted beyond isolated greyish specks in the basal nuclei and mid-brain of six patients who died in the acute stage, and a relative poverty in pigment in some of the cases which came to necropsy after prolonged Parkinsonian illness. In the spinal cord of 5 cases minute areas of infiltration in the posterior cornua could be seen on naked-eye examination.

This is in marked contrast with what we have observed in other cases of non-purulent encephalitis. In 4 cases of influenza, areas of infiltration, some of them as large as a shilling, were visible on the cerebral cortex. (One of these showing naked-eye changes in each island of Reil is exhibited in the Pathological Museum.) In 2 cases of encephalitis due to the toxæmia of pregnancy, extensive hæmorrhagic exudates could be seen with the naked eye in the basal nuclei and mid-brain. (One of these is exhibited in the Pathological Museum.) In a case of Wernicke's disease extensive hæmorrhagic softening was seen in the mid-brain, and in lesser degree in the basal nuclei and cerebral cortex. Two cases of polio-encephalitis were observed in which translucent reddish areas of softening were visible in the cerebrum and mid-brain, as well as in the anterior cornua of the cord. There are on record cases of non-purulent encephalitis in which there were no naked-eye signs of disease in the brain on *post-mortem* examination, but these are generally admitted to be rare. It is thus permissible to draw the general conclusion that the encephalitis known as lethargic encephalitis differs from other forms of encephalitis in that there is, on the whole, an absence of naked-eye signs of disease in the central nervous system. No account need here be taken of the encephalitis due to syphilis, tubercle, malaria, or trypanosome infection, for these obviously belong to a quite different category.

With regard to microscopic lesions, a distinction can be drawn between the cases which died in the early stage of the disease and those which came to *post-mortem* examination after a prolonged Parkinsonian illness. In the former the lesions are diffuse, are of a

moderately acute inflammatory character, and, as pointed out by Turnbull and McIntosh and Douglas McAlpine and others, tend to be more pronounced in the basal nuclei of the cerebrum and in the mid-brain, and especially in the mid-brain and in the substantia nigra of that region. Occasional foci of reaction may be noted in the cerebral cortex, pons, upper reaches of the medulla, and in the posterior cornua of the cord. The anterior cornual nuclei are not involved. The inflammatory reaction is represented in perivascular infiltration, occasional hæmorrhage, deposits of salts in the vessel-walls and surrounding tissues, degeneration of neurones, and occasional neuronophagia and proliferation of glial cells. The reaction is not so intense as in poliomyelitis and in influenza, and is quite different from that in Wernicke's disease or in the encephalitis of pregnancy, which is essentially hæmorrhagic and not of the nature of a true inflammation.

In the Parkinsonian syndrome there is a consensus of opinion that the most pronounced lesions are in the substantia nigra. Our own findings in this respect accord fully with those of Jacob, Douglas McAlpine, and others who have gone carefully into the problem. It is questionable, however, whether the depigmentation, degeneration of neurons, demyelination, gliosis and slight vascular change in this region are accurately interpreted as inflammation, or, in other words, as a process in which the infective agent is still active. I am not convinced that the histological appearances resemble those observed in such chronic affections of the central nervous system as syphilis, tubercle, malaria or trypanosomiasis. On the other hand, I am in agreement with Hoffmann that in some cases there are changes, though of a minor degree, in the basal nuclei of the cerebrum. The possibility must be taken into account that the degeneration of the substantia nigra is not an isolated lesion accountable for the clinical phenomena in the sense in which anterior cornual degeneration accounts for the disabilities of poliomyelitis, or destruction of the motor cortex accounts for hemiplegia of the upper neuron variety. It is more likely that the Parkinsonian sequelæ are the expression of a disordered function of the whole compendium of reflexes related to the basal nuclei of the cerebrum, the mid-brain and the vestibular apparatus, and concerned with the regulation of those phases of automatic posture which render voluntary movement possible. Histological evidence in those cases that died in the acute stages of the disease indicates the implication of the whole series of nodal centres of correlation between the caudate nuclei and the vestibular nuclei. Such wide-spread involvement is presumably the basis of an original derangement of function of this extensively consolidated mechanism,

and the exhaustion and degeneration of the substantia nigra may quite well be a by-product, as well as a contributing factor to the subversive process. Very little is known of the functional anatomy of the substantia nigra. Douglas McAlpine makes a very significant remark as to the difficulty of determining the condition of the nerve-fibres which course to and from it. A solution of this problem would certainly throw much light, not only on the Parkinsonian syndrome, but on the physiology of the basal nuclei and of automatic movement.

The results of pathological investigation warrant a general statement on the nature of the disease. The toxins of encephalitis show a predilection for the great correlating centres of the nervous system—that is, for the grey matter on the afferent side of the proprioceptive system, for certain nuclei in the base of the brain, and for the posterior cornua of the cord. It is significant that there is practically no evidence of disease in the cerebral cortex, in the red nuclei, or in the anterior cornua of the cord. In sharp contrast with this is the affinity of the toxins of influenza for the cortex and of the toxins of poliomyelitis for the anterior cornua.

3. *The Sequelæ of Lethargic Encephalitis.*

The initial signs are varied. Sudden or insidious in its onset, it may be mistaken for acute mania, hæmorrhage, influenza, acute abdominal disease, lumbago, disseminated sclerosis, chorea, epilepsy, and other conditions. The prevalence of an epidemic was often the most reliable clue to a diagnosis. Frequently it was only when the acute stage had passed and the characteristic sequelæ appeared that it was possible to recognize the real nature of the disease. But these sequelæ are characteristic and peculiarly distinct in the manner in which they appear in children, on the one hand, and in adults on the other.

In the case of children the main disorder consists of profound emotional instability with perversion of conduct. Ebullitions of excitement with uncontrollable impulse, often expressed in outrageous and criminal conduct, afford the evidence of a serious dissolution of nervous integration in the early stages of the disease. There is no clouding of perception as in epilepsy, for when the spasm has subsided there is clear recognition of what has happened, and often an expression—even a precocious expression—of regret. The presumption is that the peculiar character of the sequelæ in children is determined by the fact that the disease has supervened during the early developmental period, and that neural dissolution has occurred in the basal structures before the association centres of the cerebrum have become consolidated with each other, and with the lower

automatic centres over which they are destined to exercise control. When, at a later stage in children, a Parkinsonian phase develops, the psychomotor excitement abates. I know of only one case out of fifty in which recovery may have occurred.

The Parkinsonian syndrome, the common sequel in adults, may emerge immediately from the acute stage or may not supervene for months or years. It comprises in its general uniformity of expression a great variety of somatic and visceral disorders, including inhibition of movement, tremor, excessive salivation, greasiness of the skin, outbreaks of sweating, abnormality in sugar metabolism, attacks of hyperpnœa, and occasionally excessive increase in weight. Combined in varying degree in the single characteristic sequela are the features of two distinct diseases—paralysis agitans and katatonia. It is a paralysis agitans with vegetative disorder, and it is katatonia without the stupor. It is inconceivable that such a varied disorder should be due to a lesion confined to the substantia nigra, in the sense in which infantile paralysis is due to destruction of the anterior cornua, or hemiplegia to ablation of the motor cortex.

I have pointed out elsewhere that the initial involvement of the ocular and vestibular apparatus is consistent with the presence of acute changes in the basal nuclei and brain-stem. The parts of the central nervous system originally affected are essentially those whose integration is concerned in the postural and automatic movement necessary for voluntary control by cortical activity. This great compendium of reflexes has its nodes of integration in the basal nuclei of the cerebrum, in the mid-brain, in the vestibular nuclei, and in the posterior cornua of the cord. It is known to physiologists as the proprioceptive system, and it is suggested that the Parkinsonian sequela is due to a functional derangement of this system incident to destruction of some of its vital parts in the early stages of encephalitis. This conception is consistent with the anatomical findings on which a comparison was made with poliomyelitis and influenzal encephalitis. The lesion in poliomyelitis is in the anterior cornua, in influenza in the cerebral cortex, and in lethargic encephalitis in the correlating centres in the basal nuclei and posterior cornua.

The manner in which a great neuro-muscular compendium may be functionally deranged is seen to advantage in the case of the respiratory mechanism, in which normal health may be impeded by the pathological reactions of coughing, sneezing, hiccup, or the closely allied phenomenon of vomiting. Pathological physiology has to do, not merely with absence, diminution, or increase of normal function; it deals with the aberrant irradiation of stimuli and with

subversive reactions which are absolutely inconsistent with normal function, but which may be kept within limits by stabilized organic tendencies. The pathological physiology of the Parkinsonian syndrome is the study of an organized chaos—a chaos induced in the first instance by destruction of important integrations, and reorganized on an unstable basis in the process of rehabilitation. A suggestive analogy may be found in cardiac disease, in which the circulatory failure, which is often long delayed, bears some resemblance to the Parkinsonian syndrome. The adaptive process is not confined to the heart itself. It extends to the peripheral circulation, in which altered tonus plays a part. When the subversive element in the adaptation gains the ascendancy the failure due to œdema and waterlogging occurs in the peripheral circulation. It is not unlikely that the progressive disability in the Parkinsonian syndrome is due, not to the continued activity of the original toxin, but to aberrant irradiation and subversive tendencies in a poorly adapted proprioceptive system. This conclusion is supported by the remedial effect in some cases of intensive treatment with belladonna and hyoscine.

The outlook in this sequel is no more favourable than that in the special disorder in children, although great improvement may occur and progress may be stayed in many cases by the treatment mentioned.

Of those who survive the acute stage few make a recovery. Not more than sixty out of three hundred were free from all signs and symptoms two years after the infection. It is a remarkable fact that in a disease involving vital centres of the brain and producing such pronounced aberrations of conduct and impediments to behaviour, there should be practically nothing in the nature of dementia in the sense in which that term is understood by the alienist.

4. *History of the Disease in Glasgow.*

Looking back on the history of the disease in Glasgow several points of interest arise. Profound lethargy marked the earliest cases in 1918. The first 6 cases I saw never came out of the state. In 1919 the initial symptoms were often those of acute excitement. In 1920 (and to a lesser degree in 1924), a large proportion of those affected were children, and the majority of these showed choreiform agitation. In 1921 and 1922 the majority affected were adolescents and adults, and the initial symptoms were again severe, although in some cases they were insidious and took the form of transient giddiness or diplopia. In a few cases the disease began with epileptic seizures. In 1923 and 1924 the onset was, as a rule,

more gradual; and we now know from the sequelæ which have developed in the interval that the infection may occur without producing any inconvenience that could reasonably be ascribed at the time to encephalitis. In 1924 some cases were so misleading as to determine a definite diagnosis of disseminated sclerosis. In one instance Dr. Marshall and I demonstrated on several occasions, as a typical example of disseminated sclerosis (ankle clonus, positive Babinski, absence of abdominal reflexes, nystagmus), a case which afterwards became lethargic, and which, on *post-mortem* examination, revealed the definite evidence of encephalitis in the basal nuclei and in the posterior cornua. There was no histological evidence of disseminated sclerosis. I have four *post-mortem* records of similar cases. It is important to note that the optic nerves were normal in each case. There has been no epidemic since 1924, and in the interval I have not seen a single acute case in which the diagnosis of lethargic encephalitis was unequivocal.

(For discussion, *vide* p. 786.)

*The Pathology of Epidemic Encephalitis.** By J. GODWIN GREENFIELD, M.D., F.R.C.P.

1. *Ætiology: The Virus of the Disease.*

EPIDEMIC encephalitis resembles many of the common infectious diseases in being caused by a virus which no one has seen, or has been able to grow in an artificial medium. Whether it has been possible even to transmit the disease to animals is still a matter of dispute, although the most recent work tends to confirm rather than to discredit the assertions of those who claim to have done so. This work is of the greatest interest, and it is of special importance in that it clarifies some of the difficult clinical problems which the disease presents. In particular, it seems to shed light on the question why the more acute forms of the disease are less often followed by progressive sequelæ than those in which it begins more insidiously.

Those who have claimed to infect animals with the disease must be divided into two groups. The protagonists of the first group are Loewy and Strauss of New York, and Kling and his associates in Sweden. Some of those who obtained the earliest positive results in this country must also be included in this group. These

* Being one of the opening papers of a discussion at the Annual Meeting held at Edinburgh on July 21, 1927 (conjointly with the Sections of Neurology and Mental Diseases of the British Medical Association meeting).

workers used either brain pulp, or cerebro-spinal fluid, blood, nasopharyngeal secretion, urine, or fæces from cases of encephalitis for injections into rabbits. The animals showed no symptoms, but when they were killed and their brains examined microscopically, about 50% were found to show lesions similar to those of the human disease; in particular, foci of lymphocytic exudate and perivascular infiltration. This disease could be transmitted from rabbit to rabbit indefinitely, but only about half of the rabbits became infected. The claims of these workers were shown to be invalid by McCartney, who examined 372 stock rabbits at the Rockefeller Institute, and found similar lesions in the brains of 55%. Following on the work of Bull and Oliver he was able to trace the ætiology of the encephalitis in these animals to a protozoon which Levaditi has named the *Encephalitozoon cuniculi*. This comparatively harmless parasite had obviously caused an epizootic among the experimental animals, which chanced to resemble encephalitis lethargica in its histological characters. These results must therefore be completely discounted.

The other group of workers who have transmitted encephalitis to animals claim that the ætiological agent is identical with that of herpes febrilis, differing from it only in possessing a greater affinity for the nervous system. The first to transmit this virus from the human disease were Levaditi and Harvier, who in 1920 produced the symptoms of acute encephalitis in a rabbit by the subdural injection of brain-tissue obtained from a case of encephalitis lethargica. It is noteworthy that the patient from whom this material was taken had facial herpes at the time of death. Following on this, Doerr, Schnabel and Berger in Bale, Luger and Lauder in Vienna, and Perdrau in London, have produced encephalitis in rabbits by the inoculation of either brain-pulp or cerebro-spinal fluid. All these workers state that it is extremely difficult to infect animals, and that only a very few of the human cases of encephalitis examined yield a virus which is pathogenic for animals. But when encephalitis is produced in the rabbit, it can usually be transmitted as a rapidly fatal disease from animal to animal.

It has been known, since the pioneer work of Grüter and its confirmation by Kraupa and Löwenstein, that fluid obtained from the vesicles of dendritic ulcers or of labial herpes contains a virus which, when inoculated on to the scarified cornea of rabbits, produces a keratitis, accompanied by sero-purulent conjunctivitis, and often followed by rapidly fatal encephalitis. Levaditi and Harvier, in ignorance of this work, inoculated the virus which they had obtained first into the anterior chamber of the eye, and later on to the scarified cornea of rabbits, and in both instances produced not only local

lesions, but an encephalitis from which the animals died in ten to fourteen days after inoculation. It only remained for Blanc, working in the Pasteur Institute at Athens, to compare the virus obtained from these two different sources, and it was later proved that they were identical by crossed immunity experiments. It is true that certain differences are noticeable, not only between encephalitis and herpetic virus, but also between different strains of encephalitic virus. Some of the latter constantly cause both keratitis and encephalitis; others produce a less severe keratitis, but when injected into the brain produce a fulminating encephalitis. On the whole, the herpetic virus is more virulent for the cornea, and less virulent for the brain, whereas the encephalitic virus may be comparatively avirulent for the cornea. But when keratitis has been produced by a virus of either kind, it is impossible to reinfect that cornea with virus of any other strain, although it still remains sensitive to inoculation by other viruses, such as that of vaccinia.

The only serious criticism brought against the theory of the identity of the virus of herpes febrilis with that of encephalitis lethargica, is that in the few instances in which encephalitis has been caused in rabbits by the inoculation of human material the virus of herpes febrilis had been accidentally included. This may well have been so in Levaditi's first case, in which herpetic vesicles were present at death. In fact, Flexner obtained an apparently identical virus from the cerebro-spinal fluid of a convalescent case of neurosyphilis. Herpes is a very common and wide-spread disease among mankind, and the fluid from herpetic vesicles is constantly pathogenic to rabbits. Not only so, but saliva and nasopharyngeal washings of those who are susceptible to herpes are frequently sources of herpetic virus. It would, therefore, not be surprising if occasionally virus of this kind reached the cerebro-spinal fluid during life, or the brain after death. This opinion is strengthened by the observations of Teissier, Marinesco and others, that patients suffering from encephalitis lethargica are not more but less immune to herpes inoculated cutaneously than are the generality of mankind. Levaditi himself thought to cure encephalitis lethargica by injecting the virus of herpetic encephalitis into the lumbar canal of patients, and produced in many of them facial or labial herpes. There is therefore no such crossed immunity in the human subject as exists in rabbits. But it is notorious that human immunity to herpes febrilis is very slight. Even in the rabbit immunity to herpes does not last long and shows many peculiarities. It is definitely a tissue immunity and not a humoral immunity. Mixing the serum of an immune rabbit with virus does not reduce its virulence, although the addition of immune brain-pulp sometimes does so.

Perdrau found that the brain-pulp of rabbits immunized by cutaneous inoculation contained aggressins in addition to immune bodies, and that when kept in glycerin from two to three weeks the aggressin remained active, whereas the immune bodies deteriorated. Acting on these observations, he fortified the virus contained in human brain emulsion by adding to it before inoculation twice as much brain-pulp from a recently immunized rabbit. In this way he produced encephalitis in rabbits with material which, when injected alone, proved ineffective. He also made use of the "negative phase" of immunity by performing his intracerebral injection the day after a dermal inoculation, or even by giving on four successive days two dermal and two intracerebral inoculations. In this way he was able to produce encephalitis in rabbits with material from each of three fatal cases of encephalitis lethargica. His work is of the utmost importance, since it seems to indicate why so many of the earlier experiments had failed. He showed in the first place that the most virulent human virus, which, if preserved in glycerin long enough to rid it of the accompanying immune bodies, produced in rabbits a fulminating encephalitis, fatal in four days from the time of inoculation, and might, if injected fresh and without the help of aggressins, produce no symptoms at all. And secondly, that less virulent material, especially that obtained from less acute cases of the disease, might produce in rabbits a subacute form of encephalitis with lethargic symptoms. These symptoms were quite unlike those of the ordinary herpetic encephalitis, but were exactly similar to those seen if herpes virus were inoculated intra-cerebrally into immunized animals at a time when their immunity was passing off. In both cases the brains of these animals did not yield any virus which could be transmitted to other animals. From these observations he concluded that in the human disease one of three things may happen :

"(1) The development of a local cellular immunity which overcomes the infective agent and leads to a complete recovery. (2) The development of a state of cellular immunity which only partially overcomes the infection, the final issue being either a fatal one or a chronic infection. (3) Failure of the development of any immunity and a quickly fatal result."

Cases of type (3) would yield a virus which, being free from immune bodies, would be easily transmissible to rabbits; but the majority of cases were of type (2), and material from them would be either completely non-infective, or might produce a subacute encephalitis from which no further active virus could be obtained. If, however, it were freed from immune bodies by prolonged glycerination, or if its virulence were increased by the addition of

“aggressins,” such material might produce a typical herpetic encephalitis transmissible to other rabbits. Now the experimental work with herpes has shown that the immunity obtained by the inoculation of a weak virus is less complete and more evanescent than that given by a strong virus. It seems, therefore, likely that in the human subject an infection by a comparatively non-virulent strain might fail to produce sufficient cellular immunity to kill off the virus completely, and that it might spread in the brain, attacking only those cells which have less power of resistance. It may be, as Perdrau has suggested, that certain cell-groups are less resistant than others, and possibly the melanin-bearing cells of the substantia nigra and substantia ferruginea are particularly susceptible. If so, it is easily understood why cases in which the initial cerebral symptoms are of the slightest character frequently go on progressively to a state of post-encephalitic Parkinsonism.

2. *Clinical Pathology: the Cerebro-spinal Fluid.*

The only laboratory examination which gives any assistance in arriving at the clinical diagnosis is that of the cerebro-spinal fluid. Here the evidence is sometimes negative rather than positive, as, even in the early stages, the fluid may be quite normal or may contain a slight excess of glucose, which is always of doubtful significance. But usually in the first few weeks of the disease there is a lymphocytosis of 10 to 100 or even more cells per cubic millimetre. In my experience, as well as in that of others, the cells are usually all mononuclear, but occasionally the presence of a varying proportion of polymorphonuclear cells has been reported. In the past I have been inclined to doubt the diagnosis when any considerable proportion of the cells was polymorphonuclear. But in one case in which I found 10% polymorphonuclear cells, the onset of typical sequelæ has established the diagnosis; and there appears to be no reason for doubt in Douglas's Sheffield cases, where as high a proportion as 44% was sometimes found. In a case examined histologically by Da Fano, as also in one of von Wiesner's, the inflammatory exudate in the brain was largely polymorphonuclear in character, and this is the case also in the herpetic encephalitis of rabbits during the more acute stages. In view of these facts I am inclined to alter my earlier opinion, and to agree that polymorphonuclear cells may sometimes occur in the cerebro-spinal fluid. It is characteristic of encephalitis that the rise in the cell-count is not usually associated with any great increase either in the total protein or the globulin, and sometimes a large cellular excess is associated with a normal protein percentage—the so-called cell-protein dissociation. Excess of protein is exceptional, and a coagulum

practically never forms. Yellow or hæmorrhagic fluids are sometimes obtained when there has been meningeal hæmorrhage, but such cases appear to be rarer now than they used to be. Not uncommonly, the colloidal gold reaction gives curves of the luetic type. Some workers have obtained such reactions in every case examined, others only in 15 to 50% of cases, but all are agreed that some change in the colloidal gold is characteristic of the disease. Occasionally fairly strong curves of the paretic type have been obtained, but are rare. The colloidal gold reaction is of special importance in the post-encephalitic states, as it may give the only evidence of any abnormality in the fluid. The reactions obtained at this stage are usually so weak that the other colloidal reactions may fail to demonstrate them.

3. *Morbid Histology.*

The histological picture of the disease is so well known that it would be unnecessary to add anything to it, were it not that there has lately been a tendency to focus attention on the mid-brain, forgetting the cerebral cortex, and to think more of the cellular exudate than of the damage done to the neurons. It has now been definitely established that post-encephalitic Parkinsonism is due to the destruction of the cells of the substantia nigra, and certain evidence, both clinical and pathological, appears to justify the assumption that sometimes the disease lingers on in this region of the brain after it has died out elsewhere. But there can be no doubt that destruction both of these melanin-containing cells and of nerve-cells elsewhere in the brain may, and does in fact, take place at a very early stage. I have examined the brain of a case of lethargic encephalitis which terminated on the twenty-third day of the disease, in which most of the cells of the substantia nigra had already disappeared.

Now it is easy by any of the ordinary staining methods to establish the disappearance of melanin-bearing cells, as the granules of melanin lie about free in the tissues for some time afterwards. But it is very much more difficult to tell when there has been destruction of some of the cells of the cortex or of the basal ganglia. In the case of the latter organs cell-counts have occasionally been done, and have shown that a certain small proportion of the neurone has disappeared. General shrinkage of the basal ganglia has rarely been taken into account, although it is well known that this may occur and may confuse the cell-count. In the cortex comparative cell-counts are extremely difficult. But decay of the neurons of the cortex and basal ganglia may be demonstrated in a large number of

cases by the collection of lipoid granules around the walls of the small vessels in those regions. The majority of these granules appear to consist of the lipochrome of nerve-cells, although a certain number may result from the destruction of myelin. Compound granular corpuscles, however, are very rarely seen, and demyelination of the cortical layers is never prominent. There is evidence that lipochrome is not easily metabolized in the tissues, and its appearance in large amounts in the walls of the small cortical vessels after a few weeks of disease may, I think, be taken as showing at least severe damage to, if not destruction of, a large number of cortical neurons.

I have recently examined the brain of a case of encephalitis which ended in mania about four weeks after the onset of diplopia and paræsthesia. In all the regions of the cortex examined the accumulation of lipoid, not only in the nerve-cells, but also around the walls of the vessels, was very striking. It was not everywhere of equal intensity, but was usually greatest at the bottom of the sulci, and from here spread outwards in an irregular fashion towards the surface of the brain. Similar collections of lipoid pigment were also present in the putamen and caudate nucleus, but were less noticeable in the pallidum and optic thalamus. Unfortunately I did not have an opportunity of examining the mid-brain in this case. In a post-encephalitic case in which, in addition to Parkinsonian bradykinesia, there was pronounced lethargy, similar perivascular collections were found in the cortex, especially in the occipital poles. In the frontal cortex there was, in addition, a definite disappearance of nerve-cells.

We are therefore justified in considering encephalitis lethargica as a disease in which there may be wide-spread and severe destruction of nerve-cells, not only in the brain-stem, but also in the cortex; and it seems clear that this neuronal degeneration is quite independent of any inflammatory cellular reaction that may be present. It is of interest to note that such skilled observers as Bouman and Bok and Flexner and Amoss have demonstrated a similar direct action by the virus on the nerve-cells in the herpetic encephalitis of rabbits. This conception of the pathogenesis of the disease is supported by the observations of McNalty, Boyd and others, that in the most rapidly fatal cases there may be little or no inflammatory exudate or perivascular cuffing. It is not a new conception, but it is perhaps a useful one to keep in mind when we try to visualize the pathological substratum of the mental sequelæ of lethargic encephalitis.

(For Dr. Greenfield's comments on his opening paper and his further remarks and the general discussion, *vide* p. 736.)

*Chronic Encephalitis.** By GEORGE RIDDOCH, M.D.Aberd., F.R.C.P.Lond., Assistant Physician, London Hospital and National Hospital, Queen Square.

CLINICAL and pathological experience has shown that encephalitis lethargica, like neuro-syphilis and disseminated sclerosis, is essentially a chronic disease. For whether it declares itself acutely or insidiously, and however complete the recovery from the initial phase may appear to be, in a large proportion of cases the infection, which has evidently lain dormant for weeks, months or years, again becomes active and gives rise to the grave disabilities with which we are familiar. The distressing result is that we never know when the patient is cured. At present we are at a prognostic *impasse*.

The disease commonly begins as an acute illness, with the symptoms and signs of which we are not here concerned. Suffice it to say that it may be severe, with high fever and general constitutional disturbance; or subacute, with or without distinctive features, such as lethargy and diplopia; or so slight that it is looked upon as a trivial event. The mortality-rate has been differently estimated, but it probably lies between 20% and 30%. Of the survivors, some are left with residual troubles, that may in time disappear, or become stationary, or get worse. Others remain well for so long that we hope that the cure is complete. But there is always the danger of relapse and the development of late manifestations.

An important group of cases is that in which the disease seems to be chronic from the beginning. Of course there is the possibility that the initial attack has been missed, or passed over as either influenza or a common cold. But with that in mind cases are not infrequently met with in which the most searching inquiries fail to reveal the history of a suspicious illness.

Clinical Forms of the Disease.

Although the virus of encephalitis lethargica has a predilection for the brain-stem and corpus striatum, no part of the nervous system is immune. It has to be remembered also that the disease is a general infection with a special affinity for the neuraxis, but attacks other structures as well, notably the ductless glands. The variability of its clinical manifestations is, therefore, not surprising. At the same time there is the danger, when dealing

* Being one of the opening papers of a discussion at the Annual Meeting held at Edinburgh on July 21, 1927 (conjointly with the Sections of Mental Diseases and Neurology of the British Medical Association meeting).

with a new disease where our knowledge is far from complete, of overstressing its polymorphism and of using it as a harbour for our diagnostic difficulties. The clinician with his mind attuned to new possibilities requires the constant check of pathological investigation. Nevertheless, chronic encephalitis lethargica is already stamped by the occurrence of many distinctive disorders of function, and others, doubtless, will yet come to light.

It is useful to separate various clinical pictures or syndromes from the diverse manifestations of the disease. With a wide-spread infection of this sort a classification on rigid anatomical or physiological lines is impracticable. More convenient, if less scientific, is one that is based on common groupings of symptoms and signs which more or less indicate the main anatomical incidence of the lesion, although different physiological units may be involved. But here again the liability to recurrences may so alter the clinical picture throughout the course of the complaint that classification on any basis becomes complicated and inadequate.

In the time at my disposal I will not attempt more than a brief outline of some of the physical disorders of function presented by the disease in its late stages. The mental changes which are so important, especially in children, are dealt with by Dr. Marshall.

The Parkinsonian Syndrome.

In adults this is the most common disability of a general kind resulting from encephalitis lethargica. It occurred, for example, in 70 out of 129 cases studied by Mme. Lévy (5). It may appear rapidly during the acute illness when there is some hope of improvement. But more often its evolution is slow and progressive from the outset, although in its course there may be stationary periods.

The clinical picture of the disorder in its fully developed form is now so familiar that to describe it afresh would be unnecessary. It would be more profitable to consider some of the features which indicate the mild Parkinsonian state. These are often slight, but, as a rule, so alter the patient's appearance and behaviour that they at once arrest attention. He, too, is always aware that something is wrong, and his constant complaint is of a sense of weariness and reduction in vigour. These symptoms will be discussed later in more detail, since they may be present in extreme form without gross physical signs. With them, but not invariably, there is lethargy or insomnia, which may last continuously for many months, or disappear for a time and recur. The sleeplessness is particularly resistant to treatment. Such disorders of sleep are, of course, not peculiar to the Parkinsonian state, but may form part of any of the clinical pictures of chronic encephalitis lethargica.

The early signs of Parkinsonism are found more in the upper part of the body, especially the face, than elsewhere. The face is greasy, the expression tends to be fixed, the eyes staring, the mouth often a little open, and a pool of saliva may be seen between the lower lip and the teeth. The palpebral fissures may be wide or narrow, but blinking is infrequent, and quivering of the lids, when an attempt is made to open or shut the eyes, is a constant sign. Diplopia, squint and nystagmus are less commonly found than in the acute stage of the disease, but defects in ocular movement or pupillary reaction are never absent. The external ocular palsies are supra-nuclear in origin, and consist of defective conjugate movement, especially on convergence. A striking abnormality that is sometimes observed is intermittent spasm of the elevators of the eyes. The pupils are not usually altered in size or shape, but are often unequal, and almost always show some disturbance of reflex action to light or of accommodation or both. They may be fixed. Impairment of the pupillary accommodation reflex and of conjugate convergence of the eyes go together. Although there may be no definite diplopia, mistiness of vision from defective muscle balance or ciliary paralysis is often complained of, and may be a persistent defect.

A characteristic feature of the Parkinsonian state is the relative immobility of the affected parts even in the apparent absence of rigidity, at all events to the ordinary clinical tests. In its minimal development this is evident in slight fixity of the facial expression and of the eyes, a tendency to hold the head still, a reduction of the associated swinging movement of the arm in walking, and a diminution in the natural fidgetiness of the healthy individual.

Along with the face, one upper limb is usually slightly affected in the mild cases of Parkinsonism, and when there is any rigidity its cog-wheel character can best be detected at the wrist. Of the other slight signs of the Parkinsonian syndrome, two only will be mentioned, namely, excess of saliva in the mouth, the result of diminished activity of the swallowing reflex, and micrographia. Even slight involvement of the right hand is apt to be portrayed in the handwriting, which becomes smaller, the reduction in size of the letters being progressively evident towards the end of each line, as the script goes on. In addition, the lines forming the letters are slightly wavy, although tremor of the hand may not be seen.

Involuntary Movements.

Involuntary movements of many different kinds are amongst the common manifestations of chronic encephalitis lethargica. The

time of their appearance in relation to the onset of the disease, their duration, and the constancy of any one form show great variation. More than one variety may be seen in the same patient, and they may change during the course of the illness. Some are slight and almost insignificant, others are large and arresting, and, in a severe case, the body may be in an almost constant riot of movement.

Involuntary movements rarely, if ever, occur as the sole manifestations of the disease. Mental or physical derangements of some sort are also present, but may be so slight as to be easily missed by the casual observer. Emotional instability and restlessness, especially at night, lapses in behaviour, minor pyramidal or extra-pyramidal signs and oculo-motor defects are perhaps the most frequent slighter accompaniments of involuntary movements, but any of the dramatic respiratory disorders may be found.

Mme. Lévy (5) has grouped the involuntary movements of encephalitis lethargica as follows: (1) Choreiform movements, (2) bradykinesia, (3) myoclonic movements, and (4) tremors. But there are many others—for example, innumerable tics, shuffling and stamping movements of the feet, ocular or glossal spasm, complex automatic actions of the whole body, and the "imitative" movements described by Babinski and Klebs (1). Brief mention only will be made of some of these abnormal reactions.

Bradykinesia is the term used by Marie to denote slow, regular, rhythmic movements, often of great amplitude. Such are torsion of the trunk, athetoid movements of the limbs, spasmodic torticollis and grimacing. They are not often encountered.

Myoclonic movements are well known in the acute phases of the disease. But they may also appear as late manifestations in any part of the body and persist for months, accompanied by pain and cutaneous tenderness, radicular in distribution. The pain is often severe and continuous, and may last long after the shock-like muscular contractions have gone. The contractions are rhythmical, at a rate which varies, and may reach forty a minute, and involve part of a muscle, a whole muscle, or a muscle group. Usually they are of insufficient strength to displace a limb segment. When they are localized, the upper abdominal wall or the diaphragm is most often the part affected, and in the latter case the objective manifestation of the contractions is recurrent hiccup.

Tremor of different parts of the body occurs chiefly as a complication of the Parkinsonian syndrome. Froment and Delore (4) have rightly insisted that, unlike the tremor of paralysis agitans, it occurs only during voluntary movement or the maintenance of an active posture. In addition to the limbs it is found elsewhere, giving rise, for example, to shaking of the head, clicking of the teeth,

to-and-fro movements of the tongue, and a rhythmical sucking action of the lips.

All involuntary movements are aggravated by emotional disturbance and fatigue, and, so far as I know, disappear during sleep.

Respiratory Disorders.

A considerable literature has grown up concerning these striking and diverse abnormalities. At first they were often looked upon as hysterical—a not surprising mistake, for they can to some extent be controlled by voluntary effort, become aggravated by excitement, and are frequently associated with emotional instability and restlessness, especially at night. With some of the more severe respiratory disorders delusions and violence may develop, necessitating the patient's confinement in a mental hospital.

Turner and Critchley (6) have classified respiratory abnormalities into three groups: disorders of rate, disorders of rhythm, and respiratory tics.

Tachypnœa and bradypnœa are usually paroxysmal, the attacks varying in duration from a few minutes to several hours. With increase in the respiratory rate (60 to 100 a minute) breathing as a rule is shallow, not necessarily distressing, and there may be no accompanying tachycardia. Sometimes, however, breathing is deep as well as rapid, and, in prolonged attacks, tetany from over-ventilation of the lungs may then develop. Tachypnœa is followed by a period of either bradypnœa or apnœa before normal respiration is established. In bradypnœa the respiratory rate may fall as low as 6 per minute and the breathing is deep and often noisy and panting.

The term "dysrhythmia" is used to cover such abnormalities as sighing, apnœic pauses, breath-holding and the like. Breath-holding is a most dramatic performance, which may be often repeated, especially towards evening, and occur during sleep (Turner and Critchley (6)). After a few deep breaths the chest is held in full inspiration for as long as half a minute. The head is often thrown back, the limbs may perform various grotesque movements, the face may or may not be cyanosed, and, in the longer attacks, consciousness is sometimes lost for a short time. Noisy expiration follows and normal breathing is then established.

Respiratory tics.—Hiccup, yawning, spasmodic hard cough without expectoration, sniffing, hawking, sneezing, are all included under this heading. They are perhaps most often met with in young patients of school age, who, in addition, show changes in character and are subject to nocturnal excitement.

Spastic Paralysis and Muscular Atrophies.

Evidence of slight pyramidal disturbance is common enough as part of almost any syndrome of chronic encephalitis lethargica, but especially Parkinsonism; and, since Buzzard and Greenfield(2) described the first case, it has been recognized that hemiplegia, with or without an apoplectiform onset, may occur during an acute attack of the disease. So, also, rapidly developing paraplegia from myelitis has not been unknown in some of the epidemics. But paralysis of either cerebral or spinal origin may also develop insidiously and form the prominent part of the clinical picture. The diagnosis in such cases may be extremely difficult or remain uncertain, but, as a rule, distinctive phenomena are associated with the paralysis, or the history of the illness provides the clue. Thus, Wimmer (7) has described a case of hemiplegia in which the paralysis was gradually replaced by Parkinsonian features. These disorders may occur simultaneously and on different sides of the body, as in one patient I had under observation for several weeks. Another case where, however, the diagnosis is more doubtful, is that of a man of 53 who, three years after an acute attack of encephalitis lethargica, developed progressive paresis of one lower limb along with nystagmus and unilateral deafness. He was otherwise healthy.

Local muscular atrophies, with or without fibrillation, in different situations have been described by several observers. Thus, Wimmer (7) has recorded an example of wasting of the tongue, and I have at present under my care a patient with unilateral glossal atrophy with fibrillation. Sicard and Paraf, Froment and others have described amyotrophies in the limbs. These are often associated with pyramidal or sensory disorders, clearly pointing to spinal involvement. From histological and clinical evidence it would appear that muscular atrophies may be due to lesions either of the anterior horns or the roots, and, when radicular, there are often in addition severe root pains and cutaneous tenderness which may persist for months.

Endocrine Disorders.

Adiposity, with or without disturbance of the sexual functions, is fairly often met with. Duncan (3) found it in 7 out of 83 cases investigated at the London Hospital. One of my patients, a young girl, who became rapidly and grossly fat after an acute attack of the disease, had amenorrhœa lasting for many months. Later she developed exophthalmic goitre and her weight diminished, but did not fall to normal until she made an apparently complete recovery in eighteen months.

In another case, tachycardia, tremor, slight goitre and emotional instability appeared in a girl a few weeks after she seemed to have recovered from the acute phase of her illness, and persisted for many months.

Diabetes insipidus and glycosuria are also occasional late results of the disease.

Asthenic Syndrome.

Lastly, there is a clinical picture of chronic encephalitis lethargica of which enfeeblement is the constant and main symptom, and in which the physical signs may be slight. Insufficient attention has been paid to this not uncommon syndrome.

The condition may follow an acute attack of the disease, either immediately or after a variable interval, or develop as a chronic state from the beginning. The patient's complaint is of a more or less persistent sense of fatigue, both mental and physical, not a mere inertia, but the discomfort of great weariness. There is diminished desire or power for effort, and physical exertion or mental exercise aggravates the sensation of weakness. The patient looks tired and lackadaisical, and his movements and speech are slow and without animation. For a considerable time he may, with difficulty, continue his work, but if the feebleness increases, as it usually does, he ultimately gives up the struggle and lies in bed or sits in a chair doing nothing. Unlike the weakness of myasthenia gravis, it is not as a rule much diminished by rest, and, unlike the neurasthenic, the patient does not tend to feel better as the day goes on. He may sleep well or be lethargic, but quite often insomnia is a serious complication. Especially when there are family responsibilities, the results of worry cloud the clinical picture, and depression, tearfulness and irritability lead to the common diagnostic error of anxiety neurosis.

This state of fatigue with the sense of general ill-health and weariness is common to most, if not all, Parkinsonians; but the point I wish to stress is that it quite frequently occurs as the sole or main disability. At the same time, in my experience, some of the patients who are afflicted in this way sooner or later develop the Parkinsonian syndrome, but with what frequency I cannot say, since the period of observation in many is as yet too short. In one case, a man of 40, the characteristic facies and bodily posture began to develop fifteen months after the onset of the illness.

Slight physical signs are almost always found, and of these, defective pupillary reactions and conjugate movements of the eyes, especially on convergence, are the most frequent. Sometimes there is a little weakness of voluntary movement of the face, tongue,

and palate; or again mild Parkinsonian signs or involuntary movements, such as tremor or facial tic, may be seen.

Recognition of this group of cases is important, not only from the point of view of the symptomatology of the disease as a whole, but also for their differentiation from psychogenic disorders, with which they are frequently confounded. In the literature occasional reference has been made to this clinical form of encephalitis lethargica as a "myasthenic" variety of the disease—a term which, in my opinion, should not be used; for between it and myasthenia gravis there are many essential clinical distinctions and complete pathological divergence.

The gaps in this brief outline of the clinical features of chronic encephalitis lethargica will be filled in by subsequent speakers. Our knowledge of the symptomatology of the disease, if yet imperfect, is steadily growing, but it must be admitted that in regard to prognosis and treatment we are at present profoundly ignorant. With nine years' experience now behind us, and a wealth of material at our disposal, much could be done by systematic investigation, especially at large hospitals, to throw more light on the nature of the disease in its various manifestations.

References.—(1) Babinski and Klebs, *Soc. de Neur.*, July 6th, 1922.—(2) Buzzard and Greenfield, *Brain*, 1919, xliii, p. 305.—(3) Duncan, *ibid.*, 1924, xlvii, p. 76.—(4) Froment and Delore, *Rev. Neur.*, No. 1, January, 1926.—(5) Lévy, *Les Manifestations Tradives de L'Encéphalite Épidémique*, Paris, Gaston Doin.—(6) Turner and Critchley, *Brain*, 1925, xlviii, p. 72.—(7) Wimmer, *Chronic Epidemic Encephalitis*, London, Heinemann.

(For discussion, *vide* p. 737.)

*The Mental Aspects of Epidemic Encephalitis.** By ROBERT MACNAB MARSHALL, M.D.Glasg., Assistant Physician, Victoria Infirmary, Glasgow.

MY view of the nature of this disease coincides with that of Dr. Mackenzie. The disease encephalitis lethargica may be defined as an infection the toxic products of which have an affinity for the grey matter of the central nervous system, and so give rise to any of the syndromes of disease of that tissue or to any combination of such syndromes, and which runs a fickle course that may end in recovery, death, or the production of characteristic sequelæ.

In seeking to make a helpful contribution to a discussion of this protean disease it seems best not to try to give an epitome of the

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disease, but to choose certain topics suitable for discussion. It is proposed, therefore, in what follows to deal briefly with the following points :

- (1) The clinical importance of the course that the disease runs.
- (2) The incidence of the characteristic sequelæ of the disease.
- (3) The mental state of the restless, naughty child.
- (4) The clinical affinities of the Parkinsonian syndrome.

(1) *The Clinical Importance of the Course that Encephalitis runs.*

The chief end of the clinician's work on this disease appears to be to cut out of its protean manifestations various types, and to arrange them in a scheme of classification. Little or no success, however, has attended his efforts in this direction. Of the many schemes of classification of the clinical varieties of epidemic encephalitis that have been drawn up in almost every European tongue, no one has met, or is likely to meet, with general acceptance. This general failure to make good in their taxonomic labours has been attributed by the clinicians themselves to the way in which well-defined types of nervous disorder succeed each other in the course of the disease. It is not uncommon, they have pointed out, to see epidemic encephalitis begin as a neuralgia, and then pass through a series of states akin to chorea, lethargy and acute mental confusion, each succeeding state blending with its neighbours in a way that eludes their powers of definition. But this failure to define clear-cut types of the disease is hardly a matter for regret, for while the fickle course that the disease runs may render the work of the taxonomist impossible, it is, in itself, a most valuable subject of clinical study. In this respect its chief value lies in the fact that a study of the course that the disease runs clinically brings the observer into touch with the morbid process responsible for the production of the clinical types that are the taxonomist's pre-occupation. In so far as the clinical varieties that the taxonomist defines are static, there is nothing specific about them. There is nothing specific, for example, about the ophthalmoplegia of epidemic encephalitis, even although paralysis of accommodation is commonly met with in that condition. It only regains its specific character when it is reviewed in the light of its clinical history, and demonstrated to be an incident in the course of the disease that runs a kaleidoscopic course.

While an epidemic of encephalitis lethargica is raging, the diagnosis in the great majority of cases offers no real difficulty. It is another matter, however, when it is a question of recognizing a sporadic case of the disease. In these circumstances the difficulties

of a differential diagnosis between epidemic encephalitis and the other forms of non-purulent encephalitis may be insurmountable. The same remark applies to the difficulties that arise on meeting an unusual form of chorea, ophthalmoplegia, or lethargy. In all these instances, however, the fact that the condition has occurred in the progress of a malady that has run a fickle course, in which divers symptoms of nervous disease have put in an evanescent appearance, goes a long way to establish the nature of the disease process at work.

(2) *The Incidence of the Sequelæ in Encephalitis Lethargica.*

It is usual for an interval to elapse between the subsidence of a disease and the appearance of its sequelæ. This is far from being the rule, however, in epidemic encephalitis. Not infrequently it happens that a syndrome that has played a more or less prominent part in the acute phase of the disease persists after this phase has apparently subsided. Tics, disorders of the respiratory rhythm and psychomotor excitement frequently behave in this way. Although it is usual for an interval of anything up to four years to elapse before the appearance of the Parkinsonian syndrome, it also may follow hard upon, if not actually arise out of, the acute phase of the disease. On the strength of these considerations the appropriateness of the term "sequelæ" for such manifestations of epidemic encephalitis has been called in question, and the term "residua" used in place of it. But the facts of the case are not so unique as to warrant this change in terminology. Scarlatinal nephritis is commonly regarded as a sequela of scarlet fever because an interval of a fortnight elapses between the subsidence of the fever and the appearance of the nephritis. But nephritis may also appear as a symptom of scarlet fever, and persist after the fever has subsided; yet no one has ever suggested on that account that scarlatinal nephritis should not be spoken of as a sequela of scarlet fever. The term "residua" may play quite a useful rôle as a label for the nervous syndromes that arise out of the acute phase of epidemic encephalitis, and follow a subacute or chronic course of their own, but it can never displace the term "sequelæ" for those syndromes which appear some time after the subsidence of the acute phase of the disease.

Age appears to play an important part in the incidence of the residua and sequelæ of epidemic encephalitis. Psychomotor excitement, with or without nocturnal wakefulness and somnolence by day, tics, choreiform movements, and disorders of the respiratory rhythm, show a preference for the early years of life. On the

other hand, the Parkinsonian syndrome, the well-defined states of mental disorder—mania, melancholia and confusion—and the residual paralyses are the appanages of youth and adult life.

Sex does not appear to influence the incidence of the sequelæ; but there is some evidence to show that, although pregnancy does not play the part it was at one time thought to do in modifying the course of epidemic encephalitis in women, it influences the incidence of the Parkinsonian syndrome.

An attempt has been made to show that the severity of the acute attack influences the incidence of the sequelæ. This is largely the work of observers who have been in a position to follow the after-history of patients whom they have treated during the acute phase. It is, however, a very common experience in a neurological clinic or in a mental clinic for school-children, to be unable to get a history of an acute attack of the disease in patients who show the sequelæ of the disease in their most characteristic forms. This fact has led many observers to connect the incidence of the sequelæ with the way in which the acute illness and the convalescence have been managed. These observers hold that the great desideratum is rest to the mind and body, and advocate six months of this for mild cases, and a year for severe cases.

There is much evidence to show that the nature of the sequelæ vary from epidemic to epidemic. Thus the Parkinsonian syndrome was a common sequela of the 1919 epidemic, and was practically unknown in that of 1918. On the other hand, psychomotor restlessness with nocturnal wakefulness was a common sequela of the epidemic of 1920–21, and athetoid movements of the epidemic of 1923–24.

(3) *The Mental State of the Restless, Naughty Child.*

A great deal of attention has been paid to the restless, naughty child because of the social and educational problems that he raises, and much that has been written about him is wide of the mark. The moral aspect of his behaviour has been emphasized, naturally enough, as it is his apparent disregard of all moral considerations that makes him impossible at home, at school, or in the sick ward; and many have professed to see in this an absence, a numbing, or a perversion of his moral sense. Strangely enough, very little has been said about the *maniacal* character of his misbehaviour, although it has more affinity with that of the maniac than with that of the delinquent, hebephrenic, or that *rara avis*, the moral imbecile. There is nothing cunning or underhand about the misdemeanours of the restless, naughty child. Unlike the delinquent, he does not.

choose a convenient season in which to commit his misdeeds ; he carries them out in the public eye. He acts on the spur of the moment, and his offences are quite devoid of *malice prepense*. On the other hand, he does not show the stolidity of the hebephrenic or the moral imbecile. He is accessible to an appeal to his better self and is not insensible to correction. Most of the outrageous incidents in which he figures arise from injudicious handling. He commits some venial offence. Everything turns on the way in which he is corrected. If he is taken the right way the matter ends in tears, but if his anger or resentment are aroused he throws the first thing that comes to his hand at the head of his censor, or indulges in all sorts of threats or abuse of him. But whichever mental state is aroused is of short duration and soon gives place to another. In short there is any amount of instability, but little or no evidence of moral depravity, in the misbehaviour of the restless, naughty child.

If the mental state of these children be looked at as a whole, the instability that is so striking a feature of their misbehaviour is seen to be confined to no particular faculty of their minds. All their mental processes are unduly mutable. Their ideas, their moods, and the impulses of their wills are all easily induced, and, failing to develop properly, are readily supplanted by others. In consequence of this these children become the slaves of their environment. They no longer behave according to the principles instilled into them by their upbringing, but obey the whim of the moment. They become pert and forward, inclined to talk to whomever they meet, and to handle whatever catches their eye. Incidental and non-essential ideas, aroused by habit of speech or similarity of sound, break into their talk, giving it a smack of precocity. On the other hand, their restlessness is far from aimless ; it is really a press of occupation. They are always busy about something, and so long as their activities can be confined to useful channels they work well under supervision.

I consider that the "naughty, restless child" is suffering from psychomotor excitement, and it is similar to that which may occur in the course of an attack of mania of the manic-depressive type.

What the psychologist calls *general intelligence* is not affected by the disorder to any appreciable extent. The recognized mental tests show that the apparent precocity of the restless, naughty child is not accompanied by a high intelligence quotient. On the other hand, it is quite exceptional for one of these children to have an intelligence quotient below 85. Nothing in the nature of a secondary dementia is ever seen, even when the disorder has lasted so long as nine years. All that may be said about them is that

their mental powers do not mature. They are a sort of "Peter Pan"—they never grow up.

(4) *The Clinical Affinities of the Parkinsonian Syndrome.*

This sequela of epidemic encephalitis derives its name from the resemblance it bears to paralysis agitans. Although at the first glance the resemblance appears a close one, it does not stand detailed examination. Even where an undoubted similarity exists between the two conditions there are important points of difference. There is, for example, no doubt about the strong family resemblance between the facies of Parkinsonism and Parkinson's mask, but the former shows none of the deep furrowing of the brow that is so prominent a feature of the latter. Again, there is much in common between the posture and gait that the patients manifest in the two conditions, but the localized distribution of the muscular spasm and the "kinesia paradoxa" that are often seen in Parkinsonism never occur in paralysis agitans. As for tremor, a symptom common to both conditions, it rarely dominates the Parkinsonian syndrome as it does paralysis agitans.

The differences which exist between the two conditions are notable. In the first place there is nothing in paralysis agitans comparable to the metabolic disturbances that often constitute an important part of Parkinsonism. In Parkinson's mask the skin of the face has not the thick, greasy look that it has in the facies of Parkinsonism, and it is never associated with sialorrhœa. Moreover, constitutional changes, such as are seen in the *forme cachectisante* or in the tendency to obesity that patients suffering from Parkinsonism show, are never met with in paralysis agitans.

When cases of Parkinsonism began to appear in Glasgow during 1919 they were often referred to as atypical cases of katatonia. This identification of the characteristic sequela of epidemic encephalitis with katatonia is, in many ways, more just than that implied in the term "Parkinsonian syndrome." So far as its somatic symptoms are concerned, katatonia has more in common with Parkinsonism than paralysis agitans. When well developed the facies of the two conditions are practically identical. Both show the starched look with the smooth forehead, the thick greasy skin, and the saliva dribbling from the half-opened mouth. In both conditions the tongue tends to become small, indented, and the seat of an intrinsic tremor. The posture and gait are likewise very similar, even to the presence in katatonia of a condition in every way comparable to kinesia paradoxa. On the other hand, cataleptic manifestations, which are a common feature in katatonic

rigidity, are sometimes seen in the rigid muscles of Parkinsonism. Here the resemblance breaks down, for while mental changes are common in Parkinsonism, the stolidity and inaccessibility of the katatonic are never seen; indeed, it may be said that if a Parkinsonian were to become inaccessible, *ipso facto* he would become a katatonic.

(For discussion, *vide* p. 738.)

Spirochætes in the Brain in General Paralysis. By A. R. GRANT, M.D.Aberd., Deputy Medical Superintendent, and H. T. KIRKLAND, M.A., M.B., Ch.B.Glasg., Senior Assistant Medical Officer at the County Mental Hospital, Whittingham, Preston, Lancashire.

FOLLOWING on the momentous discovery of the causative organism of syphilis by Schaudinn and Hoffmann, some eight years later Noguchi, working under the great difficulties of his own method, demonstrated the presence of spirochætes in the brain of a general paralytic.

Since that time, with improved technique in staining, numerous observers, including Jahnel (1), Hauptmann (2), Sioli (11), Hans Hermel (8) in Germany, Lelio Grimaldi (10) in Italy, and Dunlap (3) in America, have made detailed and, in most cases, confirmatory and additional observations on the morphological, biological and pathological characteristics of the *Spirochæta pallida*, as demonstrated in the central nervous system of general paralytics.

However, of recent years little has appeared in the literature on the demonstration of the organism in the central nervous system of general paralytics who have undergone the various forms of treatment, *e.g.*, (1) specific anti-syphilitic therapy by the various arsenical preparations, tryparsamide and salvarsanized serum; (2) non-specific treatment by (a) chemical substances as phlogetan and sodium nucleinate, (b) derivatives of infectious agents, as tuberculin; and (3) artificial inoculation of intercurrent infectious diseases, *e.g.*, malaria.

Such an investigation would seem to us essential, having a material bearing on the various hypotheses advanced to explain the *rationale* of the treatment by the various therapeutic agents above, in particular (a) Hauptmann's view that the favourable action lies in the formation of immune bodies, and the production of phagocytes, which prevent the general toxic process by the absorption of the *Spirochæta pallida*, and (b) on the destructive influence of high temperature as such on the organism as outlined

in Jahnél's and Weichbrodt's (15) experiments. In addition, we are of opinion that it would throw some light on the subject and assist us to distinguish the symptoms due to the presence of spirochætes and those assignable to the toxins generated by them.

In this series of some 50 cases are included cases which have been treated with malaria, with tryparsamide and phlogetan, of whom some showed at one period so remarkable an improvement, mentally and physically, as to warrant their discharge to their former life for a considerable period.

In each case a complete clinical record was available to correlate with the *post-mortem* findings, and no case has been included which did not show on admission the physical signs, the mental picture and the serological findings of a general paralytic. In all cases the Wassermann reaction of the blood and cerebro-spinal fluid was positive. In no case was the *Spirochaeta pallida* demonstrated in the cerebro-spinal fluid during life, although constant search was made in each case by the various methods, namely, (a) dark-ground illumination, (b) Alzheimer method, using Jahnél stains, (c) Wharton Starry method. The *post-mortem* was conducted as soon as practicable after death, and fresh specimens obtained, macerated and stained immediately by the method of Tribondeau, and examined for the presence of the organism. Thereafter sections were cut and stained by Jahnél's (13) method.

This was observed: In 3 cases a negative result was obtained when Tribondeau's (14) stain was used in macerated specimens, while the Jahnél stain revealed the spirochætes scattered throughout the sections of brain-tissue. The reverse, a negative section by Jahnél's method and a positive by that of Tribondeau, was never found to hold true.

From time to time we have given the various methods for the staining of spirochætes in the central nervous system a trial, including Levaditi's, Fontana's and their modifications, and the Noguchi and Wharton Starry methods, by using tissue which was known to be positive with Jahnél's method. The results, however, have been disappointing for the most part, and Jahnél's method has, in our hands, proved the most reliable. We have found that it brings out the organism vividly and unequivocally on a yellowish-brown background; and on well-stained specimens no difficulty is experienced in differentiating the organism from the nerve-fibres, etc., which appear to have given some other observers trouble.

The organism has been demonstrated in the brain in 62.5% of the cases examined. This figure is somewhat higher than other observers have obtained—a fact which we consider may be due to the minute and systematic search of sections of all parts of the brain by various trained observers at different times. We can therefore say with confidence that the 37% of cases in which spirochætes cannot be demonstrated are negative. We believe that there is a close analogy between these cases and those of old

gummata or tubercular granulomata, where also the organism can not be demonstrated, and that the presence of the spirochætes in the central nervous system is not essential for the paralytic process to progress and terminate in the usual fatal result.

FACTORS DETERMINING THE SUCCESSFUL DEMONSTRATION OF SPIROCHÆTES IN GENERAL PARALYSIS.

(a) The time which elapsed between the death and *post-mortem* has been carefully noted. In only 3 cases, which proved negative, has it exceeded 50 hours. In 6 others in which the time exceeded 50 hours, spirochætes have been demonstrated by Tribondeau's and Jahnel's methods. The average time in the positive cases is 27 hours, and in the negative 28 hours. It would appear that the time elapsing, within due bounds, has little influence on the successful demonstration of the organism of Hauptmann (9) who has demonstrated them alive in the brain-cortex 48 hours after death, and dead one month after death. Seldom did we observe any sign of their having changed their position *post-mortem*—*e.g.*, penetrating and invading the blood-vessels or the white matter of the brain.

(b) It has been the experience of Jahnel and other observers that spirochætes are found, almost without exception, in those cases which died in seizures. But in our observations the rather significant fact has been brought to light that only 21% of those cases in which we have successfully demonstrated spirochætes have the patients died in or ever have had seizures, whereas 50% of the negative cases actually have so died. The onset of the paralytic attacks evidently is not due to an invasion of spirochætes, but rather, as Hauptmann postulates, to an anaphylactic reaction, entirely independent of the presence of spirochætes in the central nervous system.

(c) In complete agreement with other observers it has been found that the cases which have run a long course before death usually proved negative in the examination for spirochætes; whereas the acute, fulminating type have been, without exception, the happy hunting-ground for the successful demonstration of the organism. The average residence in this hospital, has been in the former case 17 months and in the latter 6 months.

(d) The often-changing mental symptoms presented in the various stages of the disease in individual cases seem to have no bearing on the presence and final demonstration of the organism, for it has come to light, from a search through the clinical records, that the confused, elated, euphoric, excited, depressed and grossly demented types occur in almost equal

numbers throughout both series of cases. But in marked contrast to these, it appears more than a coincidence that we have never failed to demonstrate the organism in the 4 cases of juvenile general paralysis which are included, whose age at death varied from 19 to 26 years. It would appear that the organism present in the nervous tissue of hereditary syphilis, as part of the general invasion, has still survived to this, the later stage, although absent in meninges, etc. In addition, the only case of senile general paralysis, æt. 73, proved to be a fertile ground for the demonstration of the spirochæte in all parts of the central nervous system, as did other cases enumerated in the succeeding paragraph.

(e) In all, 11 cases have, at some period, undergone treatment with malaria, and in 8 of these no spirochætes could be demonstrated. Freeman (7) reports similar findings in his series of cases; but he is a bold person who would ascribe their absence to the results of the fever therapy, as in the remaining 3 cases we have, like Gurewitsch (4), found the organism scattered throughout the tissue in fair numbers, and in one case appearing almost in a swarm. This case, it is interesting to learn, had been discharged recovered, had followed his work outside for some time, only to be readmitted again. Five cases had been treated with the new arsenical preparation, tryparsamide, 3 proving negative in the search for spirochætes. In the cerebro-spinal fluid the colloidal gold curve showed marked alteration from the parietic type—in one case being quite negative and in the other having changed to the luetic type, the Wassermann reaction altering from + to —, and the cell-counts becoming normal in all 3 cases. In the other 2 cases the spirochæte has been demonstrated after laborious search, but the serological findings had not been altered to any extent, except in the case of the cell-count. Of the cases which have been treated with phlogetan, one showed spirochætes, but neither showed any alteration in the serology.

THE DISTRIBUTION OF THE SPIROCHÆTES.

(a) *General.*—The organism has, as a general rule, been located in one of the layers of the cortex, and up to the present time we have never been able to demonstrate it in the white matter. In untreated cases it is most easily seen in areas in which the infiltrative processes are most marked. Despite prolonged search we have not been able to confirm Manouilien's (5) finding the spirochæte in the cortical nerve-cells. In our series they appear to have no definite relation to the cells, or to have any elective site, but are scattered, apparently indiscriminately, throughout the tissues. The swarm or nest type, as described by Jahnel, is

infrequently met with, and occurred only in 5 of the cases under review, and in the frontal area. However, spirochætes are often seen, especially in the case of juvenile paralysis, clumped together, but not so thickly as to warrant the descriptive term of "swarm" or "nest." Generally they are scattered in units of one or two throughout the positive cases. The vascular type, an offshoot of the swarm type, we have observed but infrequently, and we have never been able to find any relation between the gummatous vascular transformations, or the miliary gummas which are occasionally met with in general paralysis, and the situation of the spirochæte.

In those cases treated with malaria, or with arsenical compounds, the organism has been found in few numbers, and is generally demonstrated in areas showing marked vascularity of the cortex. It is seldom observed in those parts where the degenerative process is most marked.

(b) *Local*.—In common with other observers, we have found that the organism may be demonstrated in any part of the cortex, especially the anterior of the frontal lobes—when absent there it has never been found in any other region of the brain. The gyrus rectus has proved the commonest resting-place for the organism; the motor area and the superior frontal gyrus have not proved suitable places for the demonstration of it. In 4% of the cases we have been able to demonstrate it in the superior and inferior parietal lobes, supra-marginal and angular gyri, the island of Reil and the temporal and the occipital lobes, but we have never seen it in the pia mater or in the choroid plexus, although it has been found in the thalamus, the corpora quadrigemina, pons, cerebellum, and the grey matter of the cerebral aqueduct.

FORM OF SPIROCHÆTE.

The spirochætes are of three varying types, as in ordinary somatic syphilis, long, medium, and short, with the spirals well preserved, though the organism, as a whole, appears much thicker under the silver stain.

THE DEMONSTRATION OF THE SPIROCHÆTES IN OTHER ORGANS.

In two of the cases the organism has been demonstrated in the aorta. An observation worthy of note, in view of the postulation of the theory of a neurotrophic strain of spirochætes, is that in one of these two cases we have been unable to demonstrate the organism in any part of the central nervous system. In the other

a senile general paralytic (73 years of age) in which the spirochæte found was widely disseminated throughout the brain areas already mentioned, we have been able to show its presence, not only in the cortex of the suprarenals, which is embryologically developed from the genital ridge, *i.e.*, mesodermic cells, but also in the medulla, which is recognized to be developed from tissue common to it and the sympathetic nervous system. This observation, we are of opinion, in correlation with the work that has been done on the organs of internal secretion, should give added significance to the endocrinal factor in general paralysis, and Kraepelin's (12) view on its pathogenesis—that it is a partial phenomenon of a general trophic disorder, and not primarily a disease of the central nervous system.

Summary and Conclusions.

(1) In a series of 50 cases of general paralysis spirochætes were found in 62·5% of the brains.

(2) Spirochætes are more likely to be found in the brain of recent acute cases than those which have run a long course, but—

(3) In 4 cases of juvenile general paresis whose ages ranged from 19 to 26 years at death, spirochætes were found in the brain.

(4) In cases which had been treated by malaria or tryparsamide, spirochætes were found in a much smaller percentage than in those untreated, and when present were not in such large numbers. As the number of treated cases was small, the statement requires further confirmation.

We are indebted to Mr. A. H. Fann, Senior Laboratory Assistant, for his share in the photographic and technical part of the work, and we beg to thank Dr. R. M. Clark, Medical Superintendent, under whose general supervision the work has been carried out, for permission to publish these results.

References.—(1) F. Jahnel, "The Spirochætes in the Central Nervous System in General Paralysis," *Zeitschr. f. d. ges. Neurol. u. Psychiat.*, lxxiii, p. 310, December 21, 1921.—(2) Hauptmann, "Clinical Findings and Pathogenesis of General Paralysis in the Light of Spirochæte Research," *ibid.*, lxx, p. 254, August 9, 1921.—(3) Dunlap, "Recent Studies on Spirochætes in General Paralysis," *Arch. of Neurol. and Psychiat.*, viii, No. 6, December, 1922.—(4) Gurewitsch, M., "The Pathological Anatomy of General Paralysis after Malaria Treatment," *Lub. f.d.g. Neur. u. Psych.*, cv, p. 314, 1926.—(5) Manouilien, "Histological Studies in General Paralysis," *Compt. rend. Acad. d. Sc.*, clxxiv, p. 1134, 1922.—(6) Silva, "Localization of Spirochætes in the Brain in General Paralysis," *Rev. Neurol.*, xxxiii, p. 558, December, 1926.—(7) Freeman, "Histopathologic Observations in Malaria of General Paralysis," *Journ. Amer. Med. Assoc.*, lxxviii, No. 14, April, 1927.—(8) Hermel, "The Presence of Spirochætes in Atypical Cases of General Paralysis," *Zeitschr. f. d. Neurol. u. Psychiat.*, lxxiii, p. 149, December 30, 1921.—(9) Hauptmann, "Biologic Problems in the Domain of Neurosyphilis," *Klin. Wochens.*, i, p. 2121, October 21, 1922.—(10) Grimaldi, "Spirochæta Pallida and Progressive

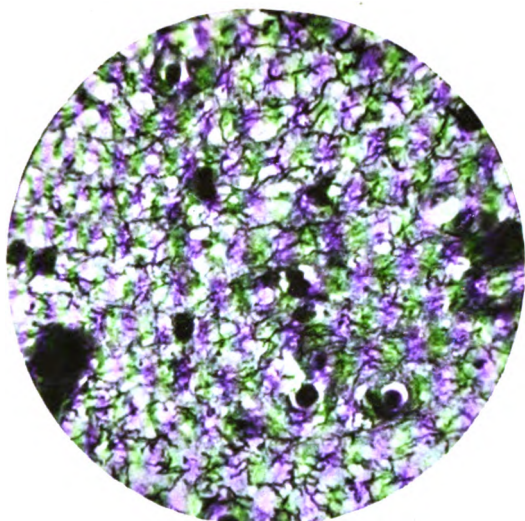


FIG. 1.

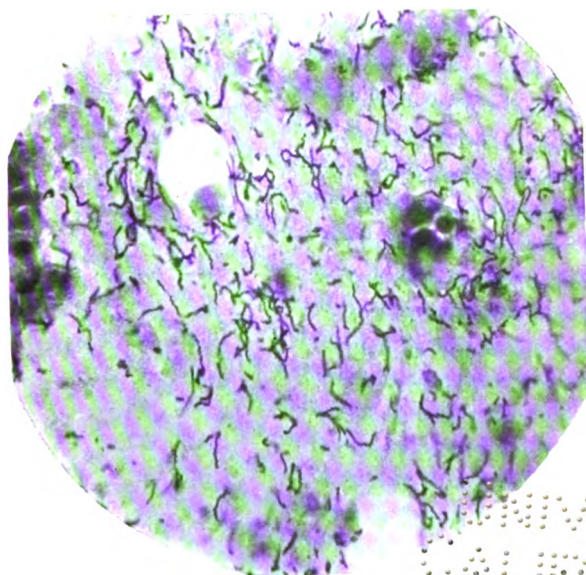


FIG. 2.

- FIG. 1.—Section of brain cortex showing *Spirochæta pallida* in swarms. Stained by Jahnle's method. $\times 1,000$.
- FIG. 2.—Section of brain cortex showing *Spirochæta pallida* in "nest" type. Stained by Jahnle's method. $\times 1,000$.

To illustrate paper on "Spirochætes in the Brain in General Paralysis,"
by Dr. A. R. GRANT and Dr. H. T. KIRKLAND.

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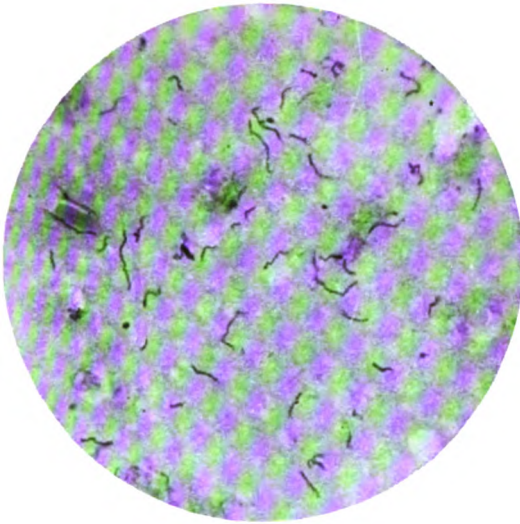


FIG. 3.

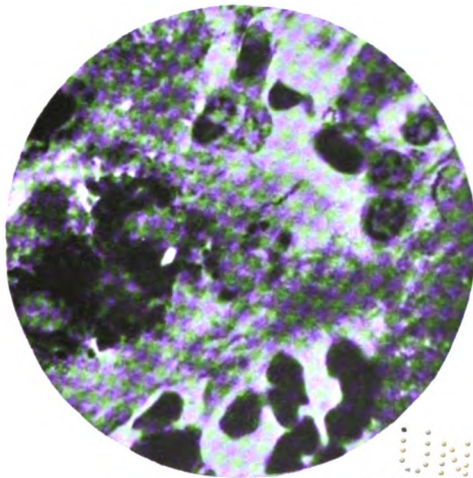


FIG. 4.

FIG. 3.—Section of brain cortex showing *Spirochæta pallida* (treated case), "scattered," demonstrating the long, short and medium type. Stained by Jahnke's method. $\times 1,000$.

FIG. 4.—Section of supragenal showing *Spirochæta pallida* in cortex. Stained by Jahnke's method. $\times 1,000$.

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Paralysis," *Ann. di Neurol.*, xxxix, p. 22, No. 1, 1922.—(11) Sioli, "Die Spirochæte Pallida bei der Progressiven Paralyse," *Arch. f. Psychiat.*, lx, pp. 401-464, 1919.—(12) Kraepelin, "Problems Presented by General Paresis," *Journ. Nerv. and Ment. Dis.*, lxxiii, No. 3, March, 1926.—(13) "Jahnel's Method for Staining Spirochætes in the Brain," *Arch. of Neurol. and Psychiat.*, March, 1922.—(14) Tribondeau, "The Staining of Spirochæta pallida," *Bull. de la Soc. Franç. de Derm. et de Syph.*, November 12, 1912.—(15) Jahnel and Weichbrodt, *Zeitschr. f. d. ges. Neurol. u. Psychiat.*, lxxix, p. 220, July 30, 1921.

Clinical Notes and Cases.

An Interesting Case of Meningitis. By NEIL MCDIARMID, M.B.,
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THE following case is of interest because of the mode of onset and the causal organism:

Patient, A. B.—, a woman, æt. 53, was admitted to Whittingham Mental Hospital on October 7, 1918. With the exception of several attacks of bronchial asthma she had enjoyed fairly good physical health since admission. She was also afflicted with slight deafness on both sides, but had no other evidence of aural disease.

On getting up on the morning of May 9, 1927, she was affected with headache and vertigo, with slight vomiting. On examination she was found to have a Bell's paralysis on the left side. It had all the characteristics of an infra-nuclear lesion. Spasmodic bilateral nystagmus was present and could be elicited in all directions, but was most marked towards the left side. Pulse, temperature and respirations were normal, and examination of the nervous system revealed no other abnormality.

Lumbar puncture on the following day showed the cerebro-spinal fluid to be turbid but not under pressure. The Ross-Jones and Pandey's tests were positive. The sugar content was '05% and the cell-count was 1,253 per c.mm., consisting of polymorphonuclear leucocytes and lymphocytes. The differential count was 87·5% of the former and 12·5% of the latter. No red blood-corpuscles and no organisms were demonstrated on this occasion. The Lange gold sol test gave a reading of 001221000 and the colloidal gamboge a reading of 121000.

In spite of the cerebro-spinal fluid findings it was not until May 14 that she showed other signs and symptoms of meningitis.

The cerebro-spinal fluid was withdrawn on three other occasions, and on the last occasion (May 19) the cell-count was 7,732 and the cells were of the same type and percentage. The sugar content was '018%. The Ross-Jones and Pandey's tests were positive. The Lange gold sol reading was 0000012332 and the colloidal gamboge 001220. It was not until this withdrawal of fluid that any organisms were isolated. On this occasion a Gram-negative organism, microscopically resembling the typhoid bacillus, was demonstrated, but no growth was obtained on culture.

Death took place on the following day, and the *post-mortem* findings were those of a basal meningitis. The fourth ventricle and the cerebellar tissue immediately surrounding it was the area most affected. The ventricle was greatly distended with a thick, greenish exudate and the tissues in that area were softened and disintegrated. Microscopically the exudate was found to consist of pus-cells in various stages of disintegration, and the same type of organism as

found in the cerebro-spinal fluid was again demonstrated, but no growth took place on culture.

There were no evident signs of disease of either ear which might point to a cause of the meningitis.

From the findings in the cerebellum it may justifiably be concluded that the vertigo was due to the lesions in that area. The Bell's paralysis seems to have been due to an involvement of the seventh nerve on its exit between the olive and restiform bodies.

I am indebted to Dr. R. M. Clark, Medical Superintendent, for permission to publish this case, and to Mr. A. H. Fann for his aid with the laboratory examinations.

Medico-Legal Notes.

REX v. FREDERICK JOSEPH STOCKWELL.

THIS case was tried at the Central Criminal Court, on July 21, before Mr. Justice Branson. The prisoner was a fireman, aged 31 years. He was accused of the murder of his wife, who was found dead in bed on the morning of June 21, near to her being a shovel with the stem bent. The prisoner was found in the kitchen, with an artery in his arm opened, and with a wound in his neck. He was removed to a hospital, and he there made the following statement: "I had a good skinful on the day previous. I went to bed with the wife at 11. I don't remember getting out of bed, but when I came to myself I was battering her head in. I was frantic, and said 'Here goes,' and cut my throat and opened an artery in my arm." The facts of the case were not disputed. Evidence was given that the prisoner had suffered several times from malaria, when on war service in Egypt.

Dr. W. R. K. Watson, medical officer of Brixton Prison, expressed the opinion that the prisoner was suffering from manic-depressive insanity. While under observation he had once got out of bed, and run round the ward, apparently in his sleep. Dr. Watson considered that, at the time of the act, the prisoner did not know the nature and quality thereof. If the prisoner thought at all, he probably thought that he was doing something quite different.

Dr. W. H. B. Stoddart took the same view.

A verdict of "Guilty but insane" was returned, and the customary order was made.

REX v. GERARD ARTHUR MAXWELL WILLSHIRE.

THIS case was tried at the Maidstone Assizes, on June 28, before Mr. Justice Rowlatt. The facts were of a peculiar character. On

the evening of May 10, the defendant took a young woman, with whom he had only a recent and casual acquaintance, in his motor-car from London. He stopped in a wood near Maidstone, ordered her to undress, tied her hands behind her, she having nothing on save her shoes and stockings, and then blackened her with some kind of polish.

Precise particulars of the mentality of a man who perpetrated such a curious sadistic outrage would be of great interest. The defendant had been allowed bail at the preliminary magisterial inquiry, and no mental investigation had been made. At the trial he pleaded "guilty," and counsel addressed the court on his behalf. Information was given to the effect that the defendant, while on war service, had contracted trench fever, and that, since then, the slightest quantity of alcohol had a very pronounced effect upon him. Some suggestion was made to the effect that he had committed peculiar actions upon previous occasions, but no particulars were given. It was stated that he had been drinking heavily on the days preceding the offence. It would appear that he was sufficiently sober to drive the car from London.

It was urged by counsel that the defendant should be placed in some institution, under medical supervision. Mr. Justice Rowlatt, however, imposed a sentence of six months' imprisonment in the second division. Assuming the facts to be as stated, it would seem unfortunate that the defendant's medical advisers had not been able to induce him to place himself voluntarily under restraint and treatment before such a disaster had occurred. But the difficulty of persuading patients to adopt this course is well known. Failing this, it would seem to be a case in which the power, given by the Inebriates Act, 1898, to sentence a person convicted of such a crime to a period of detention in an inebriate reformatory might have been used with advantage. Such detention may be in addition to, or in substitution for, a sentence of imprisonment or penal servitude.

DE FREVILLE *v.* DILL.

MR. JUSTICE MCCARDIE, sitting in the King's Bench Division of the High Court of Justice on July 1, delivered a reserved judgment in favour of the claimant, Mrs. May de Freville, wife of Mr. G. P. H. de Freville, for the sum of £50—the amount of damages which had been awarded by a jury—against Dr. A. V. Dill, of Brinscombe, Stroud, for alleged negligence in certifying her to be a lunatic on June 9, 1926.

A stay of execution was granted, Mr. Singleton, K.C., who appeared for Dr. Dill, stating that his client considered it important in

the interests of the medical profession that the case should be taken further.

Reports of the case have appeared in the *British Medical Journal* on April 9, April 23, June 4, and July 9, 1927.

Judgment.

Mr. Justice McCardie said the jury were the tribunal on questions of fact, and their verdict must be taken to indicate their opinion that the plaintiff was not in such a state of mental or nervous disorder on June 9, 1926, as to require her detention in a mental hospital. The defendant, Dr. Dill, was never employed by Mrs. de Freville, who never contracted with him, nor did she consent that he should act as her medical adviser. Dr. Dill, in examining her and forming his opinion, acted on behalf of her husband, or her father-in-law, the Rev. Frederick de Freville, and not on her behalf. The first contention on behalf of Dr. Dill was that he owed no duty of care to Mrs. de Freville. The point had often been discussed in well-known litigation during the past seven years. Many exhaustive judgments had been given which touched directly or indirectly on the point. The question was one of great importance, because it stood on the threshold of such actions as the present. It was, therefore, singular that it had not received express and clear decision from the final appellate tribunal. It would have been desirable long ago to pronounce the exact cause of action in such cases. He inferred from the many dicta in the opinions delivered in the House of Lords in *Harnett v. Fisher*, and also from the decision itself, that such an action as the present was to be regarded as an action on the case for negligence in certification, causing damage through detention in a mental hospital without just cause. If the cause of action were of that nature and if there were no contract between Dr. Dill and Mrs. de Freville, did he owe her the duty of care with respect to certification and to the matters that preceded and surrounded it? It was plain that a surgeon who operated negligently on the body of a patient was liable in damages although there was no contract between the patient and himself. So, too, was a physician who administered medicine to the body of a patient. But Dr. Dill performed no operation nor did he administer any medicine to Mrs. de Freville. He only expressed in a certificate his honest view that she was a "person of unsound mind and a proper person to be taken charge of and detained under care and treatment." If he owed her the duty of care with respect to certification it was curious if he would not be liable for negligence in not certifying her if she had been of unsound mind and had inflicted injury on herself. He (his lordship) feared, however, that he was not free to express an independent opinion in view of the law already laid down in the early case of *Hall v. Semple* and the recent cases of *Everitt v. Griffiths*, *Harnett v. Bond* and *Adam*, and *Harnett v. Fisher*. He must, therefore, hold that Dr. Dill owed to Mrs. de Freville the duty of reasonable care.

During the past seven years a number of medical men who had acted in perfect good faith had been exposed to the most prolonged, harassing and costly litigation on the allegation that they had acted without reasonable care in a matter which was the most difficult, delicate and indefinite in the whole range of medical practice. It might well be that, as the result of past litigation, many doctors had refused, and would refuse, to take any part whatever in the work of certification, because of the perils and anxieties of litigation which might follow. Perhaps some further protective legislation was needed. The second contention of Dr. Dill was that his certificate was not the cause of Mrs. de Freville's detention. If he (his lordship) had been freed from authority, he would have thought that the effective cause of the detention was the order of the justice of the peace, and not the certificate of Dr. Dill. The decision under Section 16 of the Lunacy Act, 1890, lay with the justice of the peace, and not with the doctor. The justice of the peace could decide as he pleased whatever the certificate stated. He was possessed of judicial authority and discretion, and his adjudication was a decision *pro tempore* on the matter before him. The doctor's certificate, although an essential requirement, was a mere opinion which possessed of itself no operative force. The balance of opinion in *Everitt v. Griffiths* in the House of Lords and in the Court of Appeal favoured the view that Dr. Dill's certificate must be taken to be the cause of Mrs. de Freville's detention, and that balance was substantially increased by the recent

decision of Mr. Justice Horridge in *Harnett v. Fisher*, where he held that the negligent giving of the doctor's certificate was the direct cause of the magistrate's order and of the consequent detention of the plaintiff. There were also dicta on the point in the House of Lords, and, on the balance of authority, he held that Dr. Dill's certificate was the cause of Mrs. de Freville's detention in the mental hospital. He hoped that before long the House of Lords would give a clear and final decision both on the question of the duty of care, and also on the question whether the doctor's certificate was the "cause of the detention." Each was a matter of grave importance, both from a legal and a practical point of view. It was regrettable that so great a difference of opinion should exist, and that a trial judge should be beset with difficulty and doubt. He also hoped that, when the question of the certificate as a cause of detention was finally considered, the case of *Harnett v. Bond and Adam* would receive a full measure of attention. He doubted whether the importance of that case in respect of causation and the nature of *novus actus interveniens* had been fully realized.

The third contention on behalf of Dr. Dill was that the procedure set up by Section 16 of the Lunacy Act, 1890, had not been followed, and that Dr. Dill was entitled to assume (a) that his certificate was a mere and unessential preliminary; and (b) that the justice of the peace would, when the matter was brought before him, call in another and independent doctor for the purposes of certification. That point was never raised before the jury, and it was not open to the defence to raise it now. Even if it were, Dr. Dill had himself said in evidence that he did not contemplate that another doctor would be called in by the magistrate, and that he expressly stated to the relieving officer that no second doctor was necessary; Dr. Dill plainly assumed that the magistrate, if he made the order, would act on his (Dr. Dill's) certificate.

THE LUNATIC AT LARGE.

The case of "de Freville against Dill," in which Mr. Justice McCardie delivered his considered judgment at the end of last week, deserves more attention than the excitements of the last few days have allowed it. It is, in fact, the latest of many warnings of the disquieting state of our lunacy laws. Full comment upon the evidence, which occupied a special jury for seven days in May, is precluded by the verdict and by the notice given that it is intended to carry the proceedings further. It is enough to say that Mrs. de Freville was detained in an asylum on the night of June 9, 1926, after Dr. Dill had certified that she was of unsound mind, and a Justice had issued a reception order, and that next morning she was discharged as of sound mind by the asylum authorities; that she brought her action for negligence in signing the certificate and on certain subsidiary points; and that the jury awarded her £50 damages. In giving judgment for these damages and costs, Mr. Justice McCardie said that it was not for him to review the evidence or to weigh the verdict, and he confined himself to the legal arguments laid before him. The points discussed are far from being new; they have been considered again and again in a number of cases by the Courts of first instance, by the Court of Appeal, and by the House of Lords during the last seven years; yet Mr. Justice McCardie declares that the two principal contentions advanced by the defence still await clear and final decision from the House of Lords. He observed, indeed, that the difference of opinion concerning them is still so great that they leave a Judge who has to act upon what he conceives to be the balance of authority beset with difficulty and doubt. The evils caused by this uncertainty are manifest and grave. Many medical men who have acted in good faith, as it is admitted that Dr. Dill acted in the present case, have been subjected to "the most prolonged, harassing and costly litigation on the allegation that they had acted without reasonable care in a matter which is the most difficult, delicate and indefinite in the whole range of medical practice." Mr. Justice McCardie suggests that as the result of past litigation many medical men may have refused, and will refuse, to have anything to do with certification because of the perils and troubles which may follow. Hesitation on such grounds to certify exposes patients to the danger of being left at large when detention is indispensable to their welfare, exposes their families to the danger and the intolerable anxiety of looking after them, and exposes the public to the danger inseparable from the freedom in their midst of persons who are insane or who stand on the shadowy and shifting border of insanity. "Perhaps," Mr. Justice McCardie observed, "some further protective

legislation is needed." There is no "perhaps" about it. The need of legislation is clear and urgent.

On the two main contentions in law advanced for the defendant, as on the issues of fact referred to the jury, the Judge held that he was not free to express an independent opinion. On them he felt bound by the weight of authority, as on the questions of fact he was bound by the verdict. The first of these contentions was that the defendant owed no duty of care to the plaintiff. To the uninformed lay mind that seems a surprising, not to say, a startling proposition. There is no doubt whatever that a surgeon who operates negligently, or a physician who prescribes negligently, does owe this duty to a patient even in the absence of a contract between them. It is "*mala praxis*," which has been "a great misdemeanour and offence at common law" since the days of Lord Raymond, and for which "the universal remedy" of "trespass on the case," dating back to Edward I and the Statute of Westminster, provides redress. But it is by no means so clear, as appears from the divergent opinions of high authority cited by Mr. Justice Horridge in "Harnett and Fisher" and from the judgment in the present case, that this doctrine applies to a medical man who, in the absence of contract, signs a certificate of lunacy. It is indeed singular, as Mr. Justice McCardie remarked, that a question which "stands upon the threshold" of actions such as that before him "has not received express and clear decision from the final appellate tribunal." The "exact cause of action" in these cases remains, in his opinion, undefined, and he was driven to form his decision upon inferences drawn from the *dicta* delivered in other judgments. There was no pretence of contract between the plaintiff and the defendant, but by this process and "in view of the weight of opinion" he felt that "he must hold that Dr. Dill owed Mrs. de Freville the duty of reasonable care." A more perplexing problem seems to be indicated by the Judge's suggestion that, while a doctor might owe such a patient care about certification, he might not be liable to the patient for negligence if he refused to certify a person actually of unsound mind who afterwards injured himself. The second contention of the defence borders on the province of metaphysics, and has been discussed with much subtlety and with dissenting judgments in "Everett and Griffiths" among other cases. It was that the defendant's certificate was not "the cause" of the plaintiff's detention—a view which leads us back to the doctrine of the "*novus actus interveniens*" in "Harnett against Adam and Bond." Mr. Justice McCardie states right out that, had he been free from authority, he would have considered that "the effective cause" was not the certificate, but the reception order. In his personal opinion the certificate was an essential requirement, but also it was no more than "a mere opinion," devoid in itself of operative force. The decision under the Lunacy Acts rests with the Justice, who can make it whatever the certificate may state. But on this point also the Judge deemed it his duty to yield to authority. He felt constrained to hold that the defendant's certificate was the cause of the plaintiff's detention.

The public will certainly share the hope which Mr. Justice McCardie expressed that the House of Lords will soon decide both these questions in a manner to end further ambiguities and uncertainties, and that, when the doctrine of causation is considered, the bearing of "Harnett against Adam and Bond" and the nature of "*novus actus interveniens*" will be fully examined. The whole subject of the detention and release of alleged lunatics unquestionably demands fresh investigation in view of modern progress in mental medicine and of certain recent disclosures. Abuses are extremely rare, but the possibility of abuse exists, and mistakes made in good faith do occasionally occur. To commit a person who is really sane to detention for an indefinite period in the company of lunatics, or to keep in such detention a patient who has become sane, is to inflict upon an innocent sufferer a doom of almost unimaginable horror. Detention, on the other hand, commonly gives real lunatics their best chance, and often their only chance, of recovery, and it is indispensable to the safety of others. But detention is usually ordered upon certificate, and whether a certificate is the "*causa causans*" of a detention, or is merely a "*causa sine quâ non*," it almost always, and rightly, has great weight with the Justice in making the order. It is therefore of the utmost importance that medical men should not be deterred from giving certificates in proper cases and with a proper degree of care. Generally diagnosis of mental illness is simple and certain; but the ablest and the most experienced of experts in mental diseases are themselves the first to acknowledge the extreme difficulty of

decision where patients are hovering on the dim and wavering line which divides mental unsoundness from eccentricity. The great majority of certificates are necessarily signed by country practitioners and not by specialists. They have to judge by such knowledge as they possess and by their common sense, and sometimes the decision must be prompt. It is a significant fact that neither the Lunacy Acts, nor the Courts nor the medical text-books give any definition of unsoundness of mind or of insanity, nor do mental specialists, as witnesses, seem able to do so. The plain sense and justice of the matter seems to be that in all cases of certification, contract or no contract, medical men should be held strictly responsible for reasonable care as well as for good faith, but that the present remedy for alleged negligence or misfeasance is open to abuse and cries for immediate reform.

[Extract from the *Times*, July 8, 1927.]

Occasional Notes.

The Evolution of the Reception Orders for Mental Patients in England and Wales: A Historical Survey.

INTRODUCTION.

The foundation of English lunacy law, *i.e.*, statute law apart from the Prerogative of the Crown and lunacy regulation, was laid in 1774, when Parliament passed an Act for "the Regulation of Madhouses" (14 Geo. III, c. 49). This Act laid the groundwork for a central lunacy authority, the licensing of all mental institutions and their visitation, and the necessity for an admission order supported by medical certificates and other evidences of the patient's insanity.

The Act was designed for the protection of the upper and middle-class insane accommodated in licensed houses. Prior to this such patients had often been shamelessly exploited, neglected or cruelly treated. It also aimed at deterring relatives and others from confining sane persons in mental institutions to further criminal or other nefarious purposes.

It did not apply to pauper patients, who continued to be admitted to licensed houses merely on the order of the overseers of the Poor—no medical certification of insanity being required. Dangerous lunatics were classified with "rogues, vagabonds and other idle and disorderly Persons," and arrested. Criminal lunatics were confined in prisons. For the most part the poor insane were either at large or in workhouses, jails, houses of correction, etc. Their treatment, wherever they were housed, was a disgrace to a Christian nation.

Many years went by before rich and poor stood anything like equal before the lunacy law, nor has complete equality yet been reached.

The first legislation for the protection of the pauper and criminal insane occurred in 1808 when Parliament passed Mr. Wynn's Bill (48 Geo. III, c. 96), which authorized magistrates, if they were so

disposed, to establish county and borough asylums.* The difficulty of accommodating dangerous lunatics arrested under the Vagrancy Act of 1744 was one of the principal reasons for this move, another being the desirability of ridding the prisons of some of their criminal lunatics.

In this historical commentary we propose limiting ourselves to the origin and subsequent evolution of the reception order, not that the story has not been told before, though, perhaps, never by itself, but because it has a very real and important bearing on the present-day proposals for reform in this matter. Some advocate stricter legal precautions; others would reverse history and adopt a procedure for all cases similar to that for the admission of private cases of the 1845-53 period. Naturally historical facts are brought forward in support of either view, and not always correctly, as we shall show.

The story is an interesting one, especially the part played in it by Lord Shaftesbury. Perhaps the most common misconceptions are in regard to the latter, and these it is our special purpose to correct.

On reading the bare outline of events from 1774 to 1885 several points at once strike the imagination. What matter was nearest to the heart of Lord Shaftesbury in his life-long devotion to the welfare of the mentally afflicted? Why did he perfect, if not initiate, judicial intervention in regard to the admission of the poor insane and oppose it vigorously in the case of the private patient? How came it about that many regarded him as being, while he lived, the greatest enemy of judicial intervention? Why is 1889 spoken of as the period when judicial intervention first made its appearance in our lunacy system? On what grounds is Lord Shaftesbury said to have upheld the view that the question of sanity or insanity is purely a medical matter?

All these questions we hope to touch upon, if time permits, in our dissertation.

THE PEDIGREE OF THE LUNACY ACT OF 1890.

Lunacy legislation during the first century or so of its existence descended along two lines, commencing from the Acts of 1774 and 1808 respectively. This is an important point to remember, as losing sight of it has resulted in many historical inaccuracies. The 1774 Act line of legislation was restricted at first to licensed houses, but later included registered hospitals and cases in single care; the 1808 Act line concerned only the county and borough asylums and the welfare of the pauper and criminal insane. The former

* The term "asylum" is used (reluctantly) to avoid confusion with "public" or "registered" hospitals.

dealt with the pauper classes only as far as they were patients in private institutions. Similarly the latter came to have provisions for the admission of private cases to county and borough asylums. These two lines began to converge in 1855, 1862 and 1889, when single amending Bills of both lines of legislation became law. The lunacy law was consolidated in the Act of 1890. This may be graphically represented as a legislative genealogical tree, the principal Acts only being included, as follows:

County and Borough Mental Hospitals
(Pauper and Criminal Insane).

Licensed Houses, Registered Hospitals
(Private Insane).

[1744]
(17 Geo. II, c. 5, s. 20 & 21)

1774
(14 Geo. III, c. 49)

1808
(48 Geo. III, c. 96)

1828
(9 Geo. IV, c. 41)

1828
(9 Geo. IV, c. 40)

1832
(2 & 3 Vict. c. 107)

1845
(16 & 17 Vict. c. 126)

1845
(8 & 9 Vict. c. 100)

1853
(16 & 17 Vict. c. 97)

1853
(16 & 17 Vict. c. 96)

1855
(18 & 19 Vict. c. 105)

1862
(25 & 26 Vict. c. 111)

1889
(52 & 53 Vict. c. 41)

1890
(53 Vict. c. 5)

Separate Acts dealing with the criminal insane date from 1800 (39 & 40 Geo. III, c. 94 and c. 100). The student interested should consult 1816 (56 Geo III, c. 117); 1838 (1 & 2 Vict. c. 14); 1840 (3 & 4 Vict. c. 54); 1860 (23 & 24 Vict. 75); 1863; (27 & 28 Vict. c. 29); 1883 (46 & 47 Vict. c. 38); 1884 (47 & 48 Vict. c. 64).

THE RECEPTION ORDER FOR PRIVATE PATIENTS.

The reception order on petition took its origin from the "order" of one physician which came into existence with the Act of 1774. The name and address of the person authorizing the proceedings had to be given and any practitioner could sign it, even the medical proprietor of the house to which it was proposed to take the patient. Anybody could authorize the proceedings; a domestic of the patient's house or a total stranger could act. Neither was it illegal for the practitioner to act in both these capacities. The admission had to be notified to the Commissioners of those days, if in London within three days, and if in the provinces within fourteen days. The order did not apply to public hospitals or single-care cases or to paupers.

The Gordon-Ashley Act of 1828 (c. 41), which was amended in some particulars by an Act in 1829, required the medical order, dated not more than fourteen days prior to admission, to be signed by two practitioners who had visited the patient separately. The order was now becoming a medical certificate, for more mention is made of the person authorizing the proceedings, whose degree of relationship or connection with the patient had to be given, as did the age, occupation, previous certifications, etc., of the patient. An undertaking was required of him that he or his deputy would visit the patient at least once every six months.

The Act extended the order to cases in single care, except those in the charge of relatives or committees, and to the admissions into public hospitals and other charitable and voluntary institutions except Bethlem. Notifications of admission, if outside London, had to be addressed to the Justices, and all notifications had to be accompanied by copies of orders and certificates. For the first time restrictions were made as to who could sign the medical certificate; the practitioners signing were not to have any interest in the house to which the patient was ordered to be sent.

The Lunacy Acts of 1828 and 1829 were amended and consolidated by the legislation of 1832 (c. 107), and two separate medical certificates were required, dated not more than seven clear days prior to admission. For the first time the forms of the order, statement of particulars and medical certificate were prescribed. The order was undated, and had to be signed by a relative or other person.

To the physicians forbidden to sign the certificate were added those who had either father, son, brother or partner interested in the house to which the patient was to be sent. It is to be noted that the word "insane" was not used in the medical certificate. The certificate was to the effect that the person was of

"unsound mind" and a proper person to be confined. Bethlem remained exempt, but curiously, public hospitals and other charitable and voluntary institutions were once more placed in a line with Bethlem in this respect.

The next legislation along this line was the famous Act of 1845 (c. 100).

This Act and its companion (c. 126) dealing with county and borough asylums, were placed on the Statute Book on the same day, both Bills being introduced to Parliament by Lord Shaftesbury. They were based upon the report of the Commissioners, known as the "Doomsday Book," which recorded the results of their most thorough visitation and inquiry into the administration and condition of every mental institution in England and Wales, the outcome of the enlarged powers of visitation they had received by the short Act of 1842 (5 & 6 Vict. c. 87).

The improvement introduced into the reception procedure was that the medical certificates were no longer to be mere declarations of insanity, but the facts, whether observed by the practitioner or communicated to him by others, upon which this opinion was based, were for the first time demanded. It is interesting to note that the person signing the order was not required to see the patient, which duty was considered of importance by Lord Shaftesbury in the case of a pauper patient. The section in the previous Act which demanded a declaration that the person signing the order or his deputy would visit the patient every six months was not re-enacted (possibly an oversight).

The terms "lunatic," and "idiot" were added to "unsound mind" in the medical certificate.

Reception orders were again required for admission to all public hospitals and other charitable and voluntary institutions except Bethlem. For the first time "boarders" or "lodgers" are mentioned, but only to exclude them from licensed houses unless certified in the usual way. This did not apply to public and registered hospitals.

The terms "asylum," "registered hospital" and "licensed house" were clearly defined, and these definitions have since remained unchanged.

This Act of 1845 for the first time afforded protection to those who received patients in accordance with the law, which immunity was expressly denied them by all previous Acts.

The Act of 1853 (c. 96) was the last to affect materially the admission order and certificate required in the case of private patients before the two lines of lunacy legislation united in 1889. No doubt most, if not all, of its amending provisions had the approval of Lord Shaftesbury, and in reality the reception order for private patients as left by this Act should be hailed as "Lord Shaftesbury's own" and not that of 1845.

Bethlem, the last stronghold of independence, was roped in. It should be noted that the order could be signed either before or after one or both of the medical certificates. Licensed houses might retain as "boarders," with the assent of the Commissioners, patients who had recovered. Certificates were not valid which were based solely upon facts communicated by others. Orders and certificates could be amended within 14 days of reception of the patient with the assent

of one or more Commissioners. Practitioners were to state their medical qualifications and the place where the examination of the patient took place.

The order and certificate now only awaited that fundamental alteration which converted the person signing the order into the petitioner and his replacement in his former capacity by a judicial authority (as in the case of the pauper order), to bring it up to its modern form. The procedure of certification of a private patient up to now was mainly a medical and family affair, carried out in accordance with the law.

So far the changes since 1774 were all to the good, and were the appropriate response to clearly ascertained abuses, negligences and malpractices, which had long called for remedying. This cannot be said of the final apotheosis, as we shall presently show.

THE EMERGENCY ORDER FOR PRIVATE PATIENTS.

No separate provision for emergency treatment was necessary until the "pauperization" in 1889 of the private reception order. The necessity for immediate control in many cases of mental disorder was recognized as far back as 1828, when the absolute freedom enjoyed under the Act of 1774 had to be curtailed and regulated. The Act of 1828 (c. 41) provided that :

"And every such Certificate for the Confinement of any Person in a House Licensed . . . shall, if the same be not signed by two Medical Practitioners, state the special Circumstances, if any, which shall have prevented the Patient being separately visited by Two Medical Practitioners; and any Patient may be admitted into any such licensed house upon the Certificate of one Medical Practitioner only under the Special Circumstances aforesaid, Provided such Certificate shall be further signed by some other Medical Practitioner within Seven Days next after the Admission of such Patient, etc."

The period of possibly temporary residence was reduced to three days by the Act of 1845 (c. 100), but again extended to three clear days by the Act of 1853, but the latter Act demanded two additional medical certificates (making three in all) if the patient were to be detained. When the Legislature, unsupported by the medical profession, our Association, the Commissioners or the report of any Select Committee, "pauperized" the reception order for private cases, it was recognized that something must take the place of the summary arrest as paupers by an official of the Poor Law of early cases in the pauper class, and of confinement in a workhouse pending certification. The need for an urgency order in private cases was apparent. Like the judicial intervention in the certification of private cases, the urgency order can be traced back to Scottish lunacy procedure, and was an English modification of the Emergency Certificate of the Scottish Act of 1857.

RECEPTION ORDERS FOR PAUPER PATIENTS.

Their commencement as far as the line of legislature affecting private institutions and registered hospitals is concerned can be definitely dated by the passing of the Act of 1828 (c. 41). Before this pauper patients were received into licensed houses at the request of the Poor Law authorities or on the production of warrants under the Vagrancy Act of 1744. It was now enacted that no pauper patient was to be admitted to a licensed house without an order signed by two justices or by an overseer of the Poor and the officiating clergyman of the parish to which the patient was chargeable, supported by a medical certificate that he was a proper person to be confined.

The Act of 1832 slightly altered this by substituting one justice or the officiating clergyman and one overseer of the Poor. To the medical certificate was added the declaration that the patient was insane.

The Act of 1845 (c. 100) complicated matters by decreeing that the order admitting a pauper should always be signed by two persons who had examined the patient previously, namely, a justice or an officiating clergyman with the relieving officer or an overseer of the Poor. The medical certificate was to be dated not more than seven days prior to admission, and, as in the case of a private patient, the terms "lunatic," "a person of unsound mind," "insane person," "idiot," were placed at the disposal of the practitioner. A statement of particulars of the patient was to be appended by the relieving officer or overseer signing the order.

This procedure was again amended in 1853 (c. 96). The justice was restored to his dignity by his signature being made of the same value as the dual signatures of the officiating clergyman and the relieving officer or overseer of the Poor.

This procedure in regard to pauper admissions cannot, however, be considered apart from that initiated by the other (the county and borough asylum) line of legislation, the basic idea of which being that pauper lunatics should not be sent to private institutions or registered hospitals or workhouses if they could be accommodated in county and borough asylums. The admission machinery of paupers into private institutions was only to be used in those areas where the magistrates had not taken steps to carry out the Wynn Act of 1808, which line of legislation did not entirely become compulsory until the Act of 1845 (c. 126). The difference between the procedure ordered for pauper admissions by this latter Act, as amended and consolidated by the Act of 1853 (c. 97) [please note

that this Act must not be confused with that of the same year we have already referred to, namely c. 96], is so interesting in the light of present-day aspirations that it is worthy of recording.

The Wynn Act of 1808 (48 Geo. III, c. 96) was entitled "An Act for the Better Care and Maintenance of Lunatics, being Paupers or Criminals in England." The local asylums it was designed to call into existence were for the accommodation of the dangerous lunatics arrested under the Vagrancy Act of 1744 and criminal lunatics from the prisons. From this rather awful but beneficent beginning there arose in course of time those magnificent and well-ordered county and borough mental hospitals of to-day which threatened at one time (and the danger has not yet passed) to supersede the licensed houses of which Lord Shaftesbury was no special friend. The Act was amended in 1811, 1815, 1819 and 1824. The Acts of all these years together with ss. 20 & 21 of the Vagrancy Act of 1744 were repealed by the Gordon-Ashley Act of 1828 (c. 40). As before stated, the provision of county and borough asylums was not made compulsory until the Act of 1845 (c. 126), but certain enactments for the welfare of the pauper insane were early made compulsory in this line of lunacy legislation.

The first matter attended to was the rounding up of all pauper lunatics, and bringing to the light of day where and how they were housed and their condition. Overseers of the Poor were compelled to submit to the justices annually such a return, with a medical certificate regarding each patient. They were also to report to a justice, under a heavy penalty for not doing so, every pauper insane person that came to their knowledge. The justice, if he thought fit, could require the patient to be brought before two justices, who would order a medical examination, and afterwards, might sign a *warrant* for the patient's detention in a county or borough asylum, and failing this, in a licensed house. So there existed, after the passing of the two Lunacy Acts of 1828 (c. 40 and c. 41), a "warrant" for the admission of pauper patients, as above described, and the "order" which referred to admissions into licensed houses only. It was not until 1845 that the certification of all pauper lunatics who needed asylum care and treatment became obligatory and the justices "warrant" for commitment disappears in favour of the reception "order."

The Act of 1828 (c. 40) introduced machinery for dealing with lunatics found wandering and unfit to be at large, whether paupers or not. They were committed when possible to county and borough asylums. Lord Ashley, speaking in the House of Commons in 1844, said that the law required no medical certificate whatever for a pauper patient, except when admitted into a private asylum, though we confess we are at a loss to find support for this statement. This Act of 1828 allowed private patients to be admitted to county and borough asylums on the order of one visitor, supported by one medical certificate—a strange anomaly.

All admissions to these asylums were notified, not to the Commissioners, but to the next general Quarter Sessions of the Peace.

To continue our observations regarding the pauper orders as affected by the legislation of 1853: while the Act of 1853 (c. 96) merely amended the Act of 1845 (c. 100), which remained the principal Act, that of 1853 (c. 97) repealed that of 1845 (c. 126) and consolidated and amended the law regarding pauper lunatics.

The pauper order under this Act was to be signed by a justice "upon View, or personal examination of such pauper or other Proof," on the patient being brought before him. It was also lawful for the justice to examine the patient at his (the patient's) own abode, or elsewhere.

The interesting point we wish to mention is that the officiating clergyman and others detailed to act in the similar provision of the Act of 1845 (c. 100) were only to sign the order (after examination of the patient) *if the latter could not, on account of his health or other cause, be conveniently brought before a justice; also that two medical certificates, one signed by the parish medical officer, or one medical certificate signed by the parish medical officer and another practitioner, forced the hands of the person or persons signing the order, and had to be received as conclusive evidence that the person was a lunatic and a proper person for detention.*

The procedures for the confinement of lunatics found wandering were made applicable to insane persons cruelly treated or neglected, with the proviso that the order in the latter case was to be signed by two justices. The procedure for the admission of private patients was made identical with that ordered for such cases by the Act of 1845 (c. 100), as amended by the Act of 1853 (c. 97). In fact in several respects at this time there was a tendency to make the procedures similar in these two lines of lunacy legislature, and the forms prescribed were on such lines as to be applicable as far as possible to both, though the manner in which they were used might be different. Admissions to county and borough asylums were, as in the case of admissions to licensed houses, etc., to be notified to the Commissioners, *i.e.*, after two and before the expiration of seven clear days.

THE SITUATION IN 1854.

We have now arrived at that stage in the evolution of reception orders at which Lord Shaftesbury was minded to call a halt. It was not that his reforming zeal was spent; on the contrary, a study of his diary, writings, speeches in Parliament and evidence before Select Committees show that his ideals in lunacy matters were by no means fulfilled. Indeed, some were of such force and character as to animate many of us even now; they are ideals for the consummation of which we still strive, such as the freedom of lunacy administration from the taint of criminal and pauper association; the curative treatment of mental disorders, especially in their early stages; and the better education of the general practitioner in psychiatry.

Up to now he had striven long and assiduously both in Parliament and out of it to remedy the frightful state of affairs in the accommodation and treatment of the insane, revealed by the reports of the Select Committees of 1763, 1814 and 1827, and the famous report of the Commissioners in 1844.

With Mr. Gordon, Lord Shaftesbury had been associated with the Acts of 1821. The following year saw his first official connection with the Commissioners in Lunacy. He became chairman of the Commission on November 21, 1833. His mastery of the subject was unique, and his knowledge of the mental institutions intimate from personal visitations. No single person had contributed more to the building up of the official machinery for the safeguarding of "the most helpless, if not the most afflicted, portion of the human race." All this had been accomplished against long odds—vested interests had been strong, public opinion prejudiced and unbalanced, and the "inertia, torpor and indifference" of Parliament amazing.

He was justly proud of this lunacy machinery which, with the whole-hearted efforts of those early pioneers of the humane and "non-restraint" treatment symbolized by Tuke and Pinel, had already put an end to the gross abuses and cruelties of the past and bid fair, given time, to completely revolutionize the care and treatment of the insane.

In regard to the admission of mental patients to care and treatment and the safeguarding of citizens from wrongful certification and detention, nobody knew better than Lord Shaftesbury where this machinery was sound and where it was weak, yet it was doing its work very satisfactorily in this respect, and he felt that, so long as this was so, it would be folly to disturb it until experience could point definitely to where it could be strengthened so as to secure what it did not in fact enjoy—the full confidence of the public.

We will now pause a while and review the situation as it existed about 1854. What were its striking features? One immediately occurs to us, *i.e.*, the difference in the treatment of rich and poor as regards certification and detention.

Voluntary treatment, though under undesirable restrictions, was open only to the better classes. All but the rich had to become pauperized and subjected to inquiry and examination either by a justice or by his representatives, a clergyman and a Poor Law official before appropriate treatment could be obtained. In the case only of the rich was certification a purely medical and family affair. The uncertified poor insane maintained at home, if on parish relief, were subject to quarterly inspections by the parish medical officer. The law had no cognizance of a private patient kept at home if properly treated. In the case of the pauper patient the person signing the order had to see the patient; in the case of the private patient he need not see the patient or have ever done so. Yet this interviewing and examining of the pauper patient was held

by Lord Shaftesbury to be an additional safeguard against wrongful confinement. Indeed, he was very emphatic on this point, for when he introduced his two Bills of 1845 on June 6 of that year, and speaking of the one relating to licensed houses and registered hospitals, he said :

“ My Bill will also provide an additional security against the improper detention of pauper patients, by requiring that the persons signing the order for their confinement shall personally examine them beforehand, and that the medical officer who certifies as to their insanity shall see them within seven days previous to their confinement. I may add that neither of these safeguards exists at present. I propose, also, that my measure should compel every person receiving a patient to state his condition, mental as well as bodily, when first admitted, and the cause of his death when he dies.”—*Hodder's Life and Work of the Seventh Earl of Shaftesbury, K.G.*, p. 331.

Thus, whatever else Lord Shaftesbury did for the mentally afflicted, if he did not actually introduce judicial intervention, he certainly perfected and consolidated it in regard to pauper patients, who numbered, in 1854, 13,909 out of a total of 18,338 of those confined in mental institutions, i. e., roughly 3 to 1 private patient.

On what grounds, then, did he oppose it in regard to the certification of private patients, which he did so strenuously since it was first mooted about 1857 up to his death in 1885? Obviously he thought in this relation that what was good for the poor was bad for the rich; nor can it be said that he condemned *in toto* this judicial interference as some would have us believe. Of course this apparent inconsistency in his views might be met by saying that as the public were to foot the bill, a representative of the public should have first say in the matter, but from our study of the situation this excuse never entered Lord Shaftesbury's mind for a moment. The reason was something deeper and nobler, and in the light of this reason he was not inconsistent. Yet his attitude on this question has puzzled men both during his time and since. There should be no doubt in our own minds as to his real motive in this matter. It was the necessity for early and effective treatment in all cases of mental disorder—rich and poor alike. This great principle, more than any other, influenced his career as a lunacy reformer, and accounts for his attitude on many questions.

From the very first day his attention was drawn to the plight of the insane, especially the poor insane, he was out to secure early and effective treatment. The first General Report of the Metropolitan Commissioners published on July 1, 1829, and signed by Lord Shaftesbury (then Lord Ashley) and other Commissioners, preached this doctrine, and the attitude of the Board in England in regard to it has been consistent throughout.

But he knew that so long as the Poor Law authorities dominated the pauper insane, early and effective treatment could not be

attained. It was natural for the overseers of the Poor to prefer to immure the pauper insane in workhouses where the weekly cost was 2s., than to send them to county and borough asylums or licensed houses, where the weekly cost was 7s. or 8s. It was thus absolutely necessary, if the poor were to have the advantage of institutions specially designed, equipped and administered for the treatment of mental disorders, that the strong arm of the law should be invoked in the form of the intervention of a justice, or of some responsible person like an officiating clergyman. (Note that the pauper order was never under any Act since 1828 signed by the Poor Law authorities alone). Furthermore, his object was not only to send all occurring insanity to appropriate institutions, but to clear the workhouses entirely of their insane inmates. He could not even trust the union medical officer in these matters, for he excluded him in the 1845 Act (c. 126) from certifying pauper patients, though he thought better of it in 1853.

But when it was proposed to establish judicial interference in regard to the certification of private patients, Lord Shaftesbury immediately took alarm, because he saw that in these cases it would endanger this great principle of early and efficient treatment. As far as the poor were concerned, under the circumstances which then existed, judicial interference favoured, indeed, was essential to his greatest ambition; on the other hand, in regard to those more favourably situated it would be an obstacle—hence his strong disapproval of judicial intervention in the certification of private cases.

Anticipating history a little, it is convenient here to reproduce his considered views in this relation. These are best recorded in the 35th Report of the Commissioners for 1881 :

“The *certain* result of this measure would be, we strongly feel, to increase in many cases the reluctance, already very great, to place a relation under early treatment, a matter of the utmost importance.

“The *probable* result also would be, that to avoid publicity, patients of the upper classes would be clandestinely confined in England, or would be removed illegally to the continent for treatment, and deprived of all the protection of visitation.”

The point then to be remembered in Lord Shaftesbury's attitude to judicial intervention was its possible effect on early treatment. The vital importance of early treatment forced itself on him at the very commencement of his career as a Commissioner and was never lost sight of by him afterwards as the first principle of lunacy reform.

Such being the case, we are confident that under the changed circumstances—social and otherwise—of to-day he would feel that judicial intervention in the certification of the poor insane was not only no longer necessary, but to be condemned for the same reason as he condemned it in regard to the private insane, namely, that it delayed early and effective treatment.

THE SELECT COMMITTEE OF 1859.

To continue our historical comments: Lord Shaftesbury was soon to encounter what was a new experience for him in his career as a lunacy reformer. Hitherto the public, or rather the lay mind, was either indifferent to his pleadings or gave him its support. But the reforms of 1828 and onwards had been too long delayed, and he was yet to encounter that "mass reaction" which was certain to come sooner or later when the abuses of the lunacy institutions and the horrible cruelties inflicted on the insane had really reached the hearts of the people. This "mass reaction" was symbolized by a torrential wave of suspicion and resentment which swept the nation, in regard to all who had or had had anything to do with the administration of the Lunacy Acts or the care and treatment of the insane. It was to some extent initiated but certainly fanned by a section of the Press, by imaginative novelists and irrational and emotional mob orators, gossips and others who seized upon and certainly made the most of one or two regrettable incidents which had occurred. This public outcry, which, as was shown later, had little to support it, was reflected in Parliament; hence the appointment, on February 15, 1859, of a Select Committee, with the Hon. S. A. Walpole as chairman, to inquire into the operation of the Lunacy Acts. Lord Shaftesbury and his Commission and the whole lunacy administration were to be put on their trial—a cruel reversal of fate, the reformer changing places with Parliament and the public in the pillory, where he had once put them for their apathy and neglect in respect of the sufferings of the mentally afflicted.

This wave of suspicion and excitement in regard to lunacy matters has since assumed almost a periodicity of recurrence, and has not yet, as we all well know, settled down.

Now the interesting thing about the reports of the several select and departmental committees which have chiefly followed upon these outbursts is that the charges and complaints made and investigated and most of the evidence given and the matters discussed are of much the same character.

The Report of the recent Royal Commission in Lunacy and Mental Disorder can be included in the same category, and is now before the Association and other bodies directly interested for critical examination. This has already been undertaken to some extent in the pages of this Journal (*vide* October number, 1926), but at the moment the question of greatest importance and urgency is that of early treatment. It is in order to assist those upon whom will fall the duty of making constructive proposals in this relation, that these notes are written, and the advantages of knowing exactly the ideas of those who have been faced with these problems before will be apparent.

There is no doubt that Lord Shaftesbury and his colleagues emerged triumphantly from the ordeal of the Select Committee of 1859.

As to the 1845-53 procedure in respect of private admissions and its weak points, Lord Shaftesbury gave the following evidence :

[We have not time to deal with his views on the general medical practitioner in regard to psychiatric knowledge and experience. They deserve a special article. He early advocated the setting aside of some of the asylums as centres for instructing medical students and practitioners in lunacy matters.]

Question 192.—Do you think that there is anything now in the form of the certificate, or what is required to be inserted in it, which creates any unnecessary obstacle in the way of placing persons under that restraint, which they clearly ought to be placed under?—None beyond this, that the certificate declares that the person ought to be taken charge of, and be placed in a lunatic asylum. That at once fixes the taint of insanity upon the family, and we have done all that we could to mitigate the effect. The form used to be, that such and such a person was “a proper person to be confined”; that was considered painful, and this was substituted—“to be taken charge of and placed under medical treatment.” One of the great difficulties arises from this—that you must, in seeking for a certificate, apply, generally speaking, to the medical men in the neighbourhood. Now the knowledge of lunacy among medical men is extremely limited indeed; it has never yet been made the subject of study generally. Of course there are some who have attained to a very great degree of science and knowledge, and there are most eminent names in England at present, but people assume that because a man is a medical man, he must have a knowledge of lunacy, and they therefore apply to him for his opinion; but the fact is that a medical man has no more knowledge of lunacy than any other human being, unless he has made it a special study; it is a specialty, and as much requires minute study as anything else. For my own part I do not hesitate to say from very long experience, putting aside all its complications with bodily disorders, the mere judgment of the fact whether a man is in a state of unsound mind, and incapable of managing his own affairs and going about the world, requires no professional knowledge; my firm belief is that a sensible layman, conversant with the world and with mankind, can give not only as good an opinion, but a better opinion, than all the medical men put together; I am fully convinced of it.

Question 161.—Is it necessary that the person [signing the order] should be a near relation?—No: any person, any friend may do it. You could not have that restriction, for there are many people who have no near relations, and some even have no friends; and it often happens that you must allow a person who knows the circumstances to sign the order. Then there is a “statement” with all these various particulars which must be put down. It merely goes on in this way: “Name of patient, sex, age; if married or single; condition of life; religious persuasion, as far as known,” and so on. That must be signed by the person giving the order, or some other who can vouch for the contents.

Question 201.—Have you any suggestion to make with regard to the certificate?—The only suggestion that I can make with regard to the certificate is this, that supposing the present system to go on, I think that some benefit would be gained by granting in the first instance a certificate for only three months; now it is granted in perpetuity, so long as the patient is under the disorder; but in the first instance I would have it given for only three months, and I think the effect would be to compel a revision of the case by the family or friends; the relatives would then be obliged to look again into the matter, as they would know that in all probability, if they did not do so, the patient would be returned upon their hands.

Committed to the consideration of this Select Committee were two Bills which had been introduced to Parliament by the Rt. Hon. S. A. Walpole, namely, “A Bill to amend the Law concerning the Providing of Lunatic Asylums for Counties and Boroughs and the Maintenance of Pauper Lunatics,” and “A Bill to amend the Law concerning the Care and Treatment of Lunatics.”

Clauses 4 to 14 of the latter Bill proposed that there should be medical examiners appointed independently of the Commissioners, who should visit patients admitted to licensed houses within seven days of their admission and report to the Commissioners whether they were fit and proper persons to be detained. A second visit in each case was to be made in about three months' time. The Secretary of State first suggested that this independent visitation should be done by the Commissioners or deputies acting under their authority. Lord Shaftesbury had turned the proposal down as impossible, but had stated that if such visitations were necessary to allay the anxieties of the public in regard to wrongful certification and detention, the least harmful procedure would be for local practitioners to undertake them for a fee. He confirmed this in his evidence before the Select Committee. The second visit he rather objected to, his view being that there should be re-certification after three months. His real views were that the whole of the procedure was unnecessary and that the ordinary visits of the Commissioners were a sufficient safeguard. This and other proposals in the Bill raised a storm of opposition from our Association, which held special general meetings on the Bill on February 28, and March 26, 1859, and the following resolutions, among others, were passed :

I. That the contemplated appointment of medical examiners, under the Lunatics' Care and Treatment Bill, is highly objectionable, inasmuch as they would probably in most cases be gentlemen imperfectly acquainted with insanity ; that their visits would cause much disturbance to the patients, and would consequently have an injurious effect upon them ; and that the proposed system of secret reports is one in every respect to be condemned.

III. That the clause depriving medical practitioners, being wholly or partly proprietors of any licensed house, of the power of certifying to the existence of insanity with a view to the reception of a patient in any other licensed house, is objectionable, inasmuch as it would most unnecessarily prohibit a very competent class of men from signing certificates, and would thereby be disadvantageous to the public.

VIII. That patients should be admissible into any licensed house upon their own notice in writing to the Commissioners, without any order or certificates ; and that such notice should hold good for one week.

It is useful to have these views in mind in case like proposals are forthcoming in the near future. The proposal was also one of the features of the Dillwyn Bill of 1880.

At this early period the question of judicial intervention in the certification of private cases was tentatively raised, upon which Lord Shaftesbury gave evidence before the Select Committee as follows :

Question 846.—Would your Lordship approve of a pauper lunatic being taken before a magistrate that he might see the case?—The Honourable Member means, I suppose, private lunatics. I think nothing could be worse than that ; there would be a degree of publicity about it that would be most painful, to go before a magistrate, and to have the matter determined by him, whether the patient

should or not be put under medical treatment. In 99 cases out of 100 the magistrate knows little or nothing about the matter. A case occurred the other day of a poor man who was taken before a magistrate, and he refused to certify, because the man was not in an infuriated state. "A quiet person like him," he said, "ought not to be put in an asylum; take him back." He was in a low, desponding state, and if he had been sent to a curative asylum, he might have been cured, and restored to society.

The following extracts from his evidence show what Lord Shaftesbury thought of the association of lunacy administration and the Poor Law authorities, especially in regard to early treatment :

Question 683.—What provision would your Lordship suggest, requiring the relieving officer to do so as an act of duty?—I think there should be a provision to this extent, that the relieving officer, or the overseer, should not, of his own authority, take any lunatic into a workhouse, which he does now, for a vast proportion of them are taken in so.

Question 690.—Has your Lordship any remedy to propose that you think would be likely to prevent an evasion of the law?—Yes; the remedy which I stated before, which is, that the relieving officer and overseers should be interdicted by law from putting any pauper lunatic into a workhouse on their own authority; and that in every instance before a pauper lunatic is placed in a workhouse, he should be taken before a magistrate, and that the magistrate shall determine whether the individual ought to be sent to the county asylum.

Question 695.—Might you not add a proviso to that clause, prohibiting every relieving officer from taking any lunatic pauper to a workhouse without the authority of a magistrate?—Certainly; that is what I want.

Question 696.—And also add, that no magistrate should order a pauper lunatic to be taken to a workhouse, unless it was made clear to that magistrate that there was either no asylum in the county or borough to which he could be taken, or that the asylum in the county or borough was full?—Yes.

Question 699.—The relieving officer takes the man to the workhouse, not as a lunatic?—Yes.

The following extract from the Report of this Select Committee of 1859 deals with the question of early treatment and certification, and is well worthy of our consideration to-day, though written sixty-eight years ago :

"The circumstances under which the Patient may be placed under Restraint, and the Safeguards provided for the Propriety of his Confinement."

This is by far the most difficult part of the subject. It has been suggested that in all cases the alleged lunatic, before he is confined, should, as a matter of right, be entitled to have his case tried and decided by some magistrate; or, as it has been proposed in a more mitigated form, that the medical certificates of the alleged insanity should be inspected and verified before a magistrate; and that if the magistrate was not satisfied with them, he should have the power of inquiring into the truth of the statement made, and of the necessity of the intended confinement. The latter proposition would tend to assimilate the law of England to the law at present existing in Scotland. There, the certificates, with a statement regarding the case, signed by a relation of the party desiring the confinement, are sent to the sheriff of the county (the sheriff in Scotland being a judicial officer), who has to satisfy himself, either upon the mere examination of the parties, or if he thinks proper, by a personal examination of the alleged lunatic, or by calling other evidence that the alleged lunatic is a proper person to be detained and taken care of. The reasons assigned in favour of this proposition are thus stated

by the witness in reply to the question : "What evils would the course you recommend obviate ?" The answer is, "I think it would give greater security to the public, instead of having an examination after the confinement in an asylum, when the mischief has been done. If you once place a person in an asylum, there is a certain stigma which attaches to him, and which he never gets rid of, and upon persons of weak nerves it has a most prejudicial effect."

The two suggestions thus offered to your Committee involve a most important question. But it appears to your Committee, that if either of them were introduced and strictly acted upon, they would be likely to produce still greater evils than those which they profess to remedy. According to the evidence taken before your Committee, it is fully admitted that in a very large majority of cases there is *prima facie* evidence to justify the confinement. Indeed, it may be said that the instances are extremely rare in which, under the present law, the confinement is or has been unwarranted. If that be so, the evil of acting on the present law without inquiry before a magistrate is more imaginary than real. But the evils arising from a change in that law by insisting on inquiry, when the parties desired it, would often lead to an unnecessary publicity, which it is for the interest of the patient, as well as his family, if possible, to avoid. Insanity under any shape is so fearful a malady, that the desire to withdraw it from the observation of the world is both natural and commendable. The reverse of this would in all instances be painful, and in many it would be cruel. A man in business may become affected with temporary insanity, brought on by over-exertion, mental anxiety, or physical ailment, but if he is early and properly treated, his recovery may be as quick as his seizure was sudden. What could be more injurious than a public inquiry in such cases as these ? Where the insanity was undisputed, the inquiry would lead to no useful result, though the knowledge of the malady might be seriously prejudicial to the future prospects of the patient and his family. But when it was disputed, it is unnecessary to dwell on the various mischiefs which would instantly result from it, such, for instance, as the agitations caused to the patient's mind just at the moment when it was trembling on the balance ; the injurious comments which might sometimes be made on his character and conduct ; the unnecessary exposure of private matters, which need not be brought, and which ought not to be brought before the public gaze, if, at least, it be possible to avoid it ; the stigma or prejudice which might permanently attach to him and his children in the event of recovery ; and frequently it may be added, the grievous expense which such inquiries would entail, as they did in the case of Chancery lunatics, where inquisitions were required, until recently, to be held before a jury. Nor should it be forgotten that the delay caused by reference to the magistrate, with a possible inquiry, to be instituted by him into the case, might prevent or retard the immediate treatment which is so requisite for the patient, and thereby tend to aggravate the malady. It ought also to be borne in mind that the sheriff in Scotland is a judicial officer and professionally conversant with legal matters, while a magistrate in England may have little experience in those subjects which, according to this plan, he might be called upon to determine. For these reasons your Committee are disinclined to adopt these suggestions. No doubt the conclusion thus arrived at introduces the further question, What, then, are the proper safeguards ? For if there be even one person improperly confined, it is right to provide the amplest protection which the law can afford in order to prevent so deplorable a result.

For providing this protection several things are necessary. *In the first place*, it is important that the medical certificate should be clear in its statement, and accurately framed. The whole justification for the patient's confinement depends on this document. The form of the certificate required by law appears to be sufficient ; but your Committee are of opinion that some additional security should be taken for ensuring its accuracy. It is sometimes imperfectly filled up, and the patient is then placed under restraint on a document which does not legally justify his detention. Mr. Bolden's suggestion that these certificates should be verified before a magistrate, so far only as to enable him to determine whether the Act had been complied with, would probably tend to greater caution in this behalf. It would operate as a check on too hasty a conclusion, and obviate the necessity of further examination, without impeding a proper confinement for the purposes of cure, and without entailing that painful publicity which on so many accounts it is desirable to avoid. This suggestion, when thus considered, deserves to be attended to. *In the second place*, your Committee recommend that the certificate

authorizing the detention should be limited, in the first instance, to three months, and no more. It is now granted for an indefinite period; but if it were limited to three months in the first instance, "the effect would be," as Lord Shaftesbury observes, "to compel a revision of the case by the family or friends; the relations would be obliged to look again into the matter, as they would know, in all probability, if they did not do so, the patient would be returned upon their hands." In the third place, the order for receiving the patient into the asylum with which the medical certificates are accompanied should state the time when the person signing it had last seen the patient; and such order should not be effective unless the applicant had himself seen the patient within three months of his signing the order. A case has been brought to the notice of your Committee, where the party applying had not seen the patient for two years, and another where he had not seen him for six times that period.

This contains an indictment of the intervention of a justice acting in a judicial capacity. The solution of the problem of early treatment and certification in all cases of insanity advanced amounts to a provisional order of three months' duration, vized by a magistrate, and a re-examination before more prolonged detention is authorized.

The Lunacy Amendment Act of 1862 (25 & 26 Vict., c. 111) followed the consideration of this report. This Act amended the three principal Lunacy Acts in force at that time, namely, 1853 (16 & 17 Vict., c. 97) for pauper and criminal lunatics, and 1845 (8 & 9 Vict., c. 100) and 1853 (16 & 17 Vict., c. 96), which referred solely to private cases and licensed houses and registered hospitals.

The Act of 1862 made it illegal to detain a lunatic or alleged lunatic in a work-house for a period beyond fourteen days unless it was certified by the medical officer of the union that the patient could properly be kept there. The person signing the order for the reception of a private patient was required to have seen the patient at least one month before the date of signature, and the time and place of such interview was to be stated on the order. The order was valid for a month from the date of signing. The order was also valid whether the patient, after admission, became a pauper or *vice versa*.

The notice of admission of a private patient together with the order and medical certificates was to be transmitted to the Commissioners within one clear day, but not the medical statement, which was to be sent as hitherto.

THE SELECT COMMITTEE OF 1877.

Following the Select Committee of 1859 and the legislation of 1862, there was an exacerbation of public unrest and excitement. Charges of unjustifiable certification and detention, especially in licensed houses, and of gross neglect on the part of the Commissioners were freely made, and another inquiry demanded.

There were other factors, too, which assisted towards this end. Medical men had become very reluctant, as now, to sign lunacy certificates owing to the frequency of actions taken against them on this account. Medical men demanded early treatment for their mental cases, and at the same time the protection of the law for any

action they took in the interest of these patients. Then there was an outburst of reforming zeal on the part of the Lord Chancellor and others in regard to the administration of the law generally, resulting in the Judicature Acts of 1873. A revised set of rules governing lunacy practice appeared in 1883.

Another Select Committee actually came into existence on February 12, 1877, its appointment being moved by Mr. Dillwyn, who really was out to abolish the Commissioners. It was "To Inquire into the Operation of the Lunacy Law as regards the Security afforded by it against Violation of Personal Liberty."

Lord Shaftesbury, the noblest of men, was, unfortunately, at that time in poor health physically and nervous and depressed in mind, and doubted very much whether he could adequately preserve from despoliation that great lunacy administration he had slowly but surely built up, and which he knew was efficient and had done untold good for the mentally afflicted, and was capable of doing more.

Who cannot but be touched at the following entries in his diary for 1877?

" March 11th.—My hour of trial is near ; cannot, I should think, be delayed beyond the coming week. Half a century, all but one year, has been devoted to this cause of the lunatics ; and through the wonderful mercy and power of God, the state now, as compared with the state *then*, would baffle, if description were attempted, any voice and any pen that were ever employed in spoken or written eloquence. *Non nobis Domine.*"

" July 22.—Sunday. Appeared again on Tuesday, 17th, before the Committee. . . . Beyond the circle of my own Commissioners and the lunatics that I visit, not a soul, in great or small life, not even my associates in my works of philanthropy, as the expression is, had any notion of the years of toil and care that, under God, I have bestowed on this melancholy and awful question. . . ."

However, notwithstanding his forebodings, he emerged triumphant from the strain of his long examination, most of it an astonishing feat of memory. As much of the evidence given before the Dillwyn Select Committee of 1877 deals with problems exercising our minds to-day we will now give some extracts.

The following evidence by Lord Shaftesbury deals with the Admission Order:

Question 11340.—What is your Lordship's opinion as to the order of admission ? Do you think there is any change necessary in that ?—The order of admission stands on a very singular footing, no doubt, because any one person may sign the order, with the exception introduced in the 25 & 26 Vict., that no medical man having an interest in a lunatic asylum and no person receiving a percentage should be allowed to sign the order ; otherwise any person whatever has the power to do so. I will tell you how that arose. When we prepared the Bill, which passed as the Act of 1845, we were perfectly aware of the weakness of the provision in respect of the order of admission, but we could not determine to whom to assign the power ; we could not impose it on relations or friends, because we found that in so many instances there were poor medical students and poor law students,

and a great many other people who came up from the country and resided in inns or lodging-houses, and who were suddenly taken ill; of whom no human being knew anything, and yet an order must be signed, and therefore it was allowed that anybody should sign the order of admission, because otherwise the patient would not have been admitted into any asylum. I have not the least doubt that we intended as soon as we could to make some better provision, but strange to say, notwithstanding the law is so wide, and apparently so capable of abuse, I have not heard a single instance of a protest against it, or of any mischief having arisen out of that. Your Right Honourable Chairman, I think, made some remarks upon it in the examination of Dr. Tuke, and it is undoubtedly a blot and ought to be amended, because, although it has not hitherto produced any mischief, it is clearly not on a proper footing. What I should recommend would be this: that you should have the law as it stands with a view to meet the emergency of the case, but then give the Commissioners a power to substitute some person for the one who signed the original order. I think my colleague Mr. Phillips suggested that it should be confined to those who had the power of discharge in the case of the death of the person who signed the order. I think I should go a little further than that, and leave it to anybody that the family agreed upon, because where a family are not in harmony, many of them would agree upon a third person, and if they did that I should give to the Commissioners the power to substitute him.

The subject of judicial intervention in regard to private admission is discussed and again opposed by Lord Shaftesbury:

Question 11604.—We have had evidence from the Scotch Commissioners of Lunacy, in which comparisons very favourable to the Scotch system have been drawn with regard to the intervention of the sheriff. Your Lordship has, I think, already expressed an opinion with regard to the intervention of a public authority; would you consider that the prospects of cure derived from placing a patient under early treatment would be considerably interfered with, if the law were altered, so as to necessitate the intervention of a magistrate in this country?—Most undoubtedly. The great fear in England of so many people is publicity, and anything that tends to bring the patient before the public, and to make the case of the patient notorious, would induce people to keep back that patient so long as they could before they submitted him to the treatment of an asylum, or of a single house; it would interfere very materially with it.

Question 11605.—I think to some extent the evidence of Sir James Coxe and Dr. Mitchell clashed; the opinion of Sir James Coxe was that the sheriff very rarely exercises his judgment in the matter. Dr. Mitchell thought he more often did; but so far as your Lordship's opinion is correct, you do not think any advantage whatever, as to securing the patient's liberty, would be derived from the intervention of the magistrate, whereas considerable injury would probably be done to his prospects of cure?—I have no doubt about it. If I recollect right the Scotch evidence went to this: That sometimes the sheriff acted judicially, but very often he did not interfere at all, and that it was very uncertain and very desultory, but even if he did interfere more than he does, it would not apply to the case of England. The Scotch people and the English people are different in many respects. I have no doubt the Scotch system is admirably adapted to their tastes and feelings, but I am certain it would be most repugnant to our tastes and feelings to have the civil magistrate interposing in these matters. Just consider it in this way. Supposing you called in the intervention of the magistrate, he must act either ministerially or judicially; if he acts ministerially, what earthly use is he? He merely signs his name to the documents, and what will be the result? People would become very much alarmed if it got wind that there was some member of their family about to be placed in a lunatic asylum. It would give no protection whatever, because if the magistrate did it ministerially, in what way could he control the certificate, or the person who gives the order, or the person who receives the patient into the asylum? It is a mere ministerial act and it afforded no assistance or security whatever; but supposing, on the other hand, he acts judicially and is called in to sit in judgment on the certificate, and then he signs his name at the foot of the document, and says it is good and sound, then see what he does. He exonerates the medical man from his great responsibility; he exonerates the man who signs the order; he exonerates the

man who admits the patient into the asylum because he has declared everything to be good and current; however bad it may be it is endorsed by the judicial man, who has been called in by Act of Parliament to sit in judgment on that certificate. Then you take away from the patient all remedy, all right of prosecution when he obtains his liberty. He could not sue the medical man for damages, because he had been inattentive with reference to the certificate which he had given, nor the person who signed the order for wrongful imprisonment. The whole thing was endorsed by the magistrate, and must pass as unquestionable.

Question 11619.—I think your Lordship is under some misapprehension as to the part that the sheriff acts in the matter; he has the option of acting according to his own discretion, either ministerially or judicially; he may judge of the fitness of the evidence upon which the medical men grant the certificate, or he may not do so; he may judge, and usually does, of the fitness of the persons to give evidence under the circumstances; for instance, relationship, or anything of that kind, might be regarded as a disqualifying characteristic in a person signing the certificate?—That is what we should object to; we should object to an inexperienced layman taking upon himself to reverse the decision of the medical men.

The following extracts deal with the proposal to safeguard a patient from wrongful detention by an appeal for his examination by two independent practitioners (Scottish Act, 1857):—

Evidence by Sir. J. Coxe, a Scottish Commissioner at that time:

Question 2311.—Supposing the patient to allege that he is sane—I am not now speaking of you taking action—he can only obtain his discharge if the superintendent says he is not sane, by obtaining two medical certificates?—Any man may send two medical men, and make application to the sheriff if he gets certificates of sanity.

Question 2312.—Any person confined as an alleged lunatic?—Any member of the public. If you had reason to think any friend of yours was improperly confined in an asylum, you might apply to the sheriff to name two medical men. You send two medical men approved by the sheriff, and if certificates of sanity are given the sheriff would order his discharge. The difficulty is that few people are disposed to find the fees of the medical men.

Evidence by Lord Shaftesbury:

Question 11560.—In Scotland anybody can procure the release of a lunatic by getting two medical certificates?—Yes.

Question 11561.—That, I think, is not the case here?—No.

Question 11562.—What do you think of that?—I should be very sorry to give them absolute power, but I should allow anybody to introduce two medical men to make an inquiry into the state of the lunatic. I should not be inclined to give them the absolute power to dismiss him upon that; but I think, and indeed I am certain, that the greater part of the proprietors of the licensed houses of the present day are always glad to see medical men of character come into their establishment.

Question 11563.—I suppose some status must be proved?—Yes.

Question 11564.—You would think it right that any friend who could prove any real interest in a patient might introduce two medical men for the purpose of trying the case of the sanity of the patient?—I think so; there might occasionally be very cogent reasons against it, but as a general principle I should say it would be a very good thing.

The following extracts from the Report of this Dilwynn Committee of 1877 deal with early treatment and certification;

6. Nevertheless, the anomalous state of the law, which undoubtedly permits forcible arrest and deportation by private individuals, without the intervention of public officers, except in the case of paupers, and the fearful consequences of fraud or error, have induced the Committee carefully to inquire whether any additional safeguards may be devised.

7. The difficulty which presents itself at the outset is the universally conceded importance of the speediest possible treatment of the first symptoms of derangement. This might doubtless be carried on, and, in many instances, better carried on, outside the walls of an asylum, but in most cases such would obviously be impossible, nor would an intermediate hospital, which has been suggested, effectually prevent the taint of insanity from attaching to temporary cases. Any impediment to the rapid conveyance of a patient to an asylum might render his case hopeless. In Scotland, what is called an emergency certificate, signed by one medical man, is found to work well, and evidence was given that the speedy treatment secured in this way is so efficacious, that in many cases no further certificate is required, as the patient is discharged before the expiration of the three days during which it is valid. If, however, he is detained longer, the Committee think that notice should be at once transmitted to the Board, and that no patient should be kept beyond three days without a fresh certificate, signed by two independent medical men.

9. In all other cases the certificate should be granted by two independent medical men. That there will even then be a risk till lunacy is more generally studied is shown by a remarkable case in the evidence before the Committee. Anything, therefore, that would make the certificate more precise would give additional security, such as the substitution of statutory declarations for the loose statements which frequently appear upon the certificate; and in addition to the report now required after two and before seven days, a very careful statement should be prepared from the case-book, and forwarded to the Board at the end of the first month.

10. It seems reasonable that the person who signs the order should state on the face of it by what right or authority he intervenes. It would, in the opinion of the Committee, tend to prevent abuse if it was required that the order should be given by a near relative, as in Ireland, or by some responsible person who could be called to account, instead of, as it was represented to the Committee, sometimes by a servant, or some man of straw, who might disappear altogether if any inquiry took place. This would also be in accordance with the law of Scotland, with regard to the person who petitions the sheriff.

11. The Committee are of opinion that the same procedure should apply to all lunatics, whether with or without property requiring protection, whether private patients or paupers, and whether conveyed to the lunatic wards of workhouses or to hospitals or asylums. But they do not attach importance to the order emanating from a magistrate, such as the sheriff in Scotland, or a justice of the peace in England, whose intervention must necessarily in most cases be merely ministerial, and who may not in all cases be available.

Notwithstanding the findings of his own Select Committee that—

“Although the present system is not free from risks, which might be lessened though not wholly removed by amendments in the existing law and practice, yet assuming that the strongest cases against the present system were brought before us, allegations of *mala fides* or of serious abuses were not substantiated”—

Mr. Dillwyn introduced a Bill to Parliament in 1880 and again in 1881 which contained provisions for the admission of all patients to mental institutions (including judicial intervention and independent medical examination), which were so impracticable that the Commissioners had no difficulty in killing them. They did this very effectively in their 35th Report for 1881, to which reference has already been made.

This Bill, when first introduced, never reached the stage of the second reading, and failed to reach the Committee stage on its second appearance in the following year. It was apparent, however, that the legal element in the House would

never rest content until judicial interference in some form or other was extended to private admissions. One provision of Mr. Dillwyn's Bill was that the Chairman of the Commissioners should be a paid official "to increase its efficiency"—not a handsome acknowledgment of the great services of England's greatest humanitarian.

THE CONSOLIDATION OF THE LUNACY ACTS.

The Government's next attempt to effect further reforms in lunacy matters was the introduction by Lord Chancellor Selborne of the Lunacy Amendment Bill of 1885 which led to the resignation of Lord Shaftesbury, and which probably hastened his death in October of that year. He had, however, on the Bill being dropped following a change of Government, resumed his duties as Chairman of the Commission.

Lord Halsbury, who succeeded Lord Selborne as Lord Chancellor, re-introduced the measure in 1889. It had many good points and simplified lunacy procedures in many respects, and gave every certified person the protection of the Crown as regards his property, only hitherto extended to those found insane by inquisition. Its great blot was that for the future no person, whether rich or poor, was to be treated as an insane person without a judicial inquiry. In this innovation, as we have before stated, the Government had not the support of the medical profession, nor of the findings of any select committee or of our Association, though on the advice of its Parliamentary Committee it effected many improvements in the measure in other directions. On this particular question our Parliamentary Committee, in a report dated July, 1887, observed among other adverse criticisms :

No. 6. The Committee are of opinion that it is undesirable that a magistrate should be called upon to decide questions which are of a purely medical character, and still more undesirable that it should be legally practicable for a magistrate to overrule the scientific opinion of two medical men, who might be among the most eminent of their profession.

No. 7. The Committee are strongly of opinion that the power of these authorities should be purely *ministerial*, and that when any doubt arises on what is a medical question, they should have power to refer the case to the decision of a medical man to be named by them, but that they should not themselves have the power to personally visit and examine the alleged lunatic.

We need not describe the repeal of the Amending Act of 1889 and its re-enactment in the Consolidating Act of 1890, the provisions of which and its wonderful draftsmanship are familiar to us all.

CONCLUSION.

Our views as to the deductions which can be drawn from these historical facts and the guidance they may afford in regard to the future must be left to another article.

Two points, however, are made abundantly clear, namely :

(1) **That the clearance of the workhouses, prisons, etc., of their insane inmates and the alleviation of the conditions under which the mentally afflicted poor suffered and died could not have come about without judicial intervention and the aid of the strong arm of the law respectively.**

(2) **These having been largely effected, there appears to be no longer any historical grounds for the continuation of judicial intervention in the certification of rate-aided cases of mental disorder.**

J. R. LORD.

Appointments to the Medical Staff of Mental Clinics.

[Copy of letter addressed to the Chairman of the Council of the British Medical Association.]

SIR,—

I beg to state that at a General Meeting of the Royal Medico-Psychological Association a resolution was passed unanimously expressing strong disapproval of the following recommendation of the Council of the British Medical Association reported in the Supplement to the *British Medical Journal* for April 30 :

“ That it be recommended to the Representative Body that specialist work in connection with the treatment of patients suffering from mental disease in its early stages, whether at hospitals or clinics, should not be carried out by whole-time medical officers of public health or local government authorities, but on a part-time basis by medical practitioners who have special knowledge of the subject, but who need not necessarily be devoting their whole time to such work.”

It was resolved that all members of the Royal Medico-Psychological Association who were also members of the British Medical Association should be asked to attend the Divisional Meetings of the latter Association, to which this recommendation stands referred, and to oppose its adoption as ill-founded and retrograde and against the best interests of the treatment of early cases of mental disorder.

It was further resolved that a letter of protest should be sent to your Council setting forth the grounds upon which my Association's disapproval of the recommendation were based.

A summary of the view taken is that, though it is desirable for general practitioners to be closely associated with the work of these clinics, there should be no such discrimination as in the British Medical Association's recommendation, but that the criteria for such appointments should be ability to treat early mental cases, and local expediency as to how such treatment can best be provided.

My Association in General Meeting discussed the report of the Meeting of your Council at which this matter was considered, and in regard thereto the following observations may be taken as a fuller expression of its views:

- (1) If the Council's recommendation becomes the policy of the British Medical Association, then an injustice will be done to many members of the Royal Medico-Psychological Association, most of whom are also members of the British Medical Association, and not a few of whom hold or have held official positions in the Branches and Divisions of the latter body.
- (2) The part of the recommendation to which objection is taken is that "work in connection with the treatment of patients suffering from mental disease in its early stages, whether at hospitals or clinics, should not be carried out by whole-time medical officers of . . . local government authorities"—that is, by the medical officers of the County and Borough Mental Hospitals.
- (3) In the course of the discussion, as reported in the Supplement of April 30, among the various reasons advanced in support of this recommendation was a suggestion of the incompetency of the medical officers of public mental hospitals to deal with early mental disease. This could only be advanced from ignorance on the part of the speakers of the training which the alienist has in normal psychology, morbid psychology, neurology and general medicine, and of the knowledge which he acquires from the study of the evolution of mental disorder from its earliest manifestation, and of the factors, social, physical and psychic, which are involved in causation. Knowledge on these lines is essential for the effective treatment of mental disorder in every stage, but particularly essential in the early stage when disaster may often be averted.
- (4) To divorce the diagnosis and treatment of mental disease in its early and late stages is scientifically and administratively unsound, and is not in the best interests of either the patient or the medical profession. It tends to emphasize the difference between certified and uncertified mental disease, which, as has been shown lately in the law courts, is largely artificial and chiefly a matter of expedience. Those best able to judge recognize that the study of disorder of the mind requires a wide knowledge of its different stages, and that to divide its treatment into

compartments is as illogical as would be a similar division in disorder of any other organ of the body.

- (5) The contention—of long standing—that the medical staffs of public mental hospitals are not competent, owing to lack of experience, to treat early cases of mental disorders is also ill-founded. For the most part mental symptoms are the same whether early or late except as regards degree, and the physician who is most familiar with them is the one most likely to recognize them, and also most likely to prescribe the best treatment. No account is taken of the experience gained during the relapses of convalescents, the beginning of attacks in recurrent cases, etc.
- (6) It is no part of the argument to deny that the General Practitioners throughout the country by training and opportunity are fully equipped with this knowledge and experience, but it is contended that they have no justification for claiming monopoly and pre-eminence in these respects, or for sitting in judgment on a section of their colleagues, and ostracizing them as unfit to treat cases of a sort to which they have really given very special study. It is to the exclusion of the medical officers of the County and Borough Mental Hospitals that my Association takes exception. Our contention is that the authorities should be left to make their selection of medical officers for early mental disease clinics unfettered by the limitation on their choice suggested in the recommendation of the Council. If the County and Borough Mental Hospital medical officer be excluded, this will entail the removal of medical men now conducting clinics with considerable success in spite of attendant difficulties, legal and financial. For obvious reasons the exclusion of the County and Borough Mental Hospital medical officer would inevitably make it impossible to establish mental clinics in many country areas.
- (7) Another class of argument used in support of the recommendation was that a medical officer of a mental hospital would create an "atmosphere" repellent to patients. This is one of those vulgar errors which owe continued currency to the unthinking and the uninformed—lingers in the last century—and to the timorous practisers of pretence. The recommendation should not satisfy them, for many medical officers of mental hospitals, not being under "local government authorities"—all those in registered mental hospitals and all in licensed houses—remain eligible for appointment in charge of a clinic. Why they

should have a less noxious influence on the " atmosphere " is not disclosed in the discussion. The Royal Medico-Psychological Association sees in this differentiation between the medical officers of County and Borough Mental Hospitals and those of other mental hospitals—all members of my Association—an invidious and unjustifiable discrimination, which would be strongly resented both by those who would be eligible and those who would be ineligible for appointment to clinics if the recommendation of the Council be accepted and become effective.

- (8) The recommendation is also contrary to the policy recommended by the British Medical Association in regard to the admission of voluntary boarders to public mental hospitals. If it is inadvisable for the medical staffs of public mental hospitals to treat early cases in clinics, it must surely also be inadvisable to treat them when in public mental hospitals.
- (9) The essential and fundamental and unethical fault of the recommendation is that it is an attempt by one set of doctors to dictate to authorities that they shall not appoint members of another set of doctors to certain work on the ground that they are less competent than the dictators to treat patients. This is an assumption which the Royal Medico-Psychological Association knows in this case is wholly unjustified, and the Council of the British Medical Association is asked to reconsider its recommendation with the object of eliminating the strongly resented exclusion of the medical officers of County and Borough Mental Hospitals from work in connection with clinics which really owe their origin to the persistent pleading and appeal of these very men.

In conclusion I have to suggest, that should this letter fail to convince your Council that its recommendation is ill-founded and pregnant with possibilities detrimental to the welfare of mental clinics and the treatment of cases of mental disorder in their early stages, your Council should consent to receive a deputation on the matter.

I am, Sir,

Your obedient servant,

JOHN R. LORD,

President,

Royal Medico-Psychological Association.

To the CHAIRMAN OF THE COUNCIL
OF THE BRITISH MEDICAL ASSOCIATION.

[Extract from the Supplement to the *British Medical Journal*, July 30, 1927, p. 74.]

Treatment of Early Stages of Mental Disease.

Mr. Soutar moved, as a recommendation of Council :

That specialist work in connection with the treatment of patients suffering from mental disease in its early stages, whether at hospitals or clinics, should not be carried out by whole-time medical officers of public health or local government authorities, but on a part-time basis by medical practitioners who have special knowledge of the subject but who need not necessarily be devoting their whole time to such special work.

This, he said, referred to specialist work which was now being taken up so largely in clinics and hospitals with regard to the treatment of early mental disease. It had led to a certain amount of misunderstanding, and a letter had been received from the President of the Royal Medico-Psychological Association (Dr. J. R. Lord) expressing his feelings on the subject in the strongest terms. Dr. Lord wrote : " This is one of those vulgar errors which owe continued currency to the unthinking and the uninformed—lingers in the last century—and to the timorous practisers of pretence." Mr. Souttar said that there was no desire to exclude any group of medical men from their proper work ; but he held that, as far as possible, medical work should be carried out by private practitioners—that it should not be transferred to those holding whole-time appointments under public authorities. That was the policy of the Association, but, on the other hand, they did not wish it to be thought that they desired to exclude whole-time men from these appointments.

Mr. E. W. G. MASTERMAN said that a member in his own Division, who was a medical superintendent of a very large hospital for early mental cases, had explained to him how much offence the resolution as it stood had given, and he hoped that by inserting a few words it might be made more acceptable. He proposed that it should read : " That specialist work . . . should not necessarily be carried out by whole-time medical officers," and that the words " where such are available " should be added after " practitioners."

Dr. J. R. GILLESPIE (Belfast) said that in Belfast quite recently the board of a hospital, on the suggestion of the staff, invited the medical superintendent of the mental hospital, which was under the Belfast Corporation, to undertake to conduct a clinic for early mental cases in connection with the voluntary hospital, and he had consented to do so. His Division desired this whole question to be referred back to the Council.

Mr. Masterman's amendment was accepted by Mr. Souttar, and the amended resolution was carried.

The Work of Women Medical Officers in Mental Hospitals.

ON November 20, 1926, there was held at the Holloway Sanatorium, Virginia Water, by invitation of Dr. Elizabeth Casson, an informal gathering of nineteen medical women interested in psychological medicine, to discuss their special work. These medical women were all who were able to attend out of a large number who were working, or had been working, in mental hospitals, and who had been invited. Mrs. Hume-Pinsent and Miss Darwin, Commissioners of the Board of Control (England and Wales), and Miss Landon, one of its inspectors, were also present. Twenty women doctors sent messages of regret for non-attendance, together with much helpful information.

Some of the subjects discussed were : The need for the patient to have the doctor most suited to his or her requirements ; the

importance of staff conferences, at which junior as well as senior medical officers should be present; the place of the medical women in the teaching of nurses; the terms of appointment of medical women with regard to promotion. It was noted that there are already medical women in charge of mental hospitals. Housing accommodation for the senior medical women and the importance of telling junior medical women of the need for work in mental hospitals was also discussed.

The following resolution was then passed: "That this meeting, which included fifteen members of the Medical Women's Federation, form a group concerned especially with the mental aspects of medicine and with the interests of medical women practising in this branch."

A committee of nine was then elected, the Chairman being Dr. Elizabeth Casson. That committee has now been made a Standing Committee on Psychological Medicine of the Medical Women's Federation, and has been strengthened by the addition of Dr. Kate Fraser, of the Scottish Board of Control.

It was agreed to prepare a memorandum on the work of medical women in mental hospitals, to encourage the appointment of medical women in such hospitals. Information has been received from women doctors in Great Britain, Ireland, America, Germany and Sweden on work of this kind in their countries, and the sub-committee is awaiting the result of a questionnaire sent out to different nations by the International Medical Women's Federation.

The Hon. Sec. of the sub-committee is Dr. Isabel Wilson, 42, Harley Street, London, W. 1, who will be glad to hear from any fellow-members of the Royal Medico-Psychological Association who are interested in the subject.

Part II.—Reviews.

The Psychology of Murder: A Study in Criminal Psychology. By ANDREAS BJERRE, LL.D. Translated from the Swedish by E. CLASSEN, M.A., Ph.D., M.R.S.L. London: Longmans, Green & Co., Ltd., 1927. Demy 8vo. Pp. xii + 164. Price 9s. net.

The study of the criminal, from any scientific point of view, is a comparatively new branch of science. Such study, in its inception, naturally adopted general and statistical methods. It is now recognized that no real advance can be made apart from the intensive investigation of individual offenders. Only of late have

adequate means for such investigation been at our disposal. Our knowledge is, at present, but superficial, our methods are tentative. Yet we may attempt to accomplish something, and it is our duty so to do, for the sake of our successors. The present volume is a notable addition to our science, and is the outcome of work done by the author at the Stockholm Central Prison.

The science of the psychology of the criminal cannot, however, confine itself to the investigation of isolated individuals. Like other sciences, if it is to be fertile, it must endeavour to classify its observed phenomena under certain groups. Some generalizations must be made, even if these are hypothetical and tentative. The author holds that the determining factor in all crime is "weakness," by which term he means a general incapacity for satisfying the demands which life makes upon all men, irrespective of social environment. This incapacity is found among murderers in three main types, each of which may be regarded as a method of escape from reality. He gives us a careful study of an example of each of these three modes of escape.

To the mode of escape most frequently selected he gives the name of "self-deception." The universal tendency to attempt escape in this way is exhibited without restraint by the criminal. The selected example is that of a man called Winge (all the names in the book are fictitious), who, after various experiences in the underworld, some of which appear to have been of a homo-sexual character, committed (with the assistance of a companion) the murder of a postman, in order to obtain possession of a sum of money officially carried by the victim. The perpetration of the crime exhibited that lack of precaution against detection which has so often been observed among murderers. The author would seem to consider that the fear of punishment has little deterrent effect in such offences. Both before and after the crime Winge appears to have surrendered himself to a curious, self-deceptive optimism, entirely unrelated to existing facts. However apparently desperate his situation, he was always expecting something to turn up as a relief therefrom. A striking feature of this chapter is an analysis of the peculiar religiosity often found in offenders, and which, although it cannot be regarded in the light of true religion, is very far from being mere hypocrisy. It may be a primitive form of seeking support from some power outside ourselves. The murder, in Winge's case, had not been his first offence against the law, and the author makes wise remarks upon the importance which should be attached to all first offences. Incidentally, the theory is maintained that lurid newspaper reports of crimes do not (as is often supposed) give birth to criminal instincts; but they may fortify such instincts as are already existing.

The author next deals with a mode of escape which he terms "anguished fear." The criminal Gunnarsson, who seems to have been a rustic Don Juan, murdered a farm girl, whom he had caused to become pregnant, with circumstances of sadistic ferocity. The crime was committed in order that his mother might not know of his relations with the girl. The result of the investigation revealed

the operation of an intense mental conflict, originating in a feeling of inferiority. There was also a well-marked dependence upon the mother. The author appears to accept the main conceptions of modern psychological theory, the unconscious, mental conflict, repression and the like. He inclines somewhat to Adler's variant of the Freudian hypothesis. He rejects the complete psycho-analytic view, considering that the term "sex" is employed in too wide a sense. But he recognizes the immense importance of impressions received in early childhood, and he is fully alive to the danger of reading the investigator's complexes into the mind of the patient.

Finally, the history of Malmström is taken up. This is the case of a man who murdered his wife, because she had become aware that he had committed arson, after having had incestuous relations with their three daughters. It is the least convincing of the three chapters. The term, "shamming" applied to the mode of escape from reality herein described is unfortunate, for it carries a connotation of deliberate malingering, whereas the author means an attempted conformity with the ordinarily accepted rules of conduct. It is not easy to see why this case should not have been included in one of the two former classes. The chapter, however, contains a very useful discussion of the nature of confessions made by criminals, and of the value to be attached thereto.

The author holds that modern criminology does not sufficiently distinguish between the act and the doer thereof. He considers that the phrase "to understand all is to forgive all" contains a fundamental falsehood. But he maintains that conduct is determined, in each particular case, by circumstances, environment and upbringing. What better statement of his own position could the strictest determinist ask for?

It is a matter for great regret that Dr. Bjerre's early death prevents us from having the advantage of further works from his pen. We can but hope that certain lectures, which he mentions, will be given to us by an editor. What inspiration may we draw from his most able example? Studies of the mentality of murderers are, of course, carried on in this country, but these are confined to points of immediate moment. Before trial, investigations are conducted, with a view to the determination of the murderer's "criminal responsibility." After trial, there may be investigation to ascertain the propriety of mitigating the death penalty. Neither occasion is suitable for such intensive inquiry as that described in this book. But there remains a considerable number of murderers who have escaped the full penalty of the law, and whose mentality awaits, and would well repay, full investigation. May we not hope that this investigation may be conducted by workers as fair-minded, as careful, and as competent as Dr. Bjerre?

M. HAMBLIN SMITH.

The Science of Mind. A Complete Course of Lessons in the Science of Mind and Spirit. By ERNEST SHURTLEFF HOLMES. London: A. M. Philpot, Ltd., 1927. Demy 8vo. Pp. xxvi + 398. Price 8s. 6d. net.

This is an extraordinary book. It contains a good deal of metaphysics, a good deal of religion (Christianity, Buddhism, and other), some spiritism, a trace of modern psychology, and a large amount of those diverse mental therapeutic cults which are popular in America (whence the book appears to have emanated). It is on so many different planes that it is quite impossible to criticize it from the point of view of this Journal. And there is a further difficulty, in that a vast number of terms, philosophical, religious and other, are made use of, but many of them in a sense quite diverse from that which they bear in the sciences from which they are derived. The book is announced as "a complete course of lessons in the science of mind and spirit." It contains advice to "practitioners" of some form or other of mental healing. Disease, we are told, is "wrong thinking." The practitioner "takes his patient, the disease, and everything that appears to be wrong, into his own mentality, and here he dissolves all false appearances and all erroneous conclusions." This quotation is, we think, sufficient to show the scope and nature of the volume.

The vogue of books such as this—and it is only one of many—does convey a real warning to us. It is easy to style this kind of thing absurd and fantastic. But the matter cannot be put aside so easily. We have an indication that there is a mass of human trouble with which orthodox medicine does not deal. Our too great insistence upon a material outlook has driven potential patients to cults of this kind.

M. HAMBLIN SMITH.

The Mysterious Kundalini. By VASANT G. RELE, F.C.P.S., L.M.&S. Bombay: D. B. Taraporevala, Sons & Co., 1927. Crown 8vo. Pp. x + 120. Illustrated. Price Rs. 3.8.

In Indian philosophy, we are informed, Yoga is the process by which the embodied spirit is made to become one with the universal spirit. An expert in the science of Yoga is enabled to exhibit certain remarkable phenomena, some of which are described. Complicated physical exercises are required for the training of the would-be Yogi, and these are illustrated. The whole affair is under the control of Kundalini, which Yogic literature describes as being coiled up like a serpent (is there a symbolic significance in this?). This little book is an attempt to explain some of the Yogic phenomena in the light of Western anatomy and physiology. The author identifies Kundalini with the vagus nerve, and he expounds this thesis. Lt.-Col. C. H. L. Meyer, I.M.S., tells us in a foreword that the author's views have much to be said for them, and far be it from us to express an opposite opinion. But he who desires to comprehend the book must first assimilate a neurological terminology far more appalling than that with which we wrestled in our

student days. The book is dedicated to those interested in the science of Yoga, and it may, perhaps, be left to them.

M. HAMBLIN SMITH.

Freudian Essays on Religion and Science. By CAVENDISH MOXON.
Boston: Richard G. Badger, The Gorham Press, 1927. Demy
8vo. Pp. vi + 133.

This small volume consists of eleven contributions which, with one exception, have been previously published in British and American journals. Nearly half of these deal with the psycho-analytic aspect of various religious subjects in which is included a study of the Christian creed. The other chapters are devoted to such problems as Freudian criminology, M. Coué's theory and practice of auto-suggestion, sexual enlightenment, and Freud's death instinct. Though a Freudian in the true sense of the term, the author is a follower of Rank's later ideas as expounded in his book *Das Trauma der Geburt*, and criticizes Freud's theories in *Beyond the Pleasure Principle* from this point of view. He would, therefore, instead of adopting the speculative hypothesis of a death instinct, rather explain many mental phenomena on the basis of the tendency to regress to the intra-uterine condition. According to Rank, it is in this urge that the deepest repression exists. Mr. Moxon is a well-equipped student of his subject, and his enthusiasm leads him to say that he is "not without hope that these essays may stimulate readers to further study of the psycho-analytic discoveries, which not only illuminate many dark places in the world, but, when based on personal experience, give a degree of control and direction of impulse beyond any other technical means hitherto discovered by man." The book should be highly acceptable to those who, having an open mind, desire to widen their mental horizon on the theme of religion and in some other spheres of general interest.

C. STANFORD READ.

Segregation and Autogamy in Bacteria.: A Contribution to Cellular Biology. By F. H. STEWART, M.A., D.Sc., M.D. London: Adlard & Son, Ltd., 1927. P.B. Demy 8vo. Pp. vi + 104. 4 Plates. 23 Tables. Price 7s. 6d.

This small book should prove of decided interest not only to those versed in genetics, but to bacteriologists who may wish to know the less frequented lines of research relating to bacteria.

The introduction deals with the previous literature on bacterial variation, and the leading points of the work and views of different investigators are detailed. The interpretation of some of the passages is, however, rendered difficult by use of foreign idiom.

A summary of these researches shows a wide diversity of opinion as to the exact mode of bacterial reproduction. The most commonly held view is to regard the changes observed as simple vegetative fission, during which, under certain conditions, a heritable change takes place, called by some mutation ("sports" of Darwin), by others, slow adaptation. Throughout the succeeding chapters the

author sets out to prove that it is highly probable that bacteria pass through a life-cycle with alternating phases of asexual and primitive sexual (autogamic) reproduction. In the preliminary discussion the two modes of variation in bacteria are mentioned: (1) The rare type in response to strong or prolonged stimuli, a change corresponding to mutation by loss or gain of a factor in a homogeneous stable animal or plant. (2) The common variation dependent on some permanent setting of an unstable organism. The new form is stable, and the event corresponds with segregation of a recessive type from a heterozygote or with one side of Mendelian variation. The writer mentions objections that have been raised to the idea that bacteria are made up of allelomorphs (hereditary units) in the same way as higher forms. Each point is dealt with, and reference made in support of his views to the method of plant and animal reproduction either by mutation (sports) or by Mendelian variation. He points out that, although in higher forms the normal mode of reproduction depends on conjugation in the gametes, occasional segregation in somatic divisions occurs in nectarines by bud variation on peach trees comparable to segregation in the reduction division—a fact not as widely known as it deserves to be. This more primitive method of conjugation can be brought into line with that of bacterial reproduction. The problem of whether segregation in higher forms is determined by external stimuli, which are important in most bacterial variation, is left an open one. It has also been pointed out that, when an unstable bacterium varies, it gives rise to one type only, a recessive—a fact supposedly contrary to Mendelian principles. Stewart, however, shows two types are commonly present, the heterozygote and homozygous recessive, and that the homozygous dominant does appear, though rarely. He cites a similar occurrence in double-throwing stock, and brings into line the three main varieties of coliform organisms subject to his investigations. Evidence is given that they are Mendelian variants of one species, of which paracolon is the homozygous dominant, *mutabile* the heterozygote, and colon the homozygous recessive.

Variation in them occurred in two modes: a rare variation in paracolon in response to strong or prolonged stimuli, regarded as mutation; that occurring regularly in *mutabile*, which is unstable, in which papillæ give off descendants of two types, *mutabile* and colon, the latter breeding true. This change he represents as Mendelian variation, brought about by the segregating of allelomorphs in a heterozygote.

Chapter III deals with modification, or non-heritable change of character in bacteria. If inherited, mutation or variation occurs; modification, on the other hand, is temporary, and reversion sets in when the surroundings or environment are re-established. Cultural experiments are given as examples, and the relation between modification and mutation demonstrated. The mechanism effecting modification would suggest that the bacteria in question, although having the power of fermenting lactose, are inhibited by a special factor. The modifying influence suspends the action of the inhibitory factors, and so liberates the ferment.

In the subsequent chapters the author sets out in great detail numerous experiments, some lasting for over twelve months. Considerable care has been taken against the possibility of contamination being responsible for the interesting results.

The life-histories of the three main types of coliform organisms previously mentioned are elaborately set out, and such types as *B. dysentericus*, *B. Flexner*, and *B. typhosus* likewise closely studied. The writer has spared no pains to make the steps sufficiently clear, and, aided by reference to the abbreviations given, the tables are worth the study entailed.

Some of the facts deduced from these experiments may be briefly summarized:

(1) A bacterium heterozygous in a given character (*e.g.*, the power of fermenting lactose), if exposed to the appropriate stimulus gives descendants of two kinds, one like the parent, the other recessive (fermenting lactose).

(2) The recessive always breed true.

(3) Segregation in one character arises only in response to an appropriate stimulus, even in a race heterozygous in two or more ways.

(4) Under suitable conditions segregation and mutation can go on in successive stages, giving rise to variants widely different from the original stock.

(5) A homozygous dominant, having a weakened inhibition to lactose fermentation, may develop recessive characteristics without an intermediate heterozygous stage.

(6) Habitual reversion can be explained as a type of mutation that does not correspond with that in higher forms. This is due to the fractioning of a factor and its dependent unit character, as suggested by Bateson.

(7) Repeated exaltation of a function may occur (*e.g.*, marked fermentation of dulcete by *B. typhosus* after primary mutation) by successive segregation of two (multiple) inhibitory factors by papillary reproduction.

Chapter X details a number of ingenious and interesting experiments to prove the discontinuity of the variations observed. For example, lactose may be fermented from the beginning, but never indicated on account of the neutralization of the acid formed by alkaline peptone. In other words, the change from alkaline to acid may occur in a space of hours, although the process on which it was based had been going on for weeks. The experiments would show that inhibited bacteria consume either no lactose or any other sugar, or only minute quantities. When inhibition is overcome the change is abrupt, the consumption of lactose being very high.

In the last chapter the whole situation is reviewed, provisional hypotheses are formulated, and deductions made. Two methods of reproduction can be clearly distinguished in the growth of a bacterial colony, namely (1) marginal and (2) papillary. The former is a vegetative growth by a process of simple fission. The latter, however, arises when growth of the colony is about to cease.

In this type of variation there seems little doubt that a close relation exists between segregation and conjugation (gametic reproduction) in higher forms, a heritable change resulting. The author goes on to discuss the two hypotheses, one which he calls segregation and autogamy, the other mutation and adaptation, and quotes literature dealing with his arguments. The case clearly lies in favour of the first. In conclusion, the life-history of a bacterium is briefly recapitulated and the mode of sexual and asexual reproduction summed up. At the end of the book four excellent plates are given showing the colony characteristics of the organism studied. The book is a remarkable piece of work (much of it original, involving over 10,000 cultures), which, if not definitely proving sexual activity in bacterial reproduction, is in favour of the title given.

W. M. FORD-ROBERTSON.

Therapeutic Malaria. By G. DE M. RUDOLF. Oxford Medical Publications, 1927. 8vo. Pp. 234. 2 Coloured Plates. 55 Figs. Price 12s. 6d. net.

This work, for which the Gaskell Gold Medal of the Royal Medico-Psychological Association was awarded to the author last year, is based upon the study of cases of general paralysis of the insane treated by induced malaria.

The book is divided into two parts. Part I deals with the therapeutic indications, results and mode of action, while Part II is confined to considerations relative to malaria itself.

Malaria has been employed as a therapeutic measure for other manifestations of syphilis, also in dementia præcox, but the best results are undoubtedly obtained in cases of general paralysis.

In referring to the mental changes observed in the latter disorder as a result of malarial treatment, the author lays much stress on the fact that many cases begin to show improvement during the incubation period of infection, but whether this is a coincidence or the effect is very doubtful.

He mentions that Bunker and Kirby record improvement in intelligence tests of the Terman type. From the literature to hand it is a pity that this procedure is not more universally employed, as the testing of these patients at intervals—before, soon after treatment, and then three or six months later—would afford a constant factor whereby a quantitative measure of the mental improvement may be estimated.

With regard to physical changes as a result of treatment, the remarkable gain in weight observed in many patients is a good prognostic sign. In nearly all cases general physical improvement is marked; tremors, speech and gait improve; seizures, too, are much less common after treatment.

The serological changes are dealt with, and it is to be noted that the number of writers who have observed negative Wassermanns in the cerebro-spinal fluid after treatment is very small indeed.

The degree of mental and physical improvement in no way corresponds to any change in degree of serological changes.

Various theories are put forward as to how malaria brings about improvement in general paralysis, but evidence is conflicting and our knowledge at present limited. Dr. Rudolf suggests that the improvement is related to the mononuclear reaction which takes place in malaria.

In Part II after referring to the possibility of immunity against malaria, the author describes the details of the direct mosquito infection and secondly the blood-inoculation method. In blood inoculation care must be taken that there are no traces of antiseptics in the apparatus for withdrawal or injection of blood; this is important, because if any antiseptic is left in the syringe, it is extremely likely that the parasites may be killed before they are injected into the patient.

He next deals with the incubation period and the temperature chart. Pyrexia in general paralysis is not uncommon and must not be confused with malaria.

Referring to the clinical aspects, the spleen, though enlarged, is seldom palpable in a primary case. No mention, however, is made of an almost constant complication—constipation.

Two chapters are devoted to the blood and the malarial parasites. The staining and examination of blood-films is of great importance. Blood-films should be examined every day.

There is a chapter on biochemistry dealing mainly with the blood-sugar curves.

With regard to the termination of fever, the author first deals with the temporary abortion of fever, by giving a small quantity of quinine—a practise first adopted at Horton. It appears that the optimum dose is one of 5 gr., whereby the fever undergoes a remission lasting from 14 to 15 days, when the fever recommences. This is of great value when patients become very ill during the primary attack before the full course of treatment is completed.

Relapses are fairly common in mosquito infected cases, but seldom occur with blood inoculation malaria, the period of time elapsing between the primary attack and the relapse being in some cases as long as eight months.

Indications for the termination of fever are set out at length, but not enough stress is laid on the importance of parasite counts. From experience at the experimental station at Horton Mental Hospital there is no doubt whatever that a daily parasite count is the surest means of controlling the fever. If, using an oil-immersion lens and a No. 2 ocular, there are more than 30 to 35 parasites in 25 fields, it is a certain indication for temporary abortion of the fever.

The last chapter deals with characteristics of different species of mosquitoes. An incorrect statement is made about anopheline mosquitoes requiring permanent pools of water for breeding purposes and not using water-tanks. Water-tanks and butts are not infrequently found to be swarming with anopheline larvæ (usually *A. bifurcatus*).

One or two errors in this book deserve comment. Leishman's stain (p. 141), which is used most frequently, should be made up by dissolving 0.15 grammes in 100 c.c. (not 10) methyl alcohol (acetone free). To say that Schuffner's dots can be found even when the staining is deliberately faulty is very doubtful, for other observers think the presence of Schuffner's dots is a sure criterion of a properly stained film, and the absence of these dots an indication that either the process in staining is faulty or that the stain itself is not properly made up. The method quoted (p. 123) for staining of Schuffner's dots with Giemsa and washing in sodium hyposulphite is intended for thick films and not thin films as stated.

As a complete guide for treatment of general paralysis by therapeutic malaria the book is open to criticism, as too many controversial points are raised. Malaria is not without dangers and its management is not an easy matter; nevertheless the book has many merits, and summarizes much the malarial therapist requires to know. For the author's own contributions to this subject and his zeal and enthusiasm we have every praise.

The bibliography is excellent, and the author is to be congratulated on the immense amount of work involved.

W. D. NICOL.

Forensic Psychiatry. By W. NORWOOD EAST, M.D. London: J. & A. Churchill, 1927. Pp. viii + 381. 8vo. Price 16s.

In the ever-increasing complexity of modern life there is no question of greater importance than the proper treatment of those who will not or cannot comport themselves in accordance with the dictates and prohibitions of the community of which they are members. The object of laws is primarily to supply rules of conduct which shall subserve the well-being of all concerned, by the provision of sanctions for the punishment of those who disobey them. But conduct is the direct result of mental processes, and accordingly conduct of an anti-social character at once raises questions as to the mental factors which underlie the injurious behaviour. But herein at once arises a diversity of approach to the problem, for to the legal mind, interested in the maintenance of the law, the character of the act itself makes a stronger appeal than does the psychological basis which is the chief interest of the medical mind.

Dr. East, whose long experience in the Prison Medical Service has brought him into contact with the perpetrators of every kind of criminal act and with every type of mental abnormality, is able to appreciate both points of view, and his book is, therefore, of outstanding interest. As he points out in the opening chapter on ascertainment, "two views appear to be finding favour with students of anti-social conduct. The one attributing much, perhaps over much, to mental conflict and repression, causing effects through the working of the unconscious mind; the other, whilst recognizing that a repressed complex may be a cause of misconduct, fails to associate the complex with the particular criminal conduct under

consideration, and attributes the offence to less subtle causes of faulty instinctive functioning. . . . Ultimately the conscientious student will probably come to regard as causative factors of certain criminal acts both mental conflict and instinctive tendencies in their respective settings." In regard to the choice of intelligence tests Dr. East is eclectic, but as he points out, the ultimate criterion of mental deficiency is the capacity for social adaptability, and not any more or less conventional standard of educational attainment. The medical witness who is not expert can easily be placed in a difficult position by an astute counsel, and he will find much sound and helpful advice from the chapter on Practice and Procedure. Attention is drawn to the fact that technical knowledge and impartiality are the justification for the presence of the medical witness at a criminal trial, and that he can claim no privilege for confidences disclosed to him by a prisoner.

The chapter on Criminal Responsibility is a carefully thought-out summary of the problem, and usefully includes both the questions propounded to the Judges by the House of Lords in the McNaughton case and their answers thereto. The latter are so often omitted, and yet without them the judicial rulings cannot be fully understood. The detection of the simulation of mental disorder as a device to escape punishment must always be kept in mind, and may sometimes cause the examiner much anxious thought. Dr. East offers many practical suggestions which may help in the detection of malingering.

The greater part of the volume is devoted to a consideration of the various forms of mental abnormality, and is illustrated by a large number of cases. Not the least of the merits of the book is that it forms an admirable text-book of general psychiatry, based for the most part not upon experience of cases already certified as of unsound mind, but of persons upon whose liberty there has hitherto been no restraint, and who, until the committal of the act with which they are charged, have been free members of the community.

As a guide to the forensic aspects of psychiatry, "full of wise saws and modern instances," the book is admirable.

G. A. AUDEN.

Mental Hospitals and the Public: The Need for Closer Co-operation.

By Lt.-Col. J. R. LORD, C.B.E., M.D., F.R.C.P.E. London: Adlard & Son, Ltd., 1927. Pp. 33. Price 1s. 6d. net.

This essay has been written by Col. Lord in aid of the work of the National Society for Mental Hygiene, of which organization he is the Hon. Secretary. The writer aims to put in words some small things achieved which are designed to improve the lot of the mentally afflicted person, to soften the attitude of the "group mind" towards him, to find a place for him within the community during his necessary segregation, as we do those sick in body, and not outside of it, or on the fringe of it, estranged from the

world as though he were a pariah or outlaw ; to improve and facilitate his treatment by bringing in the wake of the psychiatrist the great body of medical knowledge to bear upon his infirmity ; and, finally, on his recovery, to welcome him back to full citizenship, and to find him suitable work so that he may live and thrive.

What the attitude of the society has been in the past towards the psychotic is vividly depicted by the writer in an historical sketch of the treatment of mental disorders in ancient and mediæval times. That this attitude is very different now becomes evident when we compare the mental hospitals of to-day with those of a comparatively few years ago, but, as the writer shows, public opinion has never really emancipated itself from the thralldom of mediæval thought in its ideas of insanity. It is, indeed, probable that many years will elapse before mental disease is regarded in quite the same light as physical disease. For one thing, its origin in many cases is veiled in obscurity. If (say) dementia præcox were found to be due to some recognizable germ, it is probable that the occurrence of this disease in a member of a family group would be accepted with much more composure than is at present the case. Then, the very nature of a psychosis tends inevitably to isolate its subject from contact with common life ; he lives essentially in a world of his own ; his conduct is (apparently) unmotivated ; he becomes indifferent to public opinion and impervious to external solicitations. Such attitudes are calculated to produce uneasy tensions in normal people ; they feel themselves to be in the presence of something uncanny and outside the range of their experience. It is disconcerting to deal with an individual whose conduct fails to be influenced by methods hitherto found effective in dealing with other human beings, and no doubt the fear of the biologically abnormal has something to do with the attitude of society towards the psychotic.

In concluding his essay, Col. Lord suggests directions calculated to bring the public generally to look on the sick in mind and the work of the mental hospitals in the same light and with the same sympathy and interest as they do those sick in body, and the work of the voluntary general hospitals. In this connection he stresses particularly the value of a recognized hospital visitor as a communicating link between mental patients and their homes, and gives an interesting account of the work which is being done at Horton by Miss Dale, who is giving her services at that hospital as a " Visitor " from the outside world. This and other matters of practical interest to the psychiatrist are discussed. We hope, however, that this paper will not only be read by those connected with mental hospitals, but also by the general public, for whom it is primarily written. It cannot fail to exert a beneficial influence, and should do much to dissipate the misconceptions which are rife as to the work and aims of those who are responsible for the treatment and care of the mentally sick.

H. DEVINE.

Post-Encephalitic Respiratory Disorders. By SMITH ELY JELLIFFE, M.D., Ph.D. Nervous and Mental Disease Monograph Series, No. 45. New York and Washington: Nervous and Mental Disease Publishing Co., 1927. Med. 8vo. Pp. ii + 135. Price \$2.50.

The first 100 pages of this monograph are quite interesting and instructive. In them Jelliffe reviews the work of others.

He describes two cases of his own, and under the heading "Psychopathological Problems" he then expresses his own views on the significance of the post-encephalitic respiratory disorders. Being a psycho-analyst, it is doubtless inevitable that he should conclude that these are all oral-erotic and anal-erotic manifestations.

It is emphasized that the "staying in bed" symptom is "an increase of impulse in the direction towards the death wish"; the salivation represents "what it is known to represent in many schizophrenics, *viz.*, an orgasm"; the Parkinsonian tremor bears a close relationship to the masturbatory habits of the patient, and "is in the nature of fear lest they be detected in this maneuver."

As regards therapy, the author is of opinion that psycho-analysis holds out the best hope of helping post-encephalitic patients, but naïvely adds that he does not entertain the delusion that it will master all of the cases.

Freudians will doubtless consider that this monograph is a valuable contribution to the study of post-encephalitic respiratory disorders.

P. K. McCOWAN.

Industries and Occupations for the Mentally Defective. By P. J. DEELY. Epsom: Birch and Whittington, 1927. Crown 8vo. Pp. 112. Price 7s. 6d.

Though this book is written primarily for the help and guidance of the larger institutions for mental defectives, most of it is applicable to mental hospitals, while those in charge of mental patients, either privately or in smaller homes, will find in it all they require to know of handicrafts suitable to these restricted opportunities. There is also much technical knowledge in the book which will be very serviceable wherever useful and diverting occupations are encouraged, such as general hospitals, convalescent homes, sanatoria, deaf-and-dumb institutions and the like.

No attempt is made to deal with occupational therapy in its stricter clinical sense, *i.e.*, as a direct method of treating mental and nervous diseases, the main concern of the author being the use of industries and occupations on educational, diversional and economic grounds. Nevertheless the clinical occupational therapist will find there much to his liking, and, pending the writing of a more comprehensive and suitable manual, should not fail to possess a copy.

The book is an honest endeavour to supply a need which was beginning to be acutely felt by occupational therapists and handicraft officers in the many fields, which are every day increasing in

number as the importance and value of occupations in the treatment of all handicapped people is being realized.

The book is written in a clear and easy style, and the composition plain, unadorned and business-like, and in marked contrast to the verbosity and obscurity which characterizes many writers on the allied subject of occupation therapy.

About 46 occupations are described suitable for both sexes, and what is most useful, there is included in each description a list of the materials, tools and appliances required.

A naïve and characteristic utterance by Dr. E. S. Litteljohn, obviously reflecting his own personal experiences in the organization of industries and occupations, and full of good advice and encouragement, forms an excellent foreword.

J. R. LORD.

Précis de Séméiologie Neuro-psychiatrique—à l'usage des Praticiens.

By A. ROUQUIER. Paris: Gaston Doin et Cie, 1927. Foolscap 4to. Pp. 272. Illustrations. Price Fr. 32.

The aim of the author of this book has been to produce a compact guide to the diagnosis and treatment of disorders of the nervous system, whether in the special department of neurology or psychiatry.

Two hundred pages are devoted to neurology. The system followed is mainly symptomatological and descriptive. The general semeiology of disorders of the pyramidal tracts is followed by a more particular description of the results of various lesions of these tracts. Disorders due to diseases and injuries of the cord, of the cerebellum and cerebellar tracts, of the extra-pyramidal motor tracts and of the central nuclei follow in order. Sensory disorders are described under the headings of sensory syndromes of cortical, of thalamic and of spinal origin, the last including tabes and syringomyelia. Sections on the muscular atrophies and the peripheral nerves are succeeded by descriptions of the syndromes of cranial hypertension, disorders of language and of the vegetative nervous system, and the neurological portion of the book is closed by an account of epidemic encephalitis.

As a method of providing a useful clinical picture the scheme of description has merits, but some important and difficult morbid conditions seem to have been insufficiently noticed, such as cerebral syphilis and disseminated sclerosis. Little or no attention is given to morbid anatomy and pathology, and differential diagnosis is scarcely mentioned. The description of epidemic encephalitis is from a neurological point of view very complete and up-to-date, but is complicated by being divided into two sections, one devoted to the disease and one under the heading of diseases of the basal nuclei.

Although he deplors the distinction drawn between the practice of neurology and of psychiatry, the author appears to have overlooked opportunities for emphasizing the double aspect of nervous disorders. In his very short paragraph on the subject of tics no

reference is made to the psycho-neurotic basis of many of them. The psychiatric accompaniments and sequelæ of encephalitis are no more than alluded to, and the highly important asocial and criminal tendencies which so commonly follow this disease in juveniles are ignored. Nor in the description of disseminated sclerosis are there included the psycho-neurotic symptoms which so frequently complicate the picture of this disease.

In the sixty-three pages devoted to psychiatric symptomatology, the scheme of classification of Morel, Magnan and Dupré is closely followed. The description of constitutional psychopathic states constitutes the first section—mental deficiency, states of constitutional excitability or depression, of hypermotivity and anxiety, the “mental degenerations” of Magnan and Régis, and the “morbid constitutions” of Dupré, including the emotive, the anxious, the paranoic and the mythomaniac. A general scheme for the examination of supposed defectives is outlined, but no reference is made to the work which has been done with a view to estimating the intelligence in a comparable way. Among the physical stigmata of degeneration we are told that the sign upon which French medical jurists mainly rely is the comparative increase in the span of the fully extended arms. In the normal this is about equal to the height of the subject, in defectives it is greater.

Acute mental disorders are dealt with in the following section under the headings of confusional states, transient delusional states, manic states, melancholic states, manic-depressive psychosis, depressive syndromes and the neurasthenias.

Chronic mental diseases are placed in two groups, namely, chronic systematized delusional states (of which the most important are the chronic hallucinatory psychosis of Ballet, and the chronic systematized persecutory delusional state, with false interpretations, of Sérieux and Capgras), and states of dementia (including dementia præcox, general paralysis and senile and organic dementias).

Hysteria and the various forms of epilepsy are also included in the psychiatric portion of the book, each in a separate section, without reference or relation to other neuropathic conditions.

This *résumé* of psychiatric symptoms is too highly compressed to be compared with an ordinary text-book. The author in his introduction seeks to disarm criticism of his concise and dogmatic method, but even with this in mind there is a certain lack of balance in the book. Two pages are given to the description of hysterical fits (which are admittedly of greater importance in France than in this country), but on the other hand, the psychology of Freud and his school is dismissed in a few sentences, and Bleuler's concept of schizophrenia receives little more notice. Freud's name is wrongly spelt three times in a single page. A foot-note concedes that psycho-analysis may render service in the elucidation of some morbid mental states.

The book is well printed in clear type. There are nine diagrams of sections of the central nervous system. There is no index. The covers are of paper.

W. D. CHAMBERS.

Les Syndromes Neuropathiques. Par A. HESNARD. Paris: Gaston Doin et Cie, 1927. Medium 8vo. Pp. ii + 247. Illustrations 23. Price Fr. 40.

In the series of which this book constitutes the latest, six numbers have previously been published, including *Respiratory Syndromes*, *Endocrine Syndromes*, etc. Each author has addressed himself to his subject from the point of view of groups of symptoms instead of disease-entities, and the present work deals with the psychoneuroses on this basis. These are described in five groups: Neurasthenic, psychasthenic, anxiety, obsessional syndromes, and hysterical and pithiatic syndromes. It is agreed that these groups seldom occur pure.

The author does not use the term "psychoneurosis," nor does he draw the distinction commonly made between hysteria and obsessional neurosis on the one hand, and neurasthenia and anxiety states, as neuroses proper, on the other. He states that the symptoms of the neuroses, into whichever of his five groups they fall, consist of two series—physical and psychic. The latter consists chiefly of a habitual morbid mental state accompanied and reinforced by disturbance of the affective activities, to which the individual has partial insight. The physical series is seen to be only the reverberation of the affective disorder, particularly on the external expression and internal impression of the emotions.

Neurasthenic and psychasthenic states are described in the same chapter, but in separate sections. It is emphasized that the concept of their common basis—neuro-psychic fatigue—has no physiological foundation and is purely theoretical if not symbolical. Neurasthenia is characterized by the richness and variability of its subjective symptoms in the absence of adequate physical signs. The neurasthenic suffers from a misdirected and excessive internal general sensibility. Psychasthenia, a much commoner malady, consists of a constitutional character disorder in which painful ideas about the subject's contact with reality manifest themselves to him. Excellent descriptions of individual symptoms complete the chapter.

Describing the anxiety syndrome—the author points out that anxiety is the most elementary expression of the defence instinct in man. It occurs normally in three degrees—apprehension, anxiety, anguish (*angoisse*, *angor*)—and these terms are useful in assessing neuropathic anxiety states. Acute anxiety syndromes are found in the form of crises and also as panophobia, the anxiety attaching itself momentarily and by hazard. They tend to pass into chronic anxiety states. These are classified according to whether the anxiety is attached to the self, external objects and events, or to other persons. The most common and important are those associated with hypochondria. No mention is made of Freud's differentiation of anxiety neurosis and anxiety hysteria. Psychopathic states may supervene on chronic anxiety syndromes in various forms. In "anxious psychosis" the anguish has been so extreme as to shake the patient's grasp of reality; a melancholic syndrome with self-accusatory ideas may follow panophobia; and

confusional states may obviously complicate any hyper-emotive syndrome.

In regard to the obsessional syndrome, the author points out that this symptom is closely allied both to anxiety and to psychasthenia, and that all gradations between these three syndromes exist. He does not use the term "imperative idea," nor distinguish between obsessions accompanied by anxiety and others. Obsessions are classified as diffuse, systematized, and associated obsessional states, with numerous sub-classes, and this objective point of view appears less helpful than the older division into intellectual, impulsive and inhibitory. The psychogenesis of obsessions is discussed at much greater length than the other syndromes. It is pointed out that the most salient feature in an obsessed case is the apparent discordance of the morbid idea, but the obsessional content invariably arises from unconscious activities of the mind, and its apparent unreal discordance can be more accurately described as an anachronism in the affective life of the individual.

The chapter on hysteria is the longest in the book and follows closely the usual French teaching on the subject. It is entirely descriptive. The manifestations are classified into paroxysmal, chronic somatic, psychopathic or psychiatric, and those associated with organic disorders. In the description of hypnotic states under the third heading the danger of using hypnotism to remove hysterical symptoms is duly emphasized.

As regards ætiology, the author believes that all neuropathic syndromes arise from a common deep-seated cause dating from early infancy. Generally speaking they express some affective deficiency, and run parallel with the active sexual life. Heredity, accidents of parturition, early familial and social difficulties of adjustment, which may or may not be sexual in nature—these are the causes of the psychoneuroses. Accidental emotions and shocks, exhaustion, bodily illness and so on are of no importance. Surprisingly, Freud's ætiological theories are not mentioned in this section.

In discussing psycho-pathology, the author states that above all neuropaths suffer from an instinctive or affective lack or defect, and that they can only support this at the expense of their health—that is, by realizing their symptoms. Neurasthenia is defined as a collection of clinical phenomena associated with erethism of the neuro-vegetative system, and representing the first degree of awareness of morbid emotional and cœnesthetic excitation. Janet's theory of psychasthenia is dismissed, and this disorder is stated to consist of a morbid constitutional character, marked by conscious morbid sentiments which arose from some evolutionary disorder of the instinctive activities, and which prevent the affective life of the individual from attaining consummation and satisfaction. Anxiety is the clinical representation of a special hyper-excitability of the emotive apparatus in its defensive function against external or internal dangers, the hyper-excitability being due to lack of satiation of deep-seated instinctive tendencies, such as infantile acquisitiveness or adult sex-longing, especially when stimulated and

denied. Obsessions are parasitic psychic products of distant origin in which the affect is attached to the memories, imaginations and aspirations of childhood. Hysteria is characterized by an incapacity to assimilate moral impressions which are disagreeable to the excessive self-love of the individual.

The book closes with a chapter on the therapy of neuropathic syndromes. Physical therapy and the traditional moral treatment receive adequate notice, but the author relies mainly for treatment of all the psycho-neuroses upon Freudian psycho-analysis, the explanation and technique of which are set out at length.

On the whole the book is interesting and readable. A considerable portion is admittedly descriptive, and it would probably be more valuable were more space given to the theories and classifications of other writers, though the tone is not unduly dogmatic. The type is good. The plates are small and not very well reproduced, but some of them are characteristic. There is no index in an ordinary sense, but quite a full table of contents. The covers are of paper.

W. D. CHAMBERS.

Part III.—Epitome of Current Literature.

I. Neurology.

Metastatic Tumours of the Brain. (*Arch. of Neur. and Psychiat.*, April, 1927.) *Globus*, J. H., and *Selinsky*, H.

In only 4 out of 12 cases reported by the authors were the metastatic foci single. In the others the foci showed wide variations in number, size and distribution. The seat of the primary growth was: A bronchus in 2 cases, the skin in 3 cases, the colon in 2 cases, the suprarenal in 1 case, the prostate in 1 case and the urinary bladder in 1 case. The clinical signs and symptoms depend on the extent of the involvement of the brain by the principal largest mass, the presence of a mass, however small, in a vital part of the cerebro-spinal axis, or the presence of a nodule so situated that it will obstruct the flow of the cerebro-spinal fluid. The authors conclude that acute onset of cerebral symptoms with rapid development of signs of a disseminated character and symptoms of increased intra-cranial tension, in the absence of changes in the discs and positive serologic or febrile manifestations, suggests strongly a metastatic process. The probability is strengthened by the appearance of progressive wasting and asthenia out of proportion to that encountered in primary tumours of the brain.

G. W. T. H. FLEMING.

Protein Sensitization in Epilepsy. (*Arch. of Neur. and Psychiat.*, April, 1927.) *Ward*, J. F., and *Patterson*, H. A.

The authors tested the protein sensitivity to uncooked proteins of 1,000 epileptics and 100 non-epileptics. In the Craig Colony

group it was found to be 37% and in the New Jersey State Village for Epileptics 56·8%. In the non-epileptic group only 8% showed a positive reaction. The authors suggest the investigation of sensitivity to cooked protein extracts. G. W. T. H. FLEMING.

The Treatment of Meningococcal Cerebro-spinal Meningitis [À propos du traitement de la méningite cerebro-spinale à méningocoques]. (Journ. Neur. et Psychiat. Belg., May, 1927.) Bouche, G.

The author states that he has complete faith in the efficacy of treatment by anti-meningococcal serum, but in order that it may be effective it is essential that the serum can reach the lesion in sufficient concentration. He therefore strongly urges that in all cases of cerebro-spinal meningitis the appropriate serum should be introduced not only into the lumbar canal, but into both ventricles, in children and adults, at the earliest moment. He gives the following list of signs, in the lumbar fluid, of blockage of communication between the ventricular system and the spinal canal: Disappearance of meningococci, scarcity of polymorphs, xanthochromia, increased albumen and especially globulin, coagulation, low tension, and difficulty in obtaining a free flow of fluid. W. D. CHAMBERS.

Herpes Zoster in Syphilitics [Le Zona des Syphilitiques]. (Journ. Neur. et Psychiat. Belg., May, 1927.) Dujardin, B.

Reference is made to the previous work of Brown and the author himself on this subject, and to other more recent publications. He does not agree that the treatment of syphilis by arsenic has made herpes more common in syphilitics. He considers that it is a meningitis in syphilis (even latent) which renders the herpetic infection of the ganglia and the cord more liable to occur. He also states that in syphilitic cases the herpetic eruption most commonly occurs elsewhere than on the thorax and upper limbs.

W. D. CHAMBERS.

The Functional Significance of the Extra-pyramidal Systems. (Psychol. Bull., vol. xxiv, No. 4, April, 1927.) Rogers, F. T.

In this compressed review the author analyses the work that has been and is being done on efferent cerebral tracts other than the pyramidal, particularly the connections and functions of the corpus striatum. He marshals the evidence that in normal muscular activity a dual system is involved—the direct or pyramidal tract, and the more diffuse extra-pyramidal tracts—these being normally balanced and integrated. The various disorders (clinical or experimental) ascribed to interference with the striatum are described, the work of Wilson being given special prominence. A list of sixty-five references to the literature of the subject follows the paper.

W. D. CHAMBERS.

Recent Anatomico-physiological Data on the Sleep Centre [*Données Anatomico-physiologiques Récentes sur le Centre du Sommeil*]. (*L'Encéph.*, May, 1927.) Lhermitte, L.

This paper describes the recent experiments of V. Demole, who produced a state of apparently natural sleep in cats by the injection of a small quantity of a solution of calcium chloride into the infundibular region of the brain. A similar use of a potassium solution caused excitation. The author concludes that these experiments confirm the theory that hypersomnia, whether continuous or paroxysmal, is due to a lesion in the mid-brain, and should be included in the infundibular syndrome described by himself and H. Claude.

W. D. CHAMBERS.

Delayed Post-Comotional Narcolepsy, Associated with a Mesencephalic Syndrome [*Narcolepsie Post-Comotionnelle Tardive Associée a un Syndrome Mésocéphalique*]. (*L'Encéph.*, May, 1927.) Papastratigakis.

The case of a young, healthy man whose head was severely crushed, leading to immediate unconsciousness followed by confusion for four months, after which narcolepsy appeared. Later a definite Parkinsonian syndrome, with pupillary and respiratory disturbances, appeared, especially marked on the left side. The site and nature of the possible lesions are discussed, the author concluding that it is probably a glioma of the right cerebral peduncle, involving the oculo-motor nucleus and the locus niger.

W. D. CHAMBERS.

Zosterian Myelitis [*La Myélite Zostérienne*]. (*L'Encéph.*, April, 1927.) Lhermitte, J., and Nicolas, M.

This paper is preliminary only, and consists mainly of a historical review of the literature of herpes zoster, with special reference to the histo-pathological findings recorded. Further observations are promised.

W. D. CHAMBERS.

Zosterian Myelitis—Acute Inflammation of the Grey Matter of the Cord in Herpes Zoster [*La Myélite Zostérienne—La Téphromyéélite Aiguë de l'Herpès Zoster*]. (*L'Encéph.*, May, 1927.) Lhermitte, J., and Nicolas, M.

In this (second) paper a full account is given of the symptoms and autopsy of a case of zoster. The patient suffered from an herpetic eruption of the skin supplied by the first four left cervical roots. His cerebro-spinal fluid showed 88 cells per c.mm., with a very slight albumen content, and gave a negative result when injected into the ventricles of a rabbit. Death from broncho-pneumonia took place seven weeks after the eruption, the patient having continued to suffer severe pain in the original area. At the autopsy the peripheral nerves of the affected region showed marked degeneration, but no inflammatory change; the respective ganglia were in the state of infiltration and degeneration described by Head

and Campbell, and the cord showed very severe necrosis, exudation and inflammation of the grey matter, especially in the second and third cervical segments. The literature on the ætiology and pathology of zoster is discussed, and the authors claim that very many cases of this disease show evidence of actual myelitis. They conclude that the virus of zoster is limited in action to a definite region of innervation, where resistance is lowered owing to infection of autonomic centres by the same virus, and that spread of the virus is by perivascular, not by perineural lymphatics. The paper is illustrated by nine plates.

W. D. CHAMBERS.

The Infundibular Syndrome in Hydrocephalus—the Regulating Mechanism of Sleep [*Le Syndrome Infundibulaire dans l'Hydrocéphalie—l'Appareil Régulateur de la Fonction Hypnique*]. (*Gaz. des Hôp.*, No. 38, May, 1927.) Lhermitte, J.

The infundibular syndrome originally described by the author and H. Claude tabulated the symptoms associated with lesions, especially neoplastic, of the infundibulum, and according to these writers consists of polydipsia, polyuria (sometimes polyphagia), circulatory disorders and narcolepsy. The complete syndrome may result from hydrocephalus, as well as from other causes. The experiments of V. Demole in inducing pathological sleep in the cat by the injection in the infundibular region of a calcium chloride solution are referred to. The author concludes that the syndrome, as described, is a definite anatomical and physiological entity.

W. D. CHAMBERS.

Associated Movements [*Sur les Syncinésies Globales*]. (*L'Encéph.*, December, 1926.) Russetzki, J.

This paper comprises a record of the work already done in connection with associated movements, and gives graphic records of tests performed on 11 normal persons and 89 cases of various diseases. The mode of production is discussed and various theories considered. The author concludes that there is still much to be learned about simple voluntary muscular action.

W. D. CHAMBERS.

Mental Confusion in Cases of Cerebral Tumour [*La Confusion Mentale dans les Tumeurs Cérébrales*]. (*L'Encéph.*, December, 1926.) Baruk, H.

The author describes the various degrees of confusion associated with brain tumours and their diagnostic value. He states that in tumours of the frontal lobe there is usually early and profound torpor and apathy, disorientation and an appearance of dementia; in tumours of the base and mid-brain, dream-delirium and insomnia; and in parieto-temporal tumours, retardation and aphasia. All the symptoms tend to be more marked in tumours of the left side, and in some cases large tumours on the right may be quite latent, as far as psychic symptoms are concerned. The

author regards as most important the general cerebral hypertension associated with small localized cerebral tumours.

W. D. CHAMBERS.

Hypertonic Oculomotor Crises of Encéphalitic Origin [Crises Hypertoniques Oculogyres d'Origine Encéphalitique]. (*L'Encéph.*, December, 1926.) *Laignel-Lavastine.*

A case is recorded in which paroxysmal fixation of the eyes was the only physical symptom, the crisis being accompanied by intense anxiety and depression. It could be aborted by the administration of amyl nitrite. Reference is made to similar cases in which suicidal attempts were made, and the author suggests that the anxiety in such cases of encephalitis *fruste* may be due to involvement in the disease of mid-brain centres regulating affective tone.

W. D. CHAMBERS.

A Special Form of Encephalitis [Sur une Forme Particulière d'Encéphalite]. (*L'Encéph.*, December, 1926.) *Draganesco, S., and Rays, L.*

This paper records a clinically obscure case in which the autopsy of the brain showed miliary hæmorrhages, leucocytic thrombi and a few scattered areas of softening without any morbid changes in the basal nuclei or locus niger, and with very little peri-vascular infiltration. Two excellent plates are included. The authors conclude that the case was atypical encephalitis lethargica in spite of the unusual *post-mortem* findings.

W. D. CHAMBERS.

Three Cases of a Family Disorder resembling Wilson's Disease [Sur Trois Cas d'une Affection Familiale Rappelant la Maladie de Wilson]. (*L'Encéph.*, June, 1926.) *Verger, H., and Aubertin.*

This paper describes the symptoms, etc., of a disorder occurring in a father and his two children, apparently arising from disease of the lenticular nuclei. The father's malady began in 1917, during his war service, and was at first diagnosed as Friedreich's ataxia. In the son it began with a febrile attack in 1916, æt. 15, and in the daughter's case insidiously in 1920, æt. 20. The symptoms in all cases consist mainly of spasmodic generalized contractures, following attempted movements, and of varied involuntary movements of an athetoid type. The possible origins of the disorder, and especially whether it is post-encephalitic, are discussed. W. D. CHAMBERS.

Intra-lobar Cerebral Sclerosis with Symmetrical Distribution. Its Relation to Diffuse Peri-axial Encephalitis [La Sclérose Cérébrale Centro-lobaire, à Tendence Symétrique; ses Rapports avec l'Encéphalite Périaxiale Diffuse]. (*L'Encéph.*, February, 1927.) *Foix, C., and Marie, J.*

The disease lies between cerebral sclerosis and encephalitis, and is now described for the first time. The name of diffuse periaxial encephalitis was given by Schilder to what is apparently the subacute

form of this disease, which, as described, is a chronic form. There are three notable points of agreement between the two forms: (1) The wide area attacked, being the central white matter of the hemispheres and the white interior of the convolutions; (2) the complete integrity of the cortex and of a thin myelinated sub-cortical layer; (3) the symmetry of the diseased area.

After an exhaustive historical survey the authors describe in detail three cases which they have observed themselves, and refer to others in the literature. They consider intra-lobar cerebral sclerosis and diffuse periaxial encephalitis to be stages or aspects of the same disease. According to their experience the former consists of three phases: (1) Period of onset, characterized by abrupt motor disorders, paraplegia, convulsions, dysarthria, etc.; (2) period of repair, when the acute symptoms diminish; (3) period of sequelæ. The morbid anatomy, histo-pathology, differential diagnosis and ætiology are fully described and discussed, the paper being illustrated with 18 micro-photographs. The authors consider the disease to be toxic in origin, and recommend that it be kept in mind in dealing with obscure paralyses, particularly in children.

W. D. CHAMBERS.

Unilateral Inability to Symbolize, due to Specific Arteritis [Asym-bolie Unilatérale par Artérielle Spécifique]. (L'Encéph., January, 1927.) Trabaud.

The author describes a case of muscular atrophy affecting the left hand, associated with a peculiar sensory disturbance allied to ideomotor apraxia and sensory aphasia. The site of the lesion in the brain is discussed.

W. D. CHAMBERS.

The Proprioceptive Sensory System and Ataxia [Le Système de la Sensibilité Proprioceptive et l'Ataxie]. (L'Encéph., January, 1927.) Nicolesco, I., and Nicolesco, M.

This clearly written paper concludes that disorders of co-ordination are intimately connected with the function of antagonistic muscular action, and are due to disease of the cell-groups constituting the proprioceptive sensory system.

W. D. CHAMBERS.

Cyst of the Third Ventricle (Kyste du III^e Ventricule]. (L'Encéph., January, 1927.) Frey, L.

In the case described there was complete destruction of the infundibular region without any of the so-called hypophyseal signs.

W. D. CHAMBERS.

Two Cases of the Thalamo-Vegetative Syndrome [Deux Observations de Syndrome Thalamo-Vegetatif]. (L'Encéph., September-October, 1926.) Davidencoff, S.

Two cases of a typical thalamic syndrome association with vegetative symptoms, namely unilateral hyperidrosis and increased pilomotor excitability, are reported and described. The author is not convinced that the vegetative symptoms in such cases are constant enough to constitute a syndrome.

W. D. CHAMBERS.

A Post-Encephalitic Sequela, in the Form of Delayed Cerebellar Atrophy [*Séquelle Postencéphalitique à Forme d'Atrophie Cérébelleuse Tardive*]. (*Journ. Neur. et Psychiat.*, July, 1926.) Delbeke, R., and Van Bogaert, L.

This paper describes a peculiar cerebellar syndrome occurring in a man of 37, about a year after an attack of encephalitis. The main features are disorders of equilibrium, asynergia, symmetrical distribution of morbid signs, and a peculiar dysarthria, with absence of intention tremor and nystagmus.

W. D. CHAMBERS.

Late Myopathy of Distal Type [*Myopathie Tardive de Type Distal*]. (*Journ. Neur. et Psychiat.*, July, 1926.) Van Bogaert, L.

A full description of a case of myopathy affecting the shoulder-girdle, hand, face and palate muscles, associated with a thyro-suprarenal syndrome and changes in the basal metabolism, the whole probably a sequel to an enteritis of uncertain origin.

W. D. CHAMBERS.

Some Cases of Conjugal Neuro-Syphilis [*Quelques Cas de Neuro-syphilis Conjugale*]. (*Journ. Neur. et Psychiat.*, July, 1926.) Hoven, H.

The author records five cases of conjugal neuro-syphilis. He discusses the theory that such infections are due to a special neuro-tropic *treponema*, but does not regard that as proved.

W. D. CHAMBERS.

Tabes: New Pathogenic, Anatomico-pathological and Clinical Studies [*Sur les Tabes: Nouvelles Études Pathogéniques, Anatomico-Pathologiques et Cliniques*]. (*L'Encéph.*, March, 1926.) Larora, G. R.

The author, after discussing recent research on tabes, demonstrates that this disease starts in an inflammation of the posterior roots due to the presence of the *Spirochaeta pallida* in the meningeal processes which cover them. The destruction of fibres in the posterior columns is secondary to this. The infection in the root may or may not be accompanied by a meningitis. Tabes appears as a system disease only when well advanced and when many roots are affected, the greater part of the posterior column then showing secondary degenerative change. In the earliest stages only the short fibres forming the column of Clarke are affected.

The importance of early diagnosis, before the posterior columns are seriously implicated, and before the knee-jerks are lost, is emphasized, and the value as a symptom of tabetic pains is noted.

Early and very prolonged treatment is essential. The author has had good results with intrathecal injections of mercury and bismuth in small doses over long periods. He has found that arsenical preparations employed early lead to severe exacerbations.

W. D. CHAMBERS.

The Localization of the Origin of Voluntary Impulses [À propos de la Localisation d'Origine des Impulsions Volontaires]. (L'Encéph., March, 1926.) Fontecilla, M.

In a very compressed paper the author advances the view that the cerebral cortex is subordinate to a double nucleus situated at the third ventricle, having two aspects—vegetative and personal.

W. D. CHAMBERS.

2. Psychology and Physiological Psychology.

Verbalization in Multiple Choice Reactions. (Psychol. Review, November, 1926.) Rexroad, C. N.

This article shows the results of a series of experiments in multiple choice reactions, and presents data that are readily interpretable only if it be assumed that the individual is almost constantly making verbal responses, and that these responses play a large part in setting off overt responses.

WM. McWILLIAM.

Playing School—A Compensatory Mechanism. (Psychol. Review, November, 1926.) Lehman, H. C., and Witty, P. A.

In this article the authors continue a comparison of the study of play in white and negro children, taking as their subject "playing school." It is shown that girls of both races engage in this activity much more commonly than boys. That negro children participate in playing school more frequently than white children, and that both race-groups participate less frequently in this activity as age increases.

The writers suggest that the negro children engage in playing school more commonly than white children because this activity symbolizes to them knowledge, power and prestige, which they are unable to achieve in the world of actuality. This form of make-believe play may be a compensatory activity.

WM. McWILLIAM.

Recent Work of Pawlow and his Pupils. (Arch. of Neur. and Psychiat., April, 1927.) Gant, W. H.

1. Conditioned Reflexes.

Pawlow considers all acts to be reflex, and distinguishes two kinds of reflex—the inborn, physiological, unalterable or unconditioned reflex, and the acquired, usually called psychic or conditioned reflex. The flow of saliva resulting from the sound of a bell alone, because it formerly accompanied feeding, is a conditioned reflex. In order to form the conditioned reflex, the conditioning stimulus must be associated with the unconditioning stimulus a certain number of times (twenty or more, depending on the dog and other conditions). The conditioning stimulus must always precede the unconditioning stimulus. An example of what is called a conditioned reflex of the second order is given by blowing a whistle at the same time as a conditioning stimulus formed by a light is given. Soon the whistle

produces a flow of saliva when sounded by itself, although the whistle itself has never been followed by feeding. A reflex of the third order is shown by using the defence reflex. Instead of an electric stimulus to the sole of the foot a conditioning stimulus by means of a skin irritator is used. Then the skin irritator is combined with the noise of bubbling air through water, but no electric current is used. Soon the bubbling sound is sufficient to cause howling and withdrawal of the foot. This is a reflex of the second order. Now the bubbling is repeated simultaneously with a whistle for several days, and soon the whistle acquires the property of a conditioning stimulus, causing the dog to howl and withdraw his foot. This is a conditioned reflex of the third order.

Frequent successive repetitions of positive conditioning stimuli not interrupted by other stimuli caused the dog to become irritable and excited. If negative conditioning stimuli were used, the dog became sleepy and fell asleep. When conditioning stimuli were repeated too often without intervals for rest, or a too difficult problem was presented, the dogs showed symptoms resembling neurasthenia—whining, refusing to eat, disinclination to work. These dogs recovered with rest and rectal injection of potassium bromide. When the cortex of a cerebral hemisphere is removed it is impossible to form the defensive conditioned reflex. Krasnogorski, a pupil of Pawlow's, working with young children found that they developed conditioned reflexes much more quickly than dogs, and retained them for a longer period. He found it impossible to develop conditioned reflexes in children under 2 weeks of age. Abnormalities in conditioned reflexes in children indicate a disturbance in the balance between inhibition and stimulation. Imbeciles develop conditioned reflexes with difficulty; neurotic children develop them more quickly than normal children and lose them more quickly.

2. *Sympathetic Nervous System.*

Orbeli considers that the efferent sympathetic fibres have a direct influence on the central part of the spinal reflex arc. The sympathetic nervous system exerts a profound influence over the physico-chemical changes occurring in skeletal muscle, accompanied by a modification of the functional ability of that muscle. These changes influence the conditions of the motor end-plate, calling forth transformations in the efficiency of the corresponding muscles. This forms a sort of regulatory mechanism for the expenditure of muscle strength, and governs the conduction of impulses by the motor nerves.

3. *Epilepsy.*

Speransky found that slight freezing of the cerebral cortex of the dog causes epileptic convulsions after from two to five hours, followed by death in from twelve to fifty hours. If the frozen part is removed immediately after freezing, no symptoms result (except in the case of the motor cortex). Transplantation of a part of the frozen brain to the subdural space of a healthy dog causes symptoms of epilepsy and death. Speransky thinks that an autoneurotoxin

is formed, which passes into the blood, causing hyperkinetic symptoms. An intense motor excitement, although not epilepsy, is produced by injection of from 150-300 c.c. of defibrinated blood from the ill animal into the blood of a healthy dog. Working on these autoneurotoxins, he found that the brain substance of transplants from frozen cortex was rapidly disintegrated by normal cerebro-spinal fluid; the vessels, etc., persisted long after the brain substance had vanished. Speransky concludes that in local disease of the nervous system, destruction of the brain substance occurs in the affected part, and products of this destruction pass in the fluid to other parts of the brain; hence a diffuse encephalitis may be set up. He points out that the sclerosis of the cornu ammonis which occurs in epilepsy and various encephalitides is due to the fact that the fluid bathes this part of the brain on three sides with autoneurotoxins.

G. W. T. H. FLEMING.

Psychology and Culture. (*Psychol. Bull.*, vol. xxiv, No. 4, May, 1927.) Willey, M. M., and Herskovits, M. J.

This paper summarizes the recent work of anthropologists and ethnologists on the progress of culture—that is, anthropology from the social aspect—and emphasizes the value of this work for the psychologist. It is in four sections—the definition of culture, the morphology of culture, the mechanisms of culture, and methods in the study of culture. Reference is made to 148 publications on the subject—admittedly an incomplete list. W. D. CHAMBERS.

Concepts of Trait and Personality. (*Psychol. Bull.*, vol. xxiv, No. 5, May, 1927.) Allport, G. W.

The author criticizes the vague and varied meanings attached to such words as "trait" and "personality" by psychologists, and proceeds to set out his own views, including what he considers to be the basic requirements for the study of personality. There are 46 references to publications. W. D. CHAMBERS.

Studies in Sex Differences. (*Psychol. Bull.*, vol. xxiv, No. 5, May, 1927.) Allen, C. N.

After a concise review of recent publications on this subject, the author concludes that few, if any, of the so-called "sex differences" are due solely to sex; that the social training of the sexes is different and produces differential factors, interests, etc.; and that there is a large number of variables which have not been controlled, and which make previous conclusions on the subject uncertain. References to 74 publications are given. W. D. CHAMBERS.

Psychology in Industry. (*Psychol. Bull.*, November, 1926.) Viteles, Morris S.

This article reviews developments during recent years in the application of psychology in industry. A bibliography of 360 titles follows, referring mainly to books and to articles in technical journals. W. D. CHAMBERS.

The Self in Recent Psychology. (Psychol. Bull., vol. xxiv, No. 4, April, 1927.) Calkins, M. W.

This paper is a summary of recently expressed views and attitudes of psychologists on the nature of self. Thirty-eight references are given to books and papers.

W. D. CHAMBERS.

3. Clinical Psychiatry.

Melancholic Stupor and its Relation to Parkinsonian Disease. The Site of the Lesions [El Estupor Melancolico y sus Relaciones con la Enfermedad de Parkinson. Sitio de las Lesions Anatomicas]. (Rev. Argentina de Neur., Psiquiat. y Med. Leg., i, 1927.) Obarrio, Juan M.

The author asserts that melancholic stupor presents a neurological symptomatology identical with that of Parkinson's disease, and puts forward the theory that melancholic stupor is a true Parkinsonian syndrome. In both conditions the anatomical lesions in the brain occupy the same regions, namely, the locus niger and the pallidal system. Melancholic stupor, he says, is due to an auto-intoxication caused by adrenal deficiency, which, acting on these cerebral zones, originates cellular changes which translate themselves clinically into the depressive syndrome.

MALCOLM BROWN.

The Mental Pictures in Schizophrenia and in Epidemic Encephalitis. (Amer. Journ. of Psychiat., January, 1927.) Jelliffe, S. E.

Dr. Smith Ely Jelliffe, in a long but interesting article, presents, as he writes in his sub-title, "their alliances, differences and a point of view" in a discussion of the mental pictures in schizophrenia and epidemic encephalitis.

After a prolonged introduction he proceeds to review the literature as to similarities of symptomatology. The work of Steck is referred to at length, e.g., with regard to the rapid alterability of the Parkinsonian paramimicry, comparison being drawn with the precisely similar mimicry of schizophrenia. Steiner is dealt with in similar fashion. Similarities are also found in cataleptic attitudes in the two types of disorder. "Bleuler's descriptions in his monograph are most typical, and for the most part are exactly reproduced by the encephalitic." References are also drawn from the work of Hauptmann, Wilson (the Croonian Lectures, 1925), Lange and Schilder. That of Hauptmann is severely criticized over some twelve pages.

Common histopathological considerations are discussed. In his summary he states: "Schizophrenic changes may be envisaged more as parenchymatous degenerations and have a widespread non-neurological pathology as well. Encephalitis shows vascular infiltrating extravasation types of pictures. The localizations have a tendency to be cortical and striatal respectively, although the thalamic, striatal and mid-brain pathology of schizophrenia is also quite manifest."

There is a comprehensive bibliography, together with references in foot-notes.

WM. MCWILLIAM.

Observations and Remarks on the Physical Constitution of Female Psychiatric Patients. (Amer. Journ. of Psychiat., January, 1927.) Wertheimer, F. I.

This article is a study of female psychiatric patients, in whom the author was primarily concerned with the problem of a relation between anthropometric measurements and body types diagnosed by observation. Body profiles are grouped and indices arrived at, e.g.,

$$\text{Leg length (in cm.)} \times 10^3$$

$$\frac{\text{Transverse chest diameter} \times \text{sagittal chest diameter} \times \text{trunk height}}{\text{}} \times 100$$

Results of the work can be judged from the author's final sentence: "Altogether, the recognition of body types in women is more complicated than in men, and a perfection of technique and more clarity in type diagnosis will be necessary before exact biometric methods can be applied to the problem of correlation with nosological types." WM. McWILLIAM.

Affective Experience in Early Schizophrenia. (Amer. Journ. of Psychiat., January, 1927.) Sullivan, H. S.

Dr. Sullivan in this article discusses "apathy in schizophrenia, and concludes that the alleged indifference, apathy and emotional disharmony of the schizophrenic is more a matter of impression than a correct evaluation of the inner experience of such a patient. He arrives at his conclusions through research, in which the psychogalvanometer and the cinema are employed, the latter in the study of the mobility of the facial musculature. Practical details are given. WM. McWILLIAM.

A Bibliography of American Contributions to War Neuropsychiatry. (Amer. Journ. of Psychiat., January, 1927.) Fenton, N., and Morrison, D. E.

The authors provide a comprehensive bibliography of American contributions to war neuropsychiatry. These contributions number 223, and are arranged in alphabetical order under their authors' names. WM. McWILLIAM.

Two Cases Illustrating the Combination of Affective and Schizophrenic Symptoms. (Amer. Journ. of Psychiat., October, 1926.) Campbell, C. M.

The author in this article reviews two patients presenting the combination or alternation of manic-depressive and schizophrenic modes of reaction. Brief summaries of the patients' lives are given, together with a formal analysis of the various attacks, and, finally, reviews of the personalities of the patients, of the situation, and of the rôle of the sex instinct in the psychoses. WM. McWILLIAM.

Fatigue: A Clinical Study. (*Journ. of Neur. and Psycho-path.*, October, 1926.) Gillespie, R. D.

The author in this article makes a detailed study of fatigue in its clinical aspect, the work being along broad behaviouristic lines. He recognizes three clinical varieties of fatigue and discusses at some length the ætiology of its syndromes, classifying them in five divisions—constitution, auto-intoxication, excessive effort, emotion, and the psycho-analytic theories.

Symptomatology is dealt with under five groups into which his cases fall :

1. Fatigue the direct expression of a conflict.
2. Fatigue a prodromal symptom of serious mental illness.
3. Fatigue accompanying other symptoms which together make a picture of depression or of a schizophrenic psychosis.
4. Fatigue a symptomatic equivalent to a recurrent depression.
5. Fatigue a sequel of a variety of mental disorders.

Full clinical histories are given of 14 cases.

Dr. Gillespie concludes from his clinical findings that several methods of treatment can be used in dealing with the fatigue syndromes with some confidence in their foundations. He states that the principal rôle must be assigned to psychotherapy, and further recommends graded exercises, hydrotherapy and the administration of phosphates.

WM. McWILLIAM.

An Introductory Study of the Erotic Behaviour of Idiots. (*Journ. of Nerv. and Ment. Dis.*, May, 1927.) Potter, H. W.

The erotic behaviour of 398 idiots was studied. Nearly three-quarters of the entire group showed the presence of erotic desires—a larger percentage of females than of males. Nearly four-fifths of the total erotic idiots were auto-erotic only. The remainder, in addition to being auto-erotic, directed their sex interests to their associates (of the same sex) as well. The erotic desire was expressed in forms of genital and pregenital eroticism and perverted eroticism, such as masturbation, mutual masturbation, rocking motions, sadomasochism, oral and aural eroticism, pederasty, cunnilingus and fellatio. Masturbation and mutual masturbation were more common among the males, rocking, oral eroticism, masochism and sadism were more common among the females.

G. W. T. H. FLEMING.

The Rôle of Syphilis in the Parkinsonian Syndrome. (*Arch. of Neur. and Psychiat.*, May, 1927.) Pardee, I.

There are scattered reports throughout the literature of Parkinsonian symptoms associated with general paralysis; to these the author adds his quota. He points out that the encephalitic virus has an affinity for the striate region, but that the *Spirochæta pallida* rarely has.

He regards the question of treatment as hopeless.

G. W. T. H. FLEMING.

A Morbid Theft in the Course of a Melancholic State [Vol Morbide au Cours d'un État Mélancolique]. (*Fourn. Neur. et Psychiat. Belg.*, May, 1927.) Vermeulen, G.

Although suicide and murder are not uncommon in melancholics, petty crime is rare. The case is described of a woman, æt. 57, who suffered from an attack of depression after being accused of theft (apparently unjustly) by her landlady. During the depression she stole several trifling articles from shops before being sent to a hospital. The medico-legal value of the case is discussed.

W. D. CHAMBERS.

Three Cases of Recovery from Interpretative Delusional States. [Sur Trois Cas de Guérison de Délires Interprétatifs]. (*L'Encéph.*, May, 1927.) Clerc, P., and Picard, J.

In this paper are described the cases of three patients who suffered from definite states of delusion of interpretation without hallucination, and who recovered and have remained well for 3½, 12, and 2½ years respectively. The only feature in the cases suggesting paranoia was some degree of egocentricity. In other respects the reactions were quite different from those of a paranoiac. No organic or toxic cause was discovered in any case. The nature of the psychosis and its possible relation to paranoia is discussed and commented upon.

W. D. CHAMBERS.

Fugues and Amnesia of Uræmic Origin—Amnesia of Identity [Fugues et Amnésie d'Origine Urémique sur une Forme d'Amnésie: L'Amnésie d'Identité]. (*L'Encéph.*, May, 1927.) Claude, H., Abadie, J., Robin, G., and Cenac, M.

After alluding to two similar cases previously described, the authors set out in detail the case of a man, æt. 52, who suffered from more or less prolonged fugues with complete disorientation of identity. After discussing the cause of these and excluding epilepsy, etc., the authors conclude they were uræmic in origin, and are able to report that treatment of the kidney condition has prevented any relapse, and has improved the general mental condition of the patient.

W. D. CHAMBERS.

Delusions of Insanity in Others [Le Délire de la Folie d'Autrui]. (*L'Encéph.*, April, 1927.) Veillet, L.

The patient, a constitutional psychopath, whose case is described in this paper, conceived the idea, following puerperal fever, that her husband was insane. An analysis of the psychological mechanisms probably at work is given, and the author considers the condition sufficiently important to be classified as a form of delusional insanity.

W. D. CHAMBERS.

The Indications for and the Technique of Psycho-analysis. [Les Indications et la Technique de la Psychoanalyse]. (*Gaz. des Hôp.*, No. 36, May 4, 1927.) Robin, G.

This is a highly compressed paper setting forth the author's views, as indicated in the title.

W. D. CHAMBERS.

Perversions of Instinct in a Case of Impulsive Obsessions following Encephalitis [*Perversions Instinctives chez un Impulsif Obsédé d'Origine Encéphalitique*]. (*L'Encéph.*, December, 1926.) Laignel-Lavastine and Morlaas, J.

This paper records a case in which impulses to cruelty to animals accompanied Parkinsonism. The patient was vagotonic.

W. D. CHAMBERS.

The Kataphrenias [*Les Cataphrenies*]. (*L'Encéph.*, June, 1926.) Austregesilo, Prof.

The author applies this name to the group of cases which resemble dementia, but which can improve and recover (in from six months to three years), and in which no anatomical lesions can be detected. It includes atypical psychoses, chronic confusion ending in recovery, manic-depression of catatonia, stuporose or confused type, post-infective amentia, pseudo-dementia præcox, recoverable cases of schizophrenia, etc. Ten illustrative cases are quoted, and the author claims that his new term simplifies the nomenclature and will prove an advantage.

W. D. CHAMBERS.

Masked Disseminated Sclerosis with a Mental Début [*Sclérose en Plaques Fruste a Début Mental*]. (*L'Encéph.*, March, 1927.) Targowla, R.

In this case the illness began with a well-marked confusional state strongly suggestive of a toxic or infective origin, and only after some months did the physical signs of disseminated sclerosis appear. The author emphasizes the necessity of being prepared to meet similar cases, and states that in his opinion psychopathic states are more common in this disease than is supposed.

W. D. CHAMBERS.

Psychopathic Emotional Disorders in the Absence of Mental Automatism [*Troubles Psychopathiques Émotionnels sans Phénomènes d'Automatisme Mental*]. (*L'Encéph.*, February, 1927.) Claude, H.

This paper is a short, but very lucid exposition of the case of an old woman who complained of being irrationally worried and upset over a long period by the actions of a neighbour, and yet contrary to expectation failed to develop any serious psychopathic symptom, particularly notable being the absence of all phenomena of mental automatism. The reactions of the patient remained purely emotional and superficial, where in the majority of cases delusions of external agency would certainly have developed.

W. D. CHAMBERS.

Chronic Hallucinatory Involutorial Psychosis [*La Psychose Hallucinatoire Chronique d'Involution*]. (*L'Encéph.*, February, 1927.) Achille-Delmas, F.

Three cases of a chronic hallucinatory state in patients æt. 81, 77 and 69 years are described, and their special characters lead the

author to claim that the condition is a special involucional form of chronic hallucinatory psychosis. According to him the notable features are the age of the patients; the absence of psychopathic antecedents; the good physical condition, apart from arteriosclerosis; the absence of psycho-motor hallucinations and echo of the thought; and lastly the absence of mental enfeeblement.

W. D. CHAMBERS.

Traumatic Stupor, Etherization, Recovery [*Stupeur Traumatique, Éthérisation, Quérison*]. (*L'Encéph.*, January, 1927.)
Brailovsky, V.

The case of a man, æt. 30, who, after being tried for the theft of some money, passed suddenly into a state of complete stupor. When this had lasted twenty days light ether anæsthesia was induced up to the stage of excitement, in which the stupor suddenly disappeared and the man appeared to be normal.

W. D. CHAMBERS.

Confusional Mania [*La Manie Confuse*]. (*L'Encéph.*, September–October, 1926.)
Lautier, J.

The author points out the apparent contradiction in the nomenclature of this condition, and after describing three cases, emphasizes the points of distinction between true mania, confused states accompanied by manic excitement, and typical confusional states.

W. D. CHAMBERS.

A Case of Juvenile Mythomania [*Un Cas de Mythomanie Juvenile*]. (*Journ. Neur. et Psychiat.*, July, 1926.)
Vermeylen, G.

This paper is a full account of pathological confabulation in a youth æt. 17, followed by a discussion of the views of Dupré on the distinctions between this morbid condition and the normal childish, playful "make-believe."

W. D. CHAMBERS.

Hallucinatory Psychosis in a General Paralytic [*Déire Hallucinatoire chez une Paralytique Générale*]. (*Journ. Neur. et Psychiat.*, July, 1926.)
Vermeylen, G.

An account of a case of general paralysis in a woman, æt. 59, of eighteen months' duration, in which highly organized auditory hallucinations with delusional interpretations were the prominent clinical symptom. The rarity of this symptom in general paralysis is discussed. At the time of writing the progress of dementia has broken up the clinical picture, and treatment by malarial infection being about to begin, the author speculates as to whether the hallucinosis will return if an intermission of the paralytic process takes place.

W. D. CHAMBERS.

A Case of Communicated Insanity [*Un Cas de Folie à Deux*]. (*Journ. Neur. et Psychiat.*, July, 1926.)
Hoven, H.

After a short review of the literature on the subject, the author records the simultaneous development of a polymorphic delusional

psychosis in two elderly sisters. Unlike most cases, in this instance both sisters seemed active subjects, and neither dominated the other, but the delusional content and symptoms were practically identical.

W. D. CHAMBERS.

Hysterical Contractions of the External Muscles of the Eye [*Les Contractures Hystériques des Muscles Externes de l'Œil*]. (*L'Encéph.*, March, 1926.) *Balduzzi, O.*

Such contractures are quite common temporarily, but are rarely of long duration, and the few prolonged cases which have been recorded are quoted by the author. He describes the case of a young woman, a "grande hystérique," which he observed himself, in which internal strabismus with diplopia followed the hysterical attacks.

W. D. CHAMBERS.

Chronic Hallucinatory Psychosis with Delusional Interpretations in a Diabetic suffering from Hypertrichosis [*Psychose Hallucinatoire Chronique avec Interprétations Délirantes chez une Diabétique Hypertrichosique*]. (*L'Encéph.*, March, 1926.) *Laignel-Lavastine and Valence.*

The authors describe an interesting case in which the delusions varied according to the amount of glycosuria. After typhoid fever sugar disappeared from the urine for seven months, and during this period the mental state was nearly normal. The case supports the theory of Cherambault that chronic hallucinatory psychosis is always of organic origin. The patient (a woman) had a marked hypertrichosis of masculine type—an accompaniment of diabetes which one of the authors has seen frequently.

W. D. CHAMBERS.

Obsessional Fugues and Epidemic Encephalitis [*Fugues Obsédantes et Encéphalite Épidémique*]. (*L'Encéph.*, March, 1926.) *Dupouy, R., and Hyvert, M.*

This is the case of a man, æt. 25, who had epidemic encephalitis in 1920 and has since suffered six fugues. The authors point out that if these fugues can be caused by the lesions of encephalitis in this case they may be equally due to other organic causes in other cases.

W. D. CHAMBERS.

Interpretative Psychosis of Emotive Origin. The Prognosis in these Interpretative States [*Psychose Interpretative d'Origine Émotive. Du Prognostic de ces États Interprétatifs*]. (*L'Encéph.*, March, 1926.) *Tinel, J., Robin, G., and Cénac, M.*

The paper describes the case of a man, æt. 36, constitutionally emotional, but with no previous disorder of conduct, who fled from home in a state of terror caused by delusions of sudden onset. He had detected a group of colleagues in a system of thefts, and was in fact assaulted by some of them, and a few days later he imagined himself the object of a conspiracy and in constant danger, his delusions supported by morbid interpretations. The authors discuss

the nature of the case, and conclude that it is not paranoiac and that the prognosis is favourable.

W. D. CHAMBERS.

Hallucinatory Obsessions: Their Importance in the Study of the Pathology of Hallucinations [*Obsessions Hallucinatoires: Leur Importance pour l'Étude de la Pathogenie des Hallucinations*]. (*Ann. Med. Psych.*, October, 1926.) Redalie, L.

The author describes a case in which obsessions were replaced by psychic hallucinations, and later by true auditory hallucinations. In all three phases the content of the morbid mental activity was similar, but in the first there was extreme anxiety, less in the second, and marked indifference in the third. Reference is made to other similar recorded cases, and the possible causes of the development of hallucinations in obsessed patients are discussed.

W. D. CHAMBERS.

Mental Automatism; Spiritualistic Delusions and Spiritualism [*Automatisme mental; délire spirite et spiritisme*]. (*Ann. Med. Psych.*, October, 1926.) Schiff, P.

The case of a woman, who in the course of a progressive hallucinatory psychosis came in contact with practising spiritualists and mediums, and accepted at once all their supernatural theories and explanations of her symptoms. Her illness could not be ascribed to spiritualism, but its content was modified by her experiences. In addition to the patient the medium with whom she had most to do was also demonstrated by the author, and it is pointed out that the medium's "trances" as described by himself are obviously phenomena of mental automatism.

W. D. CHAMBERS.

False Delusions [*Les Faux Délires*]. (*Ann. Med. Psych.*, October, 1926.) Courbon, P.

The author gives this name to statements which are strictly true, but which have a delusional appearance and may lead to errors in diagnosis. They occur either as an indirect result of some other mental disorder in the subject, or as a result of some abnormality in those with whom the subject comes in contact. Examples of each are given. In the discussion following the paper, it was suggested that "apparent delusions" would be a more accurate term for the condition.

W. D. CHAMBERS.

Observations on Epilepsy. (*Fourn. of Neur. and Psycho-path.*, January, 1927.) Turner, W. A.

This article contains the material of an address delivered before the Section of Psychiatry, Royal Society of Medicine, in December, 1926. The author reviews the present attitude of psychiatrists to epilepsy, and discusses the numerous theories as to its causation. Several aspects of the problem are dealt with, and he gives statistics from his own personal practice when discussing inheritance in the disease.

WM. MCWILLIAM.

A Cerebral Tumour in an Epileptic Visible in a Radiogram [*Une tumeur visible a la radiographie chez un épileptique*]. (*Journ. Neur. et Psychiat. Belg.*, May, 1927.) *Monis, E.*

This paper describes the discovery by X-ray of a cerebral tumour in an epileptic, æt. 17, the epilepsy having lasted for nine years and being Jacksonian. The author states that in all cases of epilepsy with increased intracranial pressure radiograms should be obtained.

W. D. CHAMBERS.

Mental Deficiency: Its Mental and Physical Characteristics. (*Med. Journ. of Australia*, February 19, 1927.) *Bostock, J.*

Mental Deficiency: Causes and Characteristics. (*Med. Journ. of Australia*, March 5, 1927.) *Bostock, J.*

Addressed to general practitioners, the first paper is a clinical account with illustrative cases and photographs, and the second mainly a survey of our knowledge of the ætiology of this subject. Dr. Bostock holds that it is more profitable to look upon amentia as a spontaneous variation, and believes that "he who regards mental deficient as throw-outs and experiments in the making of human life will approach them on a better basis of truth than if they are considered to be mere social rubbish." This, he maintains, is incidentally one of the reasons why mental deficiency institutions should be within easy distance of a medical school, that students may come to them for study and research. "At the present time priceless material is being wasted. . . . The variations are remarkable, and would repay by more than a cursory glance the student of any speciality. . . . As the mental and physical changes run parallel, the study of amentia is worth while for every branch of medicine."

H. FREIZE STEPHENS.

4. Treatment.

Types of Therapeutic Response observed in the Malaria Treatment of General Paralysis. (*Amer. Journ. of Psychiat.*, October, 1926.) *Kirby, G. H., and Bunker, H. A.*

In this paper are given details of the results of treatment of 93 cases of general paralysis by malaria, the types of clinical response being fully summarized in nine tables.

The authors conclude that of the 93 cases, 13 showed no effect whatever from treatment, 15 showed temporary results, and 65 showed a therapeutic influence which had persisted unmodified for two and a half years.

They further state that :

(1) The better the therapeutic result obtained, the more likely it is to be of a more or less enduring character.

(2) Of 41 patients followed for more than a year, who received no further anti-syphilitic treatment during that period, a well-marked modification in the strength of the spinal fluid Wassermann took place in 13, in 11 the Wassermann reaction was definitely modified, in 17 it remained unchanged.

(3) Patients of the "manic" type exhibited by far the greatest tendency to a favourable response to treatment.

It would appear to the authors that among the clinical factors which seem to play a part in the results obtained by the malaria treatment, the so-called clinical type of general paralysis appears to rank first in importance, the behaviour of the body-weight subsequent to treatment second, and the duration of the symptoms prior to treatment third.

WM. McWILLIAM.

Some Results of a Second Induction of Malaria in General Paralysis of the Insane. (Fourn. of Neur. and Psycho-path., January, 1927.) Nicole, J. E., and Steel, J. P.

The authors put on record observations on 20 patients who had had induced malaria for the second time, and express the results in tabular form. They conclude: "In view of a number of cases where there has been little or no mental improvement subsequent to the first therapeutic malaria, and yet where definite progress followed a second attack, it seems well worth while to renew malarial treatment in suitable patients."

WM. McWILLIAM.

Occupational Therapy in an Out-Patient Clinic for Mental Cases. (Occup. Therap. and Rehabil., April, 1927.) Emery, M.

This article records the experiences of the Occupational Therapy Department of the Mount Sinai Hospital, New York, during the past two and a half years. The department is under the direction of a professional therapist and a number of volunteers. Basketry is the main occupation, while others followed are those of book-binding, paper construction, chair-caning, furniture painting and hooked rugs.

WM. McWILLIAM.

Waste Material Available in a large Mental Hospital. (Occup. Therap. and Rehabil., April, 1927.) Theis, H.

The opening paragraph of this article commences: "The problem of using waste material has been forced upon some of us, or all of us at one time or another," and considerable help is given the occupational therapist in the solution of this administrative problem. Different types of waste material and the uses to which they may be put are described.

WM. McWILLIAM.

Occupational Therapy from the Standpoint of the Private Mental Hospital. (Occup. Therap. and Rehabil., April, 1927.) Chapman, R. M.

Early in his article the author takes as his view-point that "mental disease . . . is an expression of maladjustment," and on this develops his argument. To him the essential elements in an occupation department are the intelligent director endowed with qualities of leadership; occupational aides with valuable personalities; and a close co-operation between the physicians

who direct the treatment of the patients and the occupational department. He discusses hospital "atmosphere," "personality" in the teachers, the attitude and mental make-up of the patient in relation to treatment and the rôle of the physician.

WM. MCWILLIAM.

5. Pathology and Psycho-Pathology.

Occipital and Lumbar Puncture [*Puncion Occipital y Puncion Lumbar*]. (*Rev. Argent. de Neur. Psiquiat. y Med.-Leg.*, i, 1927.) Belado, Manuel.

As the result of the investigation of the cerebro-spinal fluid in 35 cases in which samples of the fluid were drawn off both by occipital and lumbar puncture, the author concludes that the method gives valuable indications. This is particularly the case in lesions which partially or wholly occlude the canal. The main differences between the two specimens are in pressure, but some other differences are noted, as, for instance, in a case of syringomyelia, where the Nonne-Appleton and Pandy tests were positive in the lumbar fluid and negative in the occipital, the Wassermann reaction being negative in both cases.

MALCOLM BROWN.

A Histo-pathological Study of the Cerebral Cortex of Malaria-treated General Paralysis [*Estudio Histopatologico de la Corteza Cerebral de Paraliticos Generales Malarizados*]. (*Rev. Argent. de Neur. Psiquiat. y Med.-Leg.*, i, 1927.) Siena, Adolfo M.

From the anatomical and pathological point of view, malarial therapy, in six cases examined by the author, does not seem to have produced any appreciable modification of the lesions constantly found in the brains of paralytics. In the brains examined the macroscopical changes were identical with those found in the brains of untreated cases, *viz.*, chronic leptomeningitis, normal appearance of the arteries at the base, atrophy of the convolutions, dilatation of the ventricles and granularity of the ventricle ependyma. Likewise the microscopic changes were classical, and the intellectual level of the patient could not be deduced from the pathological changes.

MALCOLM BROWN.

The Acetic Anhydride Test in Cerebro-spinal Fluid. (*Fourn. of Neur. and Psycho-path.*, January, 1927.) Greenfield, F. G., and Carmichael, E. A.

The authors record the sulphuric acetic anhydride test in the cerebro-spinal fluid, and discuss the possible underlying "causal factor" in the cases. After reviewing the literature on this test, the technique followed by them is described. One c.c. of the cerebro-spinal fluid is measured into a test-tube with a graduated pipette. To this is added 0.3 c.c. of *chemically pure* acetic anhydride. The test-tube is then gently agitated to cause an

emulsion to form. To this is then added, drop by drop, 0·8 c.c. of chemically pure sulphuric acid. Should no colour appear immediately the test-tube is again shaken gently, when invariably some coloration takes place. A positive result is constituted by a very definite lilac colour.

Results are tabulated, the headings of the table being: Sex, acetic anhydride test, physical characters, cells, total protein, Nonne-Apelt, Pandey, Lange, and Wassermann reaction in cerebro-spinal fluid and blood.

The cerebro-spinal fluids are from cases of general paralysis (16), of tabes dorsalis (6), of other forms of syphilis (4), of various other organic nervous conditions (18), and of non-organic conditions (6).

The authors conclude that the acetic anhydride reaction cannot be associated with any single one of the usual syphilitic reactions or with any known combination of these, and that the "causal factor" of the reaction must be some other substance in the fluid than that producing the syphilitic reactions. "The suggestion that it may be due to an increase in the cholesterol content of the fluid appears a possible explanation." A positive reaction occurs in practically every case of dementia paralytica, and may occur in secondary neuro-syphilis. Cases of cerebral degeneration may give a weak reaction.

WM. McWILLIAM.

Gastro-duodenal Ulcers and Autonomic Imbalance. (*Arch. of Neur. and Psychiat.*, May, 1927.) Wolff, H. G., and Thomas, E. W.

The authors, after a complete consideration of the anatomy, nerve-supply and physiology of the stomach, come to the following conclusions: (a) Anatomical and physiological peculiarities cause the "gastric pathway" and the first part of the duodenum to be especially favourable sites for chronic ulcerative processes once an initial mucosal erosion or hæmorrhage has occurred. (b) There is much evidence that the agents producing mucosal erosions and those perpetuating such erosions as chronic lesions are separate and distinct. (c) Electrical stimulation of the vagus led to hypertonicity, hyperperistalsis, hypersecretion and mucosal erosions. (d) A group of so-called gastric neuroses has been found to have much evidence of autonomic imbalance. (e) A group of acute gastro-duodenal ulcers has, in a high percentage of cases, shown evidence of autonomic imbalance similar to that of the gastric neuroses. (f) Another group of gastro-duodenal ulcers has shown little or no evidence of autonomic imbalance; this group gave the usual evidence of stenosis and chronicity. (g) It is possible that local (toxic, mechanical, infectious, etc.) or remote irritation (chronic appendicitis, disease of the biliary tract, congenital bands, genito-urinary diseases, etc.), by direct or indirect stimulation of the vagus, may cause a mucosal erosion. The mucosal erosion once produced, the anatomical and physiological peculiarities at the site of the lesion will determine whether or not a chronic gastro-duodenal ulcer will occur, or whether immediate spontaneous healing will take place.

G. W. T. H. FLEMING.

The Infantile Type of Family Amaurotic Idiocy. (*Arch. of New. and Psychiat.*, May, 1927.) *Leiner, J. H., and Goodhart, S. P.*

The authors report two cases which differ from most of the infantile cases in the absence of myelin sheath degeneration, in this respect resembling the juvenile type. The authors do not confirm Hassin's conclusion that the pathological process is most pronounced in the optic thalamus. The sieve-like appearance which Hassin describes and figures they consider to be due to the accumulation of lipid droplets and not to the excessive formation of Gitter cells. In both cases there was a marked ectodermal selectivity. In one case the cerebral hemispheres were more involved, in the other the cerebellum. In the entire group of infantile types of amaurotic family idiocy we find a variety of sub-groups with mutations in the pathological pictures. The connecting links in this group are the ectodermal selectivity and the different degrees of Schaffer's type of cell degeneration, which was pointed out and emphasized for the juvenile type of Spielmeyer in 1906.

G. W. T. H. FLEMING.

Blood-groups in Mental and Nervous Cases [*Les Groupes Sanguins dans les Maladies Mentales et Nerveuses*]. (*L'Encéph.*, December, 1926.) *Toulouse, E., Schiff, P., and Weismann-Netter, R.*

Many tests were made in a variety of cases, and the authors state their results shed no light on psychopathic problems.

W. D. CHAMBERS.

"*Rachimetry*"—*A Study of the "Differential Tension" of the Cerebro-spinal Fluid* [*La Rachimétrie—Étude sur la Tension Rachidienne Différentielle*]. (*L'Encéph.*, July-August, 1926.) *Nuñez, P. E.*

The author has studied the tension of the cerebro-spinal fluid in a large number of cases. His method is to measure first the initial tension on entry of the needle to the spinal canal, and then to record again after allowing 5 c.c. of fluid to escape. The difference between the two figures he calls the differential tension or "T.D." He follows Claude in regarding as normal a pressure of 20 cm. of water in the lying and 30 cm. in the sitting posture. His conclusions are (1) that estimation of the tension is impossible without a manometer; (2) the tension and the quantity of cerebro-spinal fluid are not in any constant relation; (3) primary increased tension without obvious cause and with a normal fluid is not uncommon; (4) spinal and arterial hypertension are not related; (5) in suspected cases of brain-tumour a T.D. of more than 10 points supports the diagnosis.

W. D. CHAMBERS.

The Study of the Cerebral Pulse [*Études sur le Pouls Cérébral*]. (*L'Encéph.*, April, 1927.) *Tinel, J.*

The tests on which this paper is based were made on old-standing trephine cases, and the author's experiments do not confirm results

previously recorded by others. He concludes that the cerebral circulation is controlled by a vaso-motor system exactly like the systemic circulation, and that there is no relation between any form of mental activity and the state for the time being of the blood-vessels of the brain. On the other hand, certain of the paroxysmal sequelæ of encephalitis do appear to be of vaso-motor origin, and these can sometimes be stopped by modifying the blood-pressure, either by increasing it by hyperpnœa or diminishing it by amyl nitrite.

W. D. CHAMBERS.

The Permeability of the "Central Nervous Barrier" [Sur la Perméabilité de la Barrière Nerveuse Centrale]. (L'Encéph., March, 1927.) Bau-Prussak, S., and Prussak, L.

This paper refers to the functions of the membranes of the central nervous system which allow, or prevent, the interchange of various substances, toxic or nutritive, between the blood-stream and the cerebro-spinal fluid. Permeability was tested by the method of Walter—the administration of potassium bromide for three to five days and the simultaneous quantitative estimation of bromine in the blood and cerebro-spinal fluid. The technique of the test is described. Normally the co-efficient varies from 2·90 to 3·30. The authors examined 108 cases of organic nervous diseases, psychoses, etc., and conclude that the method is of little value for differential diagnosis, though it can be used to test the effects of treatment.

W. D. CHAMBERS.

The Pressure in the Retinal Arteries and in the Cerebro-spinal Fluid [Tension Rétinienne et Tension du Liquide Céphalo-Rachidien]. (L'Encéph., January, 1927.) Claude, H., Lamache, A., and Dubar, J.

The blood-pressure in the retinal arteries is measured by the instrument and method of Bailliart. A large number of observations have been made on sixty cases. The retinal blood-pressure is found to be in constant relationship with intra-cranial pressure, as recorded by lumbar puncture and the use of the manometer, and the authors claim that by Bailliart's method changes in the cerebro-spinal tension can be observed without the need for repeated punctures.

W. D. CHAMBERS.

The Alkaline Tide of the Urine in Epilepsy [Le Flux Alcalin Urinaire dans l'Épilépsie]. (L'Encéph., March, 1926.) Raffin, M.

This short paper summarizes the present knowledge of the pH of the urine. The author was unable to detect any variation in the urinary pH in epileptics.

W. D. CHAMBERS.

Study of the Urinary pH in Epilepsy, Migraine and the Crises of Anxiety or Excitement [Étude sur le P.H. Urinaire dans l'Épilépsie, la Migraine et les Crises d'Anxiété ou d'Excitation]. (L'Encéph., March, 1926.) Tinel, Westphal and Valance.

These authors have found an increased alkalinity in the urine accompanying certain paroxysmal diseases. In their view the

hyper-alkalinity predisposes to the crises, and does not result from them.

W. D. CHAMBERS.

A Contribution to the Study of the Body Fluids in Epilepsy [Contribution à l'Étude Humorale de l'Épilepsie]. (*L'Encéph.*, September–October, 1926.) Raffin, R.

This paper reviews the literature to date on the reactions of the blood and urine in epilepsy, and contains the results of hourly estimations of the pH in epileptics and in normal persons. The variations are found to be more marked in epilepsy, and the conclusion is reached that the normal digestive alkaline tide exaggerates an endogenous intoxication and is probably mainly responsible for the epileptic fit.

W. D. CHAMBERS.

Pulmonary Hyper-aération—Acido-basic Disparity of the Blood and Tissues [Hyperventilation Pulmonaire—Desequilibre Acido-Basique du Sang et des Tissus]. (*L'Encéph.*, September–October, 1926.) Radovici, A.

The author has tested the results of voluntary hyperpnœa on 20 cases, some normal, some suffering from neuroses, organic nervous disease and epilepsy. The hyperpnœa was maintained for 10 to 30 minutes in each case and its results tested by Chvostek's sign, by the electrical excitability of muscle, by the oculo-cardiac reflex and the atropin test. The results in each group are set out in detail. The alkalinity of the blood was immediately increased by the hyperpnœa, and a state of tetany and of para-sympathetic tonus was induced in all cases within a few minutes. In all cases of epilepsy a fit was produced within 30 minutes, and the author considers this can be relied on as a test for true epilepsy.

W. D. CHAMBERS.

Affectivity [Sur l'Affectivité]. (*Journ. Neur. et Psychiat. Belg.*, May, 1927.) Cuylits, Dr.

The author discusses the rôle of the sympathetic system not only in normal mental activity but in the psychoses, and concludes that it has been undervalued. He considers that though often regarded as of secondary importance the sympathetic is the source of affectivity and of spontaneous mental activity, and that psychoses are due to its disordered action.

W. D. CHAMBERS.

Cerebral Starvation due to Premature Arterio-Sclerosis, without Focal Ischæmia [La Méiopragie Cérébrale par Angio-sclérose Précoce sans Ischémie en Foyer]. (*L'Encéph.*, March, 1927.) Claude, H., and Cuel, J.

In this paper is described a case of advanced cerebral arterio-sclerosis, notably diffuse in distribution and without focal lesions, associated with increased intra-cranial tension, in which the symptoms began at the age of 39 years. The authors discuss the symptoms and morbid anatomy, and show how their case is

distinguished from Alzheimer's disease, normal senile arteriosclerotic dementia and syphilitic cerebral endarteritis.

W. D. CHAMBERS.

From Psycho-analysis to Psycho-synthesis [De la Psychanalyse a la Psychosynthèse]. (L'Encéph., September-October, 1926.) Maeder, A.

This paper begins with a short *résumé* of the views of Freud, and proceeds to show their defects regarded as a philosophical doctrine. The psycho-analyst emphasizing the past tends to deny that tendency to improve which the author sees throughout human nature. The synthetic point of view which he upholds regards the present as of more importance and value than the past, and according to him the cure of a neurosis depends at least as much on a constructive attitude towards the future as on an analytic examination of the past. Analysis, the author states, is a "means" and not, as too often regarded, an "end." He deplores the relativist, positivist and hedonist philosophic outlook of the present medical generation thus typified by Freud as contrary to the Hippocratic spirit. The author points his arguments very instructively in an account of a young married woman in whose case unsatisfied sexual desire and a generally passionate and immature nature were represented clinically by an obstinate mucous colitis, the large intestine having taken over the duties, in her case, of an erogenous zone.

W. D. CHAMBERS.

The Rôle of Shock in the Crises of Excitement, Anxiety and Confusion [Le Rôle du Choc dans les Crises d'Excitation, d'Anxiété ou de Confusion]. (L'Encéph., July-August, 1926.) Tinel, J., and Santenoise, D.

The authors have previously argued that paroxysms of anxiety, mania and confusion are, like asthma, urticaria, etc., as a rule preceded by biological reactions comparable to the hæmoclastic shock described by Widal, and in this paper they advance further arguments for the same view. Further, they consider that strong emotion may, in its effects, resemble shock by upsetting the vaso-sympathetic balance, and by leading to the liberation of harmful toxic agents previously inactive. Cases in illustration are quoted.

W. D. CHAMBERS.

6. Sociology and Mental Hygiene.

The Penal Establishments and Reformatory Schools of Victoria.

We have received a number of reports from Melbourne, dealing with the working of the penal establishments and reformatory schools of Victoria for the year 1926. These contain several points of interest.

Amongst all children under State guardianship, the incidence of congenital syphilis was between 12 and 15%. In the same series, the incidence of congenital syphilis amongst mentally defective

children was 40%. This indicates a close, although not necessarily a causative connection between the two conditions. Amongst delinquent boys 13% were mentally defective, but a similar percentage was found in boys who were committed to institutions for reasons other than delinquency. During the past twenty-three years the proportion of prisoners to each 100,000 of the population has fallen from 89 to 53. In considering this fall, the increased use of the probation system must be weighed. A considerable number of prison inmates were given an intelligence test. Fixing the lower limit of normality at an "intelligence quotient" of 90, the tests indicate that 58.8% were subnormal. Taking "mental age," 4.8% were found to be below 10 years and 23% below 12 years. We are not, however, provided with any information as to the standard of intelligence in the general population. As in other countries, the chief causative factor in initial delinquency was found to be defective home conditions. Much use appears to be made of an indeterminate sentence, with conditional release on probation. It is claimed that 60% of those who are thus trusted with their freedom are not re-committed to prison. This number, however, includes both recidivists and first offenders. It is, consequently, difficult to estimate the true value of the method.

M. HAMBLIN SMITH.

Fifteen Years' Experience with Defectives on Livo. (Mental Welfare, January, 1927.) Wildenskov, H. O.

Livo is an island of 750 acres, separated by a channel from the Danish mainland. There are in residence about 95 mentally defective male patients, under the care of eleven attendants. The inmates, out of working hours, are allowed to move freely all over the island. The establishment is a branch of the parent institution at Brejning. All the patients sent to Livo had exhibited criminal tendencies. During a period of fifteen years 225 patients were received; 124 of these had been guilty of theft, 66 had committed sex offences of various kinds, 35 were incendiaries. Three-fourths of the patients were between 14 and 24 years of age on reception. All were sent to Livo as being mental defectives, but six were found to be psychopaths; these latter were removed, as it was found that they exercised a bad influence upon the necessary discipline.

The inmates are not necessarily under permanent detention. Cases which appear to be suitable are released, under due safeguards, if situations can be found for them. Releases to the number of 161 have been made, and 58 of these have been re-admitted. Some of the released cases live at the parent institution during the winter, when employment is more difficult to obtain, going out to situations in the spring. This would seem to be an admirable plan. The age and the degree of intelligence of the re-committed cases do not seem to furnish any clue as to the liability to relapse into crime. The prospect of release is regarded as of great importance. Without such a prospect it would be much more difficult to maintain discipline with so small a staff.

M. HAMBLIN SMITH.

Industrial Possibilities of the Feeble-minded within an Institution.
(*Proc. Amer. Assoc. for the Study of the Feeble-minded, 1926.*)
Raymond, C. S.

The late Dr. Walter E. Fernald, in his thirty-five years of work among the mentally defective, prepared in great detail a variety of occupations for his patients, and in this paper Dr. Raymond published lists of possible occupations for boys and girls at the mental age-levels of 3 or below to 11 years, based on classes actually in progress at the Walter E. Fernald State School at Waverley, Mass. While there are no known methods of psychological testing by the use of which it is possible to state definitely that a child with a certain mental age will perform successfully any given occupation, yet it is a great source of satisfaction for parents of defective children to know of the multitude of possibilities open to them, and in planning a programme of industrial training for such children Dr. Raymond maintains that it is wiser always to arrange for as wide a variety of occupations as possible in preference to specializing on any one particular industry. He laments somewhat that medical men and others giving advice on these matters occasionally are apt to make the sad error of laying stress on the limitations of aments rather than on the doors that may be opened for them and the numberless little windows they may be encouraged to look through, especially in a large institution—such a one as ever should be the ideal and aim of those whose duty it is to provide for the proper training of the feeble-minded.

H. FREIZE STEPHENS.

Adjustment of the Feeble-minded in Industry. (*Proc. Amer. Assoc. for the Study of the Feeble-minded, 1926.*) Burr, E.

In this paper the writer, who is the Director of the Vocational Adjustment Bureau of New York City, instances some of the benefits to be obtained by adopting the methods of vocational guidance in finding work in the community for mental defectives. It is distressing, however, to learn that in progressive America to-day "hundreds of thousands of children are gainfully employed in States where no restrictions as to child labor exists." Dr. Burr appears to adduce this fact, not as an indictment against the system that would employ such labour, but as an argument in favour of her contention that if these children can be used with profit in industry, "the same number of adults with child-minds can be utilized at the same tasks." Naturally, she argues, doing child-work, these aments would receive child-pay, but, she asks, "Would not this be preferable to their remaining unemployed and a total loss to the community?" And there is not a word more about those unfortunate "child laborers." Are the mental defectives to supplant them, or to supplement them? Altogether a startling discovery—and yet the U.S.A. fain would teach us befogged here in England "all about child culture."

H. FREIZE STEPHENS.

Social Inadequacy as seen in the Defective Delinquent. (Proc. Amer. Assoc. for the Study of the Feeble-minded, 1926.) Branham, V. C.

This is an exhaustive study of 135 cases at the New York State Institution for Defective Delinquents. The author recognizes four well-defined groups, and classifies them as follows :

- I. *Community-conscious type (social).*
 - a. Good conduct group.
 1. Socially adjustable in community.
 2. Socially adjustable in confinement only.
 - b. Unstable group (psychopathic traits not well developed).
- II. *Community-indifferent type (asocial).*
 - a. Unplanned disorderly childish conduct (active low-grade feeble-minded group).
 - b. Highly suggestible and easily led (especially for sex offences—passive low-grade feeble-minded group).
- III. *Community-antagonistic type (anti-social).*
 - a. Marked aggressive resentment against authority.
 1. The assaultive type.
 2. The acquisitive type.
 3. Pre-paranoid states.
 - b. Feebly-expressed resentment against authority.
 1. The pilfering type.
 2. The disorderly, destructive type (planned).
- IV. *Community-irresponsible type (irresponsible).*
 - a. The toxicant group (alcohol, drugs).
 - b. The psychopathic group.
 1. Fairly constant abnormal behaviour.
 2. Inconstant abnormalities (cross index with I.b).
 - c. The episodic group.
 1. Subject to marked emotional upsets.
 2. Epileptics.
 3. Transient delusional states.
 - d. The actively psychotic group (insane).

The author believes that any of the members of these groups with suitable training and treatment might be able eventually to find his way back into the community, but the largest numbers of those most likely to do so are to be found in the community-conscious or social class, even as the psychopathic and least adjustable of these cases he places at the bottom of his list, in Class IV. Further, Dr. Branham contends that as each of these groups demands special methods of occupational activities, housing and treatment, his classification scheme ensures a practical working plan for group segregation.

H. FREIZE STEPHENS.

The Eugenic Sterilization of the Feeble-minded. (Proc. Amer. Assoc. for the Study of the Feeble-minded, 1926.) Laughlin, H. H.

Twenty-three States in America have enacted laws to provide for the sexual sterilization of certain degenerate individuals, and

up to July 1, 1925, 1,374 feeble-minded persons have been dealt with in this way; but, says Dr. Laughlin, "most of the cases of sexual sterilization under the present laws have been applied to the insane, although the remedy was originally, and still is most logically, applicable to the feeble-minded."

Four types of operation have been employed, two in the case of each sex. Considerable research in experimental surgery, however, is still necessary, especially as to a simpler operation for the certain sterilization of the female; it is, therefore, interesting to note that the Committee on Maternal Health in America is conducting necessary research along this line.

A systematic study of sterilization physiology is also required. Many of the individuals who were sexually sterilized some ten or more years ago are still living; abstracts of their case-histories up to the time of their sterilization are available. These case-histories, Dr. Laughlin suggests, should be brought up to date with a view to determining "the physiological, mental and the temperamental effects upon each social type, sex and age of persons sterilized, and classified, of course, by the type of operation." The indications, he adds, seem to be that no physiological harm has come from the operations, but "more exact data of benefit or harm must await the following up of the case-histories."

H. FREIZE STEPHENS.

Mental Hygiene as Applied to the Feeble-minded. (Proc. Amer. Assoc. for the Study of the Feeble-minded, 1926.) Pratt, G. K.

In so far as any have been as yet coherently formulated, the principles of mental hygiene are as applicable to the feeble-minded as to the normal child, and none of these is as important as that underlying the inculcation of the habit of *facing reality squarely*. Dr. Pratt rightly maintains that "it is a false and an unwise and a misplaced sympathy that declines to teach the intellectually subnormal the necessity of assuming their share of the world's disagreeable but quite necessary tasks. Of course in the case of the defective these tasks and responsibilities must be graded intelligently to meet fairly the individual's lessened capacity. But to absolve a child, merely because his intellect is below par, from any and all of the duties of real life is as certain to lead to adult selfishness, delinquency and a difficult personality as it would be in the case of a normal child."

As in the normal, too, excessive day-dreaming in aments is to be discouraged; but, more than in the normal, considerable patience and tact must be exercised in teaching mental defectives to reconcile their low intellectual capacities with, often, such high ambitions and desires, to face and accept their limitations in one sphere, while being willing to re-shape their life-plans and hopes on a lower plane in another. Yet there is a considerable danger to be avoided in this endeavour lest there be instilled that conviction of hopeless inferiority so readily acquired by the feeble in mind. Dr. Pratt discusses the treatment of this distressing condition in aments,

and recognizes the value of what elsewhere we have termed "Baden-Powellism" as an excellent means of exorcising it.

Boy scouts, camp fire girls and similar agencies he also finds to be of considerable help in the management of the different manifestations in the feeble-minded of "the instinct of self-assertion," especially during the difficult days of the great pubertal urge when, like normal boys and girls, adolescent aments desire above all things to live their own lives unhampered by the dictates of authority. "Unfortunately," as Dr. Pratt points out, "such defectives lack sufficient judgment and intelligence to permit the degree of personal freedom accorded to brighter youths, and the parent or teacher must attempt the delicate task of reconciling a powerful instinct to forge out an independent career with the practical necessity for accepting the advice and decisions of others." This task will be considerably lightened where the adolescent defective has had the benefit of a sound training in childhood, for with aments, habits once learned are not easily forsaken, which makes the inculcation of an intelligent discipline in their early years their strongest adult safeguard.

H. FREIZE STEPHENS.

Community Responsibility and Mental Deficiency. (*Proc. Amer. Assoc. for the Study of the Feeble-minded*, 1926.) Sandy, W. C.

As a result of modern tendencies an increasing number of recognized mental defectives are being employed in the community, and Dr. Sandy believes that a considerable amount of communal responsibility and privilege will continue to be accorded to them. Nor can this be altogether avoided. But with the earlier recognition of aments, their better training and more efficient supervision, these privileges and responsibilities tend to become more clearly determined and definitely limited.

H. FREIZE STEPHENS.

Fifty Years in Retrospect. (*Presidential Address at the 50th Meeting of the American Association for the Study of the Feeble-minded, as reported in their Proceedings for 1926.*) Wylie, A. R. T.

An authoritative survey by its retiring President of the first fifty years of this historic and important Association that began its useful work on June 6, 1876, "in the parlor of the Pennsylvania Training School at Media" with the great Seguin as its first President. At that time there were only eight institutions for mental defectives in America—five State and three private, with a population of about 1,500. To-day there are 56 State institutions in 43 States, with a population of about 50,000, and 90 private institutions. The property value of the State institutions is nearly \$46,000,000, of the private ones \$1,500,000, while the yearly expense of the former is \$10,390,000, and of the latter \$577,000—all of which is an index of the enthusiasm and activity of this influential group of American psychiatrists.

The advances in our knowledge of mental deficiency during the

past fifty years have been great, and this Association has contributed its distinguished share to that progress, coming through the years with an honourable record. To the concluding words of Dr. Wylie we, too, would echo: "May the next fifty years be as fruitful and important."

H. FREIZE STEPHENS.

General Organization of Aid for Psychopaths (In France) [Organisation Générale de l'Assistance aux Psychopathes]. (Hyg. Ment., May, 1927.) Toulouse, E., and Dupouy, R.

After criticizing the existing law (of 1838) governing the detention and care of mental patients, the authors recommend that a new organization is urgently needed, and that it should comprise the following: (1) Prophylactic centres; (2) open psychiatric hospitals for acute and recoverable cases and certain lucid chronic patients; (3) open psychiatric hospitals for incurables and defectives; (4) closed psychiatric hospitals for dangerous and delinquent psychopaths.

W. D. CHAMBERS.

Assistance for Epileptics by Means of Occupation [L'Assistance par le Travail aux Epileptiques]. (Hyg. Ment., April, 1927.) Clecier, A., and Vervaeck, P.

The authors record that for a hundred years the lack of means for protecting and helping sane epileptics in France has been constantly and repeatedly voiced by alienists, and they deplore the fact that practically nothing has yet been done in that country to assist them. They state that estimates of the number of epileptics in France vary from one to four per 1,000, and that the question is now more urgent than ever. They outline the provision made for them in other countries and urge public authorities in France to take steps without delay. While in occupation-therapy for the insane the treatment value of the work is of more importance than its intrinsic value, in the case of sane epileptics they claim that properly organized work could be made nearly, if not quite, sufficiently remunerative to support a colony or institution.

W. D. CHAMBERS.

Suicide in Children [Les Suicides d'Enfants]. (Hyg. Ment., March, 1927.) Serin, S.

The author quotes previous statistics on this subject, and states that of 420 suicides last year in Paris, 5 were of children below 16 years and 13 of minors of 16 to 20 years. The inadequate motives for this step in most cases in childhood are discussed, and reference is made to the bad heredity and the unhappy environment which are almost universally present as predisposing causes. Suggestion and imitation are also commonly powerful factors. Among other preventives in addition to social hygienic measures, the suppression of all detail of such suicides as occur is strongly advised.

W. D. CHAMBERS.

Early Insanity: Its Medico-Legal Aspects. (Caledon. Med. Journ., April, 1927.) Greenlees, T. D.

In this article the author caters for the general medical practitioner rather than the specialist in psychiatry, and in its first instalment covers a wide field. He deals with mental disorders in infancy and childhood; puberty and adolescence, here emphasizing the importance of psychological prophylaxis; adult life, the climacteric period and old age. The instalment contains matter which is expressed in an interesting but necessarily superficial manner.

WM. McWILLIAM.

Medico-Legal Relations of Encephalitics [Les Réactions Médico-Légales chez les Encéphalitiques]. (L'Encéph., June, 1926.) Rossi, M.

The author describes a number of illustrative cases, and concludes that encephalitis is commonly only a partial factor in the medico-legal relation of encephalitics in that it is acting on a soil already delinquent, though he admits a diminished responsibility in many cases. A full list of recent literature on the subject is added.

W. D. CHAMBERS.

The Laboratory of Experimental Psychology and the Psychiatric Clinique [Le Laboratoire de Psychologie Experimentale et la Clinique Psychiatrique]. (L'Encéph., June, 1926.) Lahy, J. M.

This paper is a plea for the closer correlation of the two departments mentioned. The necessity for recording the results of simple psychomotor tests in undoubted cases of the various psychoses, in order to provide standards which would help in difficult diagnoses, is urged.

W. D. CHAMBERS.

The Model Mental Hospital at Buenos Ayres [L'Institut Modèle de Phrénopathie a Buenos-Aires]. (Hyg. Ment., May, 1927.) Claude, H.

This is a short account of a modern mental hospital of 1,700 beds built on the "Villa" system and covering 150 acres in the neighbourhood of Buenos Ayres. The author states that it is administered most successfully on the Scottish system of open doors and liberal parole. Careful classification of patients is possible and restraint is unknown.

W. D. CHAMBERS.

7. Mental Hospital Reports.

ENGLAND.

Herts County Mental Hospital.—The total number of beds owned by Hertfordshire at the two mental hospitals (Hill End and Arlesey) at the end of the year 1926 was 1,181, and the total number of patients was 1,061, giving an excess of beds as far as Hertfordshire patients are concerned of 120 beds (M., 95; F., 25); this excess is at present partly occupied by out-county and private patients.

The mental hospital estate of 350 acres has been reduced by the appropriation of 130 acres for the purposes of a mental deficiency institution at Hixberry, and negotiations are in hand with a view to the purchase of further land in the vicinity of the hospital to provide for future extension.

During the year 1926, 172 cases were admitted, of whom 158 were direct admissions, and of these 105 were first-attack cases. Of the direct admissions, definite heredity was recorded in 41 cases, and alcohol was regarded as a factor of importance in 6 cases. The recovery-rate calculated on the direct admissions was 25·3% for the year. The death-rate for the year was 5·4% on the average daily number resident, and of the deaths it is noticed that one was due to pellagra and one to encephalitis lethargica. Fourteen cases of pellagra have been diagnosed at this institution during the past seven years, and are recorded in the 12th annual report of the Board of Control.

Dr. Kimber was unfortunate to have the additional anxiety of an outbreak of enteric fever, and also an obviously introduced case of diphtheria during the year.

Salop Mental Hospital.—During the year 1926 the number of patients at this hospital increased by 50, and during the last two years the number of patients resident has increased by 80—a fact which Dr. Hughes attributes largely to the abnormally low death-rate of later years.

A comparison of the actual number of patients in residence with the registered accommodation shows that the hospital is already overcrowded.

There were admitted during the year 157 patients, of whom 118 were first-attack cases, and the recovery-rate was 25%.

Of the deaths, 20% were recorded as due to phthisis pulmonalis, and 12% to pneumonia.

A few cases of mild dysentery occurred during the year and one case of paratyphoid was recorded. As regards the treatment of general paralysis by malarial inoculation, Dr. Hughes says :

“The treatment of cases of general paralysis of the insane by malarial inoculation has been continued, and it is probable that the lives of some of these patients have been prolonged by this treatment.”

The cost of maintenance was 15s. 11½d., an increase of 7½d. on that of the previous year.

Dr. Stanley Hughes records with regret that since signing the Committee's report for the year 1926 the Chairman of the Committee has died. He had been a member of the Committee for 33 years, and its active, able and sympathetic chairman for 14 years. During the year, after 46 years' service, the clerk of the hospital, Mr. W. Johnson, retired.

Kent County Mental Hospitals.—(1) Barming Heath: The total number of patients on the hospital register at the end of the year

1926 was 1,855, being an increase of 62 during the year, largely owing, in Dr. Wolseley's-Lewis opinion, to the low death-rate.

There were 334 admissions during the year, and of the direct admissions, 61·8% had been ill for more than a month before admission, and in 57·9% hereditary defect was found to be a causative factor.

The recovery-rate for the year was 34%, and 74·8% of the recoveries took place within a year of the commencement of the illness. The death-rate for the year was 5·1%—the lowest ever recorded in the history of this institution.

Dr. Wolseley-Lewis makes the following interesting comments on the Report of the Royal Commission in Lunacy:

“The Commission recommended a wide extension of the ‘voluntary boarder’ system for patients with volition. For those without volition, in addition to reception and urgency orders such as now exist, the Commissioners propose a ‘provisional treatment order’ for patients in whom early recovery is expected. This requires a doctor's certificate stating ‘that it is expedient that the patient be detained for observation, care and treatment,’ and a magistrate's order authorizing detention for one month, and renewable for a period of five months if he sees fit. In making this proposal, which is the crucial point in the report, the Commissioners do not seem quite to have had the courage of their convictions, because they say: ‘In framing our proposals for this procedure we were confronted with a choice between what may be ideally desirable and what is practically expedient. Some witnesses, whose views are entitled to most careful consideration, have urged that in dealing with an incipient or non-volitional case which is likely to recover without recourse to certification, the warrant for detention should be made without the intervention of the magistrate. If we were free to consider exclusively the medical treatment of the patient, we should have little hesitation in accepting this suggestion. But it is a principle of English law that the liberty of the subject may not be infringed without the intervention of some judicial authority, and we doubt whether public opinion is ready to countenance a departure from it. It may be that ultimately the treatment of mental illness will be so assimilated to the treatment of physical illness that the participation of a magistrate will no longer be considered necessary. But we are concerned to recommend reforms which may be practicable in the immediate future, and we have come to the conclusion, though not without reluctance, that the provisional treatment order should be made by a magistrate.’”

Structural additions worthy of note during the year are the “Solarium” built for recent cases on the male side, and the establishment of a “treatment room” between male wards 6 and 7, where efforts are made to induce noisy and turbulent patients to dissipate their superfluous energies in some useful occupation; this is intended mainly for patients to whom much liberty cannot wisely be allowed. The occupation department shows steady numerical increase under Dr. Wolseley-Lewis's guidance.

The very satisfactory percentage figure of 55·7 passes for the General Nursing Council's Examination is a cause for congratulation, and a source of satisfaction to all those who have had the laborious work of teaching and training.

The cost per head per week for the year was 22s. 0½d. as against 21s. 11¾d. for the previous year.

(2) Chartham: This hospital had, at the end of the year 1926, 1,228 patients on the register—an increase of 46 on the year, which

Dr. Collins attributes chiefly to the "decrease in the number of those discharged unrecovered."

There were 226 patients admitted during the year, which is about the average admission-rate for this institution, but we sympathize with Dr. Collins, who deploras the large proportion of cases of congenital defect amongst the admissions to institutions that have no means of adequately dealing with that type of case.

The recovery-rate for the year was 32%, and the death-rate 8%.

As regards treatment, Dr. Collins continues to use the Starke method for general paralysis, with which he is able to record favourable results.

The opening of the chemical laboratory has been delayed owing to the unfortunate breakdown in health of the medical officer appointed to take charge of it. And X-ray outfit is being installed.

Suffolk, St. Audry's Hospital.—This institution ended the year 1926 with 21 patients more in the hospital than at the beginning; the average increase for the last five years has been 27·2. There were admitted during the year 169 (M. 73, F. 96) patients, the lowest figure since 1917, and Dr. Keith shows in an interesting table the different areas of the administrative county from whence these patients came, as compared with the previous year. The recovery-rate for the year was 10·83%, and the death-rate 6·5, and amongst the deaths were 2 cases of carcinoma and one of spleno-medullary leukæmia. Dr. Keith also records a case of enteric fever in a patient 80 years of age, who made a good recovery.

Dr. Brooks Keith, referring to the Royal Commission on Lunacy, makes some interesting remarks :

"Surely to no form of suffering has society, from time immemorial, been more unkind than to mental illness. Yet of all the ills to which human flesh is heir, it is difficult to conceive of any more distressing, and therefore more deserving of sympathy than insanity. In early times insanity was regarded as a crime, and the unfortunate patient, desperately ill, and crying out for treatment, was thrown into gaol, there to die of starvation, or by the merciful intervention of some inter-current disease. Later, when it had dawned upon the public that his condition resulted from circumstances over which he had no control, special institutions were erected for his detention, but the conditions under which he was restrained were less humane than those which are demanded to-day for wild animals in captivity. While the lot of the insane has been considerably ameliorated since these days, the improvements which have taken place have only been within the institutions provided for their treatment.

"The laws relating to the insane have not evolved in proportion to the growth of medical knowledge in regard to disorders of the mind, and the conditions under which mental illness may be treated to-day are governed by laws which definitely prevent the patient from receiving suitable treatment until his illness is so advanced that there is little hope for him of cure."

The average weekly cost per patient for the year was 20s. 9½d., as against 21s. 8d. for the previous year.

Mental Department of the Metropolitan Asylums Board.—Year by year an increasing number of duties appears to fall to the lot of the Metropolitan Asylums Board, and the additional responsibility cast upon it of recent years of dealing with the large and complex

series of cases of post-encephalitis lethargica has been met with a keenness and vigour which is a clear indication of the virile adaptability and elasticity of the Board and the skill and scientific ability of its officers. The present voluminous report edited by Dr. Sherlock is an interesting and valuable review of the whole field of the mental work dealt with by the Board, with the addition of some exceedingly good monographs by members of the staff, and of these, that by Dr. Sherlock himself is a model of clear observation, close reasoning, and cautious conclusion.

This department of the Metropolitan Asylums Board provides accommodation as follows :

Caterham Mental Hospital	2,068	beds.
Fountains " "	670	"
Leavesden " "	2,159	"
Tooting Bec " "	2,230	"
Darenth Training Colony	2,260	"
Edmonton Epileptic Colony	355	"
Brentwood Institution. . . .	350	"

and is therefore responsible for the maintenance of over 10,000 beds.

Cases of post-encephalitis lethargica are dealt with at the Board's Northern Hospital (Winchmore Hill), a portion of this hospital being set apart for these cases, of which there were 56 cases under treatment at the beginning of the year 1926, 85 admitted during the year, and 97 remained under treatment on December 31, 1926. The ocular symptoms of 99 of these cases are reported on fully by Dr. Whittington in this volume, and an able analysis of the nervous and physical symptoms in detail of 141 cases is made by Dr. Borthwick. He shows that out of this number 57 were delinquents, and the details that he gives of the moral, emotional and intellectual changes are of great value and interest to the psychiatrist.

During the year Leavesden has again unfortunately been visited with an epidemic of enteric fever of a distinctly severe type, the mortality-rate being as high as 23% of those attacked. It is probable that this high death-rate is to be correlated with the low physical state of many of the patients. The difficulty of controlling a disease such as this in an institution where patients' habits are faulty and contacts numerous is extreme. In spite of all the elaborate precautions taken, complete prophylactic immunization by vaccination had to be carried out in every ward.

The Royal Eastern Counties Institution for the Mentally Defective, Colchester.—This institution deals with a large proportion of the mental defectives of all grades belonging to the counties of Essex, Suffolk, Norfolk and Cambridge, and in addition to the main building at Colchester, has now branches at Halstead, East Hill House, and Hillsleigh (Colchester), Lexden House (Colchester), Witham and Clacton, with a total accommodation for 1,120 patients.

There were 1,081 patients in the institution at the beginning of the year 1926, 119 admitted during the year, and 1,140 remained under treatment at the end of the year.

Dr. Turner opens his report with an interesting variant aphorism.

(quoted from the *Vineland Magazine*) of the theory of happiness as an essential element in the education and treatment of the mental defective (and perhaps others), namely, "a pat on the back above the waist gets better results than several pats below," which has surely ever been the keynote of all the work of this great and valuable institution, which is fortunate in having a staff in whom enthusiasm and sympathy are happily blended with skill and understanding.

Dr. Turner's report is full of points of interest, and many of us must feel with him the misgivings and anxieties he expresses as to the future of the high-grade mental defective.

His analysis of the difficulties and stumbling-blocks of the Mental Deficiency Act, 1926, is worth reading.

Diphtheritic cases have continued to appear in the institution, and it was decided to try the Schick test as a means of checking this continual recurrence, with valuable and interesting results, one of them being the very high percentage of positive reactions amongst the staff. All the positive cases were treated with an immunizing dose of diphtheria toxin-antitoxin.

The tubercular death-rate of the institution was the remarkably low one of 0.81 on the average number resident.

SCOTLAND.

James Murray's Royal Asylum, Perth.—The Annual Report for the year 1926 has the distinction of being the hundredth of this historic mental hospital, and Dr. Chambers takes this opportunity of giving a very interesting and valuable *résumé* of its history from the foundation under the provision of the will of the far-seeing and sympathetic James Murray.

"About 1857 there was a considerable rearrangement of the duties of resident officials following what must have been the first strike of mental nurses. There is no history of their actual grievances, but judging from the traditions of the time, the prolonged hours of duty accompanied by minute remuneration may well have been among them. For several years about this time there were repeated complaints about the scarcity of suitable nurses, male and female, experienced by all similar hospitals. To a professional reader of the earlier Reports the most fascinating point is undoubtedly the constant recurrence there of themes which appear in similar documents with every air of freshness and originality to-day. As I have hinted above, the reiteration of these warnings, opinions and morals is not so much due to poverty of ideation on the part of asylum physicians as to the heedlessness and aloofness generally of the public. Among the more interesting of these echoes of the past is the assertion that insanity is usually associated with bodily disease, in 1838; a warning against the emotional dangers of religious revivals, in 1840; frequently repeated petitions for the earlier admission of patients, and entreaties for a warmer sympathy with asylums and their patients, from 1829 onwards; the advantages of comparative liberty and freedom from irksome observation and restrictions, in 1832; the dangers of alcoholic excess, *passim*; hereditary predisposition as a cause of mental disease, in 1841; the definitely curative effects of occupation therapy, in 1841 *et seq.* (this was insisted upon at length in the Reports of Dr. Lindsay, 1858-1862); the abolition of mechanical restraint, in 1854; the admission of voluntary boarders, in 1856 (the first authentic admission to The Murray of a voluntary patient took place in 1840, although a malingerer got himself admitted under a false certificate in 1830); a judicial investigation of the claims of phrenology, in 1860; the open-door system, and a note that only two wards in the hospital were kept locked, in 1885; the evil

effects of the association of recent and chronic asylum patients, in 1886; the appointment of a matron with general hospital training, in the same year; and so on indefinitely. But I am unwilling to conclude this section without quoting two very illuminating extracts from early Reports of the Board.

"The first, printed in 1838, appears to cast a light not only on the scientific interest and insight of the Directors of the day in the subject which was for the time being their concern, but also on what may be considered to be a hereditary national point of view.

"It is a curious fact that in those countries which have reached the highest state of civilization and enjoy most freedom, insanity is most prevalent. The causes of this are perhaps sufficiently accounted for in the following abstract from a small work recently published (1838), *vis.*, *Remarks on the Influence of Mental Cultivation and Mental Excitement upon Health*, by Amariah Brigham, M.D.:

"In Scotland the proportion of insane is one to five hundred and seventy-four, and in the agricultural districts of England one to eight hundred and twenty. There is, however, more insanity in England than in any other country of Europe. We find that insanity prevails most in those countries where people enjoy civil and religious freedom—where every person has liberty to engage in the strife for the highest honours and stations in society—and where the road to wealth and distinction is equally open to all. There is but little insanity in those countries where the government is despotic."

"In 1845 this same author is again quoted by the Directors in support of their arguments, and without any bias in a controversy which continues volubly to this day, one may agree that the conservative view has often been less effectively presented than in the following words:

"If the mind could be deranged independently of any bodily disease, such a possibility would tend to destroy the hope of its immortality which we gain from reason; for that which is capable of disease and decay, may die. Besides, it would be natural to expect that mere mental derangement might be cured by reasoning and by appeals to the understanding. But attempts to restore the mind in this manner generally prove useless, and are often injurious. . . . It is fortunate for insane people that the true nature of mental derangement has of late been acknowledged in practice, and that, in all attempts to benefit and cure this unfortunate class of beings, they have been assigned to the physician and treated for corporal diseases. It is true that moral and mental causes may produce insanity, but they produce it by first occasioning either functional or organic disease of the brain."

The total number of patients on the register for the year ending March 31, 1927, was 163, of whom 36 were voluntary borders; there were admitted during the year 68 cases (M. 28, F. 40), and of these 64% were admitted on a voluntary basis.

"The figures relating to the movements of voluntary and certified patients in the last seven years are set out below and are not without interest:

1920-1927.		Voluntary.	Certified.
Admitted		219	165
Discharged recovered		90	49
Percentage "		41'0	29'7
Discharged relieved		65	46
Percentage "		29'6	27'8

"It is apparent that the figures (recovery-rate) referring to the voluntary class are much more favourable, and as I have stated previously, this is in my opinion due, not only to such patients coming under treatment when their illness is at an earlier and more amenable stage, but also to the absence of any irksome feeling of constraint and compulsion with consequent antagonism to the hospital. During the year no voluntary patient was certified, and no patient was admitted under certificates who had previously been voluntary; during the seven years under review the total number of such cases is only 5, or 2'3% of all voluntary admissions."

Referring to treatment by ultra-violet rays Dr. Chambers makes the following observations:

"While every recent patient undergoes this treatment almost as a routine measure on verandahs or in shelters in the gardens, a more-intensive form of it is required for some, as well as for some of the more chronic patients whose bodily health is not good. This is provided by a course of insolation, in which increasing areas of the body are exposed at intervals to the direct rays of the sun, or by means of a special electric lamp which produces the curative ultra-violet rays, the installation of which in this hospital was referred to in my report for last year. The ultra-violet radiation is more readily absorbed, and is therefore most beneficial when the skin is warm and the cutaneous capillaries full of blood, and consequently the artificial source in a warm room indoors is of more use in winter and spring than the sun when the latter is at a low altitude and unreliable in its appearances. Both methods have been in frequent use here, and each has given good results in a number of cases, and has led to increased vigour, gain in weight, longer and sounder sleep, better appetite and improvement in spirits, in numerous cases."

Part IV.—Notes and News.

THE ROYAL MEDICO-PSYCHOLOGICAL ASSOCIATION.

THE EIGHTY-SIXTH ANNUAL GENERAL MEETING of the Association was held on Tuesday, Wednesday, Thursday and Friday, July 19–22, 1927, in the Hall of the Royal College of Physicians and at the University, Edinburgh, under the Presidency, in the earlier proceedings, of Lt.-Col. J. R. Lord, *C.B.E.*, M.D., F.R.C.P.E., and later that of Hamilton Marr, M.D., F.R.F.P.S.Glasg.

The Council and various Standing and Special Committees assembled on the previous day.

MORNING SESSION.—TUESDAY, JULY 19. *

In the Hall of the Royal College of Physicians.

Lt.-Col. J. R. Lord, the retiring President, in the Chair.

MINUTES.

The minutes of the Eighty-fifth Annual Meeting, having appeared in the *Journal of Mental Science*, were taken as read, and were confirmed and signed by the President.

ELECTION OF OFFICERS OF THE ASSOCIATION FOR 1927–28.

The PRESIDENT proposed that the Officers of the Association for 1927–28 be:

President.—Hamilton Marr, M.D., F.R.F.P.S.Glasg.

President-Elect.—J. Shaw Bolton, D.Sc., M.D., F.R.C.P.

Ex-President.—J. R. Lord, *C.B.E.*, M.D., F.R.C.P.E.

Treasurer.—James Chambers, M.A., M.D.

Editors of the Journal.—J. R. Lord, *C.B.E.*, M.D., F.R.C.P.E., Douglas McRae, M.D., F.R.C.P.E., Thomas Beaton, *O.B.E.*, M.D.

General Secretary.—R. Worth, *O.B.E.*, M.B.

Registrar.—Daniel F. Rambaut, M.A., M.D.

It would be noticed with great regret that Dr. Devine's name no longer appeared in the list of Editors. [Agreed.]

NOMINATED MEMBERS OF THE COUNCIL.

The PRESIDENT next proposed that the nominated members of Council be: Drs. G. W. Shore, R. Percy Smith, C. H. Bond, F. H. Edwards, J. Brander and D. K. Henderson. [Agreed.]

ELECTION OF HONORARY MEMBERS.

The PRESIDENT then proposed that the following gentlemen be elected Honorary Members of the Association :

R. PERCY SMITH, M.D., F.R.C.P.

Prof. G. M. ROBERTSON, M.D., F.R.C.P.E., Hon. F.R.C.S.E.

Prof. Sir HUMPHRY ROLLESTON, Bt., K.C.B., D.C.L., LL.D., D.Sc., M.D., F.R.C.P.

Recommended by Lt.-Col. J. R. Lord, Drs. J. Chambers, C. Hubert Bond, Daniel F. Rambaut, J. G. Soutar and R. Worth.

The PRESIDENT said that it was customary in the old days of the Association for the proposer of such a resolution to say something of the character, qualities and career of those it was proposed to honour in this way. He remembered reading of a meeting of the Association which demurred at the election because this procedure had not been staged. The proposals would have been turned down but for a member coming to the rescue and supplying the required information. He thought that when the Association was asked to bestow one of its highest honours, the grounds upon which the proposition was made should be forthcoming. He therefore proposed to revert to the old custom.

Dr. R. Percy Smith.

Dr. Percy Smith was Consulting Physician on Mental Disorders at St. Thomas's Hospital, and was once Physician and Medical Superintendent at Bethlem Hospital, Examiner in Mental Diseases, University of London, Physician for Mental Disorders at Charing Cross Hospital, and Lecturer in Psychological Medicine at Charing Cross and St. Thomas's Hospitals. His Association record was admirable. He had been President of the Association, Examiner in Psychological Medicine and Editor of the *Journal of Mental Science*. In other psychiatric spheres he had been President of the Section of Neurology and Psychiatry of the British Medical Association and President of the Section of Psychiatry of the Royal Society of Medicine. He served on the Committee appointed in December, 1921, by the Minister of Health, to investigate and report upon the charges made in a certain notorious book. This list did not by any means exhaust the services which Dr. Percy Smith had rendered to psychiatry, but it illustrated how he reached his eminent position as one of the greatest living consulting physicians in mental disorders. He was respected for his high professional ideals, his firmness of purpose, his logical thinking and his sagacity. It was not easy to think of him without at the same time calling to mind the late Sir George Savage, with whom Dr. Percy Smith was so closely associated. It would be invidious for the speaker to name any one of the many distinguished psychiatrists as the successor to Sir George Savage professionally, but members would agree that Dr. Percy Smith had indeed succeeded him in their affection and esteem, and in their admiration for his many fine qualities, both as a man and as a physician. He felt sure members would agree that the name of Dr. Percy Smith should be added to the Roll of Honorary Members of the Association. (Applause.)

Professor George M. Robertson.

There was another name which it was felt by the proposer should occupy a place on that Roll. One commonly visualized Dr. Percy Smith as the traditional physician in the quietude of his consulting-room and in the wards of his hospital, and though one could not exclude from the imagination that aspect in respect of Prof. George Robertson, one pictured him more in his *role* as a teacher, and above all as a force and leader in the world of psychiatry. He was always to be found in the van whenever there was a fight for higher ideals in regard to the care and treatment of the mentally afflicted, and the proper recognition, both by the public and by the Legislature, of the basic fact that lunacy was essentially a medical question. Whenever their specialty was assailed Prof. Robertson was up and doing when many were only thinking about what to do in the matter. There were many other solid grounds for the recommendation, and he thought it was only necessary to mention a few of them, for members of the Association knew and appreciated Prof. Robertson's achievements so well. The establishment of the Chair of Psychiatry and the high position which the Edinburgh School of Psychiatry had attained were largely due to the ceaseless

toil and enterprise of Prof. Robertson. The better nursing of the mentally afflicted in these modern days owed much to him in three directions: (1) The routine employment in much greater number of the general hospital nurse in mental hospitals. (2) The professional education and training of mental hospital nurses. Ever since the intervention of the Royal Medico-Psychological Association in this matter, the Professor had been associated, either directly or indirectly, in every step forward. (3) His association with the increased facilities which had been given to men in mental hospitals, especially in Scotland, to be nursed by female nurses. One also called to mind his fine inception of the system of nursing suitable cases in nursing-homes, now established in this City of Edinburgh. The speaker could assure his hearers that these homes were a pattern of what mental nursing homes should be, and could well be copied by municipalities generally. His Association record was probably second to none. Prof. Robertson had rarely missed a meeting, he had nearly always been on the Council, and he had been one of the best Presidents the Association ever had. The high respect in which Prof. Robertson was held by Scottish medicine had received the greatest possible recognition by his election as President of the Royal College of Physicians of Edinburgh. Finally, Prof. Robertson was in a large measure their host both as President of that College and Professor of Psychiatry at the University, to which bodies the Association was grateful for the splendid accommodation they had provided for that meeting. The proposer thought that it was entirely appropriate that Prof. Robertson's name should be added to the list of Honorary Members. (Applause.)

Professor Sir Humphry Davy Rolleston, Bt., K.C.B.

The last name was that of the genial Regius Professor of Physic in the University of Cambridge. He (the speaker) felt that Sir Humphry's election was long overdue. From the side of general medicine his eloquence, his great literary attainments and his personal influence had done much to bring psychiatry and medicine into closer relationship, especially in the realm of general practice. In Sir Humphry the Association possessed a powerful friend and a sincere well-wisher in the efforts the Association was making to bring psychiatry into line and co-equal with, if not the first in importance of the many branches of medical science. Sir Humphry had written the speaker personally, saying how highly he appreciated the great honour it was proposed to do him. It was therefore with great pleasure and absolute confidence that he submitted Sir Humphry Rolleston's name for acceptance as an honorary member of the Association. (Applause.)

After some comments by Dr. MARY BARCLAY, the resolution was agreed to with enthusiasm.

ELECTION OF CORRESPONDING MEMBERS.

The CHAIRMAN proposed that the following gentlemen be elected Corresponding Members of the Association:

M. René Charpentier, M.D.

M. René Targowla, M.D., Chevalier of the Legion of Honour, Chef de Clin. Paris.

Dr. Charpentier was a member of the Medico-Psychological Society of Paris, and also permanent Secretary of the Congress of Alienists and Neurologists of France and French-speaking Countries.

Dr. Targowla was a member of the Medico-Psychological Society of Paris.

[Agreed.]

The PRESIDENT, on behalf of the Association, congratulated Dr. Targowla, who was present, on his election. (Applause.)

LETTERS OF REGRET FROM ABSENT MEMBERS AND OTHERS.

The PRESIDENT said that letters of regret at their inability to be present had been received from Dr. René Charpentier, Sir James Crichton-Browne, Sir Maurice Craig, Sir Bryan Donkin, Dr. R. Percy Smith, Dr. R. Worth, Dr. G. R. Auden, Dr. G. N. Bartlett and others.

APPOINTMENT OF AUDITORS.

The PRESIDENT proposed that Drs. G. F. Barham and C. W. Bower be appointed Auditors.

[Agreed.]

APPOINTMENT OF STANDING AND SPECIAL COMMITTEES.

Parliamentary Committee.

The PRESIDENT proposed that the Parliamentary Committee be re-appointed. [Agreed.]

Educational Committee.

The PRESIDENT proposed that the Educational Committee be re-appointed, with the addition of the name of Dr. W. J. T. Kimber. [Agreed.]

Library Committee.

The PRESIDENT proposed that the Library Committee be re-appointed. [Agreed.]

Research and Clinical Committee.

The CHAIRMAN next proposed that the Research and Clinical Committee be appointed. This Committee had been in abeyance for some years, and, subject to the pleasure of that meeting, it would now come into existence again, with a wider reference. The members nominated and the particular interest they will represent, are: Drs. C. Hubert Bond, D. L. Kelly, Lt.-Col. W. R. Dawson, Dr. Hamilton Marr (*Cent. Auths.*); Drs. W. F. Menzies, J. G. Porter Phillips, C. C. Easterbrook and M. J. Nolan (*Public and Reg. Ment. Hosps.*); Drs. H. Devine and J. G. Soutar (*Private Ment. Hosps.*); Drs. W. N. East, M. Hamblin Smith (*Delinquency*); Prof. G. M. Robertson, Prof. J. Shaw Bolton, Drs. E. Mapother, J. O'Connor Donelan (*Teachers of Psychiatry*); Dr. G. A. Auden (*Education*); Drs. W. A. Potts, E. S. Litteljohn (*Mental Deficiency*); Drs. F. L. Golla, A. Ninian Bruce (*Neurology*); Drs. E. Goodall, F. A. Pickworth (*Pathology*); Drs. W. H. B. Stoddart, T. Beaton, (*Psychology*); Drs. B. Hart, J. E. Middlemass (*Consultants*); Prof. E. Bramwell and Dr. A. Cossar Sturrock (*General Medicine*). As nucleus representatives of projected sub-committees: Drs. M. R. Barkas, C. W. Bower, E. Casson, K. K. Drury, A. E. Evans, W. L. R. Fleming, A. R. Grant, J. Harris, P. McCowan, R. L. Wallis McKenzie, W. D. Nicol, J. E. Nicole, C. Farran Ridge, W. Ford Robertson, G. de M. Rudolf, J. P. Steel, I. Suttie.

It was suggested that he, Col. Lord, should be the chairman, Prof. G. M. Robertson, Vice-Chairman, and Dr. B. H. Shaw, Secretary. These appointments, however, would need to be made by the Committee, but the Council had decided that they should act *pro tempore* until the Committee met.

Dr. MARY BARCLAY asked whether the name of Dr. Isabel Hutton could be added.

The CHAIRMAN replied that the sub-committees would co-opt other members and elect them as representatives on the central committee.

Dr. MARY BARCLAY said she hoped they were all members of the Association.

The CHAIRMAN replied that they must be so to conform with the Bye-Laws.

[Agreed.]

Nominations Committee.

The PRESIDENT proposed that the Nominations Committee should be appointed. Its personnel was determined by the Bye-Laws. [Agreed.]

Mental Nursing Advisory Committee to the General Nursing Council (England and Wales).

The PRESIDENT said that it was now necessary for the annual meeting to appoint each year the Association's representatives on the Mental Nursing Advisory Committee to the General Nursing Council for England and Wales. He proposed that Dr. D. F. Rambaut, Dr. A. A. W. Petrie, Dr. F. R. P. Taylor, Dr. J. W. Kimber, Dr. H. Dove Cormac and Dr. R. Worth form the panel.

[Agreed.]

Journal Special Committee.

The PRESIDENT proposed that it should be reappointed. It had not yet concluded its labours. [Agreed.]

Provisional Research and Clinical Committee.

The PRESIDENT proposed that this committee should now be thanked and discharged. Their final report would be before the meeting that morning.

[Agreed.]

The PRESIDENT said that, subject to the Charter and Bye-Laws, the management of the affairs of the Association was in the hands of the annually elected Council. So that the report he would read was in fact an account of the Council's stewardship for the past year, and should really precede and not follow the election of the Council and Officers. The Report included the proceedings of the Council at its meeting on the previous day.

The President, in the regrettable absence of the Secretary, then read the Report, as follows :

ANNUAL REPORT OF THE COUNCIL.

The number of members—ordinary, honorary and corresponding—as shown in the list of names published in the *Journal of Mental Science* for January, 1927, was 745, as compared with 748 in 1926.

Number of new members elected in 1926	. . . . .	36
Number of members registered in 1925	. . . . .	748
Removed according to Bye-Law 17	. . . . .	0
Number of members resigned in 1926	. . . . .	5
Number of deaths in 1926	. . . . .	19

Members.	1917.	1918.	1919.	1920.	1921.	1922.	1923.	1924.	1925.	1926.
Ordinary . . .	627	626	626	640	631	676	710	694	703	700
Honorary . . .	33	32	26	24	25	27	30	29	29	30
Corresponding . .	18	17	9	9	10	13	14	16	16	15
Total . . .	678	675	661	673	666	716	754	739	748	745

The Council has again to report a year of considerable activity, perhaps even greater than has occurred for many years past. It was very evident from the Presidential Address that many important matters affecting the work of the Association and the progress of psychiatry would be brought forward for consideration.

Revision of the Bye-Laws.

The revised Bye-Laws passed at the last Annual General Meeting were submitted to the Privy Council for approval, which was given in due course from July 13, 1926.

The Association's Coat of Arms.

Letters patent, dated October 12, 1926 (beautifully illuminated), granting the Association a Coat of Arms, has been placed in the safe keeping of the Association's bankers. The Association at the February meeting (Macclesfield), 1927, adopted for ordinary purposes an abbreviated rendering of the Arms drawn by the President.

Centenary of the death of Dr. Philippe Pinel.

Dr. Donald Ross represented the Association at the celebrations of this Centenary, held in connection with the Congress of Alienists and Neurologists of France and French-speaking nations at Geneva and Lausanne in August, 1926, and presented a letter from the Association of cordial and fraternal greetings (*vide Journ. Ment. Sci.*, October, 1926, p. 718). The Association's delegates at the celebrations held in Paris in respect of this Centenary—May 30 to June 1, 1927—were Prof. G. M. Robertson, and Drs. C. Hubert Bond, Hamilton Marr and Donald Ross.

Obituary.

The Association, since the last General Meeting, has suffered severe loss by the death of members, namely, Prof. Emil Kraepelin, Dr. R. H. Cole, Dr. J. J. Gasperine, Dr. H. E. Haynes, Dr. E. S. Pasmore, Dr. C. B. Roscow, Dr. E. S. Simpson, and Dr. W. R. H. Smith.

The Journal of Mental Science.

The Special Committee of Inquiry into Journal matters recommended that sanction should be given to the experimental issue of a monograph on "Sinusitis in Mental Disorders," and the Council has approved of a proposal that a sum of £100 be devoted to this purpose.

Educational Matters.

The Council have to report a gratifying increase in the number of entries for the May Preliminary examinations.

The change in the designation of the Association had rendered obsolete of the form of certificate and the nursing medal, and these have been altered. In regard to the latter, the Association, at the November meeting (Horton), 1926, decided to issue a distinctive ribbon to be worn either separately or as a means of suspending the medal. An opportunity was taken of re-modelling the medal from a drawing made by the President.

At the February meeting (Macclesfield), 1927, the Council directed its attention to the better administration of the Association's panel of representatives on the Mental Nursing Advisory Committee to the General Nursing Council. Among other points it was laid down that no members of that panel should hold paid or unpaid posts under the General Nursing Council (subject in the case of Scotland and Ireland to Divisional agreement); that the panel should be appointed annually and report at least annually like other Committees of the Association; that the panel should invariably meet for preliminary discussion before it attends the meetings of the Advisory Committee, and that the expenses of members attending these meetings should be recoverable from the Association.

The question of the continuance or revision of the Association's Certificate in Psychological Medicine was raised by the President at the May meeting (London), 1927, and his proposals in this connection will be considered by the Council in due course. A revised syllabus of subjects for the Examination of those Nursing Mental Defectives, prepared by a special Sub-Committee of the Educational Committee, received approval at the May meeting (London), 1927, and the details of training were considered yesterday and also approved. Appropriate regulations remain to be drawn up.

Parliamentary Matters.

The consideration of the Report of the Royal Commission in Lunacy and Mental Disorders has been commenced by the Parliamentary Committee. It is gratifying to know that many of the recommendations of the Association have, in principle, been adopted by the Commission.

The amended definitions of mental deficiency proposed in a Bill presented to Parliament by Mr. B. Compton Wood, *C.B.E., M.P.*, received consideration at the February meeting (Macclesfield), 1927, and the Association's recommendation revising the definition of mental defectiveness was forwarded to the Ministry of Health, Board of Control, and the Chairman of the Committee of Medical Members of the House of Commons.

The Administration of the Library.

At the May meeting (London), 1927, approval was given to a proposal by the President that an Honorary Librarian should be added to the list of officers of the Council, and that a Bye-Law to this effect should be formulated for the approval of the Privy Council. Pending this, Dr. J. R. Whitwell was appointed Acting Honorary Librarian. The Association expressed its opinion that, whenever possible, the Honorary Librarian should be Chairman of the Library Committee. A new book-plate being necessary, the Council approved a drawing by Mr. Mussett.

The re-cataloguing of the Library and a revision of its contents being urgently necessary, the May meeting (London), 1927, directed this to be done and the cost reported in due course.

The Gaskell Medal and Prize and Divisional Prizes.

The Council decided that as a new die for the Gaskell Medal was required the opportunity should be taken to remodel it, and that it should for the future bear in relief the bust of its founder, Mr. Samuel Gaskell. This suggestion by the President received approval at the May meeting (London), 1927, and the Council is indebted to Dr. Sephton, the Medical Superintendent of Lancaster Mental Hospital, who, after prolonged search, secured a portrait of Mr. Samuel Gaskell, probably the only one in existence, and placed it at the service of the Association.

Difficulties in regard to the award of the Gaskell Medal and Prize having arisen, the whole matter was referred by the Council at the February meeting (Macclesfield), 1927, to the Research and Clinical Committee for inquiry and report.

Similarly a report prepared by the President suggesting the revision in several respects of the Regulations regarding the Divisional Prizes was also referred to the latter Committee for inquiry and report by the May meeting (London), 1927, of the Council. This report was considered by that Committee yesterday, and after slight emendation approved. Later it was approved by the Council to take effect at once.

The Advancement of Research and Clinical Psychiatry.

Following the reference made to this important matter in the Presidential Report, the President tabled a series of resolutions at the November meeting (Horton), 1926, which were approved, proposing the appointment of a Provisional Research and Clinical Committee to consider the most profitable lines on which the work of the Standing Research and Clinical Committee could be carried out, and that divisional clinical committees should be appointed to organize regular meetings in the Divisions at convenient centres devoted solely to the clinical aspects of psychological medicine.

The Medical Superintendents of all mental institutions in England and Wales have been circularized in regard to the latter matter. Steady progress is being made and approval of the proposal has been notified from about a third of the public hospitals, including those of London and other local authorities, also several registered hospitals and private institutions.

The Provisional Research and Clinical Committee has met on two occasions and completed its labours.

Memorial to the late Sir Frederick Mott.

The Council at the last Annual Meeting adopted a suggestion made by Dr. F. L. Golla and approved of by Lady Mott, that a memorial to Sir Frederick Mott should be initiated by the Association, and take the form of a book to which those, at home and abroad who had been his pupils or colleagues, or in some way associated with him in his work, or who had been inspired by his writings or teaching, should be asked to contribute a paper in recognition of the great work he did for medical science, especially in regard to mental and nervous disorders and the physiology and pathology of the nervous system.

Considerable progress has been made, and at the May Council meeting (London), 1927, the matter was placed in the hands of a Mott Memorial Committee, consisting of Lt.-Col. J. R. Lord (Chairman-Secretary), Dr. C. Hubert Bond, Dr. F. L. Golla and the Editors of the Journal, subject to the guidance and approval of the Council.

Vice-Presidents, etc.

A proposal made by the President at the February Council meeting (Macclesfield), 1927, that Vice-Presidents be appointed who should also be Chairmen of Divisions, has been considered by a panel of the Council, and now stands referred to the Divisions.

Past-Presidential Badges.

At the same meeting of the Council the President also proposed that each past President should be awarded a badge to be worn on official occasions and retained as a recognition of the high office he had held in the Association. The proposal

was referred to a panel of the Council. The badge, designed by the President, contains a replica of the medallion of the Presidential insignia. The proposal was approved by the Council yesterday.

Quarterly and Divisional Meetings.

The Quarterly and Divisional meetings during the year have been well attended, and the clinical aspect of the Association's work much invigorated by important papers and discussions.

To carry out the work of the Association during the year it has been necessary to devote two days to each quarterly meeting.

The new arrangement whereby the quarterly meetings were held on different days in the week gave much satisfaction to members and is recommended for permanent adoption.

Mental Nurses in Private Practice.

The Council has been in correspondence, through the President, with the secretaries of several of the private nurseries' employment agencies, in order to get some uniformity in the attitude these bodies are taking towards mental nurses who were not State registered but who hold the nursing certificate of the Association. In several instances they have been banned, though "existing" nurses, untrained in mental nursing, are accepted because they are State registered. It seems probable that the only concession will be that the registered nurses so employed will need to hold either the State's or the Association's mental nursing certificate.

The Child Guidance Council.

Considerable progress had been made in regard to the founding in London, with the support of the Commonwealth Fund of America, of a clinic for delinquent, backward and difficult children and for the training of psychiatric social workers, and the Council was invited to appoint a representative on the Child Guidance Council. The Council decided that as Lt.-Col. J. R. Lord was already a member of that Council and *au fait* with the work, he should also act as the Association's representative.

Appointments to the Medical Staff of Mental Clinics.

The Council has given grave consideration to a recommendation by the Council of the British Medical Association, which banned the employment of whole-time medical officers of local authorities in mental clinics. At the May meeting (London), 1927, the President was directed to prepare a letter of protest on behalf of the Association and addressed to the Council of the British Medical Association. Members who were also members of the latter Association were asked to oppose this recommendation when raised at the Divisional and Branch meetings of the British Medical Association. The medical superintendent of every mental institution in Great Britain and Ireland, and all people who were thought likely to have some influence, were circularized to that effect, and a Presidential letter of vigorous protest prepared and despatched to the Chairman of Council of the British Medical Association. A copy of the President's letter was sent by that Association to every member of the Representative Body about to meet at Edinburgh.

The Birthday Honours (1927).

The Council learned with great pleasure that His Majesty, in his Birthday Honours, had this year recognized the long and meritorious services of certain mental hospital nurses, namely, Miss Eliza Grace Musgrove, Matron of Devon County Mental Hospital, Exminster, awarded the O.B.E.; Sister Birdie Copeland, of Kent County Mental Hospital, Maidstone; Miss Sarah Lovell, a head nurse at Claybury Mental Hospital; Miss Anne Newman, a head nurse at Horton Mental Hospital; and Mr. George Goodchild, the clerk and steward at Herts County Mental Hospital, awarded the M.B.E. A member of the Association, Dr. Edward Farquhar Buzzard, had been created a K.C.V.O. The Council had directed that letters of congratulation be forwarded to each of them.

R. WORTH, *Hon. General Secretary.*

1926.	Dr.	Expenditure.	£ s. d.	Cr.	Income.	£ s. d.
Jan. 14.	To Cash—Income Tax	...	21 2 0	...	...	21 2 0
July 19.	To Cash—Advertisements	...	6 18 0	...	...	158 5 8
Aug. 18.	" " Hire of Lantern	...	4 5 0	...	...	52 16 4
Nov. 23.	" " Lecturer's Honorarium	...	52 10 0	...	...	52 16 4
Dec. 1.	" " Plates for Lecture	...	7 15 0	...	...
" 31.	" " Amount owing—Income Tax	...	21 2 0	...	...
" "	" " Cost of Publication	...	41 17 2	...	...
" "	" " Balance (Dividends)	...	62 19 2	...	...
			129 11 2			
			<u>£263 18 4</u>			<u>£263 18 4</u>

GASKELL FUND.

1926.	Dr.	Expenditure.	£ s. d.	Cr.	Income.	£ s. d.
Jan. 14.	To Cash—Income Tax	...	3 14 0	...	...	52 2 6
Feb. 18.	" " Medal	...	6 8 6	...	...
Mar. 2.	" " Prizes	...	42 0 0	...	...
			<u>52 2 6</u>			
Oct. 14.	To Cash—Medal	...	5 15 0	...	...	168 10 9
Nov. 23.	" " Examiners' Fees	...	6 6 0	...	...	19 6 7
" 24.	" " Legal Charges	...	19 9 9	...	...	4 1 0
Dec. 31.	" " Amount owing—Income Tax	...	3 14 0	...	...	9 5 0
" "	" " Examiners' Fees	...	8 8 0	...	...	19 6 7
" "	" " Prize	...	30 0 0	...	...	4 1 0
" "	" " Engraving Medal	...	0 13 6	...	...	9 5 0
" "	" " Balance (Dividends)	...	43 15 6	...	...
			159 9 8			
			<u>£233 15 11</u>			<u>£233 15 11</u>

The President continuing said that the Council would like to add to the report he had just read, the following paragraph :

"The Council retains its entire confidence in the General Secretary, Dr. R. Worth—a confidence which is shared by every member of the Association. It is owing to his wise supervision of the administration of the Association generally and of the work of the Council in particular that the Council are able to report so satisfactorily on the year's work." (Applause.)

Dr. MARY BARCLAY asked whether the appointment of a representative on the Child Guidance Council meant that the Association approved of its objects.

The CHAIRMAN replied that it meant sympathy with its main objects, which, in fact, he thought, had most people's approval. These objects were the welfare of children in every respect.

Dr. MARY BARCLAY proceeded to discuss the subject, but was ruled out of order until the adoption of the report had been proposed and seconded.

Dr. F. R. P. TAYLOR thereupon proposed the adoption of the Report.

Dr. TIGHE seconded.

The CHAIRMAN said the Report was now open for discussion.

Dr. MARY BARCLAY expressed disapproval of the Child Guidance Council.

The CHAIRMAN asked whether there were any other comments, and as there was no response he put the motion to the meeting. **[Agreed.]**

REPORT OF THE TREASURER.

The HON. TREASURER (Dr. JAMES CHAMBERS) submitted the Revenue Account and Balance-sheet for the year 1926, together with a statement of income and expenditure in connection with the Maudsley Bequest and the Gaskell Fund.

He moved that they be adopted. Dr. HAMILTON MARR seconded. **[Agreed.]**

REPORT OF THE EDITORS.

Dr. DOUGLAS McRAE read the report of the Editors as follows :

The Editors beg to submit their annual report for the year 1926.

The following table shows the cost of publication of the Journal under various heads as compared with that of the previous year.

1925.				<i>Analysis of Cost of Journal 1925-26.</i>				1926.			
£	s.	d.	£ s. d.		£	s.	d.	£	s.	d.	£ s. d.
681	2	7		Printing of Text	669	14	10				
69	13	6		Illustrations	31	12	0				
78	15	6		Paper for text	72	5	6				
16	18	3		Advertisements	18	13	9				
73	2	7		Binding	66	3	1				
			919 12 5								858 9 2
85	16	1		Reprints	71	11	2				
30	7	11		Wrappers	35	18	5				
47	2	7		Despatch	48	4	4				
			163 6 7								155 13 11
6	5	0		Stationery	11	1	6				
10	8	1		Postage	17	3	6				
10	10	0		Index	10	10	0				
			27 3 1								38 15 0
40	0	0		Publishers' Fees	40	0	0				
			40 0 0								40 0 0
			<u>£1150 2 1</u>								<u>£1092 18 1</u>
£	s.	d.	£ s. d.	<i>Credit.</i>	£	s.	d.	£	s.	d.	£ s. d.
315	0	0		Sale of Journal	302	10	0				
20	11	1		Advertisements	26	4	6				
11	11	0		Grant from Maudsley Fund	—	—	—				
			347 2 1								328 14 6
803	0	0		Cost of Journal to Association	764	3	7				
			803 0 0								764 3 7
			<u>£1150 2 1</u>								<u>£1092 18 1</u>

1925.		1926.
5s. 6½d.	Cost of production of Journal per copy	5s. 1½d.*
3s. 10½d.	Cost to the Association of Journal per copy	3s. 6½d.*
874	Size of Journal in pages	855

The number of pages, less supplements, reached at the end of the year under review was 744, which was 51 pages short of the number for 1925. The two supplements, namely, the Charter and the revised Bye-Laws, absorbed a further 32 pages.

The Maudsley Lecture, because of the general strike, was not delivered until the Annual Meeting, and therefore became due to be published in the October number. It was felt that the inclusion of this lecture, the Presidential Address and the revised Bye-Laws—which became operative on July 13, 1926, and had to be circulated—in one number would necessitate the exclusion of much ordinary matter and cause inconvenience and disappointment to both members and authors, so a special number containing the Presidential Address was published in August. Arrangements were made with the printers of the Journal to publish a library edition of this, the President indemnifying the Journal.

The cost of publication of the Maudsley Lecture, as in previous years, has been charged to the Maudsley Funds. The charge this year was made direct, and does not appear in the Journal account.

The Committee of Investigation into Journal Matters, appointed at the request of the Editors (the report of which is a separate document), has been fruitful mainly in an exchange of opinions as to the Journal might be re-modelled to meet modern requirements. It was felt that the best policy was to move cautiously in making alterations to meet demands for space for special purposes, the initial step to be the publication of monographs. To venture on a monthly journal and to invite a wider circulation would call for considerable capital, which at the moment was inopportune. Such a consummation, if desired, can only be reached gradually as the research and clinical interests of the Association expand.

Much attention has for many years been given to the "Epitome of Current Literature" as being one of the most useful sections of the Journal.

In 1925 the number of articles dealt with was 110. This was more than doubled in 1926, by rising to 237. The Epitome in its present form was an ambition of the late Dr. Connolly Norman, with whom must be associated the name of the late Dr. A. R. Urquhart, both distinguished Editors of the Journal. The practical realization of the scheme fell to the lot of one of us (J. R. Lord). The first general epitome, published in April, 1900, has retained the same form up to the present day.

The Editors, however, have long felt that there is much overlapping, duplication and waste of energy generally in the treatment of current psychiatric literature in the British journals devoted to psychiatry and neurology; neither is it done with that comprehensiveness so much desired by original workers in these fields. Not only are epitomes and references necessary to such workers, but access to the original paper is often essential.

The Editors for years sent separate papers and whole journals after being epitomized, together with unused Journals, to the Library, but this ceased some years ago at the request of the Library Committee because of lack of accommodation.

Arrangements with other journals for co-operation in publishing epitomes have been tried with some success, but have now lapsed.

The opinion of the Journal on published works is being increasingly sought by both authors and publishers. The Editors are glad to record this evidence of the high esteem in which the work of our reviewers is held, and both psychiatry and the Association are much beholden to these gentlemen. It should be remembered that, apart from being allowed to retain, if they so wish, the works they review, they receive no recompense. From time to time they are asked to send to the

* For comparative purposes the July and August numbers have been considered as one, and £18 14s. 11d. deducted as representing the special cost incurred in the production of the latter.

Library books for which they have no further use. The number of books reviewed during 1926 was 33, as against 28 in 1925.

Dr. Thomas Beaton, since his appointment as Assistant Editor, has been in charge of the Epitomes, with the creditable results we have already reported.

Before concluding their report the Editors again desire to acknowledge their great indebtedness to those who continue to give their services so ungrudgingly to the Journal and thus assist materially in its publication.

J. R. LORD
(for the Editors).

He moved that it be adopted. Dr. T. C. MACKENZIE seconded. [Agreed.]

REPORT OF THE AUDITORS.

Dr. H. J. NORMAN read the Report of the Auditors:

We, the undersigned, having examined the Treasurer's books, and having duly compared and scrutinized receipts and vouchers, hereby certify that the Accounts and Balance-sheet, as set forth, represent a true statement of the Royal Medico-Psychological Association's finances for the year 1926.

HUBERT J. NORMAN }
COLIN McDOWALL } Hon. Auditors.

He moved its adoption. Dr. McDOWALL seconded. [Agreed.]

REPORT OF THE REGISTRAR.

Dr. D. RAMBAUT read the Report of the Registrar, as follows [abstract]:

The whole of the results of the May examinations have been issued to the Institutions. I thought it might be interesting to tabulate them, as follows:

Preliminary:

	Entries.	Passes.	Percentage.
County Mental Hospitals	1,306	574	44.02
Borough Mental Hospitals	338	125	36.98
Registered Hospitals and Licoensed Houses	112	70	62.50
Scottish Mental Hospitals	266	216	81.20
Irish Mental Hospitals	167	95	56.88
Federated Malay States	2	1	50.00
Mental Defective Institutions	171	128	74.85
Totals	2,362	1,209	51.18

Final:

	Entries.	Passes.	Percentage.	Of whom distinction.	Percentage.
County Mental Hospitals	889	528	59.3	23	2.58
Borough Mental Hospitals	237	121	51.05	9	3.79
Registered Hospitals	105	51	48.75	..	..
Scottish Mental Hospitals	193	107	55.44	..	..
Irish Mental Hospitals	100	32	32	..	..
Mental Defectives	74	60	81.08	..	..
Totals	1,596	899	56.32	32	2.00

The procedure in regard to the written papers is as follows: When the whole of the written papers have been received, they are divided into equal bundles and despatched to the three Medical Examiners and the three Nursing Examiners. As the standard of one examiner cannot be the same as that of another, the papers which one examiner marks may be assessed much lower than had they gone to another examiner. A suggested solution of this discrepancy is that every paper should be sent to each of the Examiners and that each should send in his markings, which could be averaged. This though it would involve more work and would mean a delay in their announcement.

Eight candidates have been rejected for undoubted collusion.

The Deputy Registrar in South Africa has acknowledged with thanks the decision of the Council to grant him a bonus in addition to his annual remuneration. He asks when the grant will take effect. He has held this post since 1918. I suggest that the first bonus be in respect of the year 1927.

The November certificates have now been completed and will be issued as quickly as possible.

The delivery of the new medals and the brooches is still awaited, and the makers have been informed that the delay is causing great inconvenience.

D. RAMBAUT,
Registrar.

The PRESIDENT said this Report was a most important and valuable one and had been carefully considered by the Educational Committee and the Council. The action it was proposed to take in regard to it is stated in the Report of the Educational Committee.

Dr. RAMBAUT moved that it be approved. Dr. H. YELLOWLEES seconded.

[Agreed.]

REPORT OF THE EDUCATIONAL COMMITTEE.

Dr. F. R. P. TAYLOR read the Report of the Education Committee, and moved its adoption:

The Educational Committee beg to submit the following report for the year ending July, 1927.

Four meetings have been held during the past twelve months.

It is with much regret that the Educational Committee report the resignation of Dr. J. Keay, the Chairman, Dr. M. A. Collins, the Vice-Chairman, and Dr. A. W. Daniel, the Secretary.

Dr. F. R. P. Taylor was elected Chairman, Dr. Donald Ross Deputy Chairman, and Dr. Kimber, Secretary.

The Gaskell Medal and Prize for 1926 was awarded to Dr. Gerald de M. Rudolf, and for 1927 to Dr. Elizabeth Casson.

The number of candidates who presented themselves for the Nursing Examinations during the year were: Preliminary, 3,479; Final, 2,392. In the previous year the figures were: Preliminary, 3,255; Final, 2,485.

The report of the Sub-Committee appointed on February 11, 1926, to consider the training and examination of those attending Mental Defectives, was presented by Dr. Sherlock on May 18 and adopted; the same sub-committee, in accordance with their adopted report, have submitted a detailed Syllabus of Class Instruction, together with recommendations as to the conduct of the examinations.

The Training Sub-Committee have now been requested to prepare definite regulations and rules in order to bring about the new scheme, which it is hoped will come into force for the May, 1928, examinations. The syllabus and rules for training and examining will be issued as a separate document to that containing those for the certificate for mental nursing.

The Committee discussed very fully that part of the Registrar's report in which he analyses the results of the May Examinations for the Nursing Certificates. The difference in the results shown by the various kinds of training institutions might be accounted for in several ways, but before any definite conclusions could be drawn it appeared necessary (a) that the analysis should be repeated (which the Registrar kindly consents to do), and (b) that an effort should be made to secure a better method of assessing the papers. In regard to the latter matter it was decided to test the practicability of the Registrar's suggestion, with this difference: that papers which for some clear reason could not possibly be accepted need not be submitted to another examiner.

F. R. P. TAYLOR, *Chairman.*
W. J. T. KIMBER, *Secretary.*

With regard to the conduct of the examination in the future, it was felt, as the Registrar stated in his Report, that there was no uniformity, as one examiner had one standard, while another examiner had another. It could not be otherwise. In order to meet that difficulty, the Educational Committee decided that all candidates who fail to obtain 40% of marks failed in the examination without further collaboration; if a doubtful pass or distinction, the paper must be assessed again by another examiner. That was a somewhat different procedure from that which used to obtain. In former days all candidates getting less than 47% failed, those getting between 47% and 50% were doubtful, and if they obtained an "Excellent" in the *visu voce* they passed. If they gained above 70% they passed with distinction. The papers of candidates who failed, were doubtful, or were marked "Distinction," were submitted to a second examiner. Those who simply passed did not have their papers submitted to another examiner. The Educational Committee proposed that candidates getting less than 40% marks failed, but the

doubtful passes and those with distinction should be submitted to a second examiner. If the decision of the second examiner accorded with that of the first the decision should stand, but if the second examiner differed from the first, submission of the paper should be made to a third examiner for a final adjudication. As a result of adopting that course, it was hoped there would be uniformity in the examination results in the future.

Dr. T. C. MACKENZIE, in seconding the motion, asked if the examiners jointly could draw up a sort of skeleton answer to each question they set, so that they would be agreed beforehand as to what was an adequate answer to that particular question. That, he believed, would be of great practical assistance in marking examination papers. Everyone knew how difficult it was to give an adequate answer to an examination question, and there were differences of opinion as to what was an adequate answer. If, however, three examiners agreed as to what was an adequate answer, that must make for uniformity in the examination.

Dr. C. C. EASTERBROOK spoke in favour of Dr. Mackenzie's suggestion.

Dr. DOUGLAS McRAE said he tried to get that done some years ago, but failed. It was considered impracticable, but he did not agree. Each question ought to have a definite and equal value assigned to it, though he had been told the latter was impossible. If one question bore a value of 10 marks, and another bore 20 marks, unless their value was indicated the candidate would not know what questions to attack in order to get the highest marks, otherwise questions might be selected for answering which had but little value. That might explain why some who were regarded as one's best candidates failed, while others, apparently not so good, got through.

Dr. H. J. NORMAN agreed with what had been said on this matter. He thought undue importance had been attached to the written examinations. In the *visû* part the good, practical nurse did very well and got high marks, and if she came down rather badly in the written part, her total marks might not entitle her to a "Pass." If her paper marks were 40%, and if her practical work was good, the latter should be allowed to count for more than it did at present. That feeling, he was sure, was very wide-spread; it caused much dissatisfaction among those who failed because they had not done very well in the written examination. And then, too, there was a varying standard in the written questions, which was obviously unfair to candidates. He was interested to find that others thought as he did on this matter, and if the difference could be removed it would be a great improvement.

Dr. A. A. W. PETRIE asked to what extent the oral examinations affected the result of the examination. There might be very different standards in the oral examinations. In one case he heard complaints that oral examinations were sometimes too severe. Did the oral part materially affect the net result of the examination? Erratic results worried the nurses, and he was sure all would be delighted to know of attempts at improvement. Under the new procedure would there be greater delay in receiving the results, as it was necessary to report the results of examinations to visiting committees as soon as possible?

Dr. W. F. MENZIES said it was now sixteen years since he was an examiner, and in those days the examiners gave "model answers," and all questions bore the same value unless otherwise indicated. He hoped that still existed. As to the oral part of the Final Examination, a great difficulty had now been caused by the introduction of the nurse-examiner. He sent up a protest on this matter to the Educational Committee, and quoted an instance in which both the medical men had failed an incompetent candidate, but who passed because the nurse-examiner awarded 90% or 100%. It was thus clear that the medical examiners' decision could be thrown out by one nurse-examiner who was prone to mark favourably and could award 33% of the total marks. That position of things called for amendment.

The PRESIDENT said that the discussion had been most instructive, and much valuable information had come to light on the important points which the Report had raised. A transcript of these speeches would be sent to the Educational Committee for consideration and report to the next Council.

Dr. RAMBAUT said, in reply to Dr. Petrie, that the results of the oral differed enormously. Each candidate must reach 50% in the written and 50% in the oral to pass. He could give, on another occasion, statistics of the oral and of the papers separately.

Dr. H. YELLOWLEES said he had on his mind a matter he wanted to mention, but did not know whether this was the appropriate time to do so. It concerned the attitude of the Association to the General Nursing Council and *vice versa* in regard to the examination of mental nurses.

The PRESIDENT said it would be in order, though the proper time was when approval was given to the panel of representatives on the Advisory Committee.

Dr. YELLOWLEES, continuing, said he had been asked by a group of members, the Superintendents of English registered hospitals, to draw attention to what they, and he, regarded as the unsatisfactory relation which still obtained between this Association and the General Nursing Council as regards the examination of mental nurses. They believed that the difficulties caused to matrons, assistant medical officers and others by the existence of two examinations were very real, and were likely to increase to the extent of becoming intolerable. It was believed that their own examination, unless something drastic were done, was in danger of dying of inanition, or at least of becoming the badge of a mental nurse who would be regarded as of lower grade than the nurse who obtained the General Nursing Council certificate. They had the strongest grounds for believing that at present there existed a feeling—and the Nursing Council themselves were in serious difficulty about the nature of their preliminary examination—that any approach from the Association side would be received sympathetically by the General Nursing Council, with a prospect of something good coming out of it. He and a number of other members thought it a pity that the attitude of the Association, in the face of its honourable history in regard to the education and examination of mental nurses, was simply to carry on quietly, as if nothing had happened. The Association could not afford to ignore the General Nursing Council and their examination if it was desired to maintain the Association's own prestige and status in the matter of the training of nurses. He said this, in a humble way, three years ago, and he had repeated it whenever he got the opportunity, and he was grateful for another opportunity of unburdening his soul on the subject again.

Dr. MARY BARCLAY expressed her agreement with Dr. Yellowlees.

The PRESIDENT asked if anyone else wished to make comments on the educational policy of the Association.

Dr. C. C. EASTERBROOK (speaking by permission of the meeting) said that Dr. Menzies, in his remarks, intimated that in the past the policy had been to give equal value to each question. The speaker thought this should not be rigidly adhered to. It was a common practice, in University examinations, to put after each question, in brackets, its value as assessed by the examiners, one mark for each part required for the correct and complete answer. (Dr. Menzies here reminded Dr. Easterbrook that he said "unless otherwise indicated.") At present the number of marks was not given.

The PRESIDENT assured Dr. Yellowlees that his comments would be communicated to the panel of representatives on the Mental Nursing Advisory Committee of the General Nursing Council.

Dr. YELLOWLEES expressed his thanks, adding that instead of the phrase "the Association's policy" he preferred "the Association's lack of policy."

Dr. DOUGLAS McRAE took exception to a phrase which suggested that in this matter the Association had no policy. It had been laid down, in the Scottish and other Divisions, that the examination belonged to the members to begin with, and it was their machinery; and until the General Nursing Council in England, Scotland, Wales and Ireland could set up machinery for themselves—which seemed unlikely—the conducting of the examinations remained in the Association's hands.

The PRESIDENT again gave assurances that the matter would eventually come before the Council, either from the Educational Committee or from the properly constituted Committee which advised the General Nursing Council.

The adoption of the Report was then put.

[Agreed.]

REPORT OF THE PARLIAMENTARY COMMITTEE.

Dr. G. W. B. JAMES then read the report of the Parliamentary Committee as follows:

The Parliamentary Committee has met on four occasions during the year ended July, 1927.

The Committee suffered a great loss in the sudden and unexpected death of Dr. R. H. Cole early in the year. He had been very closely associated with the work of the Committee since 1912, when he became its honorary secretary. He was elected Chairman in 1921, and retained the chair with the entire confidence of the Committee until the tie was severed by his decease. During a long period he was one of the main sources of inspiration of the Association's policy in Parliamentary matters. He was succeeded in the chair by Dr. Nathan Raw, C.M.G., one of the Lord Chancellor of England's Visitors-in-Lunacy.

The Committee also felt the loss by resignation of the services of Lt.-Col. W. Brooks Keith, who succeeded Dr. Cole as honorary secretary. His place has been filled by the election of Dr. G. W. B. James.

The Committee has been mainly concerned with the examination (1) of a Bill before Parliament for the emendation of the Mental Deficiency Act, 1913, and (2) of the Report of the Royal Commission in Lunacy and Mental Disorder.

Discussion concerning mental deficiency legislation resulted in a definition of mental defectiveness for the purposes of the Act, and which had the approval of the May meeting (Macclesfield).

The Report of the Royal Commission has received careful attention from a sub-committee of ten members appointed to prepare a considered statement on the Report, particularly in regard to those recommendations which either fall short of the aspirations and ideals of the Association as expressed in its *précis* of evidence, or were adverse to them. The work of this sub-committee is well advanced, and the Parliamentary Committee hope to submit a memorandum on the subject at an early date.

NATHAN RAW, *Chairman*.
G. W. B. JAMES, *Secretary*.

He moved its adoption. Dr. F. R. P. TAYLOR seconded. [Agreed.]

REPORT OF THE LIBRARY COMMITTEE.

Dr. COLIN McDOWALL read the Report of the Library Committee as follows [abstract]:

Periodicals have been circulated regularly, and it is hoped that by the adoption of the new method by which these journals reach the members they will be returned systematically, which has not occurred in the past. The following is a list of the journals circulated from the Library:

American Journal of Insanity, *Journal of Neurology and Psycho-Pathology*, *L'Encephale*, *International Journal of Psycho-Analysis*, *Journal of Abnormal Psychology*, *Mental Hygiene*, *Journal of Nervous and Mental Diseases* (New York), *Revue Neurologique*.

No additions have been made to the Library by the Association on account of the limitation of space.

From time to time applications for the purchase of past numbers of the *Journal of Mental Science* have been made, and the Committee think that 7s. 6d. for each Journal would be a proper price to charge, but that in the case of the rarer and older volumes each application will need to receive special consideration.

A clerk is employed in the Library, and his work of card-indexing and cataloguing will be completed probably towards the end of this month.

The Committee, with regret, have to report that the Library accommodation is not satisfactory, chiefly on account of the insufficiency of book-space, and of this there is no likelihood of increase for two or three years.

J. R. WHITWELL, *Chairman*.
COLIN McDOWALL, *Secretary*.

He moved its adoption. Dr. H. J. NORMAN seconded.

The PRESIDENT said that in regard to the price to be charged for old journals, seeing that this was often a matter which had to be decided at once, he thought the price might be left to the Chairman of the Library Committee, after consultation with the Treasurer.

Dr. McDOWALL thought that ordinarily the Library Committee should decide.

The PRESIDENT asked whether that would mean undue delay.

Dr. McDOWALL replied that he did not think it would.

The PRESIDENT said that he would not press his suggestion.

The motion was then put.

[Agreed.]

REPORT ON THE REGULATIONS FOR DIVISIONAL PRIZES.

The **PRESIDENT** said that the Provisional Research and Clinical Committee had been referred to it some recommendations he, the speaker, had made regarding the emendation of the Regulations for Divisional Prizes. These were considered by that Committee, and by the Council on the previous day, and approved. The new Regulations were devised to reduce formalities as much as possible, to remove the obstacles which apparently stood in the way of medical officers entering for these Divisional prizes.

The first recommendation was that the definition of the term "assistant medical officer" should be that which had been adopted for the purpose of the Bye-Laws, which was that "assistant medical officer" shall mean an assistant medical officer or assistant physician in a psychiatric or neurological institution or service."

Candidates must be members of the Association. Under the old regulations, a member who had once obtained a Divisional prize was barred from entering for any subsequent competition. It was now proposed that he be not barred for more than one year. They had also removed the doubt as to whether a paper ought to be held up for eighteen months before it was published. Publication prior to adjudication did not invalidate a paper. Papers by more than one author could be entered for competition, and provision had been made for the award of prizes when only one or two papers had been entered.

These new Regulations were now before the meeting, He moved their approval, and that they should become operative for the year 1927. **[Agreed.]**

REPORT OF THE PROVISIONAL RESEARCH AND CLINICAL COMMITTEE.

The **PRESIDENT** then read the final report of the Provisional Research and Clinical Committee as follows:

The Committee has held two meetings, the first on May 18 and the second on July 18, 1927. There has, however, been a large correspondence between the President and members of the Committee on various aspects of the Committee's reference.

The reference from the Association was "To consider the most profitable lines on which the reference to the Standing Research and Clinical Committee (*vide* Bye-law 79) can be carried out."

Bye-law 79 is as follows:

"The Research Committee shall have as its object the encouragement and guidance of original work in psychiatry. The collection also of clinical, pathological and other statistics of interest to psychiatry and the furtherance of clinical psychiatry generally."

The words underlined are those added to Bye-law No. 80 (old number) when the recent revision of the bye-laws was made.

The Committee has given consideration as to what would be the best machinery for carrying out the work of the Standing Research and Clinical Committee under this extended reference.

They think that the time is not yet ripe to divide psychiatry into definite sections for the organization of research and clinical investigations. It would appear to the Committee that at present it is wiser to cultivate the more promising lines of development and to avoid any such hypostatization.

Their idea is to get together groups of members for intercommunion and mutual assistance who are actively interested in aspects of psychiatry at the moment engaging individual attention, and form them into small sub-committees on this or that subject. Each sub-committee would make its own arrangements for meetings, for correspondence between members and the circulation of literature, references, etc., and would report progress yearly to the Committee and have access to that body at any meeting it might hold.

The Committee feel that it is upon the basis of such groups that the main body should be largely built, and not *vice versa*. The needs of this or that line of work are best known to those actually engaged in it, and it would be the duty of these sub-committees to make them known to the main body.

This raised the difficult question of the composition of the Committee. Obviously if all the sub-committees were united to form a main committee, it would be too unwieldy for practical purposes.

They have considered two schemes of organization submitted by the President. One received their approval at the May meeting and is as follows :

The Committee to be composed of three representatives of each sub-committee (one to be the secretary), and a number of members having particular qualifications who will be nominated and elected in the usual way. The Committee will be the executive and administrative authority, with a chairman, vice-chairman and a secretary. Its duties will be "general purpose" and "ways and means."

It is proposed as an initial step to nominate a nucleus of three members (one to act temporarily as secretary) to each sub-committee, which will co-opt additional members as it deems fit; but such co-opted members need not necessarily be members of the Committee. Thereafter each sub-committee will elect annually its secretary and two of its other members to be members of the Committee. The Nominations Committee will nominate other members with particular qualifications.

The sub-committees suggested to begin with are as follows :

- i. On a Glossary of Psychological and Psychiatric Terms.
- ii. On the Treatment of General Paralysis and other Syphilitic Diseases of the Brain.
- iii. On Epidemic Encephalitis.
- iv. On Psychotherapy and Psychopathology.
- v. On Actinotherapy in Mental Cases.
- vi. On the Occurrence, Treatment and Avoidance of Infectious Diseases in Mental Hospitals.
- vii. On Biochemistry, Pathology and Morbid Anatomy, etc., in regard to the Causes and Manifestations of Mental Disorder.
- viii. On Clinical Psychiatry (which will include occupation therapy).
- ix. On the Care and Treatment of Mental Defectives.
- x. On Study Tours for individual members or groups of members for education and collecting information—supplying letters of introduction, etc.; to act also as an information bureau in regard to post-graduate education, scholarships, diplomas in psychiatry, etc.

The Committee will adjudicate on all applications for assistance made by the sub-committees and make recommendations to the Council in regard to grants. It will keep in touch with psychiatric research work everywhere, and with research work on other subjects likely to benefit psychiatry, and establish for these purposes connections with the foreign corresponding members of the Association. It will refer any subject, communication or literature to the appropriate sub-committee for information, guidance, report or other action.

The Committee will be the body responsible for the appointment of all sub-committees and for their terms of reference.

The following particular qualifications will guide the Nominations Committee in the selection of nominated members and the number suggested under each head :

(a) Medical membership of the Board of Control for England and Wales (1). Medical membership of the General Board of Control for Scotland (1). Similar bodies in Ireland (2)	4
(b) Medical Superintendents of Public and Registered Mental Hospitals	4
(c) Medical Superintendents of Private Mental Institutions	2
(d) Prison Service	2
(e) Professors and Lecturers in Psychiatry	4
(f) Educational Services	2
(g) Mental Deficiency	2
(h) Neurology	2
(i) Pathology	2
(j) Psychology	2
(k) Consulting Psychiatrists	2
(l) General Medicine	2

Total number of nominated members 30

The Committee suggest that as far as practicable these numbers should be adhered to, and in any case not exceeded.

A quorum of a Committee built up on the principles recommended will always be available wherever the Committee meet. In the selection of individuals

as nominated members and as representatives of the various sub-committees regard will be paid to the Divisions to see that they are all fairly represented.

The Committee desire to express some opinions in regard to the work of the sub-committees. It is obvious that the real work will be done by these bodies, any of which might outrival the Committee in the numbers of its members. In many respects they will be free from the interference of the Committee so long as they keep within their terms of reference. They, and not the Committee, will receive the credit for any work they may do.

As to those sub-committees dealing with special research and clinical matters, their principal activities will be the searching out of promising lines of work and organizing their pursuance; finding the workers and helping them in every possible way. The secretary of each sub-committee will collect and supply workers with up to date and comprehensive lists of references; bring workers together, stimulate correspondence, promote meetings of both small and large groups in convenient areas and establish centres for this purpose.

The current literature department of the Library will need reorganizing in order to co-operate with the work of the sub-committees.

Individual workers will publish their results when and where they like, but arrangements will be made for them to appear in the *Journal of Mental Science* and in the annual reports of the Committee and the sub-committees.

Thus the work of each sub-committee as a body will be directing, advising, aiding and arranging programmes of work—one worker taking up this and another that aspect or line. Otherwise their work will never cease, but be the continuous effort of individual members.

The Clinical Sub-Committee will have close ties with many of the other sub-committees in that it will deal with methods of examination, clinical recording, team-work and the symptomatology, classification and general treatment of mental disorders.

The Committee feels that the Committee and the sub-committees should have the advantage of professional advice as regards the reading and compilation of statistics. Without such advice inaccurate conclusions are not uncommon.

As regards the Biochemical, Bacteriological and Pathological Sub-Committee, it is suggested that it should be strictly limited to those actually working on these subjects. Generally speaking the same principle will be carried out as regards the composition of all sub-committees.

Other points the Committee considers of importance are:

(a) The advisability, where possible, of linking up the work of the sub-committees with the appropriate departments of the Universities and medical schools.

(b) The activities of the sub-committees, especially the larger ones, should have regard to the place of residence of members, and suitable arrangements for meetings made accordingly. The possibility Divisional grouping of members of each sub-committee should be kept in mind.

(c) The linking up of the Divisional clinical meetings with the work of the sub-committees. Divisional clinical meetings will be able to supply material for investigation by the appropriate sub-committees, *i.e.*, to refer interesting and important matters to them.

(d) The stimulation of regular medical staff clinical meetings in the larger mental hospitals (two or more smaller mental hospitals in a district might combine for this purpose), and the association of such meetings with the work of the sub-committees.

To sum up, the Committee desire to express the view that (a) regular staff clinical meetings at the larger mental hospitals, (b) a network of Divisional clinical meetings jointly with general practitioners, and (c) the establishment of sub-committees of the Association dealing with special aspects of research and clinical work are of great importance in the further progress of psychiatry.

J. R. LORD,
Chairman of the Committee.
[Agreed.]

He moved its adoption.

REPORT OF THE JOURNAL SPECIAL COMMITTEE.

The PRESIDENT read the Report of the Journal Special Committee as follows: The Committee had met on three occasions, November 15, 1926, May 18 and July

18, 1927. They recommend that the President, Editors and Treasurer should be granted permission to publish monographs, and that a sum of not more than £100 should be advanced for the publication, as an experiment, of a monograph by the Birmingham School of Psychiatry on "Sinusitis in Mental Disorders."

He moved the adoption of the Report.

[Agreed.]

MOTIONS INVOLVING THE EXPENDITURE OF FUNDS.

Grant to the Prince of Wales After-Care Association.

In the first place, he asked for approval of the action of the Council in making a subscription of £100 to the After-Care Association. That was in response to the Prince of Wales's appeal.

Dr. TIGHE proposed that the action of the Council be approved.

Dr. TAYLOR seconded.

[Agreed.]

Publication of a Further Volume of the General Index of the Journal.

The PRESIDENT said the next item was the grant of £150 towards the publication of a further section of the General Index of the Journal. It would be remembered that at the May meeting (London) 1927, he read a letter from Dr. McDowall, sen., which gave great pleasure to the meeting as an evidence of Dr. McDowall's continued good health and fine mental activity. The letter showed that he had been quietly, and unknown to the Council or the Editors, compiling a further volume of the General Index of the Journal, to cover a further period of ten years. It was very pleasing information, as he, the speaker, had been wondering who would be willing to take on this work, long overdue. It had been calculated that a sum not exceeding £150 would be required under this head to be debited against the Journal account.

Dr. DOUGLAS McRAE moved that the £150 be granted. Dr. EASTERBROOK seconded.

[Agreed.]

A Monograph Number of the Journal.

The PRESIDENT said the meeting had heard the reference to the experimental issue of a monograph, and the recommendation that £100 should be allowed for this purpose. It was really an advance of money, for it was hoped that it would be refunded, with perhaps a considerable sum in addition.

Dr. DOUGLAS McRAE moved that the £100 be granted. Dr. W. J. VINCENT (Newcastle) seconded.

[Agreed.]

Grant for the Work of the Research Clinical Committee.

The PRESIDENT said he hoped the meeting would approve that £50 be put at the disposal of the Council for the use of the Research and Clinical Committee. Such a sum could be used in a thousand and one different ways. One idea was to make small grants to facilitate original work—for example, to assist towards the cost of the advice of a professional statistician. Such advice was very material in regard to many lines of research. Papers on research often failed to do justice to the work from lack of knowledge as to how to marshal statistical facts to ensure correct deductions. The Association had a bitter experience in that respect in the first report on the incidence of tuberculosis, etc. Much of the work had to be done all over again, and the conclusions revised by a professional statistician. Another way the money would be useful was when a research worker desired, on a particular matter, the skilled assistance of a chemist or biochemist, which the worker or his Local Authority might not be able to finance. This assistance, costing, say £10, might fill a very important gap in a piece of research work.

[Agreed.]

The Library Catalogue.

With regard to the re-cataloguing, etc., of the Library reported by the Council, the President said there had occurred a favourable moment for this to be done at a reasonable price by experts. At the May meeting the Association ordered this

to be done without delay, the cost of it to be reported on completion. It was not likely that the cost would much exceed £50.

[Agreed.]

Past-Presidential Badges.

The PRESIDENT said that the annual cost would be a small matter, but as it was a new departure in expenditure he thought it right to obtain the approval of this meeting. The expenditure had the approval of the Solicitor as regards legality within the terms of the Charter. The cost of the die would be under £15, and the annual cost of the badge under fifty shillings. It was decided by the Council to award the badge to any Past-President who might care to receive it.

[Agreed.]

DATES OF QUARTERLY MEETINGS.

The PRESIDENT said that with regard to the fixing of the dates of the Quarterly meetings last year, as mentioned in the Council's report, there was commenced a practice which, he understood, gave general satisfaction, *i.e.*, that each quarterly meeting took place on a different day of the week, which gave a greater number of members an opportunity of attending the meetings. It was recognized that by having the quarterly meetings always on the same day of the week, say Tuesday, some members might be prevented from attending for a whole year. If the new practice were formally approved, he felt sure Dr. Hamilton Marr, the new President, would do his best to fall in with it.

[Agreed.]

Dr. D. BLAIR asked whether it was necessary to have the quarterly meetings in the same week of the month; usually it was the third week. He did not raise the point on his own account. He suggested that the quarterly meetings be held in different weeks in the months chosen, which would widen the opportunities of attending.

The PRESIDENT thought this suggestion was well worthy of consideration, and had been thought of as part of the proposal he had made.

[Agreed.]

THE MAUDSLEY LECTURE.

The PRESIDENT said he was pleased to report that the Maudsley Lecture for 1928 would be delivered by Sir John Macpherson, *K.B.E., C.B.*

ELECTION OF ORDINARY MEMBERS.

The PRESIDENT nominated Dr. Douglas McRae and Dr. T. C. Mackenzie as scrutineers of the ballot for the election of ordinary members. The following were unanimously declared elected:

EWAN, GREY LAMONT, M.B., Ch.M.Syd., D.P.M., Medical Superintendent, The Mental Hospital, Stockton, near Newcastle, New South Wales.

Proposed by Drs. John Bostock, R. Worth and R. A. Noble.

FORD-ROBERTSON, WILLIAM MARSDEN, M.B., Ch.B.Edin., Assistant Medical Officer, Pathologist and Bacteriologist, St. Andrew's Hospital, Northampton; 66, Billing Road, Northampton.

Proposed by Lt.-Col. J. R. Lord, Drs. C. C. Easterbrook and D. F. Rambaut.

LINDSAY, THOMAS, M.D., F.R.C.S.Edin., D.P.M., Senior Assistant Medical Officer, Tooting Bec Mental Hospital, S.W. 17.

Proposed by Drs. E. H. Beresford, G. W. Shore and R. Worth.

JACOBSON, JACK NATHAN, M.R.C.S., L.R.C.P.Lond., Assistant Medical Officer, Tooting Bec Mental Hospital, S.W. 17.

Proposed by Drs. E. H. Beresford, G. W. Shore and R. Worth.

ROBERTSON, DAVID, M.D., Ch.B.Glasg., Junior Assistant Physician, Bethlem Royal Hospital, London, S.E. 1.

Proposed by Drs. J. Porter Phillips, James H. MacDonald and Clement Lovell.

THORPE, FREDERICK THOMAS, M.R.C.S., L.R.C.P.Lond., Assistant Medical Officer and Pathologist, South Yorkshire Mental Hospital, Wadsley, near Sheffield.

Proposed by Drs. W. Vincent, J. M. Mathieson and J. R. Gilmour.

McCULL, GEORGE, M.B., B.S., L.R.C.P., etc., Medical Officer, Prudhoe Hall Colony for Mental Defectives, Tyne View, Prudhoe-on-Tyne.

Proposed by Drs. G. W. T. H. Fleming, R. Worth and G. Warwick Smith.

LUNCHEON.

Members of the Association and ladies were hospitably entertained to lunch by the Managers of the Royal Hospital, Morningside, at the Royal Arch Halls, Queen Street, Edinburgh. Mr. J. S. COCKBURN, the Chairman, presided.

After the usual loyal toasts, the CHAIRMAN spoke of the great pleasure that the visit of the Association and the opportunity of welcoming and entertaining members gave to the Managers of the Royal Hospital. He paid a high compliment to the Association for what they had done in the care and treatment of the mentally afflicted, and referred to the pride they, as managers, felt in regard to the work and reputation of the Royal Hospital, and their gratitude to the illustrious physicians, not least of whom was Prof. G. M. Robertson, who is still head of that hospital. He concluded by proposing the health of the Association, coupling it with the name of the President, Lt.-Col. J. R. Lord.

The PRESIDENT, in reply, returned hearty thanks for himself and the Association for the hospitality and courtesy they had received and the pleasant things the Chairman had said about the work of the Association. He said that the Chairman had real and solid grounds for his pride in the work of the Royal Hospital. No school of medicine turned out practitioners better equipped as regards psychiatry. He, the speaker, held the Royal Hospital in great veneration, for was it not there that he received that inspiration from Sir Thomas Clouston which led him to devote himself to psychiatry? The whole of his professional life was the result. It might not amount to much in the final reckoning, but it was something. Edinburgh had actually been his home during his most impressionable years. Whenever he returned, he felt as if he had never left it. The University and all it stood for was thus ever his spiritual home.

He spoke of the nursing homes for mental cases and the out-patient clinic which the Managers and Prof. Robertson had brought into existence as models which other municipalities might well copy; also as an evidence of that vitality and constructivity which had always distinguished the Edinburgh School of Psychiatry.

He concluded by proposing the health of the Managers of the Royal Hospital, coupled with the name of the Chairman.

A suitable reply from Mr. COCKBURN terminated the proceedings.

AFTERNOON SESSION.—TUESDAY, JULY 19.

In the Hall of the Royal College of Physicians.

The PRESIDENT in the Chair.

WELCOME TO FOREIGN DELEGATES AND VISITORS.

The PRESIDENT said that his first duty was to extend, on behalf of the Association, a cordial welcome to foreign delegates and other visitors from abroad. In the first place, he very heartily welcomed Dr. Henri Colin. (Loud applause.) Dr. Colin was the prime mover and the power behind the scenes in many lines of progress in psychiatry in France. He had done fine work in connection with the foundation of the League for Mental Hygiene in France and he had given inspiration to it since. They were also very glad to see Dr. Cotton, of New Jersey, U.S.A., a Corresponding Member. (Applause.) The meeting would hear later of the good work he was doing in the treatment of mental disorders by the removal of septic infections. Another gentleman he had great pleasure in welcoming, also a Corresponding Member, was Dr. L. Vernon Briggs, from Boston, U.S.A. He was the author of that remarkable book—*The Manner of Man that Kills*. Members had already greeted Dr. Targowla. (Applause.) Their ties with the sister association in Paris had been strengthened that morning by the election of Dr. Charpentier and Dr. Targowla as Corresponding Members.

THANKS TO THE RETIRING COUNCIL AND OFFICERS.

Prof. GEORGE M. ROBERTSON said it gave him very great pleasure to propose a vote of thanks to the office-bearers of the Association for the work they had done during the past year. This was not the first occasion on which he had had to discharge this pleasant duty. He thought that those who arranged the programme

realized how much he appreciated the work these office-bearers did when they asked him to propose this vote of thanks. He knew no work that ran more smoothly, pleasantly and harmoniously than this Association's activities, and that was only possible when very efficient work was done by the office-bearers. The chief office-bearer of the Association was the President. He himself had been a member of this Association a very long time—forty years—and he believed only two members present had belonged to it longer. He did not remember any President of the Association who had been more energetic than Col. Lord. (Applause.) No President had taken a greater interest in the affairs of the Association, nor had any so stirred the various activities of the body into such virile life. He assured Col. Lord that his term of office had been a historic one to be remembered for a long time.

The next important official was the Secretary, Dr. Worth, who, unfortunately, was unable to be present to-day. Those members who knew Dr. Worth were well aware that, in addition to being a very good Secretary, he was an excellent golf player—a scratch player—and that he sent his ball along the fairway, clear of hazards of all kinds. He conducted the business of the Association in much the same way. If sometimes, as a result of hitting too hard, he got into a bunker, he got out with his niblick to lie dead on the green! That was the sort of successful work he did for the Association.

Another important official was the Treasurer, a man very much respected and beloved. He looked after the purse-strings of the Association in a very efficient manner, and he thought it would be generally agreed that he was just as safe as the Bank of England.

There were two Auditors, who kept an eye on Dr. Chambers, but, under the circumstances, their office was a sinecure. What they had to do, however, they did very well.

Next there were the Editors. Col. Lord, in spite of the fact that he was President of the Association—and that was enough for any ordinary man—had continued in the work of editing the Journal. Year by year this Journal was reproducing better and better work, and so receiving high appreciation by scientific men.

He also desired to mention the Registrar. The work of that official had increased enormously in recent years. He dealt chiefly with the arrangements for the examinations for the certificate for efficiency in mental nursing granted by this Association. Every year this work was becoming more arduous, and members were aware of the fact that at the present time a very regrettable state of affairs existed: that there were two bodies—the General Nursing Council in various countries and the Royal Medico-Psychological Association, an Imperial body, conducting what was practically the same examination, and, largely, by the same examiners. The Royal Commission on Lunacy and Mental Disorder pointed out that this was a regrettable state of affairs, which might be corrected. When the Committee of Parliament investigated the whole question of nursing, they recommended that the Nursing Certificate, but not registration should be left in the hands of the Royal Medico-Psychological Association, because up to the present it had done the work so thoroughly. It had done it long before hospital nursing reached the organized state it was in now. It was hoped that before long some sort of arrangement will have been come to by which the practical training and the examinations might be conducted by the Royal Medico-Psychological Association's examiners, and registration only conducted by the General Nursing Council.

There were also the various committees, with their chairmen. They had done a great deal of work during the past year, and at no period of the Association had there been greater activity on those committees, and, therefore, those members were well deserving of thanks.

Further, members of the Council travelled great distances and were very attentive at the meetings, organizing the work, both administrative and scientific, which was conducted by the Association. Great help had come from the Boards of Control, in their view that meetings of this kind were to be regarded as meetings for the advancement of learning, to be included in the work of the District Boards and their expenses.

And there was another class of official he wished to refer to, namely, the Divisional Secretaries. Those members did not come into the limelight in the same

way that some other of the Association's officials did, yet they did essential work for the Association; indeed, the continued activity of the Association as a whole largely depended on what those gentlemen did. They, therefore, deserved a special vote of thanks. Certainly no one in the meeting would grudge an extra vote of thanks to the Secretary of the Scottish Division, Dr. Buchanan—(Applause)—on whom so much of the burden of the arrangements for the meeting had fallen.

Dr. MENZIES said he had very great pleasure in seconding Prof. Robertson's proposal.

The resolution was carried by acclamation.

The retiring PRESIDENT assured members, on behalf of the Council and Officers, that they were very happy in having earned the approbation of members of the Association. They were thankful for the generous terms in which Prof. Robertson referred to their work. As for his own, although it had been arduous, it had been to him a source of great pleasure. He was proud to have been of help to the Association, and his affection for the Association had been enhanced thereby. He hoped to be still of service, for he thought he saw some ways in which the work of the Association could be assisted by improved administrative machinery. He had been asked by the Council to report on the matter, which he felt was both a compliment and an evidence of trust. (Applause.) He also felt that his efforts to turn the attention of the Association more in the direction of assisting and stimulating research work and clinical psychiatry would not be unfruitful, and might be the beginning of a new era in the history of the Association and of psychiatry, especially as bearing on the practice of general medicine. (Applause.)

INSTALLATION OF THE NEW PRESIDENT.

The PRESIDENT said he felt that in the City of Edinburgh, the capital of Scotland, there was no need for him to speak at length of the high character and great ability of Dr. Hamilton Marr, his successor, or to give a record of that gentleman's influence on the progress of psychiatry in that country, or to dilate on the respect and affection in which he was held as a medical member of the General Board of Control for Scotland. No more sympathetic or loving personality had ever become President of the Association, and he felt that Dr. Hamilton Marr would well maintain the dignity and the responsibilities of the high office to which the members of the Association had elected him. The traditions and well-being of this venerable Association would be safe in his hands. He had very much pleasure in investing Dr. Hamilton Marr with the Presidential Badge and Collar.

Lt.-Col. J. R. Lord then vacated the Chair.

THE PRESIDENTIAL ADDRESS.

The PRESIDENT (Dr. HAMILTON MARR), on taking the Chair, expressed his thanks for the honour the Association had done him and for the kind words of the retiring President. He then read his Presidential Address on "Dante and Rabelais: An Account of Two Mediæval Physicians, with a Summary of their Philosophy" (*vide p. 516*).

On its conclusion, the President was accorded a hearty vote of thanks.

Vote of thanks to the President for his Address.

Lt.-Col. W. R. DAWSON, O.B.E., said the duty had fallen to him—and he felt it to be a very easy one—of proposing that the best thanks of the meeting be given to the new President for the address he had just delivered. In that address were said many interesting things, and it was fortunate for the speaker that it was not customary to criticize Presidential addresses. Still, as the address proceeded, several points had struck him. The first was, how fortunate the University of Edinburgh was, in comparison with the University of Montpellier. The gown which had been worn by Rabelais had disappeared because of the custom of removing a portion at each capping ceremony, whereas in Edinburgh, at which the cap was covered with a garment worn by John Knox, that was not the practice. Then it seemed to him that their specialty, psychiatry, had produced a larger number of men of literary tastes as compared with other branches of the

medical profession. To mention one or two older men—all would remember the fine writings of Dr. Ireland, and of that wonderful octogenarian, Sir James Crichton-Browne; while among the younger men he might name Dr. Norman. This year's President was in the direct line of the very best of these, as he had well shown in the address this afternoon. Those who were aware of the interest which Dr. Hamilton Marr took in literature expected something good this afternoon, and they had not been disappointed. And in regard to the matter of the discourse, it was encouraging to find that those two old philosophers, who studied life from varying angles, and who had expressed what they found in such different ways, came to the conclusion that by study and by endeavouring to live up to what they learned in the studies they pursued, they would eventually arrive at the best which life had to offer. He did not wish to imply that the Royal Medico-Psychological Association had, up to the present, been wandering in the "Wood of Error," but he thought his audience would agree with him that if it had been, no man was better fitted to play the part of Virgil, and to guide by sound counsel, reason and ability, the destinies of the Association during his year of office than their friend Dr. Hamilton Marr, who had just taken the chair.

He therefore had the greatest possible pleasure in proposing a vote of thanks to the new President for his extremely interesting address. (Applause.)

Dr. F. R. P. TAYLOR said that, not from any merits of his own, or from any pretence of being a speaker, but because he had the misfortune to come from South of the Tweed, he had been asked by Col. Lord to represent the English members and second this vote of thanks to the President. It was fortunate that criticism on the Presidential Address was not permissible, as it would have been impossible for him, the speaker, to have criticized the scholarly and eloquent address just delivered.

The proposal was carried by acclamation.

The PRESIDENT cordially thanked Col. Dawson and Dr. Taylor for their kind remarks, and the meeting for passing the vote of thanks.

A DIVISIONAL PRIZE.

He announced that Dr. T. W. DAVIE had gained a Divisional Prize of £10 for his thesis on "The Treatment of General Paralysis by Tryparsamide."

MORNING SESSION.—WEDNESDAY, JULY 20.

In the Chemistry Theatre, University New Buildings (conjointly with the Section of Mental Diseases, British Medical Association Meeting).

Prof. GEORGE M. ROBERTSON (President of the Section of Mental Diseases) in the Chair.

DISCUSSION ON CHRONIC SEPSIS AS A CAUSE OF MENTAL DISORDER.

Opening Remarks.

The CHAIRMAN, in the first place, extended to all in the Section of Mental Diseases a very hearty welcome. To-day two bodies were met to discuss a very important subject, namely, "Chronic Sepsis as a Cause of Mental Disorder," in the discussion of which he was sure many would wish to take part.

At the present time there were being celebrated two centenaries, both of which had a deep meaning for all who were concerned with mental disorders. There was the centenary of the death of Philippe Pinel. By universal consent, the whole of mankind claimed Philippe Pinel as the reformer who, in 1793, initiated the era of the humane treatment of the insane. There were, of course, other reformers, and the idea of such humane treatment had occurred to others too; but the dramatic moment which gave birth to this treatment was when Pinel removed the chains which had bound his insane patients. On Friday morning of this week, at 9.45 a.m., at the West House of the Royal Hospital, a wreath would be placed on the bust of Pinel—a bust which was erected when the building was constructed, and was in position even before the French erected one to that great man.

The other centenary was that of Lister, the greatest benefactor of the human race. Lister's discoveries were first applied to surgery, and, in consequence, surgery had advanced with such strides that probably its zenith had been reached. Listerism was also applied to obstetrics, but it was a new question whether the greatest sphere of the application of the principles of Listerism was not that of pure medicine. Whatever the comparative merits of this question might be, it was certain that the field of application of Listerism in medicine was vast, and that it had not been explored as it should have been. Attention was directed to this subject in one of the most noteworthy of the many addresses given during the Lister celebrations in London, namely, that given by Sir Berkeley Moynihan. Sir Berkeley said he doubted whether the work of a physician, Dr. William Hunter, had received from physicians generally the attention it deserved, but he, the speaker, felt that in the domain of mental disease at any rate that charge could not fairly and should not continue to be laid. Hence this discussion.

It seemed to him that this Section and the Royal Medico-Psychological Association could not better celebrate the birth of Lord Lister than by having a discussion on the influence of chronic sepsis in the causation of mental disorder. In order to secure a fitting initiation of such a discussion he went to the fountain-head on this matter, and asked Dr. William Hunter to come along to-day and do so, and he was glad when that gentleman consented. (Applause.) Sir Berkeley Moynihan had also been kind enough to be present.

Before calling upon Dr. Hunter, he had one further remark to make. Seeing that the British Medical Association and the Royal Medico-Psychological Association were both holding their Annual Meetings in Edinburgh, it occurred to some that the scientific meetings of those two bodies could be joint affairs. This had been arranged, and so, for the first time, the two Associations were holding their meetings together. As President of this Section of the British Medical Association it gave him great pleasure to take the Chair. Four Vice-Presidents were appointed: Dr. Hamilton Marr, Lt.-Col. J. R. Lord, Dr. C. Hubert Bond and Col. John Keay. It was a matter of interest to note that all four had been Presidents of the Royal Medico-Psychological Association. It was the speaker's opinion that every member of the Royal Medico-Psychological Association should be a member of the British Medical Association, just as every medical man should be a member of the latter body. Similarly he thought that every member of the British Medical Association who was interested in psychiatry ought also to become a member of the Royal Medico-Psychological Association.

He then surrendered the chair to Dr. Hamilton Marr, the President of the Royal Medico-Psychological Association.

DR. HAMILTON MARR in the Chair.

Dr. WILLIAM HUNTER, C.B., said: It is a great pleasure and a great privilege to have been invited to open this discussion in association with representative psychiatrists, physicians and surgeons. Prof. Robertson has paid tribute to the importance of sepsis in medicine and the realm of mental disorders. It was under his great chief, Sir Thomas Clouston, that some forty or fifty years ago I had the pleasure of learning the rudiments of mental disorder while listening to that great man with his wonderful power of exposition.

[For Dr. William Hunter's opening paper, *vide* p. 549.]

Sir BERKELEY MOYNIHAN, Bart., K.C.M.G., said he felt that he ought to offer some apology for his presence to take part in a discussion at this Section. The secret had been disclosed by Dr. William Hunter, namely, that at the moment he held some official position in connection with the world of surgery. But he hoped the audience would accept his definition of himself and cordially believed in by him—that he was a physician doomed to the practice of surgery. At the moment the Centenary of Lister was being celebrated, and this meeting might be, in a sense, concerned in that. When distinguished surgeons from all over the world met last April in London and paid their tributes to the immortal memory of Lister, there was only one voice which spoke of Lister's work as having any application to subjects outside the domain of surgery. It was true that Lister could be described as the greatest benefactor of mankind. The progress of surgery was almost at an end, though it was true that its value was permanent. So long as

men lived and suffered, so long would the work of Lister be available to help them. Lister's work was completed; it was beyond the realm of imagination to suppose that so long as one had to operate one could either do without the methods of Lister or could much improve upon them. When hundreds of operations for a particular disease could be performed in series without a death, the mere craftsmanship of surgery was almost at the limit of improvement in certain directions. But so far as the effect of Lister's work on medicine was concerned, he thought that even now it was hardly realized that its effect was going to be at least as great and in his judgment even greater than it had been on surgery. This belief in the application of the teaching of Lister to general medicine was first promulgated by Dr. Hunter in the year 1900. It was really almost incredible when, for the spiritual preparation of this morning, he had read Dr. Hunter's papers since their beginning, to realize the foresight which was contained in much of his early work. Dr. Hunter had been, for a quarter of a century, a voice crying in the wilderness. He thought that he would be accepted in the future as indicating the trend which medicine would take. People blamed the profession—he had done it himself—for their attitude towards Lister during his life. It was shocking, but, he, the speaker, considered that the contemporaries of Dr. Hunter were just as guilty as Lister's were of that numbing and sterile vice of apathy and disbelief. With regard to infection in its relation to general medicine, the effects spoken of by Dr. Hunter, in connection with teeth, tonsils, throat, appendix, uterus, were chiefly on the abdominal viscera. It was now known that such conditions as gastric and duodenal ulcer were never primary; they were always dependent on infection, such infection often having origin in the mouth, in the appendix, or elsewhere. So far as cholelithiasis was concerned, it did not occur without antecedent infection. When cholelithiasis was established, the effects which it in turn produced on various organs were still a matter of disbelief among physicians. Fortunately he had enjoyed the close friendship of the late Sir James Mackenzie in Burnley, when the speaker did for him such surgery as he did not do for himself. Sir James Mackenzie was not only the greatest physician the world had produced in his own line, he was also a surgeon of competence—more than some people who ascribed to themselves the *rôle* of surgery. Sir James Mackenzie sent to the speaker, time after time, patients with cardiac disease in order to have their gall-bladders removed. He did not then know that Mackenzie was the world's great authority on cardiac disease, he sent one or two patients back to him with the suggestion that their heart might be got into decent condition before the speaker ventured to operate on them. Sir James was a great man, and he treated his, the speaker's, youthful indiscretions with great courtesy. He undertook the treatment of those patients and then brought them back to him. He had operated upon a hundred of Mackenzie's patients, removing the gall-bladders and curing the heart disease from which they had been suffering. There was no heart disease—except congenital heart disease—which was not the result of infection, and it was their business, when any patient was suffering from a cardiac lesion, to ask that an operation on some distant organ that seemed unconnected with the working of the heart should be carefully considered. He had recently operated upon a patient who for years had been under one of the most distinguished heart specialists in the country, who refused to allow an operation to be carried out for cholelithiasis because the heart would not stand it. Removal of the infected gall-bladder, however, had, within a month, completely altered the quality of that heart.

If these effects could be produced by the eradication of a septic focus, what must be the effect of similar conditions on the state of the mind? To-day he was present as a very humble student of psychology. He had to take it as a subject for examination in days gone by, and from that day he had read far more about it than it was good for anybody to read. His attention was first directed surgically to mental disorders, when he found that many people who now would be recognized as suffering from a functional psychosis, and were eventually operated upon by him, with great unwillingness of the relatives—often of the medical man, too, who had been attending the patient for years—had long-standing organic disease, such as disease of stomach, appendix, gall-bladder, and that removal of the disease put an entirely different complexion on the patient's health. It was not merely that in such cases of functional psychoses associated with organic disease originating in

infection a mistaken diagnosis was made; the patient was often said to be malingerer. It was the primary infecting disease, producing in its turn organic lesions that had caused such a condition of mind as everybody attending on patients for years would recognize as a psychosis or a neurosis. In order to impress what he felt on this subject of neurosis upon his students, he had taught generations of them that the literal translation of "neurosis" was "I do not know." Patients came labelled with the diagnosis "neurosis," but early search for a primary infection and the removal of it would often result in the complete recovery of the patient.

He could look back thirty years on the practice of surgery, and he had been able to follow, for quite a number of years, many of the patients of the kind he was speaking about, and in these the removal of genuine organic disease had meant, after a little time, the disappearance of the functional psychosis or neurosis with which the patient had been labelled for many years before the operation was performed. He had operated upon patients suffering from dementia præcox. But what he particularly wanted to mention was, that he had operated upon four medical men who were manic-depressive cases, in all of whom distinct foci of infection associated with organic disease were found. In three of the cases the infection was in the gall-bladder, and in all four there had been improvement since the operation; in three there was what their medical men described as a complete recovery.

One of the difficulties surgeons had in assessing abdominal work was the lethargy and stagnation of the science of physiology. Physiologists seemed to spend most of their time working in the laboratory. If they would realize that men were just as important as mice, and would work in the wards and the operating theatres as well as in the laboratories, they would be able to tell surgeons what they most wanted to know, *i.e.*, the functional anatomy of the abdominal viscera. At present physiologists were a race apart; they considered their work as of purely scientific value. Personally he, Sir Berkeley, was not interested in any science which had not some sort of effect upon the happiness and the welfare of mankind.

Therefore, what he desired to know was, first of all, was there such a condition as a septic psychosis? If so, what was its frequency? And, assuming there was such a condition, what was the effect of sepsis or infection upon patients who were encompassed by the neuropathic or psychopathic tendency or heredity? What was the effect upon those patients who were passing through the stormy crisis of adolescence? What was the effect of it upon those who were in laggard environment, such as went with senescence? He got a hint from his work, and now, when patients consulted him and were withheld by their physicians from surgery because of their mental diseases, he realized that their mental disease might be making even more urgent the necessity for a surgical attack, rather than being a contra-indication of it. For a long time the surgeon had been held up from performing urgently necessary operations because of collateral disease. He had a very ready and useful working rule, which was that he never allowed a patient to die of one disease because he happened to have a few others. In cases of cholelithiasis surgeons were for years held off operation because glycosuria was present. Now, however, if glycosuria was present—even before the days of insulin—he regarded it as an additional reason for getting rid operatively of the infection which had spread to the pancreas. What he desired to know, with John Hunter and Lister, was why people suffering, as they did, in large numbers, from infection in the mouth, the tonsils and elsewhere, were sometimes able to withstand such infection and sometimes fell victims to it. In that problem was involved the whole question of immunity. Another urgent problem requiring solution was, why these conditions occurred in certain people and not in others. It might be said, "It is no use your talking to us about sepsis; everybody has oral sepsis, most people have large infective tonsils." That argument was of no use: it was bound up with the whole question of immunity about which even his dearest friend, Almroth Wright, seemed to know nothing. In the attack on this problem, it was very necessary that the observer should not suffer from "shut-mindedness." He had passed through a certain number of epochs. When first he wrote on duodenal ulcer and operated upon 150 cases in a year, one of the physicians in Guy's Hospital wrote in a journal that it was incredible that anybody could have such an experience, because in seventy-one years in Guy's only 673 patients had been recognized as having duodenal ulcer when examined on the

post-mortem table. To that the speaker replied that dead men told no tales, and that what was found in the dead-house was of no use to him, but would the writer come and judge for himself? He came, he saw, and was convinced.

It was of no use for psychiatrists to say this story was incredible and untrue. Many things which had been supposed to be incredible we had to accept, and this doctrine of Dr. William Hunter's as to the effect of sepsis was, in his view, the most illuminating idea which had happened in general medicine during the twentieth century. (Loud applause.)

Dr. CHALMERS WATSON (whose full remarks will appear as a separate paper in a future number), said that, to him, mental disorder was only a phase of general medicine. It had been said that it took twenty-five years for a new conception to fix the mind. It was now twenty-seven years since this conception Dr. Hunter had spoken of was first presented to the profession, and Dr. Hunter had given an example of enthusiasm in the face of difficulty which was beyond praise.

His own interest and belief in the value of this work was of considerable standing, and dated largely from a period, twenty years ago, when, in conjunction with a psychiatric friend, he recorded the results of an investigation of two cases of mania which he had observed and followed up to the *post-mortem* table. That inquiry showed the need for mental disorders being more closely studied from the physical point of view. The impression he gained then had increased much from subsequent experience in the wards of the Royal Infirmary, Edinburgh. In response to Prof. George Robertson's invitation to take part in this discussion, he had made a further examination of a series of twelve cases of mental disorder at Bangour under Dr. Keay, an investigation including a study of urine and stools, which he regarded as so important.

He confirmed most heartily Dr. William Hunter's view that at this period the members of the profession could not do better than make up their minds that the best and most useful memorial to Lord Lister was a definite and enthusiastic application of the principles of that great man to both general and mental diseases.

Dr. H. A. COTTON (U.S.A.) said he regarded it as a great honour as well as a pleasure to appear before this Association and hear the admirable talks which had taken place. He had been reflecting on how much the American Psychiatric Society would benefit by similar talks. He would see that his colleagues received a copy of the reports.

He wished to pay his respects to Dr. William Hunter and Dr. Graves and the others who had done so much work on the results of the infections which occurred. It seemed like carrying coals to Newcastle to speak to a British audience on the question of chronic sepsis. In the profession in the States generally the subject was much less understood than in Britain, where it was not difficult for doctors to appreciate its value. The striking point was the fact that in utilizing the doctrine of chronic sepsis in mental cases, it was not an instance of using something new or bizarre, or hitherto unheard of. There were men like Dr. William Hunter and Sir Berkeley Moynihan who were making statements that were facts. The speaker thought all his hearers would agree that every mental case was also sick physically. This was not very obvious, because some of them appeared healthy.

Last week he had the pleasure of being with Dr. Graves at the Birmingham Mental Hospital and seeing the development of the work there, which seemed to have gone beyond anything so far done in America, especially in nasal sinus work. He was much impressed with what he saw there in regard to the sphenoid and ethmoid sinuses. Infection in that region produced a very important series of foci, which had mostly been overlooked. Non-protein therapy also seemed to be a distinct advance. For years autogenous vaccines had been used, fathered by Sir Almroth Wright. Dr. Graves, by using non-protein therapy, anti-typhoid serum, etc., had produced remarkable results. In intestinal work, too, it was felt that some advances had been made. And, thanks to surgical friends in America, the view was held which Sir Berkeley Moynihan had expressed. His own surgeon-colleague, Dr. Draper, had often said that some day surgeons would not be taking out the colon. He would say a great deal had been learned by removing the colon in some 300 cases, as we now have a better idea of the pathological lesions of the colon in mental cases.

In the last two years, in America, there had been substituted a method of cleansing the colon. The Plombière's douche method, in America, produced results, but it meant a special apparatus and a very conscientious nurse, who was willing to spend

one and a half to two hours over the process. During that time the water used amounted to ten to twenty gallons. From his own standpoint, nothing compared with the colon work now being done. It would be agreed that the primary focus must not be confused with the secondary one. The foremost need was to get the oral sepsis cleared up, irrespective of what else might need to be done. One focus might be cleared up, and yet such another as a bad tooth or septic tonsils be left behind. One was apt to forget the overload. After nine years of experience, causes of error had been learned, and they who worked at this matter were more than ever convinced that every focus should be removed, even if after the removal of one the patient seemed to be better. One of his most important cases was well for three years, but eventually she was found to have an infected colon, which had to be treated. He was sure people were going about with multiple foci of infection, but were far from being insane. Many people indulged excessively in alcohol, but they were not insane. Still, that did not interfere with the fact that alcoholic insanity did exist. In his clinic 600 cases had been treated, with very satisfactory results, by means of irrigation. In 80 or 90% of such cases need for surgical treatment had been eliminated. There were a few cases of surgical bands which required operation. He was satisfied that irrigation was a method which produced results, whatever might be its *modus operandi*.

He was particularly gratified that this subject was coming to the fore, because it meant so much, and it enabled the psychiatrist to double his recovery rate. Even if three-fourths was merely enthusiasm and only one-fourth was results, the method deserved to be considered. One hospital would develop one line, another would develop some variation, but he was willing to use any method, irrespective of where it came from or who fathered it.

So, in the end, it came to a need to clean up the patients thoroughly, not merely taking out a tonsil and seeing whether the patient got well, for many foci formed in these people secondarily, the primary one being mostly in the mouth. (Applause.)

Dr. T. C. GRAVES read a paper on the subject under discussion with details of a case (*vide* p. 563). He submitted also several series of photographs illustrative of varieties of psychotic disturbances treated by various methods dependent on the individual problems they presented in the matter of septic food, whether situated in teeth, tonsils, nasal sinuses, gastro-intestinal or genito-urinary tract.

Dr. D. K. HENDERSON said: The topic which has been so fully discussed is of great importance in the ætiology of mental disorders, and it has been of considerable interest to hear the views expressed. Much that has been said I do not agree with, and I would particularly challenge some of the statements made by Dr. Hunter, who opened the discussion.

It may be true that the subject of sepsis and antisepsis in relation to mental disorder has never previously been presented before the British Medical Association, but this is a combined meeting with the Royal Medico-Psychological Association, and the latter has frequently had this topic before it. I would draw Dr. Hunter's attention to the fact that in 1902 the late Sir Thomas Clouston opened a discussion on this very topic, a discussion which was taken part in by Ford Robertson, Yellowlees, and others. The views which Sir Thomas Clouston then expressed still hold to-day, and the advocates of the toxic ætiology of mental disorder have not produced any results to change them. (Applause.) I submit that Dr. Hunter's statement to the effect that no attention has been paid to the possible influence of sepsis as a cause of mental disorder previous to the publication of Cotton's reports is not only entirely erroneous, but indirectly—and no doubt quite unintentionally—casts a reflection on all psychiatric work previous to the *début* of Cotton. In contradistinction to the report of Cotton's work, Dr. Hunter passes over, very lightly, the work of Kopeloff, Kirby and Cheney. The work of the latter group of observers has been infinitely better controlled than the work of Cotton, and is much more in accord with the opinion of psychiatrists generally. Kopeloff and Kirby examined 120 cases, divided into two groups as nearly identical as possible. One group was treated surgically, while the other group had no surgical treatment. The percentage recovery-rate in the two groups for manic-depressives was equal, while in the dementia group the recovery-rate of the operated was slightly less than in those left alone.

Further, I submit that Dr. Hunter has made the fatal mistake of judging from

one case. It is a commonplace in psychiatry to say that each case is an individual problem, but instead of accepting this, Dr. Hunter says, "Here is one case; see the brilliant result accomplished; there must be hundreds like it," and so on. Take the case which Dr. Hunter has quoted with so much commendation. It is not only imperfectly described, but to diagnose it as—I hate to use the term—"a septic psychosis"—is to make British psychiatry the laughing-stock of the world. From the description given the case is one of agitated depression occurring at the involuntal period, and if it had been properly recognized to start with, she would never have been sent to the chronic ward. The course of the illness is quite in accord with psychiatric experience, and I believe the increased attention, the change to better surroundings, the building up of resistance, had as much to do with recovery as the removal of her teeth. She is the type of case where, irrespective of a focus of infection, one would have given a good prognosis. To say that the failure to remove the teeth in the first instance caused the lady's detention in hospital for two years is an unwarrantable assumption, and a sample of erroneous judgment. (Laughter.)

Take Dr. Hunter's second case. What have we? An acute onset, a tempestuous course, a recovery with good insight. Again, a case where a good prognosis would have been given, and where, I submit, the operative procedures were merely concomitant.

Another fault I have to find with Dr. Hunter's presentation is this—that he has earned the invidious distinction of attempting to coin a new psychiatric term. For a long number of years psychoses with toxins and infections have been recognized, and that by itself would be sufficient to obviate the use of such a term as "septic psychosis." It would seem from Dr. Hunter's presentation of this highly controversial subject, that all psychoses could be divided into the septic and the non-septic, but any such simple formulation is far from the actual facts. It is a very dangerous leap in imagination to state that because something exists in a given mental case, that that something is the specific agent. For many years now, both in this country and in America, mental cases have been studied in association with the various branches of general medicine and surgery, but I cannot say because of this, except in isolated instances, that the recovery-rate has been helped. During that time the cases worked at have not merely been those in mental hospitals, but those also in psychiatric clinics, and in the out-patient departments of general hospitals. Suppose we do have half a dozen or more cases where there is a *B. coli* or streptococcal infection which has not given rise to clinical symptoms pointing to a toxic involvement, then I say that these factors are merely incidental, and may or may not have any influence on the course of the psychoses. Dr. Hunter is guilty of using a term, "septic psychosis," and yet has not given us any clinical picture of the disease which he has so glibly named. (Laughter.) Mental disorder is a much more complex situation than this discussion might lead one to believe. Do not be led away by this toxic theory; investigate carefully the facts in every individual case, and do not jump to hasty conclusions. Many useful stomachs have had to suffer the indignity of a gastro-enterostomy; a serviceable cervix or two has gone west; many a good tooth now adorns the denture of the toothless! A fair amount of mental illness occasionally seems to follow the very measures which have been so strongly advocated. (Laughter and applause.)

Dr. MENZIES said that Dr. Henderson's remarks had removed the necessity of repeating his points. In this country the profession had been somewhat mesmerized by the spirit of Lister, and had failed to recognize that in France, when Pasteur was making his great investigations, many bacteriologists, trained in his school, took up the subject of intestinal toxæmia. Forty years ago, in asylums, Buchard's mixture—naphthalene, charcoal and treacle—was a favourite remedy, and colonic washings were almost invariable. But he did not see that following all these things, and by appointing dentists to all mental hospitals, and the taking of radiograms and other measures, there had been an improvement in the recovery-rate of patients to anything like the extent that was claimed by some observers. So all that could profitably be said about chronic sepsis as a cause of mental disease had been said some time ago. Therefore when the President asked him to say a few words, he determined to ask permission to refer, not to the immediate subject, but to the related one as to why chronic sepsis produced insanity.

It was recognized that sepsis must be a secondary cause, because it was as common in the sane as in the insane. It was thus necessary to look a little further

into the primary cause. Had the profession, since the war, progressed at all, in the matter of finding out the pathology of mental disorders, or were we, in this matter, still in the same mists of ignorance? Many workers, particularly in this specialty, had done much to elucidate these problems, and the value of their work lay chiefly in their negative findings, rather than in the positive ones. It was necessary to wade through all the freshets of bacteriological investigation before they could be eliminated, one by one, as causes of mental disorder. That was now being done in our mental hospitals by the younger men in the specialty.

All of us recognized intestinal toxæmia; it could be seen, *post mortem*, in the fine, arachnoid-like membrane, and also by lines and bands and visceroptosis, especially in the second half of life, when it was common in the sane as well as in the insane. A toxic agent might produce its effects by its own katabolism, or by its action upon the amino-bodies found in the food; but it exerted its influence in two directions. The first direction was seen in its effect on the endocrine glands and the terminals of the sympathetic nervous system. The second direction was in the lymph- and blood-streams, which flowed not only to the splanchnic system—liver, spleen, central nervous system—but along the sympathetic afferent paths. Little, however, was known about these paths. It was not even known whether the fine, non-myelinated fibres running to the posterior root ganglia were coupled up to the somatic fibres of the cord, or whether they ran into the basal ganglia as separate organizations. But it was certain that there was a very large system consisting of hundreds and thousands of visceral arcs going on from the splanchnic area, especially from the liver, but also from pancreas, spleen and all the endocrine glands, passing up the cord, and entering by the paleo-thalamus, and so down the paleo-striate to the red nucleus, some also by the substantia nigra, and some by Deiter's nucleus and out by the sympathetic para-vertebral ganglia. These arcs were biologically developed for defence, and, normally, they produced no impression on the consciousness. But if there was a toxic irritant in any of the areas supplied by them, they were apt to enter consciousness, not necessarily by pain, but by feelings of ill-health, nausea, giddiness, lack of sleep, etc.

The next point concerned the varieties of mental disorder which had been inquired into in this connection. He thought people made a mistake by taking such complicated matters as primary dementia, obsessions, paranoia, etc. Why did not inquirers get down to the basic elementary feeling tone of these patients? He referred to euphoria, dysphoria, simple melancholia, acute mania. They belonged to the manic-depressive group, and were those due least to the basic emotional foundations of the animal. This did not mean that they influenced conduct less than did the others, but they were simpler to consider.

Another point he wished to touch on was that of the sane analogues of these two conditions. During the war cases suffering from gas-gangrene were seen which, because of their peripheral septic conditions, felt the mere prick of a hypodermic needle as torture, while others, even shortly before death, declared they would be "better to-morrow." They were analogues of simple melancholia on the one hand, and acute mania on the other.

The next condition was Parkinsonism and rigidity; it existed in a considerable number of basal degenerations, in hepatico-lenticular degeneration, in the striate body and in red nucleus, as well as in the hypo-thalamic region in encephalitis lethargica. There was not one connection between the lower muscular mechanisms and the cortex, but a large number, and they ran all down the basal ganglia as far as Deiter's nucleus at least, and down to the apex of the fourth ventricle. Euphoria was present in nearly all cases of Parkinsonism, and there was a sympathetic reflex arc running down in the dorsal region, opposite those ventral reflex arcs which had reference to the muscular system. They ran side by side all down the cord. One was not likely to find them histologically, but clinically their presence could not be denied.

The presence of Parkinsonism with euphoria had a most important bearing upon one's estimation of mental disorder; it meant that if the basal reflex arcs were interrupted, melancholia resulted; there could not be dysphoria or depression. It was known that they were unconscious mechanisms. If there were toxæmia in the splanchnic area, there was an increase in the irritation of these sympathetic reflex arcs, and depression resulted, always provided that the junction bridges with the

cortex were not completely interrupted, only interrupted to a certain degree. Animal experimentation results could not be reproduced in the clinical cases, as the latter were too complicated. Supposing that those visceral arcs were interrupted by the local toxæmia brought by the blood- or lymph-stream from the liver, if they were interrupted to a certain extent there could not be depression, and the way was laid open for euphoria or acute mania.

It might be asked why there was not produced mere normality, as in the case of healthy euphoria after exercise, where there was a free blood-flow going on all the time. The answer was that when the blood-flow to the cortex was charged with toxins one of the elemental foundations for the development of acute mania was present.

Therefore one reached this stage: that if the visceral and splanchnic arcs were intact but irritated, melancholia resulted; but if there was interruption of those arcs, there might occur acute mania if a toxin was circulating in the cortical cells.

It was sufficient for the present purpose to get so far down to the basal elements as to suggest a cause of mental disorder.

Mr. ERIC WATSON-WILLIAMS said that the otologist approached this subject under a certain disadvantage, as his cases were "selected." Patients were sent to him because of some aural or nasal disease, and, hitherto at least, not on account of mental disorder. The cases of manifest insanity that he, the speaker, saw were therefore few. On the other hand, a very large number of those who sought advice on account of local symptoms presented evidence of mental or psychic changes less profound but perfectly definite. He had in consequence had ample opportunities of observing the minor mental alterations that were not uncommonly associated with chronic focal infection. So definite was the picture at times that he had even been led to seek and to find a focal infection of which all other obvious evidence had been lacking.

The most characteristic change was a mental lassitude, a loss of initiative, of ability to concentrate, of power of judgment and decision. The patient might say that his "head felt woolly," that memory was not so good as it had been, that he had begun to worry excessively over trifling matters. Business that he used to carry out with zest had become laborious, social intercourse wearisome. Often, however, so slowly progressive was the change and so gradual the adaptation to diminished abilities that the victim might fail to perceive, until restored to health, what was clear enough to his associates—how profoundly he had altered; or would perhaps ascribe to advancing years the differences of which he was dimly conscious. In more advanced cases the mental processes might even be so sluggish as to produce a latent period of some seconds or perhaps more than a minute in answering a simple question. Profound melancholy and even suicidal thoughts were not very rare in such subjects. It was somewhat curious that this train of symptoms in an adult, too often dismissed as "neurasthenia," should not have attracted wider attention to the possibility of chronic septic absorption. For if a child became inattentive, dull and slothful, even the lay parent would commonly make a correct diagnosis of toxæmia, and request the removal of an offending adenoid hypertrophy. So frequently indeed in the older patient did the mental troubles subside after adequate treatment of a focal infection that one could not but deduce a causal connection.

The speaker had hoped that this discussion would bring out one point, namely how to distinguish the cases in which this connection was causal from those in which it was accidental. It was in consequence of certain cases of his own, in which the first result of treatment had been disappointing, that he was led to recognize the importance of something that had been already emphasized that morning: namely, that every possible source of septic absorption must be examined. In passing, he would like to direct attention to the ear. Absorption could occur there from a surface considerably greater than was presented by a dental apical granuloma. And infected ears were regrettably common, though often considered of slight importance.

But in the patients he had been discussing, however definite the mental change, it could not be said that they were insane. Occasionally, however, patients were seen about whom this was by no means so clear. Such a one was a man of 44, who was sent up early in 1924 for discharge from the right ear of many years' duration. The ear was quite deaf, the discharge was mucoid and of no great volume; the general health remained good; there was no pain, no headache,

and it appeared a typical case for local palliative measures. He had been under treatment six months, when he came in great distress; he "feared he was going out of his mind." He had taken to sleep-walking, and had begun to light fires in different parts of the house. Memory was poor, and he often did not remember what he had been doing for a great part of the day. Unknown to him, his wife came also, because he had so greatly changed. She confirmed his story of recent somnambulism, related certain escapades, *e.g.*, with a servant, which were quite foreign to his former nature, and of which the man appeared ignorant, reported that he was suffering from "dazed fits in which he seemed quite lost," and wished for advice on the matter of certification (as a precautionary measure). It really did appear that this course would become necessary. However, he was taken into hospital, and the speaker carried out a mastoid operation. This was not only perfectly successful in relieving the local condition, but was followed by a gratifying return to normal mentality. In two months the man had returned to work; his doctor reported this year that he remained quite well.

Another case was that of a postman. He had suffered for years from chronic nasal catarrh, but in February, 1924, he had begun to notice failing memory. This progressed to such an extent that he was unable to remember where the streets on his round lay. He began to bring home packets of letters, unable to deliver them, and indifferent to their proper disposal. He complained in March of that year of feeling always tired and depressed, and of failing vision. His wife reported that he had become morose, taciturn and quarrelsome, and that she was in constant fear that he would get into trouble either on this account or because of the way he neglected his work—the latter he soon had to give up.

Although nasal sinus disease had been suspected on several occasions, no evidence could be found, but with the appearance of these grave complications a definite post-nasal discharge was noted. The nasal sinuses were washed out under local anaesthesia; both antra were full of thick pus, while the sphenoidal sinuses showed evidence of infection. There was a temporary improvement in the mental condition, not enough to enable him to resume work, but he obstinately refused operation until July.

He, the speaker, was then able to persuade the man to have all the sinuses opened, and carried out this operation. By September the following note was possible: "His mind is clear, memory good, sight perfect except for small print, and he feels and looks well."

The speaker saw him in another connection a month ago. He had been back at work ever since, and enjoying it, and remained perfectly well.

Reference was made to two further illustrative cases published in the *Lancet*, one by Dr. Rhys Williams in 1877, the other by Dr. P. Watson-Williams in 1922. The speaker had on numerous occasions had the felicity to see minor mental disturbances yield to surgical attack on foci of septic absorption. He had on several observed really profound alterations of mind and character similarly relieved. He felt bound therefore to stand up and support those who advocated the elimination of every possible source of sepsis in the insane, in the confident hope that this course would lead to a diminution in the total volume of insanity.

Dr. W. A. Potts said that, so far from agreeing with those who did not accept the term "septic psychosis," while Dr. Hunter was speaking he, the speaker, saw a most distinct clinical picture from that gentleman's description of a septic psychosis. It was the most satisfactory term he knew. He would like to go on from that to answer the question which Dr. Menzies raised, as to how it was we could call these cases septic psychosis when septic conditions were as common in the sane as in the insane. It seemed to him that that must inevitably be so, because such investigators as Col. McCarrison, when inquiring into the condition of the thyroid, said that in all civilized people there was some toxic infection. The reason it produced psychic effects in some cases and not in others was, because in the insane person there were many contributing factors co-operating, and also the septic factor commenced earlier and so had been longer-lasting.

He did not altogether agree with the statement that there was not yet any marked improvement in the recoveries. But he felt that extraordinarily good results would follow if all septic foci were dealt with when they first developed, instead of waiting until they had produced serious, even dangerous, symptoms; and that in many cases there was a psycho-genetic factor of enormous importance, which also should be dealt with as soon as the person showed the slightest

abnormality, instead of waiting until he had become certifiable and placed in a mental hospital. The psychological treatment should have been carried out five, ten, or fifteen years earlier.

Dr. WILLIAM HUNTER, in reply, said he had been greatly interested in the discussion, and he hoped that the general result of it would be helpful to both Associations, as it certainly had been to him. It was necessary to put this great factor of disease prominently forward in order that it might be generally recognized; admittedly what he might term the side-lights could be adjusted subsequently.

He felt particularly grateful to Dr. Henderson for his criticism, from a point of view he could well understand. With regard to the difference between them, he felt much in the same position as Jonah. Jonah had only one conversation with the whale, and it was to the following purport: "If you had only kept your mouth shut I should not have been in this trouble." If the speaker's patients had only kept their mouths shut twenty-five years ago, he would not be in this trouble now. But they would not, and so one had to face the facts.

With regard to neglect of this subject in the past, one had to speak relatively. The broad fact was that psychiatrists had been very much interested in toxic infection for many years as a possible cause of mental trouble, and especially toxæmia in the intestinal tract. But the point of departure as distinct from the toxæmic and toxic factors, between that period and the factor now being considered, was the localization of the foci to some particular points. He was quite aware of what Clouston did, and how he called attention to the factor of toxæmia in mental disease. The getting down to the underlying focus was, however, a somewhat different matter.

The term "septic psychosis" which he used need not cause any confusion, as he had to use it in connection with anæmia. He could not merely say that people had bad mouths—that conveyed no meaning; he had to call a spade a spade so as to call attention to the septic underlying cause and ensure adequate treatment. If the condition was septic, it was up to the medical man to remove the sepsis. If it were merely called, in a general way, toxic, one roamed over the body to look for the site. Septic psychosis was a parallel condition to septic anæmia—a condition which he described twenty-five years ago. Dr. Henderson had stated that there was in the former no group of symptoms which characterized it, but that applied to all.

Dr. Henderson had rightly drawn attention to the work of Kopeloff, Kirby and Cheney, of America, whose work the speaker had carefully studied, and it had left on his mind an impression which there was only time for him to briefly indicate, especially as he did not wish to be controversial. Kopeloff was a bacteriologist, and he had two physicians working with him, and they made a detailed examination of 58 cases for two years, and 62 cases in the wards were left with their sepsis. In the 58 cases of mental disease, 24 (40%) had had their trouble from one to twelve years; they had had, on the average, three or four previous attacks. The teeth they had removed for the trouble averaged two or three. But one could not expect to modify a whole clinical picture by such a limited removal of sepsis. Eleven of the 58 cases were stated to show no oral sepsis, in contra-distinction to which the speaker had found too much oral sepsis in the cases of mental disease he had examined. British psychiatrists, of course, would form their own opinion on these matters. The only case of complete success which the Americans had mentioned was one in which 30 teeth were removed, ensuring that at least that patient's oral sepsis was taken away. That patient was discharged cured a month after the extractions, and was permanently discharged seven months later, and had since remained well. The most striking cases he had found in the literature were those in Kopeloff's account. The removal of the sepsis must be thorough and detailed. The three American observers mentioned said that focal sepsis had nothing to do with the mental disorders, but they concluded, "We are whole-heartedly in favour of removing all septic foci." Why? The reason they gave was, "Because there were physical conditions." And they recorded their gratitude to their colleague, Dr. Cotton for having drawn attention to the physical condition, which, however, they declined to call infection. They would not have anything to do with infection, but they wished to remove tonsils. He found that Kopeloff was not even a doctor; he was a bacteriologist. He did not think psychiatrists need worry about Kopeloff's work.

In thanking also the other speakers, he wished particularly to say how interested he had been in Dr. Menzies' speech, also that of Mr. Eric Watson-Williams, as he knew the work of the latter in connection with the nose and throat. Dr. Potts's contribution had been a confirmation of the principles he, the speaker, had laid down. It had been a great privilege and pleasure to participate in this discussion.

Prof. G. M. ROBERTSON said that Dr. Henderson, every day of his life, talked about "toxic psychoses," which was the condition Dr. Hunter meant, the poison circulating in the blood producing a diminution of the function of the nervous system, thereby tending towards an inferiority in the mental processes, in some cases leading to insanity—a toxic exhaustive insanity, which was recognized throughout the world.

The discussion had been very interesting, and it had made a deep impression on everyone who was present at it. He was sure that in the future no one attending clinical cases would overlook septic foci.

Dr. C. HUBERT BOND, in a written communication, remarks: In the absence for fifteen years of having had responsibility for the individual treatment of patients, I doubt whether I should have volunteered for any part in this interesting symposium. In complying with the invitation to do so, I am fortified by ability to claim, firstly, to have kept a resolution never to allow my clinical interest to be submerged either by official routine or by inquiries, highly important as they are, into the patients' creature comforts, general welfare and contentment; and secondly, to have kept notes of a considerable number of cases observed and discussed in the course of official visits. Moreover, it is generally admitted that on-lookers occupy a position that is not without its advantages, whether it be at a game, or whether it be in a life-and-death struggle between two groups of subtle and invisible forces—the aid of medical and other sciences being thrown in the scale to turn the balance in favour of the defensive group.

The use of such an expression as "Listerism" in connection with the treatment of mental illness is apt to strike a false note, and even to incur ridicule. We saw a tendency for that to arise in the course of an effort made, under distinguished patronage, by some of us a few years ago to raise a large fund, with which to subsidize selected mental hospitals, to enable them rigorously and unimpeded by monetary considerations, to apply routine laboratory investigation in a consecutive series of newly admitted cases, in number and diversity sufficient to supply an unequivocal answer to the question whether such systematic examination would yield directions for successful treatment which would not otherwise have been forthcoming; the idea being that, were the answer in the affirmative, the moral lesson would induce—and, indeed, compel—local authorities to provide the money for this treatment at all mental hospitals. This scheme had the ardent support of the Professor of Psychiatry in this University, and it was, I believe, one of the lecturers in Clinical Medicine here (Dr. Chalmers Watson) who suggested that the name of Lister should be applied to the Fund. How and why the scheme was not launched is beside the mark to-day. It is my hope that by some means or other it will yet mature; certainly it can do so, if contemplated legislation includes, as suggested by my colleague Commissioners, the bestowal upon Visiting Committees of a power to combine and to make financial contributions for such purposes.

Whatsoever the future of such a scheme may be, the use, in connection therewith, of Lister's name was, in my opinion, justifiable, and connotes the correct angle for truest vision. Not that it is suggested there are relatively many cases, still less forms, of mental disorder due solely to sepsis, and, even against those cases—and they are by no means rare—in which proof of septic causation seems clearest, it is of course undeniable that there are numerous examples of apparently similar sepsis in which no corresponding mental symptoms arise. It is unfortunately true, except as to a small proportion of mental hospitals, that in supplement of bedside examination, laboratory and other ancillary reports are only called for in cases where there is some evidence that they may yield an affirmative answer. On the other hand, evidence is accumulating that the more thorough the daily charting of bodily symptoms, the more routine the use of the laboratory, of X-ray examination, and of other diagnostic refinements, and the more systematic the work of the resident medical staff linked up with that of visiting specialists whose visits are regular (and not merely occasional, and in relation to

special cases), the oftener will instances of sepsis be found. It is scarcely necessary to remark that other morbid physical conditions are revealed by this thoroughness of inquiry which otherwise might have remained undetected.

It is with great diffidence that I venture any opinion on these matters, but, as it appears to me, there is already danger of exaggerating the import of this incidence, and the further risk of polemical argument with liability of cleavage into materialistic and animistic schools of thought. Any such tendency is to be deprecated as being liable to obscure the facts, and is surely not in accord with Lister's love of truth, or with the methods by which he unceasingly laboured to pursue it, and to penetrate what to him, at the time, was a baffling mystery. Do we know, for instance, what proportion of a group of average healthy adults would yield evidence of a hitherto unsuspected septic focus, if subjected to an intensive examination? Or, admitting that the incidence in a series of cases of mental disorder is, in fact, above that which normally prevails in such a postulated healthy group of adults, and admitting that restoration to mental health follows treatment directed to the septic focus sufficiently frequently to invite a deduction of cause and effect, can it even then be asserted that it is the *fons et origo mali*? Is it not a tenable argument and perhaps a greater probability that the basic defect is, as the late Sir Frederick Mott used to put it, an abnormally narrow margin of physiological resistance with the brain as the *locus minoris resistentiæ*? While it is, of course, only right to be ceaseless in endeavour to find unchallengeable answers to such questions, there is no need, and it would merely be wrong, to wait upon such investigations. The removal of sepsis cannot do otherwise than promote health, and, if perchance it has indeed acted as a precipitating agent of the mental illness, its removal cannot fail to assist in warding off relapses.

That there is, indeed, a relation between sepsis and mental disorders seems scarcely open to doubt, and therefore, upon any occasion—as during this week's memorable medical programme in Edinburgh—when the memory of humanity's debt to Lister is invoked, those who practise psychological medicine and those whose sufferings have been relieved by such practice have a just claim to be heard. Still less would we be willing to be silent when we are assembled upon the very site of his keenest struggles with the foe which at every turn met his skill as a surgeon. Nor does it need the welcome presence of our French *confères* to remind us, as Lister himself would be the first to bid us not to forget, that, just as it was the dramatic work of Pinel, Tuke, Gardiner Hill and Conolly that caused the scales to drop from the eyes of those who had hitherto treated the insane with what seems to us barbarity, so the investigations and opinions of Pasteur, who in a sense was Lister's predecessor as well as contemporary, caused him to see his problem in a new light and showed him the road to victory—not a static but a dynamic victory, the full harvest of which, as Sir John Bland-Sutton recently insisted, has been by no means yet reaped.

VISIT TO BANGOUR VILLAGE.

In the afternoon members and ladies were invited to lunch at Bangour Village by the kindness of the Edinburgh District Board of Control and the Medical Superintendent, Dr. John Keay. After luncheon the party inspected a remarkable collection of handiwork of great variety which had been done by patients at Bangour, Craig House, Larbert, Stoneyettes, Glengall, Gartnavel, Inverness, Barnhill, Dykebar, Woodilee, Riccartbar and Gogarburn.

The PRESIDENT, speaking on occupation therapy, said that at Barnhill were received boys of bad habits—almost criminal habits. They had refused to do what they had been told. When faced with definite constructional work under the tuition and guidance of experts, however, they became amenable. It gave them a new outlook on life.

The visitors then proceeded to the Treatment Pavilion and were much impressed and interested in all they saw, especially the elaborate arrangements for remedial exercises and electrical and hydro-therapeutic treatment.

Owing to the unfavourable weather Mrs. Keay's garden-party could not take place, but members and ladies were nevertheless hospitably entertained to tea indoors.

THE ANNUAL DINNER.

The Annual Dinner was held in the Hall of the Royal College of Physicians, Edinburgh, on Wednesday evening, July 20.

The Chair was occupied by the President, Dr. Hamilton Marr, F.R.F.P.S.Glasg.

The company were received by the President and Mrs. Marr at 7.45 for 8 p.m., and the guests included the Right Hon. Lord Alness and Lady Alness, the Hon. Lord Fleming, Sheriff and Mrs. Robertson, Sheriff and Mrs. Macphail, the Dean of the Faculty, Councillor Bilton, C.M.G., Dr. Henri Colin (Paris), Dr. Rene Targowla (Paris), Dr. Henry A. Cotton (New Jersey), and Dr. Vernon Briggs (Boston).

Among those invited to attend and who wrote expressing their regret at their inability for various reasons to do so were the Secretary of State for Scotland, the Under-Secretary of State for Scotland, the Earl of Stair, Lord Aberdeen and Temair, Lord Polworth, the Marquis of Douglas and Clydesdale, Lord Ashmore, Lord Murray, the Lord Provost of Edinburgh, Principal Sir Alfred Ewing, Principal Sir Donald Macalister, Sir James Crichton-Browne, Sir Robert Philip, Sir David Wallace, and others.

There was a large attendance of honorary and ordinary members and their guests, and the gathering was thoroughly representative of those interested in psychological medicine and the care of the mentally afflicted, and included Sir Frederick Willis and Dr. C. Hubert C. Bond, of the Board of Control for England and Wales; Sir Arthur Rose and Drs. Marr and Sturrock, of the General Board of Control for Scotland; and Lt.-Col. W. R. Dawson, Inspector of Mental Hospitals of Northern Ireland.

The croupiers were Dr. James Chambers, Treasurer, Dr. David Rambaut, Registrar, and Dr. W. M. Buchanan, Hon. Secretary, Scottish Division.

TOASTS.

The toasts of "The King," and "The Queen, the Prince of Wales, and Other Members of the Royal Family," submitted by the Chairman, were loyally pledged.

"THE CITY OF EDINBURGH."

Dr. C. HUBERT BOND, C.B.E., in proposing this toast: said, That scant time has been given me in which to ponder over the most acceptable words in which to propose a toast, the very thought of which conjures up such a wealth of ideas that time is needed in which to sift them and compress their expression within the limits of your patience, for the toast I have to submit to you is that of "The City of Edinburgh," wherein we have spent a week of unbounded and unforgettable hospitality.

The only possibly valid reason which occurs to me why the honour of having to submit this toast has fallen to me is that, apart from the affection I have for the *alma mater* to which I owe so much, it is known among my friends that, besides sharing the enthusiastic admiration for this supremely beautiful city—the Queen and Metropolis of the North, to which the many thousands who visit it testify—to me she has an attraction which is perhaps best expressed by the fact that ever since I went down from the University, thirty-four years ago, to practise medicine in England, I have never lost a single occasion, great or small, of returning. (Applause.) And there must be many others in this Hall to-night who, like myself, feel to the core the call and the lure of Edinburgh.

It would, of course, fall well within the scope of my toast to ask and to attempt to answer, what is, and wherein lies, this magnetic attraction which Edinburgh so peculiarly possesses. Those here to-night who are responsible for the welfare of this City and its inhabitants, and those who can claim the proud privilege of calling themselves citizens of Edinburgh, will extend their sympathy to me if, despite the fulness with which I feel this magnetic force, I shrink from an attempt to explain it. It has been portrayed in prose and sung in verse in words that have become part of our classics. And often enough in this very room and in other of Edinburgh's historic halls has it been heard from lips of orators. Edinburgh's necklace of charms, in fact, forms a goodly rope of pearls, and it is beyond, at any rate, my powers to pick out the one of great price.

There are two thoughts, and two only that I would like to mention.

One is my first visit to Edinburgh, on a dark, late spring evening, and my feelings on stepping out of Princes Street station, and viewing, after a short walk eastwards, that host of twinkling lights on and around The Mound, surmounted by a huge black, majestic-looking mass which I, of course, at once knew must be the Castle. My recollection of it all, though this was forty years ago, is as vivid as ever, and I always recommend strangers, if possible, thus to try and pay their first pilgrimage by night.

The other thought is my visit, yesterday, to that marvellous War Memorial, which, though unveiled by the Prince of Wales only a few days ago, seems already an intrinsic part of the Castle. To my mind, it is not possible even to imagine anything more beautiful, more deeply moving and soul-satisfying, or more completely fitting. And as I see Edinburgh, it seems to me that throughout the centuries there has been a pervading spirit in her founders and citizens which has responded to the matchless beauty of her site, and has seen to it that nothing shall be added but what is fitting and worthy. It is the unity and union of these attractions which is so delightful. But transcending all—if a reply has perforce to be given to the question as to wherein lies the City's magnetic attraction—the answer lies in the pervading spirit of those who dwell there. And, on the chance of catching something of this for ourselves, I ask you to rise and drink to the health of the City of Edinburgh, and to couple it with the name of Councillor Bilton. (Applause.)

Councillor L. L. BILTON, C.M.G., in replying to the toast, said he did not feel in the least like a City Father; he felt more like a son of it. Born and bred in the City, his first recollections of it was to write an essay on the subject of "Old Edinburgh," and he did not want to do it at all. But as he was walking past St. Giles's Cathedral there was an old gentleman came up to the speaker and said, "My boy, what are you doing?" He told the gentleman, who then took him down the "Royal Mile," and made it so interesting that he never forgot it. The gentleman was Prof. Blackie. From being a son of the City of Edinburgh, he, the speaker, became its devotee. He wished to thank Dr. Bond for the way in which he proposed the toast of the City. Those who were attempting to do something for the City realized the magnitude of the task they had before them. They also realized that they had been preceded by a great number of men who had a very wide vision in that City's interests. He would give only two illustrations.

When one thought of the great Queensferry Road, going out from Edinburgh, a road 60 ft. wide, one realized that it was made at a time when people were thinking of roads the size of the High Street. There was also Leith Street, a great avenue of entry to the City of Edinburgh, and that was made a hundred years ago when people were accustomed to making roads 25 to 30 ft. wide. Such things made one realize that the City Fathers of those days had at least a wide vision of future needs. (Applause.)

He supposed that when at school they all learned what the imports and exports of the great cities were, and he was thinking that day that Edinburgh had been omitted from that list, because he thought that when one looked at the University, at the Colleges, at the various wonderful institutions there were in the City, it must be admitted that the main export of the City of Edinburgh was doctors. (Laughter.) He thought the City of Edinburgh owed a great deal to the doctors. This was the first city in the United Kingdom to appoint a Public Health Officer, and he took it that this was largely due to the influence of the Medical School in Edinburgh. Edinburgh had progressed in sanitation and water supply, and in the care of her people.

He had no wish to speak at length, but he did wish to express to the company the thanks of those who were trying to do something for the welfare of Edinburgh, and their appreciation of the way the toast had been proposed, and the manner in which the assembled company had received it. (Applause.)

" LITERATURE."

Sheriff J. R. N. MACPHAIL, K.C., said it was his duty to propose for acceptance the toast of "Literature," coupled with the name of Prof. Grierson. He could not say anything about that gentleman which his hearers did not know already, therefore he must turn to "Literature."

When he was commanded to propose this toast, he naturally, and very properly,

demurred, on the ground of his entire inefficiency. But all knew how kindly pressure, firmly and persistently applied, caused one's weaker self to come to the front, and so he gave way. Moreover to that sense of inefficiency there had been added a new and rather disturbing element: for he had not originally realized as he would have done had he been a sensible person, that the distinguished Association to which he was speaking was composed of a number of distinguished individuals who made up the whole. He now remembered reading things in newspapers—which, of course, were always true—in which ladies and gentlemen had stated they had been invited to unburden themselves, to give their views on family troubles, upon political matters, on their claims to high position and great estates and even on Literature; and they had succumbed to the suggestion and had confided in some of the distinguished gentlemen who were around these tables. Then rather awful things had happened, and in the seclusion which followed they had regretted having so unburdened themselves. (Laughter.) Hence in his own case to-night he had a haunting fear that what he said and how he looked might be a matter of observation, and that accordingly for a purpose to which it was painful to allude more fully, facts observed and remarks made might have an unpleasant sequel.

With regard to the subject of the toast, if it had been English Literature, he might have been able to say something, for, many years ago, he attended the class of English Literature, and, from note-books still reverently preserved, he might possibly have been able to give the company some wise and witty sayings of Prof. Masson, the well-known predecessor of Prof. Grierson. He might have gone even further than quoting from old note books; he might, for instance, have invited their consideration of sundry very interesting problems.

But this apart, the first thing to consider is what is Literature? Examination of many dictionaries at last gave him an answer. According to the late Mr. Carlyle Literature is "The Thought of Thinking Souls." He did not know whether, by their unaided intelligence, the gathering could quite understand what that meant. It was a remarkably sublime saying, and he did not know whether it could be fully grasped. If some understood it, to the others he would say, "Take courage, Prof. Grierson is shortly going to address you." He, the speaker, was merely here like the boy whose joy it was to ring a bell and run away. He submitted this toast of "The Thought of Thinking Souls," coupled with the name of Prof. Grierson. (Applause.)

Prof. H. J. C. GRIERSON, in responding to the toast, said he had read somewhere that if one wanted to save one's life one must, early in life, learn to say "No." But when, some weeks ago, he received an invitation to reply to this toast, he forgot that excellent advice. The President had been so kind to the speaker that he felt inclined to agree to the proposal. But it had puzzled him to understand why Literature should have been singled out in this remarkable way to be toasted on the occasion of a medical dinner, especially a medico-psychological dinner. If the toast had been that of "Psychology," coupled with the name of Prof. Drever, he would have been able to understand it, for that gentleman, he understood, occupied a Chair which was founded for the purpose of examining the bumps of these people. The Chair should be called that of phrenology—a science which, like many others, was dying out. He was sorry not to have heard the President's address on two great men of letters, Dante and Rabelais. That led him to think of the place that medical men had taken in literature, because he noticed the President chose the two men named on account of their having studied medicine. Glancing back to Chaucer, the speaker found that at that time there was a general indictment of medical men in literature. As far as he could gather, there were about them three main charges. In the first place, they were very fond of gold. Chaucer said that "Gold he loved in especial, for gold in physic is a cordial." He believed it was Cortes who told that unhappy monarch Moteznma that all the Spaniards suffered from a disease of the heart for which gold was found to be a cordial, and that was the reason they were so anxious to carry large supplies of it back from Mexico. Another indictment was that doctors were very fond of bleeding people. At the present day doctors did not bleed the people in a literal sense, but if it was necessary to go to a nursing home, then when at last they emerged they found that, in one sense, they had been severely bled. (Laughter.) Another point was the extraordinary nature of the drugs which they used to prescribe. He remembered finding, on a fishing expedition in the Shetlands, in a house an eighteenth

century book of prescriptions. He would not have thought the human mind could have indulged in such eccentricities. In a mixed audience he would not particularize them. He thought the President, in his address, might well have included, in his representatives of literature at the Renaissance, another man, especially in relation to psychological medicine, and that was Montaigne, because of his interesting essay on "Why sons resemble their fathers." That author said it was strange that there should be hidden away in the germ from which his body grew a particular disease, called colic, which his father had had but which did not appear in his own constitution until he was 47. But there was another hereditary peculiarity of temperament which he was struck by, and that was his inherited and bottomless contempt for doctors. His father had it, also his grandfather, and his father lived to the age of 76, the grandfather to the age of 88, and neither of them had tasted a drug of any kind prescribed by a doctor. Only one of his relations had done so, and he died the earliest of them all, and one was not altogether surprised at that. (Laughter.) And the President might well have taken the work on *The Force of the Imagination*, because Montaigne might claim to be the first of the psycho-analysts, the first to show the extraordinary part played in human medicine by the imagination. The author said that when he saw a man who was young and juicy he himself felt better. (Laughter.)

Continuing he said he thought literature owed a debt to the work of psychological medicine in recent years. One remarkable thing about medicine was that a theory was started one year, and next year people practising in Harley Street were receiving huge fees on account of it. It was the speaker's duty to give a prize for the best novel of the year, and he had found that the psychologists had supplied our young novelists, especially lady novelists, with an enormous storehouse of subjects. He could scarcely take up a novel without finding that it relied, ultimately, on the analysis of the psyche of this or that person, involving discoveries of such a painful nature that it was not for him to touch upon them in a mixed assembly. Whether that was entirely beneficial for the novel, or not, he did not know. Therefore one might say that literature and medicine had always walked arm in arm. Montaigne said he had no dislike of medical men; he had known many excellent ones and worthy to be loved. "Nor," he said, "do I greatly blame them for profiting by our folly, for most of the world does likewise." Doctors appealed to a consciousness of the shortness of our life and the frailties with which it was beset; and it would always be to their honour that those who had done most to help the spiritual condition of men had almost never been able to obtain their effect without being able to show them that they could likewise help them bodily. "The Great Physician" had been the highest title one could have to bring consolation to poor stricken humanity.

He expressed his hearty thanks for his selection to respond to the toast.

"THE GENERAL BOARDS OF CONTROL."

Lt.-Col. NATHAN RAW, C.M.G., in proposing this toast said that, having listened to two very delightful speeches, one on the City of Edinburgh, the other on Literature, they now came to the *pièce de résistance* of the evening, namely, "Insanity." That was a subject which all present were able to discuss, and the toast with which he had been entrusted was a very important one, namely, "The General Boards of Control."

Before speaking to the toast proper, he wished to offer his felicitations and those of his colleagues to to-night's President, Dr. Hamilton Marr, on having been elected to this very distinguished position of President of the Royal Medico-Psychological Association. (Applause.)

It would be impossible for him to mention the names of all the distinguished men who constituted the Boards of Control of the two countries, therefore he would merely mention the two Chairmen.

The Chairman of the Scottish Board was Sir Arthur Rose, a very distinguished officer, who had a splendid military record, and who presided over the Scottish Board of Control with great keenness and clarity, and with splendid results. The Chairman of the English Board was Sir Frederick Willis. It was true that both those gentlemen were laymen, *i.e.*, they were not doctors, but the very fact of their success as Chairmen of these Boards showed that in many cases it was a great advantage to have a layman as chairman to a body carrying out such diverse functions as those of a Board of Control of a great country. Sir Frederick Willis,

had had a very distinguished record as a civil servant, and for many years he was in close touch with all the great public health questions of the Local Government Board, which afterwards became the Ministry of Health. Since Sir Frederick was appointed Chairman of the Board of Control of England and Wales his work had always been characterized by zest, to the great satisfaction of all concerned in the administration of the Lunacy Law. He, the speaker, therefore had the greatest pleasure in submitting the toast, coupled with the name of Sir Frederick Willis. (Applause.)

The toast was heartily pledged.

Sir FREDERICK WILLIS, *K.B.E., C.B.*, in reply, said he felt a good deal of embarrassment in being required to respond for two Government Departments, which, after the interesting speeches on other topics, must appear very humdrum. He heard a lady on his left ask, "What is the Board of Control, and what do they do?" If he were to set himself to explain what the Board did it would be voted a very weary catalogue of things, seeing that the Board exercised a general jurisdiction over lunacy. But he would like to say how very grateful he felt to the Royal Medico-Psychological Association for arranging for this toast to be proposed. That Association helped the Board of Control very much indeed. When the latter wished to get the general opinion of psychologists about any particular aspect of the Board's work, they went to the Association, and always received the greatest help from them. But for its help the power and usefulness of the Board would be much less. Of course, occasionally the Board had to do things which people did not like, but he wished to assure the gathering that both the Scottish Board and the English Board were very anxious to advance in every way the treatment of insanity and the proper care of mental defectives. And though some of the work of the Board was of a very humdrum character, it was very human work, because they did get into touch with the individual. And all documents had to be very carefully supervised, and sometimes they were returned because the facts observed and the facts communicated did not seem to justify the final conclusion which was arrived at on the statements. But they did receive very loyal help from the Association and from the medical men engaged in this work, and, on behalf of the General Boards of Control, he wished to express his gratitude for the way in which this toast was proposed and had been received.

"THE GUESTS."

Sir HUGH ARTHUR ROSE, *D.S.O.*, said he did not know why he had been selected to propose this toast, but the President was a peculiarly persistent person.

Gracing this board were many charming ladies, and he would speak of them first. He would like to have dealt with them in a heartfelt manner—(Laughter)—but as his wife was present he must pass on. There were also present distinguished foreign guests, and, on behalf of the company, he extended to them a cordial welcome. There were Dr. Colin and Dr. Targowla from France. Those two gentlemen demonstrated, and improved, the age-old alliance between France and Scotland. There were also present Dr. Henry Cotton and Dr. Vernon Briggs from the United States of America, which, he believed, was known locally as "God's own country." On every other day in the year they were members of the Association—to-day they were honoured guests. The United States had been credited with having acquired three-fourths of the gold of the world, but, in the present instance, in the persons of Dr. Cotton and Dr. Vernon Briggs they had sent us something of sterling value. The company had already heard Sheriff Macphail, and there was present, too, his own ex-colleague, Sir John Prosser. Also there was Mr. Cockburn, the Chairman of Morningside, who was generosity itself; and there was the Dean of the Faculty, who could not be got on to his feet. And the company was honoured by the presence of Lord Fleming, a distinguished Judge of the Court of Sessions—distinguished in the fact that he was the only judge carrying a war decoration earned as a fighting soldier. He also wished to mention his old friend Lord Alness, through whose fault the speaker was here at all to-night. He only hoped that should fate bring him before Lord Alness in his present sphere, he would extend to the speaker the same consideration that he always had in the past.

He had to couple with the toast the name of another legal luminary, Sheriff Robertson, and it took the speaker a little time to make up his mind why the President selected that gentleman to reply to the toast. But a careful perusal

of the daily Press a few days ago gave him the clue. The reason seemed to be that a very short time ago there appeared before Sheriff Robertson in his Court a gentleman who was driving a motor car while in a condition not usual in drivers, and with rather unfortunate results. And the words of Sheriff Robertson were so eminently wise, so typically Scotch, that probably that was the reason he was selected to reply to this toast. He said, "The man who paid £15 for a motor car and took it out on the highway was guilty of negligence," and, he proceeded, "at any rate he should see that the steering gear and brakes were in good order before taking it on a steep hill."

Sheriff J. A. T. ROBERTSON, in replying to the toast, said he had frequently wondered at the temerity of the layman who ventured to address the members of a learned society, and he was now amazed to find in himself the latest example of it. When he realized that the society in this case was the Royal Medico-Psychological Association he was somewhat afraid, and he would tell his hearers why. It happened to be his duty, as Judge-Ordinary of the Western Division of Stirlingshire, every week to sign several warrants for the detention of persons in mental hospitals. The certificates upon which these warrants proceeded set forth the symptoms which had been discovered by these learned gentlemen, the mental doctors. He always read the certificates very carefully, so that he was almost a past master in the knowledge of the symptoms of mental alienation. He was free to confess that on many occasions he had displayed similar symptoms himself. Sometimes the statement was that the unfortunate patient spoke rapidly and incoherently; at this stage on such an evening, that might be a common fault. (Laughter.) On the other hand, it was sometimes said that the patient talked trivialities in a stilted and pompous manner. The result was that he, one of the humblest of the guests, was there to reply on behalf of a large number of people, men and women who were much more able to stand in his shoes than he was himself, who represented life in many of its aspects and interests, beauty and grace, learning, wit, eloquence, judicial capacity, administrative ability, industrial enterprise, and if he was to get home that evening without a keeper, he had to do it in a speech which, on one side, would steer clear of the Scylla of stilted pomposity, without on the other being sucked into the whirling Charybdis of incoherent rapidity. (Laughter.) Fortunately for him, and perhaps for the company too, he remembered the dear old tag about the soul of wit, and, finding that the organizers had followed the Apostolic precept and had allowed him "a little for my stomach sake," he took his courage into his hands, and hope appeared on the horizon.

On behalf of all the guests, he took the opportunity of saying how thankful all were for the hospitality which had been extended to them, and how much they appreciated the cordial and generous terms in which Sir Arthur Rose proposed the toast, and the kind way in which the members of the Association had honoured it.

The PRESIDENT said he was sure the company would be interested in hearing a few words from Dr. Colin, one of the French delegates.

Dr. HENRI COLIN (Paris), in response, said he was glad, in the name of the Société Médico-Psychologique, of the opportunity of answering the cordial welcome which had been extended to him and Dr. Targowla. He and his colleague considered it a great honour and a delicate pleasure to come and meet their colleagues of the Royal Medico-Psychological Association. He was the President-elect of his Society, in the year 1918, when France was striving for final victory, and it was at its monthly sitting, on November 25, 1918, just after the Armistice, that he proposed that a special message be sent to the sister-societies of Great Britain, Belgium, Italy and the United States of America, to assure them of their heart-felt sympathy, and hoping to meet in the future. Later it was resolved to send delegates, and he and others came in that capacity to the annual meeting of this Association at York, and he would never forget the kind and cordial reception the President, Dr. Bedford Pierce, gave them. In 1921 he, the speaker, came to the London meeting, and again at this year's meeting (with Dr. Targowla), in the Edinburgh festivities they were charmed by all they saw. As they said in France, "Ils vont de surprise en surprise." So as the years passed on, the solidarity of friendship between the countries, which had been so much hoped for, became ever stronger. Whenever any great commemoration took place in France, colleagues there knew they could count on the presence and sympathy of British colleagues and friends. His thanks went out specially to the President,

Dr. Hamilton Marr, Dr. Donald Ross, Dr. Bond, and Prof. Robertson, all of whom attended the Pinel celebrations in Paris.

"THE ROYAL MEDICO-PSYCHOLOGICAL ASSOCIATION."

The Hon. LORD FLEMING, M.C., in proposing this toast, said he believed it was the present Prime Minister who said that no man was qualified for the high office of Chancellor of the Exchequer until he had learned to say "No." He, the speaker, was conscious that for many other reasons he was disqualified from holding that high office, but certainly he could not say "No" to this request from Dr. Hamilton Marr. However, he intended to carry out Dr. Marr's instructions, to propose this toast in a few words, recognizing the fact that he was speaking in the presence of many alienists.

The Association to which his toast referred had been in existence, he understood, eighty-six years, and that when it was first formed the membership was a little over 40. To-day it had reached the 800 mark; and he considered that fact alone was eloquent testimony to the increased interest in the treatment of those afflicted with mental disorder. During that period a revolution had taken place, not only in the methods of treatment, but also in the public outlook towards those so afflicted. Eighty-six years ago mental disorder was regarded in these isles as a kind of crime against society, and those afflicted with it were locked up, and subjected to restraint in order to prevent them doing injury to themselves or to others. That had now all been altered, and mental disorder was now universally regarded as a form of disease, and, as in the case of other diseases, those who suffered from it received suitable treatment in institutions intended for that purpose. It was recognized that, in order to obtain success, the disease must be dealt with at the earliest possible stage. For that reason, he believed the aim of this Association had been to promote out-patient dispensaries and clinics for dealing with this disorder, just as they were provided for cases of ordinary disease. Also, as in the case of ordinary disease, nurses had to be trained to deal with these mental cases. In the old days it was thought that all that was needed for a mental nurse was a man who had sufficient physical power to restrain the patient; but now it was recognized that for such a duty mental as well as physical qualities of the highest order were required. The certificate granted by this Association to mental nurses, he understood, was the highest it was possible to possess. He wished to say, as a member of the public, how much the valuable work of the Association was appreciated, and he wished the members God-speed in that work.

He had the honour of associating with this toast the name of the President of the Association, Dr. Hamilton Marr, who was the Senior Medical Commissioner of the General Board of Control in Scotland. In his official capacity he had come in contact with Dr. Marr on several occasions during the last few years, and he had formed a very high opinion of the ability and care with which he performed the responsible duties of that office. And, apart from that, he had had a long and valued personal acquaintance with him. They were at school together, and it was a great pleasure to him to learn that Dr. Marr had been made President of this Association. He coupled the toast with Dr. Marr's name.

The PRESIDENT, in responding to the toast, thanked Lord Fleming for the kind things he said about him (Dr. Marr). He felt somewhat like the clergyman who was often seen crying during his sermon. A little boy said to his father, "Why does the clergyman cry?" The father replied, "Perhaps if you were up there and had as little to say for yourself as he has, you would be crying too." (Laughter.) But if the speaker had little to say for "himself" there was much he could say about the Royal Medico-Psychological Association—too much, indeed, for the company to listen to this evening. Therefore he would confine his remarks to one or two pertinent facts.

The Association, if any association did, knew perfectly well the meaning of the word "cure." In its original it meant taking care of the sick. The Association knew that the only path it could follow was the path of service. One of the most important services was the endeavour to hospitalize all the mental institutions, and in this endeavour they had, as Lord Fleming indicated, tried to raise the standard of nursing. Wherever possible women nurses had been put in. He remembered a deputation of disabled soldiers coming to him and objecting to the fact that women

were being employed to nurse men in asylums. He asked them what was their reason for objecting, and they said that it displaced male labour. He replied that, as a Board, they were not concerned with that; that their concern was with the interests of the patients in the institutions. But he told them he would ask them all, individually, a question: "You are a soldier who has been wounded in the war. You have been in a hospital and have had nurses to look after you, and you have had orderlies to look after you. Which of these two did you prefer?" Every one of the men said, "We preferred the nurse." He then said to them, "Why do you deny your brother who is sick in mind the same privilege?" (Applause.) His hearers would remember the maid-servant in Cranford who, when she was asked by Miss Jenkins at the party to attend to the ladies first, said, "I will do that, ma'am, but I like the lads best." (Laughter.) Both men and women, when they were sick in mind, preferred women. Nobody knew better than the Royal Medico-Psychological Association that this path of service was the only one which could be followed; and time would fail him to tell of the work done by the Association in the direction of caring for the mentally afflicted. All along, the Association had shown progress in this respect; they had answered in many ways that question, put long ago by Macbeth:

"Canst thou not minister to a mind diseased,
Pluck from the memory a rooted sorrow?"

He wished to thank Lord Fleming for the honour he had done the Association in proposing this toast, and to tell him how much the Association appreciated what he said regarding the work done in it.

He then invited the assembled company to drink to the toast—

"FLOREAT RES MEDICA."

This was done with much enthusiasm, and the festive evening terminated with the usual rendering of "Auld Lang Syne" and the National Anthem.

MORNING SESSION, THURSDAY, JULY 21.

(Conjointly with the Sections of Neurology and Mental Diseases of the British Medical Association.)

In the Chemistry Theatre, University New Buildings.

Prof. EDWIN BRAMWELL, M.D., F.R.C.P., President of the Section of Neurology, in the Chair.

DISCUSSION ON EPIDEMIC ENCEPHALITIS.

Dr. IVY MACKENZIE (Glasgow) opened this discussion by reading a paper (*vide p. 567*).

Dr. J. GOODWIN GREENFIELD, supplementing his opening paper on "The Pathology of Epidemic Encephalitis" (*vide p. 575*), said that as Dr. Ivy Mackenzie had opened up the very interesting field of the anatomical changes of encephalitis lethargica, he, the speaker, had better deal with that part of the subject first, and later proceed to questions of ætiology.

Though he could not follow Dr. Mackenzie in his psychological and physiological excursions, he did not agree with that gentleman as to the distribution of the disease. He agreed in so far as the brain-stem was, primarily, often chiefly affected, and he thought that was due to the means by which the virus got into the nervous system. He did not hold, with him, that once it was in the nervous system it kept to one part of it. He thought it might spread very widely. It was clear that the anterior horns in the cord were more widely involved than were the posterior horns. He had looked through his specimens to see whether there was any evidence of damage in the posterior horns in this disease, and he failed to find that they were more affected than the anterior horns.

He showed several slides. The first was a longitudinal section of the cord, showing the lesion in the anterior horn-cells. In another there were lesions from the cortex down to the lumbar cord and the cuffing of vessels could be seen in the anterior horns. In those of his series which he was able to look through, he found much more disease in the anterior grey matter, but it could affect the white matter also.

With regard to the basal ganglia, it was extraordinary how early the mid-brain

was affected. Diplopia was often the earliest symptom. And it had been interesting to follow the French school and workers in Germany, showing how rapidly and to what extent the substantia nigra was destroyed. In one of the cases the destruction was almost complete as early as the twentieth day of the disease. It was easy to see destruction of the nerve-cells in the substantia nigra, as there were melanin granules which were left scattered about, and cuffing of the small vessels. In a case 21 days from the onset of symptoms, the substantia nigra had disappeared, a vessel was cuffed, and all round the region were numerous granules of pigment. It was more difficult to trace the destruction in the cortex and in the basal ganglia. Many cell-counts of the basal ganglia had been done in cases with the Parkinsonian syndrome, and they showed very little destruction of cells. In many of the cell-counts general shrinkage had not been taken into account. And in the mid-brain, in the basal ganglia, and in the cortex there might be destruction of nerve-cells in this disease, which was apparently toxic, and not necessarily associated with inflammatory exudate. He showed a slide with the exudate coming along a cortical vein and being poured into the meninges. A section from a case seven days after the onset showed a nerve-cell surrounded by satellite cells, the nucleus being displaced to the side and almost extruded. Recently he was given a specimen from a patient who had diplopia and other symptoms, from which he recovered. The patient was sent away for a holiday, but died of acute mania. He was only given the upper half of the brain, and he made a frozen section, stained with Scharlach, and he found an extraordinary condition. Many vessels in the cortex were ringed with lipochrome pigment; there was no cellular exudate, but here and there were cuffed vessels. The lipochrome pigment was attributed to degeneration in the nerve-cell; he thought it almost certainly meant a breaking down of nerve-cells, because the pigment was very difficult of solution during life and in the laboratory, and it did not seem to be dissolved by any of the cells in the nervous system. The only way, therefore, it could be carried to the vessels was by phagocytosis.

He recently examined another case, in which also there had been pronounced lethargy, and he found a similar condition there, particularly in the occipital region.

Therefore he regarded this disease as one in which the nerve-cells throughout the system were poisoned, and many nerve-cells were destroyed and fell out. This conception was not a new one, and it had been strengthened by experimental work, of which he would speak presently. Many of those who had worked on encephalitis in rabbits had considered that the virus attacked nerve-cells in the same way, without necessarily causing interstitial inflammation. He thought it was a very useful view to have in mind when considering some of the mental sequelæ of lethargic encephalitis.

With regard to the ætiology of the disease, he thought one could now well discount all the work of Lœwy and Strauss in New York, and Kling in Sweden, as the symptoms in rabbits had been proved to be due to a different disease. Experiments showed that these rabbits, after injection, had a form of inflammation of the brain, and it was proved that the rabbits of the "stock" had that, and that the organism was a parasite affecting rabbits alone. It was different when one considered the work of Levaditi and others, which correlated the virus of the disease with herpetic encephalitis of rabbits. In other words, the virus of encephalitis lethargica was considered by them to be a more virulent form of the virus which occurred in ordinary herpes labialis and similar lesions occurring in febrile conditions in man. Those papules of herpes contained a virus which, if injected into brains of rabbits, caused a fatal encephalitis in a few days; and a virus which must be regarded as identical had been found by a number of people. There was no question that the virus which they had transmitted from the encephalitic brain to rabbits was identical with herpes labialis, or at least belonged to an allied family. He had not time now to enter into all the evidence for and against that, but it was worth keeping in mind that encephalitis lethargica was not a new disease, as it was developed from this common affection herpes labialis through an exaltation of virulence, particularly against the nervous system.

Dr. GEORGE RIDDOCH, supplementing his opening paper on "Chronic Encephalitis" (*vide* p. 582), said that Dr. Ivy Mackenzie's opening remarks were very interesting, and, as Dr. Greenfield said, they raised questions of importance, though he feared he could not agree with Dr. Mackenzie's interpretations.

He took it that Dr. Mackenzie viewed the disease as an infection which did not progress, and interpreted the phenomena, such as Parkinsonism, as due to some factor other than the infection remaining in the nervous system itself—a view which the speaker found great difficulty in understanding, not only clinically, but also histologically and pathologically. For he believed it to be now established that even in long-standing cases, and before a year's duration, active foci were found with stationary lesions. He, the speaker, supported the view, based on clinical and pathological experience, that the disease was essentially a chronic one comparable to neuro-syphilis and disseminated sclerosis. It might begin with an acute phase, or a subacute one, or it might be chronic from the outset. It showed a marked tendency to go on smouldering in the nervous system, and to be manifested clinically by either a progressive disablement, or with stationary periods and recrudescences during the course of the disease. These recrudescences, in their clinical form, might vary, but, in essence, the disease was still within the nervous system.

His part in this discussion had no connection with the acute phase of the disease; he had to deal merely with the chronic phenomena, and he had only time to touch on one or two of the more important of them.

Dr. Mackenzie said it was impossible to classify the disease, and Dr. Marshall agreed with that, as did the speaker. And he thought the reason was that it was so chronic in its course, and had so varied a clinical picture. There was a danger now, in describing these clinical forms, of laying too much stress on the polymorphic picture, and in ascribing to chronic encephalitic phenomena disorders which could not be diagnosed during life.

In conclusion, he said there was no need for him to touch on treatment. Nothing apart from dealing with symptoms was known about it. And prognosis was in an equal state of chaos. He regarded the disease as a chronic infection, which might appear after a long remission.

The PRESIDENT of the Royal Medico-Psychological Association in the Chair.

Dr. R. M. MARSHALL read a paper on "The Mental Aspects of Epidemic Encephalitis" (*vide p. 589*).

Prof. GEORGES GUILLAIN (Paris) said that at different periods in the evolution of chronic epidemic encephalitis, soon after the onset of the disease, or a long time after the development of a Parkinsonian syndrome, it was not exceptional to observe symptoms which resembled those of myasthenia. When they were localized only to the limbs, or to isolated groups of muscles, the diagnosis of myasthenia gravis did not occur to one; in more numerous cases, however, the myasthenic symptoms, beginning in muscles supplied by mesocephalic nerves, and later becoming generalized, revealed a clinical picture identical with that of the Erb-Goldflam syndrome. In such cases, either a history of typical acute epidemic encephalitis before the onset of the condition or certain symptoms of the Parkinsonian syndrome indicated the true nature of the myasthenia.

Th. Alajouanine and he had described such cases, and recently A. Wimmer (Copenhagen) had recorded a series of similar observations. He wished to recall briefly the clinical characteristics of the myasthenic aspects of chronic epidemic encephalitis.

A first case was that of a man, *æt.* 57, after a period of diplopia, without drowsiness or fever, some months later felt that his eyelids at the end of the day were paralysed, also with variable diplopia. At the same time lumbo-crural neuralgia appeared, and after one week he noticed abnormal fatigue in walking when following his occupation of gardening—all these symptoms being especially marked at the end of the day. At meal-times he also felt a difficulty in masticating solid food. Speech was weak after a long talk. On examination we found bilateral ptosis, paresis of the right external rectus, paresis of the masticatory muscles, fatigue in the muscles of the upper and lower limbs in successive movements. The beginning of a Parkinsonian syndrome pointed to the encephalitic *ætiology* of this myasthenic picture.

A second case presented an identical clinical picture after a typical onset of epidemic encephalitis.

He had recently observed at the Salpêtrière, with Dr. Thévenard, a bulbo-pontine syndrome with myasthenic symptoms.

These three cases disclosed three different aspects of abnormal myasthenic

syndrome. The first two cases closely resembled myasthenia gravis; in the first one a Parkinsonian syndrome, in the second a recent epidemic encephalitis, demonstrated the infectious ætiology of the myasthenic syndrome. In the third case the clinical picture was partly that of an alternate syndrome of the bulbo-pontine region, and partly that of myasthenia according to the character of the parietic troubles and their variability. The history of the disease and the effect of sodium salicylate treatment again suggested the encephalitic ætiology.

Encephalitis lethargica seemed, therefore, able to produce symptoms similar to those of myasthenia. And furthermore, in encephalitic sequelæ it was not exceptional to meet with isolated myasthenic symptoms which were absent in the clinical picture of the Parkinsonian syndrome. Such cases were interesting from the point of view of diagnosis and prognosis; they did not seem to evolve progressively and severely as did myasthenia gravis. The diagnosis, too, was made easy by the knowledge of an acute period of infection or by the observation of sequelæ of encephalitic type. Meanwhile, certain cases presented difficulties in their interpretation. In such the electro-diagnosis did not give any real help, but with Bourguignon's technique the study of chronaxy would give new reasons for supposing an encephalitic ætiology.

This series of observations showed the great variability of syndromes depending on encephalitis, and allowed a new conception to be formed of the still obscure ætiology of myasthenia.

Dr. E. MAPOTHER said that as a psychiatrist his experience of encephalitis was necessarily warped by the fact that he only saw the cases in which special treatment was called for on account of the mental symptoms. He had seen only six cases in the acute stage, as against probably two hundred with the residua or sequelæ. Hence his experience of the acute stage was really negligible. But there was one point which was brought out by considering the history of the chronic cases, also by the facts of one or two of the acute cases he had seen, and it was the ease with which the organic nature of the condition might be missed if attention were focused on spurious psychogenesis and the physical examination neglected. He was referring specially to two cases which came into the Maudsley Hospital as cases of neurosis, though in both the patients had minor ocular palsies, which had been overlooked. One was that of a young girl, whose condition was thought to be due to mental stress connected with her approaching marriage, which event she was awaiting with the usual mixed feelings. The other was the case of a girl who worked in a factory where, it was supposed, a boiler explosion was liable to occur at any moment. Both were clearly cases of acute encephalitis.

For the rest, he thought the acute phase of encephalitis lethargica had very little concern for the psychiatrist. There was but little correlation between the severity, or type, or duration of the acute attack and the severity or type of the later mental symptoms.

Concerning chronic encephalitis, he had had a fairly large experience drawn from a number of different sources. Particularly interesting were the cases he had seen in an observation ward, where the poor of East London were dealt with, and where he had seen a number of adult delinquents who had passed through Brixton Prison, and had been discharged because of their mental state.

He would not waste time in echoing things about which there was agreement; he rather wanted to emphasize the points of difference between the various papers.

One of the points on which there was a difference was whether, as Dr. Ivy Mackenzie suggested, the chronic manifestations were a mal-adjustment after a destruction occurring during the acute phase, or whether it was a continuing infection. He had seen one or two cases which supported the view put forward by Dr. Greenfield, that there was a continuing infection. He had seen cases in which chronic delinquency had existed for years, and, later, there had occurred a short febrile illness, which it seemed reasonable to regard as a recrudescence of the infectious process. And that had been followed by an exacerbation of the delinquency. He had seen this in both the child and the adult, and at least two cases of the kind came clearly to his memory.

He thought the openers of the discussion differed also about the exact localization which determined the Parkinson syndrome, but that had little importance for the psychiatrist, seeing that the intensity of the mental syndrome was independent of physical syndromes. He had seen practically every type of neurological syndrome with—also without—mental accompaniments.

The most obvious reason, to him, was that the mental sequelæ had a localization of their own. There seemed to be an excessive tendency to ascribe delinquency, in a vague and general way, to the occurrence of the disease before ethical codes were organized. That was not in keeping with the fact that a fair number of the delinquents had been well-behaved adult citizens—a definite regression, not a mere arrest. Anyone who had had experience with cases of delinquency would agree with that.

Of course, it was not necessary to postulate a special "moral centre"; he was thinking that it depended on destruction of some part of the brain which governed, or underlay, foresight. That was supported by the fact that a number of delinquents also manifested a reckless disregard of danger or consequences. The pathology of delinquency was a very large question, with large theoretical implications. Allied problems were whether moral imbecility was a specific condition, and the exact causation of those curious cases of moral reversal which one saw after injury to the head.

He would like to question Dr. Marshall's tendency to identify post-encephalitic restlessness with delinquency. One saw many cases in which the delinquency was paroxysmal, and not associated with continual restlessness—cases in which the person behaved most of the time in a normal way, yet occasionally broke out and did some outrageous act, like rape, or theft.

He questioned the attempt to identify post-encephalitic restlessness with mania. The mania of the manic-depressive was a joyous excitement, and he had not seen that in a late stage of encephalitis. Dr. Menzies surprised him when he said, on the previous day, that euphoria was characteristic of Parkinsonism, and built a theoretical structure on that foundation. The speaker, Dr. Mapother, thought euphoria was very uncommon. Many post-encephalitics committed suicide—surely insanity, but certainly not euphoria.

The real difficulty about the diagnosis of functional mental disease and post-encephalitis was between melancholia and Parkinsonism. It was a double one. It was partly because, in many melancholics, conative impediment was the striking thing, and that was very like that of Parkinsonism. On the other hand, a large proportion of Parkinsons were profoundly depressed. He had seen a series of cases admitted to the Maudsley Hospital as recent melancholias, and in a few months they turned out to be clearly post-encephalitic Parkinsonian cases. The mistake was also most apt to occur where an apparent psycho-genesis was behind it. He wished to refer briefly to two cases.

One of them, after having been seen by four medical men, was eventually diagnosed by the parlour-maid who opened the consulting-room door and said, "There is one of those sleepy-sickness cases waiting for you." He was a man of strong religious feeling who had been in prison as a conscientious objector during the war, and had gone through a terrible time in prison. After the war he had had a severe mental conflict owing to his having taken up with another woman. His wife deserted him. This led to his having profound mental depression, and it was regarded by the doctors in question as a full explanation for his behaviour. But the eagle eye of the parlour-maid detected it at once!

The other striking case was that of a young woman who came into the Maudsley Hospital. She had recently procured abortion on herself after *liaison* with a married man. Severe hæmorrhage followed. She was living at home, and was terrified that the facts might come to the knowledge of her mother, or that she might bleed to death. She said she adopted the stooping posture and limitation of movement as a means of averting recurrent hæmorrhage. She made that statement without any prompting. It became obvious that she was a case of post-encephalitic Parkinsonism.

His last point was to dispute Dr. Marshall's identification of Parkinsonism with katatonia. The speaker thought the resemblance between the two was a superficial one; he thought there was no more resemblance than between hysterical hemiplegia and organic hemiplegia. Katatonia was definitely a mental syndrome, Parkinsonism was not. To him, that only meant a difference of level, though it was a very definite difference. He did not think anyone who had seen a katatonic syndrome suddenly pass off in a morning, as it might, could readily agree that it had any fundamental resemblance to Parkinsonism. And certainly the two were not alike in their accompaniments. One never saw, in association with Parkinsonism, any of the meaningless eccentricities of language and action which were

seen in the other state; one never saw negativism or *flexibilitas cerea*. He thought the striking thing about Parkinsonism was a defect in habitual and automatic activity. By effort the patient could temporarily reduce it. If, however, one asked the hysteric or the katatonic to overcome apparent incapacities, the result was invariably an increase of the disability. There was one accompaniment of katatonia which he had rarely seen, namely hallucinations, but he was told, by those who had had more opportunity of seeing advanced examples than he had, that hallucinations were not uncommon in very late stages of post-encephalitis.

Dr. BERNARD SACHS (New York) expressed the pleasure he felt at being able to participate in this discussion, and though it would be difficult to add much to what had already been said, he would like to allude to his experience of the disease during the time he was in charge of a neurological clinic in New York. Encephalitis appearing in epidemic form had revolutionized the practice of neurology, so that in the future it would never be quite the same as hitherto. Epileptiform seizures were regarded as an expression of some vascular disease, or as an accompaniment of conditions like brain tumour, etc. Because of the light which this disease had shed on many neurological conditions, it was well worthy of discussion from every angle. The disease had been persistent in America in its acute form, and its sequelæ are evident. The earlier American cases were lethargic, whereas the more recent ones were characterized by restlessness and insomnia. The lethargy was never complete, nor very deep; at any time a patient could be aroused from his lethargy by vigorously talking to him, though immediately afterwards he would sink back into his lethargic state. It seemed likely, he thought, that studies of this disease would reveal the location of the chief sleep centre in the brain. In later years in America the myoclonic and choreic symptoms had been marked. There seemed to have occurred a gradual attenuation of the virus. In 100 cases in his own wards the pupillary reactions were found to be defective in 35, and paresis of accommodation without dilatation of the pupil was frequently noted. Ramsay Hunt was of the opinion that there existed two striated systems, one pallidal, one non-striatal, and that when both systems were involved there occurred a combination of two types of disorder. He believed that some infantile types of cerebral palsy were of ganglionic origin. Infantile apoplexies were often associated with choreic and athetoid movements, whereas such were rare in adult apoplexies.

An important distinction in the spinal type of encephalitis was that the symptoms were those of a complete acute transverse myelitis, and were never those of poliomyelitis.

He could endorse Dr. Marshall's remarks about the restless, naughty child.

A study of the literature showed, without doubt, that epidemic encephalitis and acute poliomyelitis were separate entities. His own experience was that since the appearance of epidemic encephalitis, acute poliomyelitis had become a rare disease. If there was no relationship between the two diseases there might be a definite antagonism. Some had isolated the virus of herpes in cases of encephalitis. In this investigation he thought animals higher in the scale than rabbits ought to be used for experimentation. Similarity of lesions produced was no argument for the identity of the causal virus. The whole problem was ripe for study by means of experimentation on higher animals. Certain cell-groups were less resistant than others, and melanin-bearing cells were particularly susceptible.

When the causal organism had been found, the greatest difficulty would be to provide a therapeutic agent. It was a great scourge, and the disease might be latent in the body for years.

The association of liver disease with striatal disease had led some to suspect that disordered liver function might be a factor which determined whether or not patients would develop encephalitic symptoms. But O'Flynn, in a thorough investigation of 34 cases, showed that there was no biochemical evidence of any gross derangement of the functions of that organ in this disease.

He had found that ocular manifestations were usually the first signs of the disease. Not a few cases, however, might begin with an apoplectiform seizure. He thought the term "central and basilar encephalitis" was a better designation of the disease than "encephalitis lethargica."

Dr. W. A. Potts said that though he had come to oppose some of the statements made in some of the opening papers, he would not be ploughing a lonely furrow,

as he was in almost complete agreement with Dr. Riddoch, Dr. Sachs, and especially with Dr. Mapother, who had said many things he would himself have liked to say if it had been necessary.

He differed slightly from Dr. Mapother as he understood that speaker. If he meant that the extraordinary conduct, from the moral standpoint, was due to destruction of the highest moral centres, the speaker suggested that in the early stages, and often for many years, the peculiar immoral conduct was due rather to a numbing of those centres than to their destruction, and that, with appropriate treatment, it could be entirely got rid of, even at a late stage.

He would challenge Dr. Mackenzie's statement that the disease showed a tendency to run a very definite and peculiar course, and that the anatomical damage was wrought once and for all. He suggested that Dr. Mackenzie's theory did not apply to those not uncommon ambulatory cases which, often, were not diagnosed until some years later; sometimes because they were not properly examined, but sometimes because they never consulted a doctor as they had been ill only one or two days, and then were able to be up and to carry on more or less satisfactorily. He thought that the reason some of these cases were not diagnosed was, partly, because many practitioners were looking out for cases of a definite type, and their attitude was somewhat like that of the man whose dog barked in the night, but who, because the bark was not a typical one, did not get up and investigate, but went to sleep again, and did not realize, until he got up in the morning, that valuable assets had been removed. He agreed with Dr. Riddoch that the disease was comparable in behaviour to neuro-syphilis, and also in the fact that specific and satisfactory treatment was able to produce results if thoroughly done, and continued sufficiently long, even at a late stage. Instead of following a definite path in the later stages, it always had a choice of at least two, probably more, different paths, according to the type and temperament of the person. There was the path typically followed by dementia præcox cases, with its variety of types, but with few intermissions. On the other hand, there was the manic-depressive type, alternating between the manic and the depressive states, with, frequently, long lucid intervals, sometimes of weeks or months, occasionally of years. He, like Dr. Menzies, had had the good fortune to see many cases of the euphoric or manic type, which were undoubtedly sequæ of this disease. His own common experience had been to see cases which alternated between the manic and the depressive type.

He would like to call attention to two pathognomonic symptoms, one of which had already been referred to. In the ambulatory cases which did not go to a doctor in the first instance, there was always, if inquired for, one absolutely pathognomonic symptom, namely, the feeling—even if it lasted no more than two or three hours—of being desperately and hopelessly ill. A friend of his, whose illness took the form of a very severe hiccup, had such a severe attack in the night that it was uncertain what might have happened if his wife had not been a medical practitioner, and got up and applied chloroform to stop the spasm. He got well, and there had never been a recurrence.

The other symptom he wished to call attention to—it had already been mentioned—was the diminished sense of responsibility. He regarded that as simply due to the toxæmia. This resulted in the most bizarre and often unsatisfactory type of conduct, both in the young and in older cases. He had no hesitation in saying, in contrast to what had been said by others that in the case of the restless, naughty child who had had encephalitis, it was of no use to attempt to treat her by drill, training and "moral talks," but extraordinarily good results followed the administration of an autogenous vaccine from throat or nose, or by some form of non-specific therapy.

With regard to the most important aspect, that of treatment, he considered that the only hope was to treat the case on the lines of a septic psychosis. This was, to deal as far as possible with the original infection, and, in addition, to deal with every other unsatisfactory condition of the patient, especially any infection of the nose, throat or teeth, intestinal tract, urine. The treatment must be thorough and prolonged. Patients were often said to have been examined and attended to, but in many cases there had only been treatment of a perfunctory kind. Once he was laughed at for treating cases with influenza vaccines, but the laugh was now on the other side, because Dr. Graves and many others had proved that, even in the chronic cases, one of the most efficient forms of treatment was

non-specific protein therapy, in addition to dealing with all local infections, for this was one of the most important items in the treatment. It was of no use to make two or three applications to the nose of an aqueous solution of an antiseptic: there must be the daily application of some oily preparation which would maintain contact. This might not actually reach the infection, which might have already passed through the ethmoidal cells into the brain, and often, on its way, set up ethmoidal sinusitis, to remain a chronic source of infection. But he was sure this would prevent the entry into the brain of fresh organisms, which otherwise might be continually introduced.

In regard to intestinal treatment, too, this was often carried out in the most perfunctory way. There must be prolonged and thorough Plombières treatment. A few days ago he saw a case of encephalitis lethargica which was first diagnosed as such three years ago, and the patient had been under treatment ever since, and was so still. Practically all his teeth were taken out, in the first instance, without an X-ray examination, and the tonsils were removed, but the doctor did not proceed to give intestinal treatment. He thought it would be interesting to take a swab from the nose in that case, also from the throat, and a profuse infection by a hæmolytic streptococcus was found to be present. What was the use of excising the tonsils when the throat was readily invaded again by a condition which had not been dealt with? He found that patient was very constipated, and had been so all his life, as he often went without a motion for three days. During the whole of their married life the wife had been troubled by the patient's extraordinary indiscretions in diet, but that condition had never been attended to. When the speaker sent specimens of the patient's urine to a biological chemist, he said that the outstanding feature in the case was the intense intestinal infection and failure to eliminate the toxins produced there.

Prof. R. CRUCHET (Bordeaux) said that the polymorphism of epidemic encephalitis or encephalomyelitis, which we distinguished in 1917 in describing for the first time this hitherto unknown disease, is no longer under discussion. This is the principal reason why Prof. Euzière, Dean of the Faculty of Medicine of Montpellier, recently said that there was no better name for this disease than the name of the author who first described it.

Of the many different aspects of the disease I will consider only one which I mentioned in my London lecture on the bradykinetic syndrome in 1925. Many authors admit that the slowness of movement in post-encephalitic Parkinsonism, as well as in Parkinsonism in general, is an effect secondary to the peripheral muscular hypertonus. So understood, bradykinesia should be but a simple and particular case of movements which are executed against resistance. This point of view could not be maintained, and many facts show perfectly the independence of bradykinesia.

For a long time Verger and I have noticed the existence of sequels of encephalitis which are characterized only by slowness of movement without real muscular hypertonia; in such patients the postural reflexes and tendon reflexes are quite normal. It is not rare to discover hypertonia in such patients after several months. It is ordinarily of the type of Parkinsonian hypertonia, characterized by exaggeration of postural reflexes. We call by that name the postural reflexes described by Foix and Thévenard, also called by Delmas-Marsalet elementary postural reflexes.

With old Parkinsonian cases hypertonia can be transformed into a pyramidal type, characterized by ankle clonus and Babinski's sign.

Whatever the type of case, and whether the patient is not hypertonic or his hypertonia is a Parkinsonian or a pyramidal one, bradykinesia remains exactly the same. This clinical observation, therefore, shows well the independence of bradykinesia and the variable state of the muscular tonus.

These facts, undeniable from the clinical point of view, needed an experimental demonstration. This has just been given by one of my pupils, Dr. Delmas-Marsalet. His test is as follows: By subcutaneous injection a solution of scopolamine bromhydrate is given; this provokes in Parkinsonians a progressive abolition of postural reflexes, which is complete in about forty-five minutes. It is well seen in diagrammatic curves. At the moment when the scopolamine injection has completely abolished the postural reflexes, different segments of the limb are in flaccidity, and there is no longer hypertonia.

It is most important to note that if the patient is asked to execute movements

these remain distinctly slow, in spite of the disappearance of hypertonia. What is equally remarkable is that the abolition of postural reflex leaves the tendon reflex and general sensitivity completely intact. It even permits, when pyramidal irritation and Parkinsonian hypertonia are associated, the reappearance of pyramidal excitation (clonus of the knee and ankle, and exaggeration of the patella reflex), which this hypertonia had inhibited.

These different facts indicate clearly that it is useful to separate bradykinesia from hypertonia. Bradykinesia, just as much as bradypsychia, must be considered as an alteration of special nervous functions which have nothing to do with the tonus. It seems that bradykinesia represents, as Verger has said, a deficit of a general function of the brain—the automatic habit function.

Delmas-Marsalet's test in experimentally isolating the postural reflex gives a rational explanation of the action of scopolamine, known for a long time in Parkinsonians, and of the irregularity of this action. With the ordinary bradykinetic patient, without postural hypertonia, the effect of scopolamine is only moderate; the best result is obtained with the bradykinetic with postural hypertonia. When this condition is complicated by pyramidal signs the result is bad, because the abolition of postural reflexes will increase the pyramidal contracture still more. It is only in the cases in which pyramidal contracture, clinically absent, is discovered by the scopolamine test that the result is good; if this contracture is slight, it is right to use scopolamine. If this contracture is strong, it is better not to employ it.

Lt.-Col. J. R. LORD, *C.B.E.* (Vice-President of the Section of Mental Diseases) in the Chair.

Prof. KARL PETREN (Lund, Sweden) said it was important to remember the rôle of phagocytosis. In encephalitis one did not find phagocytosis, and the anatomical difference accorded with the clinical course of the disease.

With regard to diagnosis, he drew attention to the value of the naso-palpebral reflex of Guillain, namely, an increasing blinking of the eyes; he had found it very helpful in diagnosing Parkinsonianism.

Dr. Riddoch had alluded to the fact that there was often an interval between the acute attack of encephalitis and the occurrence of Parkinsonism. When that was so, it was of the highest importance to know how long that time could be, *i.e.*, how long after the acute attack there was reason to feel anxious that Parkinsonism might result. He had had cases in his clinic in which Parkinsonism came a fairly long time after the prime attack, but in no case had it been longer than four years. He would be glad if others could confirm his hope that after four years from the acute attack there was no need to fear Parkinsonianism.

Dr. ROYLE (New South Wales) gave a cinematographic demonstration of the good results achieved by the operation of ramisection for post-encephalitic rigidity, this treatment having been carried out three years after the incidence of the disease. A definite result ensued when one side was operated upon, and a more definite one when the double operation was carried out. Patients who were very rigid, and moved with obvious difficulty, were shown after the operation to be able to run and mount steps with apparently a normal gait. He said that the effect of this sympathetic operation was similar to that temporarily produced by giving hyoscine, but the result of the operation was permanent.

Dr. J. M. WOLFSOHN (San Francisco) said that the clinical manifestations of chronic encephalitis had been well described in this discussion, but little had been said about its treatment. Dr. Riddoch had said there was no cure for the chronic encephalitic—a view universally accepted. But what impressed him, the speaker, was how many of these cases could have been prevented had treatment in the acute stage been properly carried out? In 1918, in London, he saw many of these cases. The disease had not then reached California, and he had spoken about the disease as he saw it in London, but little interest was shown. Since then, however, there had been two serious epidemics of the disease in California, and the sequelæ had been such as were described in this discussion. In 1925 there were many hundreds of acute cases there. In the epidemic of 1923 the doctors were looking for a focal infection and channels of entry to the nervous system. He took 25 cases in the acute stage and worked out their intestinal flora. Then a polyvalent vaccine was given, after the subsidence of the febrile state. Twelve of the

cases, within two years, showed certain of the chronic sequelæ which Dr. Riddoch had described. In the 1925 epidemic he again had 25 cases, which were treated in the same way, but instead of allowing these patients to get up and be about their work after six weeks, they were kept under close observation for six to eight months. The result had been that only two of those patients had any sequelæ.

In order to illustrate what happened in an acute case when it was not carefully managed, he mentioned the case of a sailor, who came into hospital with acute encephalitis and mild diplopia, also some mental hyperactivity. At the end of a month he had to return to his work. In six weeks, however, he was back in hospital, with diplopia and vertigo, and within three months he had acute Parkinson syndrome. He had now reached the chronic stage, and his case was practically hopeless.

Another case was that of a woman who had mild symptoms of acute encephalitis. Within a week she had given birth to a child, and there followed symptoms of myasthenia gravis, the severity of the symptoms probably being due to difficult labour.

Careful consideration of 50 acute cases treated had led him and his colleagues to feel that with the use of polyvalent vaccine and antiseptics, with a prolongation to six months of the convalescent period, so as to avoid all undue physical and mental stress, some of these cases could be saved from the distressing manifestations of the chronic stage.

Dr. T. S. GOOD (in a written communication) indicated the types of encephalitis described by Von Economo. Stress was laid upon the lethargic and hyperkinetic types, and an endeavour made to show that, although both were only types of the same disease, differences existed in the ætiology and pathology. The importance of the element of previous emotional stress as a determinant of the hyperkinetic type should not be overlooked.

The mental after-effects depended upon the stage of the mental development reached, the degree of infection, the layers of the cortex most affected, and the influence of environment. Four main groups were defined: (a) Hysterical and neurasthenic; (b) moral imbecility; (c) paraphrenic; (d) deep dementia.

The hypothesis was advanced that many cases, hitherto described as dementia præcox of the katatonic variety, were in reality post-encephalitic, and that all cases of acute amnesia (Tanzi) were probably encephalitic.

Dr. T. A. ROSS said that both Dr. Riddoch and Dr. Mapother had touched on the diagnosis of so-called neurasthenia, and both gave the criterion for diagnosis, which was no doubt most important, namely, careful examination. But the speaker thought there was another thing which should be considered, namely, the enormous importance of the history. If one took what Dr. Riddoch and Dr. Mapother said, one would be driven to the conclusion that when nothing physically wrong could be found about the patient, he would be considered to be suffering from neurasthenia—a view he was very much opposed to. Neurasthenia was as positive a condition as any other in medicine, and it was not to be diagnosed by negative signs. What had led people astray was attaching importance to events like something going wrong with a girl's marriage; or that a woman lost her son and thereafter became rigid and feeble. The biography of the patient was important, not little events here and there; it was a question of how the individual reacted to the stress of life. Such a case was that of a lady who was one of the tired people. She had been getting more and more tired for years. At the age of 6 she apparently suffered sexual assault, an older boy putting his hand up her clothes. When she reached the age of 13 an old lady carefully explained to her about her periods and the meaning of sex. She now remembered and began to dwell on the incident which occurred when she was 6 years old, remarking that she must have nothing to do with any man, as she was unworthy; no man must fall in love with her, and she must not fall in love with any man. She was now aged 37, and the affection she had enjoyed was that from her own sex, though there had been no homosexuality. She was so affectionate with one woman that the latter got "fed up." She was in need of affection, but could not get it, and so she had taken refuge in a neurosis. The key to the diagnosis was provided by the way she had reacted to the ordinary situations of life. In the diagnosis one had to consider not only the absence of physical signs, but the presence of psychological elements which might be termed stigmata.

Dr. POSTON (Oldham) said that Parkinsonianism, in outward appearance at any

rate, was essentially a derangement of posture. He mentioned two cases, the first of which showed "spasmodic cramp of the upward glance" and indication of some vestibular excitement which was influenced by posture or position, and which reacted upon the centres controlling eye movements. The second case was one of complete external ophthalmoplegia with diplopia of six months' standing. Simple syringing of the ears with cold water enabled the patient temporarily to move his eyeballs in every direction and caused the diplopia to disappear. These and other findings led the speaker to urge that a vestibular lesion not only existed, but that it was responsible for the commonest group of symptoms—namely, the ocular manifestations.

Dr. P. C. CLOAKE said his remarks dealt with mental symptomatology, but were, he believed, capable of wider application.

Dr. Greenfield had given him a lead for what he had to say by his description of the widespread changes throughout the cortex, as in other grey matter, and the importance of these observations when considering mental changes.

The mental symptoms of encephalitis lethargica were of toxic-infective type, and resembled in some features the acute mental effects of such toxins as alcohol, because neuro-toxins depressed all nerve-cells, and especially those of the highest levels.

In encephalitis, in addition to the severe local lesions, there was evidence of a depression of highest cortical functions in the characteristic organic mental reaction of lethargy, weakened attention, weakened "grasp," etc., and Dr. Greenfield had shown that there might be *visible* evidence of cortical cell degeneration, too.

He thought the mental changes could best be understood by utilizing the conception of "neural energy," and thinking of mental and nervous phenomena as evidences of orderly evolution and distribution of energy derived from the activity of the neurons at different levels in the nervous system.

He would like to recall a conception of Sir Henry Head's which he thought had not received the attention it deserved. Head observed that the decerebrate cats of Bazett and Penfold responded to stimuli reflexly and purposefully, so that a drop of water placed in the ear led to shaking of the head, while touching the ear with a finger produced a different, but appropriate response.

This purposeful, adaptive character of reflex response to stimulation was only seen when the internal and external environment of the animal was good (it was abolished temporarily, for example, when the cat was given a little chloroform or suffered from sepsis), and the nervous system was said to be in a state of "vigilance."

Conceive what "vigilance" implies physiologically and apply that to high cortical levels, and the speaker thought they would see a close parallelism between high vigilance in the cortex and high mental efficiency, with its heightened attention and ability to respond appropriately to whatever stimuli might arise in the changing environment of the individual.

Attention did, indeed, imply in psychology largely what "vigilance" did in physiology, namely, that condition of the mind (nervous system) in which a selective response to a stimulus can be obtained at its optimum.

Without detailing further the characters of "vigilance" at high levels, one might state that it was precisely these psychic characters that were impaired in mental disturbances of toxic and infective origin. Hence arose lethargy, defective power of concentration, loss of interest, that inability to organize his reactions according to social standards that characterizes the child sufferer from encephalitis lethargica, head injury, etc., and possibly the same accounted for the asthenic syndrome described by Dr. Riddoch.

With regard to what had been said by Dr. Sachs about the lethargy of epidemic encephalitis having peculiar and distinctive features, he could not agree with this observation. In other conditions producing lethargy such as cerebral tumours or abscess, it was also possible to speak with and rouse the patient momentarily and get a rational answer, unless the condition had passed over to the deeper stage of mental obliteration—coma.

Dr. IVY MACKENZIE, in reply, said he still adhered to his view, though some confusion might have arisen as to the spread of the lesions. His explanation of localization to the posterior roots of the cord had to do with cases which had begun as disseminated sclerosis, and there was no question of affection of the anterior cornua. He considered it was a function disorder on an organic basis.

BALL AT CRAIG HOUSE.

On the evening of Thursday, July 21, many members and ladies availed themselves of the kind invitation of the Board of Managers of the Royal Hospital to a ball at Craig House.

MORNING SESSION, FRIDAY, JULY 22.

THE PINEL CENTENARY.

Before the resumption of the scientific meetings the President and members assembled at the West House, Royal Hospital, Morningside, and witnessed the placing of a memorial wreath, by Sir Arthur Rose, *D.S.O.*, the Chairman of the General Board of Control for Scotland, on the bust of Philippe Pinel, situated over the entrance arch of the Pathological Department.

The doorway was adorned by the French Tricolour and the Flag of St. Andrew. Among those present were Dr. Henri Colin (Paris) and Prof. R. Cruchet (Bordeaux), also the staff nurses of the hospital.

In opening the proceedings, the Chairman of the Hospital (Mr. J. S. COCKBURN) said :

We have met here to celebrate the Centenary of the death of Philippe Pinel. It was he who initiated the great reforms in the care of the sick in mind. I do not intend to give you an account of his life and of his reforms, as I do not wish to encroach on the speech of Sir Arthur Rose, who will presently speak, but I have, however, to explain how it is that this gathering takes place to-day at West House. The story goes back a very long time.

In the beginning of the last century the Paris School of Medicine was the most distinguished in the whole world, and many of our Scottish doctors went to Paris to complete their education. Among these was Sir Robert Christison. In the year 1820 he went to Paris and attended Esquirol's lectures on mental diseases, and saw the excellent way in which the patients were cared for in the wards of Pinel at the Salpêtrière. This made a deep impression upon him, which he records in his autobiography. Sir Robert became famous, and was elected President of the Royal College of Physicians in the year 1838, and, in consequence, a Medical Manager of the Royal Asylum at Morningside. At that time only East House, for private patients, existed, which has since been pulled down. The Managers determined to build West House, and it was while it was being constructed that Sir Robert Christison, owing to his admiration of the work that Pinel had done in reforming the care of mental patients, almost certainly induced the Managers to place a bust of Pinel on the entrance arch of the building.

There have been great changes at West House since 1838. What was at one time the front of the building has now become the back, and so it happened that the bust of Pinel, which is veiled at the moment, was placed over the archway which looks into the courtyard. It is interesting to note that the bust does not look outwards, but inwards, as if Pinel were still watching over the welfare of the patients, and seeing that his humane methods were being carried out.

The Managers have under consideration the question of removing the bust to the front of the building, but as it forms the keystone of the arch it will be a difficult matter.

With these introductory remarks, he then called upon Sir Arthur Rose to unveil the bust.

SIR ARTHUR ROSE said it was a little difficult to speak adequately as a layman on such an occasion as this, because, no matter how sympathetically a layman might watch the work of the medical and nursing professions, he could never fully apprehend the work of such an institution as this. He conceived, also, that it would be almost impossible for a layman to throw back his mind to the years when the conditions which Pinel did so much to improve. When one read that his first action on being put in charge of a large mental hospital in Paris was to strike the chains off fifty patients, frankly he could not conceive, knowing the modern mental hospital as he did, what the conditions in that day were like. They must have been very bad, otherwise there would not have been

the great mass of legislation on the subject in Scotland and England, which had been gradually built up in the endeavour to ameliorate the conditions of mental patients. Acts of Parliament were all very well, but they were only the dry bones. Unless the spirit of sympathy, kindness and great skill were dominant, the improvement in the treatment of mental patients could never be achieved. He thought that they in Scotland had reason to be proud, for one thing, of the fact that the inception of this great institution began concurrently with Pinel's vision on the matter. He conceived it to be a very appropriate symbol that this institution in Scotland was the only place, out of France, where Pinel was commemorated in this manner.

He spoke with much diffidence, but he thought his audience were aware of the feelings of the General Board of Control towards Morningside. It was realized by the Board that the spirit of Pinel continues to animate this hospital. On occasion there might be small differences, but, in a large sense, those on the Board of Control did their best to co-operate with those who were actually engaged in the work of the mental hospitals.

He thanked the Association for the honour it had done him in asking him to place this wreath on Pinel's bust. It gave him very much pleasure to do so in the presence of their French friends, Prof. Colin, of Paris, and Prof. Cruchet, of Bordeaux. That was not only symptomatic of what France did in this great work, but it was also pleasant to remember it as a token of the ancient and still existing friendship between the two countries.

Dr. HENRI COLIN said: Mr. Chairman, Sir Arthur Rose, Ladies and Gentlemen,— I can hardly find words in which to express our gratitude for the magnificent homage which you have rendered, and still continue to render, to the great Frenchman, Philippe Pinel. The greetings you sent us when we commemorated the Centenary of the death of the great alienist will be precious kept by us, and, moreover, we intend to have them reproduced in a book, which will be an everlasting souvenir of our mutual friendship.

Pinel's reform had a world-wide effect, and its influence in Great Britain was immense, so that Morel could write, after his travels in England in 1858, that the British were the first to profit by Pinel's ideas. And it is true that Great Britain immediately took the first place in the humane care and treatment of the mentally afflicted with Tuke, Charlesworth, Gardiner Hill and Conolly, so that the splendid asylums of England and Scotland have ever been a pilgrimage which must be accomplished by foreigners and others who may be concerned with the treatment of mental diseases.

I see before me the staff nurses of this old and world-famous hospital, which brings to mind another aspect of the Pinel Centenary, namely, the rendering of a well-merited homage to Pinel's lay assistant, whose name was Pussin, and whose name is inseparable from that of Pinel. Pussin, who was the chief assistant at Bicêtre, knew the patients he had to care for, and Pinel did nothing without taking his advice. I will only recall the story of a famous patient, an English captain, a sort of giant, with tremendous strength, who was fettered in Bicêtre for several years, as was Lieut. Norris in Bethlem. Pinel asked Pussin if he could be unfettered, and the chief assistant said he thought it was possible, and to read the account of the patient who was at last free from his bonds is impressive.

What was the result of Pinel's reform? Before him, as Kraepelin recalls in one of his books, attendants in asylums were forces more than individuals. They were ill-paid, and were allowed to exhibit the patients to visitors for a few pence. In some places they had dogs and carried big sticks during their visit. They were common, coarse, and unsavoury people. After Pinel's reform there was a total change.

Pinel always consulted his staff when something had to be done, and I believe we all do the same. That is what I have done during the past forty years. But in order to give proper answers the staff must be trained and educated. I believe the rôle of a good asylum nurse is more difficult to fill than that of the ordinary hospital nurse. Not only must a trained mental nurse observe the delusions and deliria of the patients, she must also be on the look-out for the occurrence of various physical diseases, as many patients never complain when they suffer. This is one reason why we train and educate our nurses. I have often heard it said that there was a danger of making pseudo-doctors of them, but there is no danger of that. What we require in our nurses are active and intelligent

collaboration, of the type of Pussin, and for this special education and practical training are necessary.

Now, in the address concerning Pinel by the Royal College of Physicians of Edinburgh, it is recalled that ancient bonds of friendship existed between Scotland and France. I will add that these bonds are ever being strengthened, and that whenever the merits of some of my illustrious countrymen are to be recalled, the Scotch are first in the field. For instance, it was my friend Prof. Robertson who was the first to suggest that the Centenary of the discovery of general paralysis in 1822 should be commemorated, as well as the name of Bayle. In Paris, Pinel's statue was only planned in 1877, and erected in 1886, sixty years after the death of Pinel, but we see that here in Morningside his bust was put on the then main arch of the Hospital in 1838.

The PRESIDENT of the Association said that no one could form a clearer idea of the condition of the insane in the closing years of the eighteenth century than was to be found in the following lines of one of the mad songs given in Disraeli's *Curiosities of Literature* :

" In the lovely lofts of Bedlam
 'Mid stubble soft and dainty,
 Brave bracelets strong,
 Sweet whips ding-dong,
 And a wholesome hunger plenty."

France, at that time, was suffering from the aftermath of the Revolution, and the social conditions in Britain were not much better, when Pinel, in France, and Tuke, of York, simultaneously broke the bonds of the insane. In the celebrations of the Centenary of the death of Pinel, which were held recently in Paris, of which he was himself one of the spectators, several things struck his imagination forcibly. One was that, like Lister, Pinel was appalled and horrified by the devastating effects of sepsis, but it was a mental and moral sepsis. As a member of the National Guard which witnessed the execution of Louis XVI, as one who saw all the horrors of that terrible revolution, Pinel's sympathies went out to all who were in sorrow and distress. One incident in the life of Pinel greatly interested the speaker. Pinel, in going his rounds in the Bicêtre, was struck by the miserable situation of a huge man, a perfect giant, bound hand and foot with chains. Because of his strength he had on several occasions broken the chains which anchored him to a slab of stone. I would like to quote to you exactly what Pinel said to him. He said: "Listen, my friend. To prove that I have confidence in thee, and that I regard thee as a man made for good, help me to free those unfortunates who have not their reason like thyself. And if thou conduct thyself as I have reason to hope thou wilt, I shall take thee into my service, and thou wilt never leave it." The effect of that was wonderful; the giant, free from his chains, became the devoted and obedient servant of Pinel. And so Pinel scattered the seeds of humane kindness in the treatment of the insane and a new and better era dawned for them. From this lowly but strong foundation had been built such a munificent institution as this hospital, at whose head was Prof. Robertson, a true follower of Pinel, where he was encouraged and aided to the fullest extent by a body of citizens, not a few of whom were excellent business men. He referred especially to Mr. Cockburn, the Chairman. The institution could have no better head than that gentleman from a business point of view in the guidance of those more mundane affairs to which Prof. Robertson could not devote more than a part of his time.

He had much pleasure in proposing that a vote of thanks be given to the Managers of the Royal Hospital and Prof. Robertson, the Physician-Superintendent, for the opportunity thus afforded them of paying a tribute to the memory of Pinel.

This was carried by acclamation.

The CHAIRMAN briefly acknowledged this courtesy, and the proceedings terminated.

In the Chemistry Theatre at the University New Buildings.

(Conjointly with the Section of Mental Diseases of the British Medical Association Meeting.)

The PRESIDENT of the Royal Medico-Psychological Association in the Chair.

DISCUSSION ON "POINTS IN THE REPORT OF THE ROYAL COMMISSION ON LUNACY AND MENTAL DISORDER (ENGLAND AND WALES)" (pp. 50-60).

The PRESIDENT said the issue of the Report of the Royal Commission on Lunacy and Mental Disorder came at a psychological moment in the history of the treatment of mental disease, and the section of the Report which had been chosen for this discussion dealt with problems of the greatest importance not only to psychiatry, but to the practice of medicine generally. He pointed out that psychiatry as a branch of medical science, from his own personal experience as a specialist in nervous and mental diseases to the Forces in the Mediterranean, was tardily recognized during the war, but its great importance had finally to be conceded. Generally speaking it had not been accorded the same status as public health, for the practice of which a special qualification was a *sine quâ non*. His Association had for many years held that the same conditions should apply to the practice of psychiatry. If this came about it would contribute towards the solution of the problems they had before them for discussion that day. He laid down the time allowances for speakers, to ensure as many expressions of view as possible.

He called upon Prof. Robertson to open the discussion (*vide* p. 534).

Dr. E. MAPOTHER said he regarded the Report of the Royal Commission as profoundly disappointing. He thought it was, to an extraordinary extent, devoted to the prevention of non-existent abuses in a rather inconsistent way. The general principles which it laid down and to which it paid tribute were not always promoted by its concrete recommendations. He thought it had especially gone wrong by focussing attention on procedure. For his own part, the speaker was not largely concerned with the treatment of the unwilling case. He felt strongly that the public were more concerned as to where and how they were treated than under what procedure they were treated. He even thought there would be much less difficulty than was generally thought in having voluntary boarders admitted into county mental hospitals.

The Royal Commission left him rather doubtful about the prospect of improvement in treatment. There were very many suggestions for the generalization of benefits which existed somewhere, and that they should exist everywhere. And there was much with which everybody agreed, from the improvement of pre-graduate and post-graduate medical education to such things as an adequate supply of toilet-paper. (Laughter.)

Many of the recommendations were matters within the routine province of the Board of Control. It was in respect of constructive proposals, in which some imagination was needed, that the Commission seemed to have gone wrong. Prof. Robertson had spoken of the clear-cut distinction between the voluntary and the involuntary case, but he, the speaker, denied that it was clear-cut. He believed Prof. Robertson said he hoped nobody would object to it, but the speaker objected to it intensely. He thought the worst feature of the Commission's Report was the ignoring of the non-volitional case. (General assent.)

Of profound importance was this third class; it included many of the recoverable cases, and precisely those which should, in his opinion, have an opportunity of treatment elsewhere than in a chronic mental hospital, and under different procedure—a procedure which should not involve any kind of intervention by a justice. The Royal Commission Report not only failed to increase the opportunities of treatment of such cases, it would positively restrict them. In the one institution at the present time which was treating voluntary cases in England extensively and nothing else (the Maudsley Hospital), it was assumed that if a patient had voluntarily placed himself under control and he subsequently became not unwilling, but in a state in which he was incapable of expressing his opinion, the consent for treatment which he gave or ginally still held. But the Royal

Commission laid it down that within one month the procedure essential for certification must be gone through, *i.e.*, he had to be put under a Provisional Order. What was this Provisional Order except a certificate? (Applause.)

In what way did the Provisional Order, except in name, differ from a certificate? The patient must be seen by a magistrate within seven days, again at the end of a month, and if he had not recovered or become a voluntary patient, again at the end of six months. On that Order the patient was committed to an asylum for further treatment. What was required was a method of treating the non-volitional case outside the asylum temporarily by procedure which was definitely distinguishable from a certificate, and which did not involve the intervention of a magistrate. The proposed Provisional Order seemed to be entirely indistinguishable from a certificate, except that the magistrate saw the patient three times, instead of once.

One of the objectionable things about the Provisional Order was the following: The patient *must* be seen by a magistrate—it was not merely that he *might* be so seen—and the magistrate had to see him within seven days. The doctor should not have to wait, perhaps, seven days to get his patient seen by a magistrate. It seemed to the speaker that that was going to drive most of them to the use of the Emergency Order, which remained unaltered except that it would apply also to pauper cases. That was a fairly serious thing, because he felt that the doctor's responsibility when he supported an Emergency Order was a different responsibility from that he incurred when he signed a certificate supporting a Magistrate's Order. He was in favour of having a special certifying medical man for the certificates needed for the Provisional Order. That was a suggestion, and not a definite recommendation in the Royal Commission's Report.

There was the dreadful recommendation that when the Provisional Order had to be followed by a definite Reception Order the patient had the right to claim the attendance of any one person chosen by himself, and that the justice could be assisted by his clerk, and the justice might call upon the medical man to justify his certificate, etc. It meant the institution of a trial before the patient could be committed to a mental hospital—a trial in which the patient could be represented by counsel, while the medical man could not. (Applause.)

Dr. T. B. HYSLOP said it was with extreme pleasure that he found himself at that University after a lapse of forty years. He had appreciated enormously the paper read by Prof. Robertson, for he had put before his audience many matters in a temperate yet strong manner. (Applause.)

With regard to the medical aspects of the question, there were many important considerations. As medical men, their first duty was to the patients, then to the community, and lastly to themselves. In dealing with mental cases one had always to realize that in depriving a person of liberty the doctor was taking away all social, civil and economic rights, and, in addition, putting a label round the person's neck which would last him throughout his life, and would stigmatize the family "to the third and fourth generation." There were many families going about with heads bowed down with invisible albatrosses round their necks because of the knowledge that one of their number had been certified, and they are afraid lest the same thing should happen to them. That anticipation went more than half-way to realization in themselves. He stressed this because we wanted to ask whether it was always a family taint, or was it a taint of insanity itself? In the majority of cases he would say "No" to the latter. When one took the bodily conditions it must be admitted that the label of insanity was applied to cases of faults in the endocrines and conditions due to toxæmia, etc., when they should really be called medical cases with a few mental symptoms. This was an important difference. Without wishing to boast, he could say that he had removed many albatrosses from the necks of many families by pointing out that immense difference. Certification did the deed. He held that in mental cases due to bodily conditions the medical man should be given a sporting chance of relieving these patients of their physical disabilities, and should not be compelled to label them as insane. Hence the profession welcomed the report of the Royal Commission, as it enhanced the idea of early curative measures. He believed that if certification, in its present form, could be abolished, an immense amount of good would be done to the community; it would be raised in its self-respect, and tend to get rid of this anticipation of the albatrosses of which he had spoken. In addition, it would lessen the number of those who were certified as being of unsound mind. He thought that the Report, in addition to pouring oil

on troubled waters, would help as a means of lightening the enormous burden of lunacy which the British race had undertaken.

With regard to the judicial authority, he was of the belief, as were most of those present, that insanity was essentially a medical matter. It was anticipated when the Lunacy Act of 1890 was passed that some of the responsibility would be shared by the legal profession; but not so; the whole of the burden still rested on the medical profession. He remembered, at Bethlem, an aged magistrate who came to see a patient: "I know nothing about it," he said. The speaker replied to him, "It is your duty to examine the patient." He said, "This is simply awful." He spoke to the patient, a lady, and said, "Madam, have you any delusions?" She replied, "You silly fool. If I knew I had delusions they would no longer be delusions. Good morning." (Laughter.) Whether the judicial authority was wiser now he was unable to say. If there were judicial authorities who had a knowledge of the subject it would be another matter.

With regard to medical men and their knowledge of mental diseases, his experience was that there were qualitative and quantitative differences, the second not being so evident as the first. In regard to qualitative differences he was speaking of specialization. It was not to be expected that the general practitioner would have knowledge on special subjects in every direction. Therefore on this question he thought that the general practitioners' position should be made stronger by the help of those who had had more individual experience in regard to the insane. How to bring this about was another matter. It was open to County Councils and various local authorities to appoint these men who had a knowledge of the subject as certifying officers.

Dr. W. F. MENZIES said he was under the same disadvantage as Dr. Mapother. Until he entered the room he had no intention of speaking to-day. He intended to limit his remarks to one or two points concerning his own experience.

He spoke, not as a member of the deputation of the Royal Medico-Psychological Association, which gave evidence before the Royal Commission, but as an individual, and he desired to direct attention for a few minutes on the Provisional Treatment Order and its sequelæ.

As Dr. Mapother had already said, three interviews with a justice might be necessary before a patient was certified, the last one with the justice's clerk and family practitioner present. The latter, poor man, was perhaps in the middle of his round and was hailed away maybe a distance of twenty miles, to give up half a day, or a whole day, to the question as to whether a mental patient under a provisional order should be certified or not. He was not sure whether the Government intended to bring in an Amended Mental Treatment Bill, or an Amended Lunacy Bill. He had always been sceptical about the attempts of all politicians. He thought the Association should stick to its views about the non-volitional case, as that formed the crux of the whole situation. No one would object very much to the chronic paranoiac being dealt with the utmost severity of the law, and not even a lawyer or a crank would interfere with the volition of the voluntary patient.

As regards the non-volitional case, there would be no advantage gained by opposing the Royal Commission's recommendations absolutely, but it must be recognized that if the justice and medical man had to see the patient three times an impossible situation would be created, no justice could be found to act and no medical man to certify. He thought an attempt should be made to get an amendment, which provided that the committees of visitors of county and borough mental hospitals, and the boards of management of private mental institutions, clinics, etc., should be appointed *ad hoc* the judicial authorities under the Act. The result would be that at the weekly or monthly visit of the committee or board the second medical certificate, *i.e.*, that of the medical officer of the hospital, would be ready, and the order would be signed, without trouble or publicity, or calling in any special justices from the outside. The committee or board would see or not see the patient just as it was deemed necessary. He thought that people generally were not apprehensive of improper detention, and that the whole of the agitation had been fomented by a noisy minority, many of them unrecovered patients. (Applause.)

Dr. J. S. RISIEN RUSSELL said he had listened with the greatest possible interest to the address with which Prof. Robertson opened this discussion. Had the profession in England enjoyed the privileges Scotland possessed on this matter, he,

the speaker, would have been content. He had long contended that the laws of England and Wales ought to be altered in order to allow doctors to treat patients affected mentally for at least a year without any interference by the law, and he had always held that certification ought to be the last resort.

As the law now stood in these countries, one was constantly hampered in the treatment of these patients because of the ever-present fear of coming into conflict with it. He found that the general practitioner was even more perplexed.

Two distinct issues were engaging the attention of the profession and of the public. The first was as to whether the doctor should have the whole say in the matter of certification in the case of a person supposed to be of unsound mind, without legal intervention. The second was whether the doctor who certified a person as of unsound mind should be regarded as immune against the possibility of a civil action being brought against him for damages in a court of law for alleged wrongful certification. When the question was merely one relating to the treatment of a patient, the medical profession was well within its rights in claiming to be the proper judges of what was required. But when it became a question of depriving an individual of his civil rights, the matter passed out of the sole province of medicine and became a legal one. Doctors were fully justified in claiming protection against civil actions for damages in respect of alleged wrongful certification, but they could only reasonably hope to secure this protection if they were prepared to accept the interposition of a legal authority, on whom the whole responsibility must fall. Moreover, if the medical man was to expect the protection he claimed, it seemed a reasonable proposition that he must be prepared, in conformity with all other instances in which he was called upon to give evidence, to do so on oath.

Even in so comparatively unimportant a matter as the saying whether a man was drunk or sober, a doctor's certificate was not enough, and such a certificate would not be accepted in lieu of his—the doctor—appearing in the witness-box to give his evidence on oath. How much more, then, should this be required in a case in which the decision carried such grave consequences? It was necessary to remember that a lasting damage was inflicted, and it was one which might have far-reaching consequences; for instance, as to other members of the family in regard to their status in general, questions as to marriage, life assurance, and a variety of matters which closely affected their success in life.

The suggestion that there should be the interposition of a representative of the law, and that he should be compelled in all instances to personally see and examine the person supposed to be of unsound mind, did not carry with it the least need for any publicity, for the person in question need not appear in open court.

It had been suggested that it might be an advantage for the legal representative in those cases to be a man who had been trained in both medicine and law, and that probably there were a sufficient number of barristers with medical training who could possibly be secured to fill these posts. The idea seemed a reasonable one, but it had since been pointed out to him that this would leave the matter "too medical"; that what was wanted was that the question should be viewed from different standpoints, hence the importance of having a justice, a man who had had no medical training. The "welfare" of a patient might be a purely medical question, but his safety or the safety of the public was a matter for laymen.

Important recommendations by the Royal Commission in regard to such enquiries were: That the judicial authority should always actually see the patient, and that the person whose case was being investigated was at liberty to have a friend present, and that the justice should be called upon, further, to exercise what was termed a directed discretion, which the speaker understood to mean that he must consider and state his decision on the face of his order as to whether the allegations on which the person was regarded as insane were proved, whether he had seen the doctor, and whether the patient should be told of the allegations against him.

To Dr. Russell's mind the most important recommendation of the Commission in the interest of the patient was that which, if adopted, would allow of treatment without certification having to be resorted to for at least a month, possibly six months. That was a matter he had contended for many years, and which he earnestly hoped he would yet see fulfilled in England and Wales, those in Scotland apparently having already what was wanted in this direction.

How the Urgency Order was in many instances abused and made use of as a

convenience, instead of being strictly reserved for cases of real urgency, had been so strongly brought out by evidence before the Commission that there was every justification for the interposition of a magistrate before the person was sent to an asylum, even in the case of an Urgency Order. (Dissent.)

The medical profession should welcome anything which would offer the public a sense of security in these matters, so long as what was suggested did not conflict in the opinion of the doctor with what was necessary for the good of the patient. Hence no reasonable safeguard should be rejected by the profession. That one of the two medical certificates should be supplied by the doctor who possessed special knowledge of mental diseases seemed to the speaker to be reasonable in the highest degree. If found practicable, what possible objection could there be to having doctors specially appointed under the Act to fulfil this function? The object of the profession ought to be to suggest a way out of the present difficulties. In this, three objects should be kept in view, namely, what was best for the patient, what was acceptable to the public, in conformity with the law, and what would give full protection to the doctor. This was preferable to having something unacceptable to the profession forced upon it by law.

His own suggestions for meeting these three requirements were as follows :

That there should always be two doctors supplying the evidence, except in the very rare event of a case being of such urgency as to make this impracticable, and that one of those medical men should have special knowledge of mental diseases.

That the judicial authority should, in every case, see and examine the person who was supposed to be of unsound mind, and also the doctors.

That in order to secure protection against civil actions, the doctors should give their evidence on oath, and be subject to cross-examination, in the same way as was any other witness. (Dissent.)

But what the speaker regarded as of paramount importance was that doctors should be allowed to treat patients mentally affected without certification and away from asylums for six months at least, and, if possible, twelve months.

The PRESIDENT said the meeting was highly honoured by the presence of Sir Robert Philip, the President of the British Medical Association, and who had just then entered. (Loud applause.) Not only was Sir Robert a great physician, but a great man of affairs in other directions, and everywhere his name was held in the highest respect.

Dr. DONALD ROSS said he was offering some remarks on this subject with considerable diffidence. But it did one good to know what was going on in other countries.

In Switzerland, in the Canton du Valais, there was a small hospital where things were done with an admirable simplicity. The hospital was the *Maison de Santé de Malévoz*. Dr. Repond, the medical superintendent, said to the speaker, "Thanks be to Heaven, we have no lunacy laws, no inspectors, no boards of control." (Loud laughter.) Still, those who practised in Scotland knew that the Board of Control were the doctors' real friends and *confrères*. (Applause.) In Valais there was a very simple and workable code of rules drawn up by a former superintendent in collaboration with one of the members of the Cantonal Legislative Council. The admission and discharge of a patient were governed by the superintendent's opinion as to the suitability of the case; if that functionary thought a patient was fit to be admitted he was admitted; if he thought the patient was fit to leave, he went away. Relatives, however, were not always willing to receive a patient back until he had recovered, and in such a case his further detention for a period meant that the relatives had to pay a much higher rate for his board—a course which was usually quite effective. Dr. Repond said that every law for the insane acted against the interests of the insane, and those in the practice of the specialty knew that a good deal of truth underlay the words.

Dr. Risien Russell had spoken of the desirability of having medical men with experience of psychiatry to deal with these patients. One of the speaker's recovered patients—from whom he had learned much—always maintained that two medical certificates ought to be obligatory, the second certificate being signed by somebody who had a knowledge of psychiatry, the first being signed by the family physician. That man considered that nowhere would such an expert be found outside a mental hospital, as no others had had the proper experience for the task.

In conclusion he said he would like to quote one definition of insanity he heard in the course of a conversation. He was discussing with a medical friend the difference between sanity and insanity, and his friend said, "The law has provided us with a clear-cut dividing line: the sane are those who have not yet been certified." (Laughter.)

The EARL RUSSELL, who was heartily welcomed, said that the Commission had the advantage of evidence from Prof. Robertson, which much impressed them. They also much admired the system which that speaker was able to administer. He, Lord Russell, did not wish his audience to think, from anything he might say, that he at all undervalued the doctors' evidence and the medical point of view. But he did wish, at the outset, to make this perfectly clear: that when one was dealing with legislation and with amendments to the law, it was of no use to discuss the matter solely from the medical aspect. That was somewhat overlooked in Prof. Robertson's paper, because he did not know the difficulties which were suffered from in England; it was also overlooked in some of the other speeches he had heard. The attitude of the public must not be disregarded. The Royal Commissioners had to bear that in mind. There were members on that Commission who represented, and felt to some extent, what he might call the anti-medical view. Whether it was still the effect of Charles Read's book he did not know, but there existed, in England among the great mass of the population, a certain amount of suspicion of doctors in connection with cases of insanity; and legislation could not be got through unless that attitude was recognized and allowed for. Those concerned with legislation had to remember not only the medical aspect—with which he was himself in entire sympathy—but the attitude of the House of Commons and what legislation could be got through that representative Assembly. That represented not only the intelligence, but also the stupidity and the prejudices of the nation. (Applause.) He took some exception to Dr. Menzies' description of those who were opposed to the medical view as consisting entirely of lawyers and cranks. Dr. Menzies should add a much larger, and, from the point of view of legislation, a much more important class, namely, the vast class of uninformed and uneducated public opinion.

Their duty on the Royal Commission was not to consider merely the procedure for certification, important though that was, but also to consider the happiness and well-being of that very large body of patients who spent years and years under institutional treatment. And in that respect they had to have regard both to their complaints and their feelings, especially in such matters as their opportunity of sending out reasonable letters to their friends, and in comparative privacy, *i.e.*, letters which were looked at only by the medical superintendent, not by the nurse of the ward. One of the first remarks he heard from Dr. Mapother was on the matter of toilet-paper. If any of his hearers found themselves in a strange hotel, at a critical moment, without toilet-paper, they would probably not regard the omission as a trifle. Evidence of that sort of neglect came before the Commission. And in the matter of bathing arrangements it was felt that in some cases the patients were treated in rather a brutal and inhuman manner, and the Commissioners considered it was their duty to deal with that.

When he came to certification he was approaching an extraordinarily difficult question. Many of his colleagues would have been perfectly satisfied with the opinion of two medical men, if not, indeed, in some cases with the opinion of one medical man. But they had to consider, as his hearers would have to consider if they were going to make a useful contribution to legislation, the prejudices of the public. The point of view of the public was that the medical man was one who was only too ready to certify, and without reason. Those at this meeting knew that the doctor was honest, that his one object was the treatment and benefit of his patient. This was not recognized by the general public, and they desired the intervention of some such person as a magistrate, or some judicial authority, to represent what was termed the liberty of the subject, and to prevent a man being wrongfully put away. If the judicial authority could be dispensed with, no doubt matters would go on very well. For his own part he looked upon the real safeguard for patients in England as the Board of Control, and not the judicial authority. (Applause.) The Board of Control consisted of well-informed people, with ample powers and ample opportunities of inspection. They were of much more use than any judicial authority. (Applause.)

A word about the suggestion of Dr. Menzies that members of a Visiting

Committee should be appointed members of the judicial authority. That would be absolutely fatal, because it would mean at once adding to the suspicion already entertained by patients' friends and by the general public. They would say, "These are all in the same gang." What was required was somebody from outside who was independent. And the Royal Commission did make a recommendation in regard to our judicial authorities to which the speaker attached great importance. It was that they should be persons, more competent than the justice who put the wrong construction on things, or who merely put his head into the taxicab in which the patient was seated.

Dr. Risien Russell had suggested that the justice for this purpose should be a person with medical knowledge. He, Lord Russell, thought that was entirely undesirable. (Applause.) It was not the province of a justice to form a medical opinion; he had to consider the medical opinions, and he must consider them judicially. It was not for such a justice to say, from an imperfect medical diagnosis of his own, whether a patient was sane or not. All he had to be concerned with was whether the matter had been proceeded with properly, and was it in order?

With regard to the discretion of the justice, it did not mean what Dr. Risien Russell said. It meant that he should not be left at large to perform his duties in a slovenly manner. That was what the Commission meant by it.

His lordship had also heard, in the discussion, objections to a public trial. There were the greatest objections to a public trial, or anything resembling a private trial, in the forensic sense. (Applause.) But there were the strongest representations by those who claimed to speak on behalf of ex-patients that they desired, at some stage, to state their case. It was well known that the paranoiac would state his case volubly, and he would not help one. But the Commissioners felt there were occasions on which the patient should be given an opportunity to state his case. The less that procedure took the form of anything like a trial, the better. Almost every member of the Royal Commission would agree on that.

With regard to the question of the voluntary patient, it had been suggested—and he gathered it met with the approval of his audience—that the treatment of a man as a voluntary patient should be continued when he had no volition at all. (Applause.) It was a very difficult question. He was inclined to think—it might be a lawyer's point of view—that when a man was said to be doing a thing voluntarily one should mean what one said. A man could not be doing it voluntarily if he did not know he was doing it. If the voluntary patient question was to be a success it was necessary, above all things, to avoid frightening the public into thinking that a voluntary patient might really be an involuntary patient. If that were so, it would destroy the value of the voluntary system. It was true that a voluntary patient would have moments of rebellion in which he would declare that he would not stand it any longer—that he would leave. It was to deal with such moments that the 72 hours' delay was suggested. It was hoped that in that period of 72 hours the patient would come to a better mind, or it might be decided that the patient should be certified. But if voluntary patients were treated involuntarily, public confidence would be shaken.

He would be glad, personally, if public opinion in general, in England, would allow much greater freedom in the treatment of the insane; he considered it would be to the advantage of the insane themselves. But public prejudice in the matter had to be considered. He agreed that there was no chance of new legislation on the subject this year nor perhaps next year. But the prejudices he had spoken of must be recognized. Attempts at improvement must first be made by not claiming control by the medical profession alone, for to make such a claim would not be very helpful.

Then there was the question of the Urgency Order. One speaker had suggested that a justice should always intervene before the patient's removal to an asylum. But one could not always wait for the justice before restraint had to be carried out; there were cases in which the patient had to be put under control instantly, before either a justice or a doctor could be procured. In such instances control was effected on the initiative of the relieving officer or the policeman. The liberty of the subject was maintained by requiring that doctor or justice must see the patient in three days. If the Emergency Order to which Dr. Risien Russell alluded referred to a private patient, in which he was signed up by one doctor and taken to an asylum, where he was seen by a second doctor, his lordship was of opinion

that the Emergency Order was often employed in cases in which it was not necessary, there being sufficient time to carry out the ordinary procedure. If this Order was abused it might result in it being withdrawn and not available for cases in which it really was required.

He had only intervened to impress on this audience that when discussing the matter they should not consider merely the view-point of the doctor, and that when considering the possibility of legislation the attitude of the public which was not yet educated up to the professional standard in these matters must be considered. (Loud applause.)

Sir DAVID DRUMMOND said that Lord Russell had so fully and admirably expressed his, the speaker's, views on the matter that he would only make two remarks, and say what pleasure it had given him that this Association had received so well the Report of the Royal Commission, and that personally he was very sorry the Royal Commission were unable to safeguard the certifying practitioner more than they had done.

Sir FREDERICK WILLIS, *K.B.E., C.B.*, said he understood Dr. Menzies to doubt whether any legislation was in view concerning lunacy. He, the speaker, knew that the Government were considering what legislation they should propose, and Mr. Neville Chamberlain, Minister of Health, was very anxious, during his term of office, to have a new Lunacy Act passed. In view of that fact the speaker particularly welcomed this discussion. It was one of his duties as Chairman of the Board to submit a memorandum to the Minister saying what he thought should be done, and it was a great help to him and to his colleague, who was also present, Dr. C. Hubert Bond, to have heard the various views which gentlemen had expressed. As Lord Russell had just said, politicians in these matters were largely governed by public opinion. Mr. Neville Chamberlain might hesitate to do what he considered was best if he thought it seemed impracticable, and not likely to be carried. In lunacy matters the public were still very superstitious, and in some respects we had not yet got away from the view of lunacy which was generally held a hundred years ago.

He, personally, was extremely anxious to avoid all formalities in the treatment of the insane as far as that was possible. But, though he thought legal formalities deterred numbers of people from getting treatment, yet there was something more, *i.e.*, they dreaded to recognize that there was anything at all wrong with them. They were possessed by the idea that insanity was—as it was—a dreadful thing, and that, once they started to consult doctors for a mental illness, they would be looked upon as people who should be locked up for the rest of their lives.

The Royal Commission divided patients into two classes—the involuntary, the voluntary. In regard to the voluntary patients, there was nothing more to be said; the Commission had recommended what most of his colleagues had recommended—that there should be complete freedom. They at the Board of Control put to the Royal Commission the view that patients should be divided into three classes—voluntary, non-volitional and unwilling; and they suggested that in the case which had no volition, one was not taking away that patient's liberty by giving him treatment. They tried to get the Commission to accept the view that in such a case the patient might get treatment without any intervention by a justice. Their basic ground for proposing that was that everybody was satisfied that people did not seek treatment early enough. Under the English Lunacy Acts the rate-aided case could not get treatment at all at the public expense until he had been certified. In the public asylums a case could not be taken in until it had been certified. But there was an earlier stage than that, in which the patient needed treatment, and one of the features of a new Lunacy Bill would be to give to public authorities freedom to treat early mental cases as out-patients, and, if they were voluntary, as in-patients, without a justice being brought into the matter at all. He much regretted that the Royal Commissioners did not take their courage in both hands and recommend what he was sure many of them thought should be allowed for the involuntary cases. The Report said that some witnesses, whose views were entitled to the most careful consideration, had urged that in dealing with incipient insanity admission should be carried out without the intervention of a magistrate, and they went on to say that if they were free to consider exclusively the medical treatment of the patient, they would have no hesitation in accepting this suggestion. The speaker regretted they had not, because he thought the Royal Commission could have done much to educate

the public in that matter. If, instead, the Commission had gone on to say, "It was the right thing to do," that would have helped the politicians. Many people would now be saying the Royal Commission thought of it, but turned it down. It was for the Royal Commission, he contended, after they had stated what they thought was right, to recommend accordingly. (Applause.)

He agreed that it was very difficult for any medical man to say that a patient was very likely to recover, and he, the speaker, thought that early treatment without certification should be given, because it was a desirable thing to do. In the view of the Board adequate safeguards could be secured without a justice.

The Board of Control recommended, in regard to these involuntary cases, that they should only enter institutions or homes which the Board had approved as suitable for giving the required treatment. The Board also asked that they should be immediately informed of the reception of those cases, and should have the right to visit as they thought necessary. He regarded those safeguards as adequate—more adequate than the present arrangement, because, having seen much work of the justices in connection with this matter, he thought that, in many cases, their intervention was no safeguard at all. (Applause.)

Another point was that if the safeguards were adequate, he did not see why the treatment of these cases need necessarily be limited to six months, as the Royal Commission recommended. Many of the cases required treatment for eighteen months, and if one was satisfied that there was no abuse, why not let them remain under those conditions? He did not know why any time-limit was needed. (Applause.)

There was another point which was exercising those at the Board in connection with the drafting of new legislation, namely, what further protection should be given to the doctors. He had been much distressed by some of the cases which had come before the Courts in recent years. He could not help thinking that the jury, in England at least, was an unsuitable tribunal for testing cases of this sort. (Applause.) He did not know how it worked in Scotland. There was a notorious case in which, after the lapse of twelve years, a trial took place which lasted three weeks. And all through that case it was obvious that the jury were in great sympathy with the patient—they were always against the doctor in these cases—and they were satisfied that twelve years ago this man was not insane. That seemed to him absurd. (Applause.) He hoped there would be forthcoming some practical suggestions in regard to that. It might be that the power should be taken away from British juries to decide such matters. If such cases were left to the judges, much greater justice would be done. Expert evidence had been called, and it was distressing to see the sort of evidence which one doctor gave against another. If the Royal Medico-Psychological Association and the British Medical Association could make useful suggestions on that point, they would be welcomed by the Board. He did not know whether it would not be well to say that such a case should not proceed unless the General Medical Council gave its sanction, but something of the kind was necessary.

On the question whether there should be two certificates, or one, there was a financial point behind that. Prof. Robertson asked what it would cost, and seemed rather to scorn considerations of cost in such a matter. It would cost £20,000 a year more in England if in these cases two certificates were demanded instead of one. That was a sum which politicians would look at, especially as under the one-certificate system the Royal Commission had found that no case was wrongly detained. So the Commission had no ground for recommending it, except that of satisfying the public sentiment in the matter.

He came to the meeting to listen to other people rather than to speak himself, but he was glad to have had the opportunity of saying these few words. It was extremely important that every effort should be made to break down superstition in regard to mental illness; it was a rock on which the ship foundered every time. People would not recognize that it was like any other illness, especially in its early stages. It was for that very important reason that he wanted to see swept away every barrier which could reasonably be removed in order to ensure the prompt treatment of mental illness. (Loud applause.)

Sir ARTHUR ROSE said he had little expectation of being asked to speak to-day, because, like Sir Frederick Willis, he came to learn, and he had learned a lot. He confessed himself a whole-hearted admirer of the findings of the Royal Commission.

His special reason was that he looked upon it as a very valuable strategical contribution to this great subject, in which all were interested. He was impressed during the long and happy day he, with Dr. Marr, had spent before the Commission, by the nature of some of the questions put. They thought there might easily be a marked divergence of opinion on that Report, and he was immensely relieved, though somewhat surprised, to find that the Report of the Commission was a unanimous one. The reason for that unanimity he conceived to be that it went as far as it thought it was likely the public would go. If the more progressive view had been stressed, as probably Lord Russell and Sir David Drummond and Mr. Macmillan would have done, there would have been serious risk of a minority report, possibly a somewhat virulent one, and that would have done much to retard any progressive legislation which it was hoped shortly to see. He would add his request to the Association's that any legislation forthcoming from the Report would be considered sympathetically. He, the speaker, did so to a certain extent with a selfish object in view. In Scotland a certain amount of amending legislation was required, and while he saw no possible chance of Scotland successfully going forward in getting an Amending Act on its own, he was very hopeful that if a reasonably progressive measure were passed in England, Scotland would be able to follow—not necessarily adopting the same measure, but perhaps going a stage or two further than England.

Dr. C. O. HAWTHORNE said his title to speak on this matter was not that of an expert in lunacy administration, but he happened to have been appointed by the British Medical Association a member of a Committee elected to prepare a memorandum of evidence to submit to the Royal Commission on Lunacy, and, subsequently, to examine the Report of that Commission. What he had to say he was without any intimate personal experience of the carrying out of the provisions of the Lunacy Act. It was with considerable sympathy that he heard the speech which had just been made to the meeting by Earl Russell, who brought his hearers down from the somewhat academic level to the facts of the situation viewed in their broadest aspect. He, the speaker, had learned, in studying this subject under such circumstances as he had mentioned, that there were certain broad views which had to be considered in dealing with the situation.

The first of these was the unhappy interpretation which the public mind attached to the certification of the patient. It was an aspect of the subject which had to be most carefully considered. It had been said that notification to the Board of Control was a sufficient safeguard, but that Board arrived on the scene too late; the stigma was imparted by the certificate, even though that certificate might in two or three days be reported to have been unnecessary. The shadow hung over the patient when once he had been certified. Hence one could not get away from the seriousness of the step taken when a patient was certified. And the stigma would not be removed by calling the certificate a "recommendation."

The second consideration was the importance widely attached to the protection of the liberty of the subject.

The third consideration was the position of doctors in respect of lunacy certification. Here was an impracticable situation created, as could be illustrated in the reluctance, even determination, in many cases, not to sign, under present conditions, lunacy certificates. He heard of deeds of partnership between medical men in which one of the conditions was that neither partner should sign a lunacy certificate. It might be argued that that was a stupid and prejudiced view to take, but when it was claimed that sentiments which were widely held must be respected in practical legislation, he replied that here was a body of sentiment which must be similarly respected. The B.M.A. Committee presented to the Royal Commission a view of the situation in which the doctor would be completely protected, and they believed that it had been argued on a logical basis. What led them to that view was somewhat as follows: There were only two positions which could be logically defended when considering the doctor's relation to lunacy. It was defensible for doctors to take up this position: Mental disorder, like physical disorder, was a medical matter. Doctors alone were competent to judge when a mental disorder existed and how it should be dealt with. That was a position which could be argued, and one should try to educate the public to that position. The other position, which also was sound and logical, was that the State came in and said, "This was a form of medical diagnosis and treatment which invades the liberty of the subject, and we will not allow medical

treatment of that kind to be imposed until we are satisfied that such treatment is necessary." When the State had once said that, it was for the State and not for the doctors to say what was the legal machinery by which the State itself could be satisfied that this treatment was essential. The State might ask the doctor's advice, but it was for the State to accept the responsibility when it had once said that this was a matter in which medical treatment must not take its normal course unless the State was satisfied as to its necessity. When the State stepped in and said it now assumed authority, the State must, at the same time, recognize that it assumed responsibility. Doctors might be asked their advice and opinion upon the whole situation or about a particular case, but that was simply a contribution in the shape of evidence towards the solution of what had been made a legal issue. If that was the true position, then the doctor should have the same immunity enjoyed by any other witness. Dr. Risien Russell had urged that the doctor should give not only a certificate, but an opinion under oath. Why did he not do so now? Simply because the representative of the law did not call upon him to do so. Under the existing Lunacy Law it was competent for a justice to require that the evidence given before him should be on oath. The B.M.A. Committee said emphatically that when the State intervened and had erected machinery for the purpose of determining whether this treatment should be applied in any particular case it must accept its own decision, and must not allow the responsibility to be imposed in the shape of penal consequences upon the shoulders of the medical practitioner who had given to the State his honest opinion and advice. (Loud applause.)

Dr. C. HUBERT BOND said he would try and avoid touching on the points dealt with by Sir Frederick Willis, except just to say that it was pleasant to notice how warmly Sir Frederick's remarks had been endorsed by the meeting, a fact which would be an encouragement to those who worked at the Board.

But he would like to devote the few minutes allotted to him to a consideration of Prof. Robertson's attitude on the question. He, the speaker, would like to go a step back, specifically to the year 1884, when the Earl of Shaftesbury was still Chairman of the Lunacy Commission in England. In those days the Earl was mentally as alert as ever, and was devoting nearly the whole of his time and energies to the welfare of the insane. But he was in failing bodily health, and was, indeed, feeling the weight of his 85 years. Then, as was the case which led to the appointment of the Royal Commission whose Report was now being discussed, a section of the public might be said to have been suffering from what might be termed an anxiety neurosis in mass form, which manifested itself by a fear of wrongful detention for alleged mental disorder. As a result of that feeling, Lord Miltown carried a motion in the House of Lords for the institution of a Committee of Inquiry into the administration of the Lunacy Acts. It was not intended as an attack on the Lunacy Commissioners, any more than was the recent Royal Commission; but the great-hearted Earl was hurt to the quick. He knew and felt the complete integrity of his Department, and he felt that, to use his own words, "God had manifestly blessed the efforts of the Commission." He felt, as he wrote, that "he had everything else on his side except self-confidence in his own power to meet" what he felt to be a charge, and that "the defence would be perfect in any other hands." And he saw, in the drift of such an inquiry, and in the legislation which it was proposed should follow it, especially in the proposed intervention of a justice, again to use his own words, "the labour, the toils, the anxieties and the prayers of fifty years had been, in one moment, brought to nought." So far as the speaker knew the history of those days, Lord Shaftesbury had the support of each of his colleagues on the Commission, legal as well as medical, and all the leading psychological physicians; and the depth to which his emotions were stirred had its echo in the prayer which he was not ashamed to record in his diary: "Cast me not off in the time of old age; forsake me not, O Lord, when my strength faileth." No one could read or listen to a recital of that prayer without reverence and respect. To Lord Shaftesbury, though a layman, the proposals, especially the intervention of justices, were anathema, and he took the strong step of resigning the Chairmanship of the Board of Commissioners. This was in May, 1885; but in June, upon the Bill of 1885 being withdrawn, he was induced to withdraw his resignation. Death, however, withdrew him from the fight shortly afterwards. It was at least permissible to speculate whether, had he been spared, and with sufficient bodily powers to play his part in the fight

when it did come, the intervention of the justice would ever have come about. At any rate, inured as we were in a sense in England to the justice, the audience could not listen to Prof. Robertson's magnificent and virile appeal to their medical instincts without feeling a desire to pause and ask whether, even now, it was too late to relieve the justice of a task for which, he believed, the majority of them had no love, or even taste. It might be that if the uninformed part of the public—whose importance Lord Russell had emphasized—really knew this and other historic cognate facts, and would read Prof. Robertson's presentation of the medical needs and the medico-legal aspects, this might give a swing to the pendulum in the direction of the dictum, *Floreat res medicina*.

Sir Frederick Willis had touched upon some of the thoughts entertained by those in the office of the Board regarding early treatment and notification and inspection of early cases. He thought if he were to say a word on that it might be a satisfaction to some.

With regard to the inspection of early cases—cases who were voluntary patients, or those who, having no volition, were termed involuntary, and he was not referring to those in the institutions which are already visited by the Commissioners, but to those who under future legislation might be in approved nursing homes or private houses. As the Board viewed the matter, they believed that their task should be entirely medical, unless some legal point arose. And, further, that the Law should not impose upon the Board the duty invariably to visit these cases. They wanted a free hand. The Board, when the house and its standard of treatment was favourably known to them, might not often trouble them, but when they did, it would be by a visit from a medical Commissioner.

Dr. VERNON BRIGGS (Boston, Massachusetts) spoke as a deeply interested member of three different boards in America which were concerned with mental disease, and under three political administrations. He was now on the Advisory Committee of the State Commission of Mental Diseases. He had followed the discussion of this subject in the medical press of this country, and he hoped that England will advance further than the States have done.

As to certification, the plan there was that cases considered to be dangerous to themselves or to the public and needing care and treatment were certified by two medical men. But a man was allowed voluntarily to enter a hospital for treatment and remain there an indefinite time, so long as he did not become irresponsible. Magistrates had a right to see the patient, but they seldom exercised it. He only remembered one case in which a legal action was instituted by a patient against a physician. Some damages were awarded against the doctor, but the verdict was afterwards set aside on the ground that some of the evidence tendered was not legally admissible. At present, in the case of criminals who had been to jail before and criminals arraigned on a capital charge there was an examination, before the trial, of the prisoner by two alienists of standing appointed by the State Commission of Massachusetts on Mental Diseases. The clerk of the Criminal Court was bound to report the case to the Commissioners of Mental Diseases, and failure to do so was met with a fine. In the five years this had been in operation there had been only two cases for trial before the courts in which medical men appeared against each other in the witness-box, and in that way the status of the profession had been raised. He was hoping to learn something as to the treatment of the early mental case before he left this country. In his State the sum of £20,000 was set aside for clinics for early cases and examinations of accused persons. It was considered an economic expenditure, as the clinics would prevent many cases becoming a burden on the State.

Dr. C. A. MORTLOCK-BROWN (Braunton, N. Devon), who was desirous of speaking and was prevented by lack of time, handed in her remarks as follows:

As it is impossible to compress into the space of ten minutes all I wish to say, my remarks will be limited to (a) and (b) of the matter under discussion.

As to initial detention under certificates of the certifiable patient I am entirely against Prof. Robertson's recommendation of a "purely medical" procedure, and equally averse to the "judicial inquiry" suggested by the "National Society for Reform." I consider that, as to initial detention, the existing safeguards are, in the main, adequate, and merely offer the following comments on—

(1) The Urgency Order: (a) The title should be "Temporary Order," as the Chairman of the Royal Commission suggested to the British Medical Association's witnesses. (b) Time Limit: Should be strictly seven days. (c) Sequence: In

case of certifiable patients received into mental institutions, it should be followed as now by the "Reception Order on Petition," not by a "Provisional Order."

(2) Reception Order on Petition: (a) Presentation: It is not quite clear whether the Commission (Part III, s. vi (a), p. 159, and Part II, s. 108, p. 54) recommends any alteration in the wording of s. 5. I trust not, since it is the patient's first safeguard that none but a relative can petition unless cause is shown. (b) Medical certificates: These must at present be signed by doctors who have each examined the patient "separately from any other medical practitioner." Further, neither the petitioner nor his relative nor medical superintendents may certify. These provisions form the patient's second safeguard against collusion between unscrupulous doctors and unscrupulous laymen. Therefore I deprecate the Commission's recommendations that the two certifying doctors should be entitled "to consult together" and that medical superintendents of public institutions should certify. (c) Prognosis: I deprecate the recommendation (Part III, s. vi(a), p. 159) that a prognosis be submitted with the medical certificates. (d) Patient's property: Similarly I deprecate the recommendation that the petitioner's "Statement of Particulars" shall include "a disclosure of the patient's property."

As to wrongful detention at a later stage after the patient has recovered or is no longer certifiable, no real safeguards exist.

One medical man told me he had not adopted the line of refusing to certify, but his difficulty was that the relatives objected to the patient being sent away. Sir Frederick Willis, speaking for the Board of Control, had said "there existed a terrible feeling of superstition, and people who had mental trouble were afraid to consult doctors, because they thought they would be locked up for the rest of their lives." This fear is more than a superstition, for whereas the path is made smooth for a petitioner to send his relative, who is certifiable, to a mental institution, insuperable difficulties may be put in the way of the patients' return home on recovery.

Lack of time prevents me from reminding you how the petitioner's right under s. 72, to recover his relative, is reduced by other sections of the Act to a mere semblance of power. The Commission's recommendations (s. xvi, p. 164) would dissipate even this semblance.

I agree with Mr. Parker, a barrister, who maintained before the Commission that the *standard* for certification and discharge should be the same (s. 162, p. 84). Apart from the question of stigma and sentiment, there are strong medical and psycho-logical reasons against prolonged institutional care.

It is natural that recovered patients should make complaints of wrongful certification, but it is detention after recovery about which the relatives and public are rightly suspicious. If one could assure the relatives that if at any moment they are not satisfied with the Institution they can make other provision for the patient—and also that immediately on recovery he will be allowed to return home—some objections to institutional treatment would be removed. A recovered patient returned to his home within reasonable time is the best possible advertisement for mental institutions. The powerlessness of the petitioner to recover the patient from such institutions and the general lack of safeguards against detention after recovery are the obvious causes of unwillingness on the part of the relatives and patients to make use of them.

Prof. G. M. ROBERTSON, in a written communication,* remarked that the observations of Dr. Risien Russell were paradoxical and self-contradictory, and indicated the interaction of unsolved conflicts in Dr. Russell's mind.

Dr. Russell began by saying that he would be content to enjoy the privileges available in Scotland. The chief of these was that medical men are paramount in a medical question, and that no layman ever sees the patient or encroaches on the domain of the physician to prescribe what course is required for the treatment of an illness. Dr. Russell was fully aware of these facts; nevertheless, with this knowledge he next proposed that no patient should ever be placed in a mental hospital for treatment without a full trial before a representative of the law, in

* [Time did not permit of Prof. G. M. Robertson summing up the discussion, and as certain observations made by Dr. Risien Russell urgently called for reply, Prof. Robertson did this through the correspondence column of the *British Medical Journal* of August 13, 1927, from which these are excerpted.—Eds.]

which the medical man should give evidence on oath, as in a criminal trial, and be subjected to cross-examination like any other witness. While content to enjoy the privileges available in Scotland, he proposed the very antithesis of the practice in Scotland, and what all Scotsmen would regard as anathema.

Dr. Russell had had some experience of mental trials; he knew how the subject stimulates forensic fury, so that they might go on for days and even weeks. Did he imagine that any busy practitioner would ever allow himself to be involved in such a waste of time or expose himself gratuitously to such offensive observations as he might expect in cross-examination?

To carry out Dr. Russell's views to their logical conclusion had as little regard for the welfare of the sick patient as for the time and feelings of his doctor. In a case of urgency, in which the patient required immediate care and treatment, Dr. Russell would allow no action to be taken by the patient's natural guardians and his family doctor under the certificate of emergency until a lay official visited the patient and had granted authority for this. How many certificates of emergency, if any, had Dr. Russell signed? Had he any experience?

To keep the legal procedure pure and undefiled, Dr. Russell considered that the legal representative who presides at this mental trial should not be a barrister trained in medicine; that, he said, would leave the matter too "medical," "hence the importance of having, as justice, a man with no medical training." Medicine, according to Dr. Russell's views, was a source of contamination, and if a barrister was unfortunate enough to have become infected with the virus, he was, if not debarred from this judicial post, at least deemed unsuitable.

The next paradox was that mental hospitals were naturally better equipped for the treatment of mental disease than most nursing homes or hospitals; their staffs had special knowledge and skill, and they were regularly inspected. Whilst the greatest obstacles were to be placed in the way of patients obtaining treatment in mental hospitals, every facility was to be given for their treatment in places in which the accommodation, equipment, staff and management might be anything or nothing, and there was no inspection of these. Dr. Russell had had some experience of mental disease, but some physicians might not have had as much, and others none at all. All medical men, however, were to be allowed to treat mental patients, according to him, in any place they wished and without any interference from the law for at least a year; but not so physicians in mental hospitals. Many people would be prepared to say that such a rash and unjust proposal could only have come from someone ignorant of the problem and of the history of the care of the insane. It was simply throwing the door open to exploitation of the insane and to every kind of abuse.

Dr. Russell had no faith in the members of the honourable profession of medicine. Yet it was no more than the truth to say that in no country in the world did the average standard of care and treatment in mental hospitals stand higher than in our own. While in our courts of law, the perfect justice of which had never been questioned, there had been in recent times an Adolph Beck and an Edalji case, in our mental hospitals a Special Committee and a Royal Commission had both failed to find a single instance of wrongful detention, and for seventy years and more no such instance had been found in Scotland. Such a record of careful and honourable service in a very difficult problem was beyond all praise. Fortunately for the profession of medicine and for the sick in mind, there would be few who would support Dr. Russell's views.

LUNCHEON.

Members, foreign guests and ladies again lunched at the Royal Arch Halls, 75, Queen Street, this time the hospitality being extended by the District Boards of Control of Lanark and Stirling and Midlothian and Peebles.

The guests were received by Sir Robert King Stewart, Chairman of the Lanark District Board of Control, and H. M. Cadell, Esq., D.L., Chairman of the Stirling District Board of Control.

Mr. CADELL, who presided at the luncheon, welcomed the members of the Association, and later proposed the toast of "The Board of Control, England, and the General Board of Control for Scotland," which was suitably responded to by Sir FREDERICK WILLIS, K.B.E., C.B., and Sir J. ARTHUR ROSE, D.S.O.

The PRESIDENT of the Association proposed the health of the Chairman, and on behalf of the Association thanked the District Boards for their hospitality.

THE WORK OF THE LADIES' COMMITTEE.

In connection with the Annual Meeting of the Royal Medico-Psychological Association, a ladies' committee was formed to arrange for the comfort and entertainment of the members and the ladies attending the Annual Meeting.

The Committee consisted of: Lady Wallace, Lady Rose, Mrs. Macphail, Mrs. Sturrock, Mrs. Keay, Mrs. Campbell, and Mrs. Hamilton Marr, as convener, had several meetings. When the final programme was arranged they had the assistance of Dr. Buchanan, Secretary to the Scottish Division of the Association, in carrying it out. The realization of some of this programme we have already reported and it does not call for further mention.

Members had the opportunity of taking a part in all the social amenities provided for those attending the British Medical Association meeting, which included civic and university receptions, dancing at the Palais de Danse, dinners, excursions, etc.

A garden party on July 19 at Tipperlinn House, by kind invitation of the chairman and managers of the Royal Hospital and Prof. G. M. Robertson, was a most enjoyable function.

Another delightful day was spent at Larbert, Mrs. Campbell being the kind hostess. After luncheon at her house the party went on to inspect Linlithgow Palace under the guidance of Mr. Wilson Paterson, of the Board of Works. After the visit to Linlithgow Palace, Mr. and Mrs. Cadell entertained many members of the Association and their friends at the Grange to afternoon tea.

VOTE OF THANKS.

Owing to lack of time at Friday morning's joint session, the customary votes of thanks for hospitality had to be postponed until the next general meeting of the Association in November.

The general view taken was that the whole meeting, with its somewhat unique arrangements, had been an unqualified success.

IRISH DIVISION.

THE SUMMER MEETING of the Irish Division of the Royal Medico-Psychological Association was held, by the kind invitation of Dr. J. O'Connor Donelan, at St. Dymphna's, North Circular Road, Dublin, on Thursday, July 7, 1927.

Prior to the meeting the members paid a visit to the adjacent Gardens of the Royal Zoological Society in Phoenix Park.

The following members were present: Dr. J. O'Connor Donelan (in the Chair), Drs. F. J. Deane, J. Dunne, P. Dwyer, H. Eustace, L. Gavin, S. J. Graham, T. A. Greene, G. H. Keene, D. L. Kelly (Inspector of Mental Hospitals, I.F.S.), R. R. Leeper (Hon. Sec.), J. Mills, C. B. Molony, P. Moran, M. J. Nolan, H. R. C. Rutherford, C. H. Wilson.

The minutes of the previous meeting were read, approved and signed by the Chairman.

A lengthy communication was received from Dr. Owen F. McCarthy, with an apology for unavoidable absence.

Apologies for absence were also received from Lieut.-Col. Dawson and many others.

The meeting then proceeded to consider a letter from the General Secretary of the Association, *re* the proposal of the President for the appointment of Vice-Presidents who would act as Chairmen of Divisions, and also two documents embodying this proposal. The proposal was discussed fully.

It was proposed by Dr. M. J. NOLAN, and seconded by Dr. GRAHAM: "That the proposal *re* the appointment of Vice-Presidents who would act as Chairmen of Divisions to hold office for three years be approved."

The question of payment by the Association of railway fares of the Hon. Secretaries and the proposed Vice-Presidents was raised, as it not considered justifiable that Hon. Secretaries and Vice-Presidents should be put to this expense.

It was the sense of the meeting that the Vice-Presidents should be eligible for re-election one year after vacating office.

The meeting next considered the circular received *re* the holding of clinical meetings, and the circular letter of the President, dated April 28, 1927, setting forth his proposals on this matter.

After a lengthy discussion, in which all the members took part, it was decided that the Hon. Secretary be authorized to address a circular to the medical superintendents in Ireland asking them to bring before their Committees the desirability of these clinical meetings in the interests of their patients, and for the encouragement of a more scientific spirit in the work of the assistant medical officers; and to ask the committees to defray the railway fares of the assistant medical officers attending the meetings. Much medical knowledge would be gained at such meetings, as many assistant medical officers have little opportunity of attending the quarterly meetings.

Dr. NOLAN considered the holding of these clinical meetings to be merely an enlargement of the present system of holding the Divisional Meetings. He considered that these clinical meetings should not be held too frequently.

Dr. KELLY considered that the Government would look with favour upon the establishment of these clinical meetings, which were of primary importance, and hoped that the Hospital Committees would co-operate in this effort to advance psychiatry in Ireland.

Dr. GRAHAM stressed the point that the Hospital Committees would not be in favour of paying the travelling expenses of the assistant medical officers attending these meetings unless they saw clearly the value of them to the patients and the medical work.

Dr. DUNNE spoke from the assistant medical officer's standpoint, and hoped all medical superintendents would facilitate the attendance of assistant medical officers at these clinical meetings.

The HON. SECRETARY said that he had thought the subject so important that he had made all possible efforts to have the present meeting of the Irish Division large and representative.

Dr. NOLAN and Dr. J. O'C. DONELAN stated that they very much appreciated the action of the Hon. Secretary, which had the approval of all present.

A resolution, proposed by Dr. GRAHAM and seconded by Dr. NOLAN, thanking Dr. J. O'Connor Donelan for the opportunity of visiting St. Dymphna's and for his kind hospitality, was passed by acclamation. This terminated the proceedings.

EDUCATIONAL NOTES.

National Hospital, Queen Square, Medical School.—A post-graduate course on Diseases of the Nervous System will be held at the above Hospital from October 3 to November 25, 1927. The general course will consist of clinical lectures and demonstrations; teaching in the out-patient department; and pathological lectures and demonstrations. The fees for this course will be £5 5s. A course of lectures on Anatomy and Physiology of the Nervous System will be arranged if there are sufficient applicants. Fee, £2 2s. A course of clinical demonstrations chiefly on Methods of Examination of the Nervous System will be given. Fee £2 2s. Tickets entitling to attend the Out-Patient Clinic only (£2 2s. for 3 months) may be obtained from the Secretary.

A limited number of students can be enrolled as Ward Clerks or as clinical Assistants in the Out-Patient Department. Applications should be addressed to the Secretary, Medical School, National Hospital, Queen Square, London, W.C. 1.

A course of Advanced Psychiatry will be held at the Maudsley Hospital, Denmark Hill, during the same period. Times of lectures and demonstrations will be so arranged that it will be possible for medical practitioners to attend both courses.

The Maudsley Hospital, Denmark Hill, S.E. 5.—A Post-graduate Course in Psychiatry (concurrent with course in Neurology at the National Hospital, Queen Square, W.C. 1) will be held October–November, 1927. The course will consist of (1) Four courses of clinical lectures illustrated by cases. (2) Demonstrations upon investigation of recently admitted cases. (3) Discussion of fully investigated cases.

Any of those attending the course who desire to obtain clinical experience by investigating cases themselves should apply to the Medical Superintendent.

The fee for the whole course is £5 5s. Those desiring to take any part separately should communicate with the Dean of the Medical School, National Hospital, Queen Square, W.C. 1.

The Tavistock Square Clinic for Functional Nervous Disorders, 51, Tavistock Square, W.C. 1.—A short course of lectures on Functional Nervous Disorders for Practitioners and Students will be given at the Clinic, beginning October 10, at 4.45 p.m. and 5.45 p.m., by W. Langdon Brown, M.D., F.R.C.P.; H. Crichton-Miller, M.D.; John Freeman, M.D.; J. R. Rees, M.D.; George Riddoch, M.D., F.R.C.P.; James Young, M.D.

Fee for the course: Medical practitioners, £2 2s.; medical students (*i.e.*, unqualified), 10s. 6d. Tickets for a single lecture at 5s. will be issued in so far as accommodation permits. Tickets for the course to be obtained in advance from the Hon. Lecture Secretary at the Clinic.

Bethlem Royal Hospital.—A course of lectures and practical instruction for the Diploma in Psychological Medicine, granted by the various universities and the Conjoint Board, is held at Bethlem Royal Hospital twice annually, during the spring and autumn. The next session commences on January 8, 1928. The fee for the full course is 15 guineas, but Part A or Part B may be taken separately for a fee of 10 guineas per part. In addition, clinical instruction in Psychological Medicine is given to students and post-graduates every morning (except Wednesdays) at 11 a.m. The fee for students is 3 guineas for a period of three months, and for post-graduates 5 guineas for a similar period, but a reduction is made to those who attend the D.P.M. course.

The lectures are given by: Prof. F. G. Parsons, F.R.C.S. (*Anatomy of the Nervous System*, etc.). C. Worster-Drought, M.A., M.D., M.R.C.P.; F. C. E. Danvers-Atkinson, M.B. (*Physiology of the Nervous System*, etc.). C. Lovell, M.D., B.S. (*Pathology Serology*, etc., of Mental Disorders). William Brown, M.A., M.D., D.Sc., M.R.C.P.; C. Stanford Read, M.D.; R. J. Bartlett, M.Sc., A.R.C.Sc. (*Psychology, Psycho-pathology*, etc.); E. D. Macnamara, M.A., M.D., F.R.C.P.; W. H. B. Stoddart, M.D., F.R.C.P.; Thomas Beaton, O.B.E., M.D., M.R.C.P. (*Mental Disorders*, etc.). James Collier, M.D., F.R.C.P. (*Clinical Neurology*). J. G. Porter Phillips, M.D., F.R.C.P. (*Medico-Legal Relationships of Insanity*). M. Hamblin Smith, M.A., M.D. (*Crime and Punishment*). A. F. Tredgold, M.D., M.R.C.P. (*Mental Deficiency*).

House physicians are appointed at Bethlem Royal Hospital for a term of six months, which may be extended. These appointments are made on May 1 and November 1 each year, and the vacancies are advertised in the medical papers. Apartments, complete board, attendance and laundry are provided, and also a salary at the rate of £100 per annum. Clinical Assistants are also appointed from time to time for a period of three months or longer. These are non-salaried, non-resident posts, but partial board is provided.

The Physician Superintendent of Bethlem Royal Hospital will be pleased to answer any further inquiries.

SUMMARY OF MEMORANDUM BY THE LUNACY COMMITTEE OF THE BRITISH MEDICAL ASSOCIATION ON THE REPORT OF THE ROYAL COMMISSION.

(Throughout the Memorandum the references given are to the page of the Report of the Royal Commission.)

In many important respects the Report of the Royal Commission on Lunacy and Mental Disorder is in harmony with the principles advocated by the Association in the evidence which it tendered to the Commission, and must therefore command the assent and support of the Association.

The Committee desires to draw the attention of the Association to two matters of prime importance, as in these respects the recommendations of the Royal Commission appear to be unsatisfactory from the point of view of the Association. They are:

(1) PROTECTION OF THE PRACTITIONER.

The Royal Commission expresses the opinion that the position revealed by recent cases "leaves little room for doubt that unless some relief is found for

the situation without delay a breakdown in the system is inevitable." (R., p. 39.) To meet this position the Representative Body proposed:

"That the provision of a certificate under the Lunacy Acts by a qualified medical practitioner should be an act having the legal status of testimony given by a witness in a court of law, and should not render the practitioner liable either to any civil action or to any criminal charge, except in so far as the certificate may be shown to contain statements of essential importance which are proved to be inaccurate and to have been made with a wilful and deliberate intention to deceive." (A.R.M., 1924, Min. 54.)

This proposal, which may for brevity be termed the concession of witness-status, was urged upon the Royal Commission by the Association. It was held by the Commission that the adoption of the proposal would confer the concession of the highest possible privilege, involving complete immunity even for a medical practitioner who had given a certificate negligently or in bad faith.

It may be pointed out that the suggested witness-status would involve an undesirable emphasis upon that aspect of the relationship between the certifying practitioner and his patient which is the main obstacle to the approximation of the treatment of mental disorders to that of physical ailments. To absolve the practitioner of liability to his patient in the careful and deliberate exercise of his skill would be to emphasize the legal as opposed to the medical aspect of the relationship and thus to defeat one of the main objects of the Association.

Such a course must encourage the tendency to transfer the duty of certification from the ordinary medical attendant of the patient to an expert appointed for the purpose—a tendency not favoured by the Association.

It is clear that it would be difficult to persuade Parliament to adopt the proposal rejected by the Commission after such full and sympathetic discussion.

The recommendation of the Royal Commission in this connection reads as follows:

"In our view the provision of absolute privilege could not be defended, but we consider that the certifying doctor should not be exposed to an action in respect of anything done under the Act, unless the plaintiff can first satisfy a judge in chambers that there is *prima facie* ground for an allegation of want of good faith or reasonable care.

"We therefore suggest, in order to place it beyond doubt that the onus of proof shall be upon the plaintiff, that Section 330 (1) of the Act should be amended so as to provide that no person indicated therein shall be liable to any civil or criminal proceedings 'unless such person has acted in bad faith or without reasonable care.'

"Section 330 (2) should be amended so as to enact that proceedings 'shall upon summary application to the High Court or a Judge thereof, be stayed upon such terms as to costs and otherwise as the Court or Judge may think fit, unless the Court or Judge is satisfied that there is substantial ground for alleging that such act was done in bad faith or without reasonable care.'"

This means that to succeed in such an application the practitioner must prove to the Court not only that there was, in fact, no carelessness or want of good faith, but also that nothing in the statement of claim even suggests these defects. The legislation recommended by the Commission would provide that proceedings shall be stayed unless the Court is satisfied that there is substantial ground for alleging that the certificate was given in bad faith or without reasonable care. In short, while at present the onus of proof rests upon the doctor, the new proposal would transfer it to the plaintiff. The Committee is of opinion that whilst it would constitute a distinct advance on the present position, it would not in itself be sufficient to secure the object in view.

Examination of the procedure involved in any action taken by a patient in connection with lunacy proceedings suggests, however, a means of increasing the efficacy of the change recommended by the Commission.

When the Court has before it an application to stay proceedings, the evidence submitted by the plaintiff in support of his plea of negligence in general includes affidavits from expert witnesses. In the absence of any provision for the scrutiny of these affidavits by an authority competent to form a scientific estimate of the validity of the conclusions they set forth, the mere production of such a statement of medical opinions must go far towards establishing a *prima facie* case of negligence, however slight its value may be from the professional point of view. It is

clearly improper to seek to impose any check upon the right of the plaintiff to call such witnesses as he may think fit. But there can be no objection to ensuring that such evidence, which may possibly from the technical point of view be of no substance, be subjected to impartial medical criticism at the hearing, so that the Court may not be misled.

With this end in view the Committee considers that as a corollary to the proposal of the Royal Commission, the Association should press that when an application is made to the Courts by or on behalf of a person who has been certified, alleging want of care or lack of good faith on the part of the medical practitioner who signed the certificate, the Judge should have the assistance of a medical assessor in considering the case, and the same principle should hold in the Court of Appeal.

Beyond this, the Committee is of opinion that the recommendations of the Commission with regard to the part taken by the magistrate in proceedings under the Act are of value from this point of view. The main points in the Commission's recommendations under this head are as follows: Whilst under the present practice the magistrate in a private case may or may not see the patient he shall in future be compelled to see the patient and also, wherever possible, the relatives of the patient, and in any case of doubt one or other of the certifying practitioners. (R., p. 38), and that there should be a selection of magistrates most suited to undertake these duties (R., p. 56). "The Justice should be entitled to call for the assistance of the clerk to the justices" (R., p. 55); he should be "required to exercise a directed discretion, that is, he should be required to consider whether it is necessary to see the medical practitioner or practitioners . . . whether further investigation is necessary in regard to any delusions alleged in the certificates . . . and whether the patient should be informed of the allegations (R., p. 56), and a formal record of the proceedings should be made."

Whilst the Committee is anxious to eliminate the judicial authority from the machinery for the early treatment of mental disorder, it considers that every possible means should be taken to ensure that his intervention, once it is invoked, is effective.

The Committee therefore is of opinion that the Association should press that in any form of judicial detention order there should be a clause indicating that before signing the order the judicial authority has satisfied himself that the medical practitioner concerned has exercised reasonable care. In any subsequent proceedings, such a statement should establish a presumption in favour of the practitioner whose conduct may be impugned.

(2) EXTENSION OF FACILITIES FOR THE TREATMENT OF PATIENTS SUFFERING FROM MENTAL DISORDERS.

The Royal Commission appears to have fully realized the necessity for dealing with mental disorder on a medical basis, and to this end sets out to ensure that procedure shall be simplified and the hindrance to treatment involved in the general fear of the stigma of certification be removed as far as possible.

Unfortunately, when the Commission passes from its statement of general aim to the elaboration of machinery it seems to allow the safeguarding of the liberty of the subject to obscure the main object, namely, adequate facilities for the treatment of mental disorder on a purely medical basis.

The Association recommended in its original Memorandum of Evidence the extension of provision for the treatment of temporary boarders without judicial intervention (on the lines laid down in the Mental Treatment Bill of 1923) to suitable non-volitional cases; and the institution of a provisional treatment order which would replace the existing urgency order and serve either to obviate full certification, or as a preliminary step to the procedure necessary for a reception order in cases where full certification ultimately becomes necessary.

Under the recommendations of the Royal Commission it is only those who are definitely capable of volition that will obtain relief from legal formalities directing detention. Those early and hopeful cases which cannot be said to be capable of volition fall under the procedure of the Royal Commission's provisional treatment order, which, as will be shown, is hedged about with legal formalities, and perpetuates some of the very defects and objectionable features of the existing system of certification that it was sought to eliminate. It is only in name that this order corresponds with the provisional order suggested by the Association,

and further, there is nothing in the procedure proposed by the Royal Commission to correspond with the proposal under the heading "Temporary Boarders" proposed by the Association to facilitate the treatment of this class of patient in harmony with the provisions of the Mental Treatment Bill. Hence the provisional treatment order of the Royal Commission is not only very different in substance from that proposed by the Association, but, what is even more important, the class of cases of illness to which it would apply is a totally different one.

Provisional Treatment Order proposed by the Royal Commission.

The term "Provisional Treatment Order" is applied exclusively in the following paragraphs to the order suggested by the Royal Commission which is entirely different from the provisional order suggested by the Association in its original Memorandum of Evidence. The question of the adoption of a procedure similar to that recommended by the Association in substitution for the existing urgency order or the emergency provision recommended by the Royal Commission is a distinct issue which is not further discussed. The problem now to be considered is that of the best provision for the treatment of early cases of mental disorder without certification.

Under the provisional treatment order proposed by the Royal Commission the judicial authority has to be called in from the start; at the end of one month he has again to be called in and must see the patient.

The continuation of the treatment is only authorized for a period of five months, after which the judicial authority has again to be invoked if further treatment is deemed necessary, and such treatment would be under a reception order after full certification.

From the patient's point of view the only practical difference from the present procedure is that the legal aspect of the question will be still more emphasized than it is at present. He will be placed under detention by legal authority, with even more formality than under the present law. The knowledge of his position as soon as he is able to appreciate the facts must have as prejudicial an effect upon the development of treatment and hope of recovery as has the present system of certification. Against all this the change of terminology effected by the order can hardly be considered of any appreciable value.

The proposed procedure allows for delay up to seven days after receipt of the documents by the judicial authority. It seems likely that a procedure involving delays of this kind would be useless and become a dead letter, and the emergency procedure which permits detention for seven days prior to obtaining a provisional treatment order or reception order would again become the ordinary one.

The procedure is unduly complicated, and if, as seems inevitable, it becomes general in the first instance in place of the reception order, the disabilities under which treatment is now carried out will be accentuated. The more complicated the administration the less time there is to devote to the essential needs of treatment, and the larger the hospital the more serious is this aspect of the question.

Detention under a provisional treatment order so overweighted with legal safeguards must inevitably carry the same stigma as the present system of certification.

The specific recommendations of the Royal Commission in regard to the provisional treatment order would do nothing to make early treatment more accessible in non-volitional cases, and would inevitably add greatly to the work and difficulties both of doctors and justices. It is essential, if the judicial authority is not eliminated altogether as far as provisional orders are concerned, that he should at least be relegated to a far less prominent position, and that his appearance should be less frequently recurrent than is proposed by the Commission. The Committee is still of opinion that provision should be made for some procedure on the lines of the Mental Treatment Bill for hopeful but non-volitional cases.

In support of this suggestion it may be pointed out that the intervention of the judicial authority has in fact afforded but little protection to the patient, and if that intervention is too elaborate, there is the certain prospect of its deterring the friends of the patient from seeking treatment by increasing the obstacles in agreed cases.

On the other hand, the proposals of the Royal Commission for the enlargement and readjustment of the duties of the Board of Control make the protection of the patient feasible and practicable. By the supervision and inspection

of the Board such protection is likely to be more thorough because based on wider experience than any which could be exercised by an ordinary judicial authority.

Again, the Royal Commission expressly recognizes (R., p. 20) that when all is said and done reliance must inevitably be placed at some point on the skill and integrity of the medical man. If confidence is not reposed in the medical profession, no system of protection can be devised which will not ultimately break down. The Committee is in complete accordance with these views.

The certifying doctor's safety does not appear to be increased by the proposals of the Commission with regard to the provisional treatment order, inasmuch as there is to be only one medical certificate. The doctor will certainly not be protected by styling his certificate a "recommendation." If, on the other hand, the order were made by a relative or friend of the patient, supported by two medical certificates, as suggested by the Association, the doctor would be much less exposed to attack and an attack would be more easily rebutted.

In view of the above considerations the expedient now recommended by the Committee is the simplification and deformalization of the procedure, to bring it more into harmony with that laid down in the Mental Treatment Bill of 1923. It should be possible in a non-volitional case for a "relative, friend or public official" on the certificates of two medical practitioners to give the necessary authority for treatment and control for a period of six months, subject only to the knowledge and observation of the Board of Control, sanction for whose extension of the period of treatment for a further six months. Without such modifications it seems inevitable that the new powers sought by the Royal Commission for local authorities as regards the provision of clinics for out-patient and in-patient treatment of incipient cases, and the arrangements suggested for the treatment of cases falling within the scope of the provisional treatment order in general hospitals, nursing homes or under single care as well as in public mental hospitals, registered hospitals, licensed houses and other special accommodation must fail in the desired effect (R., pp. 141 and 159). Such modifications would hold out prospects of a real and essential reform in the treatment of mental disorders.

Procedure proposed by the Royal Commission in connection with the Reception Order.

The Royal Commission proposes that, if the patient has not already been the subject of a provisional treatment order, this certificate should include a statement that he is not likely to recover within the period available under such an order (*i.e.*, six months) (R., p. 159). This seems a particularly undesirable addition to the certificate. Doctors will be very unwilling to commit themselves to a forecast of this nature, and the requirement would tend to discourage the use of this mode of certification at the start, even in suitable cases, and would thus increase the administrative labours of all concerned to no useful end. It would seem better to leave the unfettered judgment of the medical practitioner to decide which method of placing under treatment is appropriate to the individual case.

Accordingly, the Committee recommends that, with reference to Recommendation VI (a) (R., p. 159) of the Royal Commission, the words "the patient is not likely to recover within the period available under a provisional treatment order" (*i.e.*, six months), should not be included in the certificates required for a reception order.

The Commission recommends that in cases where full certification is necessary "one of the medical certificates should preferably be given by the usual medical attendant, if any, of the patient, or by a public certifying medical officer, if such an official has been appointed in the area. If the proceedings are being taken in respect of a patient already under a provisional treatment order, the certificates should be given by two independent medical practitioners, except that one may be under the hand of the medical superintendent of a public mental hospital or other medical officer in the public service. The two medical men giving the certificates should be entitled to consult together." (R., p. 159.)

The Committee desires to emphasize the fact that the Association did not, in its evidence, support the suggestion that such medical certificates should be signed by specially selected and approved practitioners, and cannot recommend any modification of the Association's attitude in this connection.

The Committee further draws attention to the fact that the reference to "two independent medical practitioners" does not make clear the meaning of the term

"independent"; whilst the reference to the superintendent of a public mental hospital or other medical officer in the public service does not indicate whether the permission to certify accorded to a practitioner falling within these categories does or does not extend to the case of a patient already in his own charge.

The Committee welcomes the recommendation enabling the certifying practitioners to consult together.

The Commission suggests (R., p. 159) in connection with the procedure in the case of an involuntary patient who requires to be dealt with by reception order after full certification as a person of unsound mind, that the petition should be accompanied by a statement of particulars, including a disclosure of the patient's property, if any. The Committee assumes that this proviso has reference to the requirement (R., p. 160) proposed by the Commission that the Board of Control should forthwith notify the Master in Lunacy if the patient has property exceeding £100. It seems to the Committee to be unfortunate to load the procedure with such matters as this, and it is suggested that if such a statement is necessary on grounds of public policy it might be supplied at any time within seven days of the patient's certification.

OTHER MATTERS.

Voluntary Boarders.

Whilst welcoming the main recommendations of the Royal Commission in connection with the extension of facilities for the reception of voluntary boarders, the Committee wishes to draw attention to certain points which seem to require explanation or modification.

The Commission states (R., p. 157) that written application should be made for treatment as a voluntary boarder; but the authority to whom this application is to be made is nowhere specified. This is a matter of some importance.

The Commission recommends (R., p. 158) that if the voluntary boarder ceases to have volition he should, within one month, be dealt with as an involuntary patient. The Committee wishes to emphasize in this connection the necessity for introducing into any legislation concerning voluntary boarders some special provision for dealing with those cases in which transfer from one institution to another would, in the absence of such provision, be bound to occur by reason of chargeability and might be detrimental to the patient.

Board of Control.

The Committee regrets that the suggestions of the Royal Commission (R., p. 176) for the reconstruction of the Board of Control do not ensure the appointment of a medical woman on the Board of Commissioners, and that the scale of salaries proposed for Assistant Commissioners is not calculated to attract practitioners of sufficient standing.

The above memorandum was considered on July 18 and again on Tuesday, the 19th, at the Edinburgh meeting of the Representative Body.

Dr. Langdon-Down (Chairman of the Lunacy Law and Mental Disorder Committee) moved its approval and reference to the Council.

Dr. C. O. HAWTHORNE (Marylebone) moved as an amendment, referring the memorandum to the Council and requesting the Council to re-appoint the Committee with instructions to take whatever steps were possible to secure what the Report of the Royal Commission declares to be "fair"—namely, that the medical profession should not be asked "to perform their essential part under the menace of litigation which, even if unsuccessful, may spell financial or professional ruin."

Dr. JAMES NEAL (Hendon) seconded.

The amendment was accepted by Dr. Langdon-Down and then carried without dissent.

SCOTTISH ASYLUMS' PATHOLOGICAL SCHEME.

THIRTIETH ANNUAL REPORT FOR THE YEAR 1926.

[Abridged.]

The Board of the Scottish Asylums' Pathological Scheme, in submitting their Report for the year 1926, desire to record their continued appreciation of the

valuable research work carried out by Dr. Reynolds in the Laboratory during the year.

It is learned with satisfaction that a further grant of £200 has been promised by the Medical Research Council to Dr. Reynolds for the current year towards the expenses of his research work.

The close association with the teaching school of Edinburgh University is being maintained, and during the year Dr. Reynolds has given post-graduate lectures in addition to his usual course of lectures as University Lecturer on Neuropathology.

Dr. Reynolds has paid visits to several mental hospitals during the past year, and the Board recognize the importance of them in stimulating interest in pathological and laboratory work.

In November of last year the Laboratory was moved to the University Buildings, where more convenient accommodation has been provided by Edinburgh University, no rent being charged. The Board desire to acknowledge this provision by the University Authorities, and also the further financial assistance in providing an additional Laboratory Assistant to Dr. Reynolds.

The revenue for 1926 amounted to £1,687 15s. 5½d. The expenditure for the year was £1,037 4s. 8½d., leaving a credit balance at the end of the year amounting to £650 10s. 9d., or a surplus of £182 15s. 0½d. on the year's working. The balance carried forward from last year amounted to £467 15s. 8½d.

At the Annual Meeting of the Board Dr. Douglas McRae was reappointed Chairman for another year, and the Executive Committee was appointed, consisting of Dr. McRae, *Chairman*; Dr. R. B. Campbell, *Honorary Secretary and Treasurer*; Dr. Bruce, *Ex-Provost* Stark, Profs. G. M. Robertson and Lorrain Smith, Drs. W. D. Chambers and W. M. Buchanan.

Research work.—A further study on "The Paths of Infection to the Brain, Meninges and Venous Blood Sinuses from Neighbouring Peripheral Foci of Inflammation" was read at the Royal Society of Medicine, London, on June 4, 1926. This and two other studies were published during the year (*Journal of Laryngology and Otology*, vol. xli, February, July, November, 1926).

A fourth study in the series was published in March, 1927; the fifth will appear in August, the sixth in the autumn of this year.

It is probable that the sixth study will be the last individual paper to be published, as it appears likely that the further cases in the series are similar to those already published. When these further cases have been worked out a monograph embodying all the data collected will be published.

In April, 1927, Dr. J. E. Slater commenced research work on Neuroglia.

Routine work.—During the year 1926, 127 reports on routine work were sent out from the Laboratory.

FIRST INTERNATIONAL MENTAL HYGIENE CONGRESS.

THE First International Congress of Mental Hygiene will be held in Washington, D.C., in April, 1929. This decision was reached at a meeting of the Organizing Committee held in Paris on June 3, 1927, which was attended by delegates from fourteen countries. It was also decided that the International Committee for Mental Hygiene, now in process of formation, should be formally founded at one of the sessions of the Congress, and that Mr. Clifford W. Beers, who has been in charge of the work of the Organizing Committee, be appointed permanent Secretary-General of the International Committee when it is established. Its secretariat, it was agreed, will be located in the United States. This will enable Mr. Beers to continue as Secretary of the National Committee for Mental Hygiene, which has its headquarters in New York City.

In reporting upon the progress of the international movement, Mr. Beers said that national committees, leagues, councils or societies for mental hygiene have been established or are being organized in more than twenty countries, and that all the principal countries will undoubtedly be represented by such agencies by the time the First International Congress of Mental Hygiene is held.—*Mental Hygiene Bulletin*, June, 1927.

CLINICAL MEETINGS.

Dr. H. Dove Cormac would appear to have the honour of being the first in England and Wales to inaugurate regular clinical meetings for psychiatrists and general practitioners, upon which we offer him our hearty congratulations. We reprint below his preliminary notice and the programme of meetings for the winter 1927-28.

Cheshire County Mental Hospital,
Parkside, Macclesfield;
September 7, 1927.

Preliminary Notice.

DEAR SIR,—I am arranging for a series of six monthly meetings to be held during the coming winter at Parkside.

Papers will be read by Prof. Shaw Bolton of Leeds, Profs. Stopford and Pear, and Dr. Core of Manchester, and the Medical Staff of this Hospital.

The subjects dealt with are such as may be of interest to the general practitioner, and will include encephalitis lethargica, post-encephalitic conditions, the sympathetic nervous system and endocrine glands, the malarial treatment of general paralysis of the insane, insanity in relation to pregnancy and parturition, and certain of the commoner psychoses.

The meetings will be held on the Wednesday nearest the middle of each month, at 3 p.m., and tea will be provided at 4.30 p.m.

Medical practitioners of the districts from which patients are received into Parkside are invited to attend, and I shall be glad to have an early reply on the enclosed card as to whether you will be able to be present at any or all of the meetings.

A full list of the subjects of the papers and dates of meetings will be sent you later.

Yours truly,
H. DOVE CORMAC,
Medical Superintendent.

PARKSIDE MENTAL HOSPITAL.

Medical Meetings—Winter, 1927-28.

1927.	October 19	{	"Encephalitis Lethargica,"
			Dr. D. E. CORE, F.R.C.P.
			"Post-Encephalitic Cases,"
			Demonstrated by Dr. G. G. PARKIN.
	November 16	{	1. "Shock: From an Experimentalist's Point of View,"
			Dr. A. D. MACDONALD.
			2. "Endocrine Therapy,"
			Dr. L. C. F. CHEVENS.
	December 14	{	"Mental Factors in General Medicine,"
			Prof. T. H. PEAR, M.A.
			"Insanities of Pregnancy and Parturition,"
			Dr. H. DOVE CORMAC.
1928.	January 18	{	"Examination and Certification of Patients,"
			Prof. J. SHAW BOLTON, M.D., F.R.C.P.
			"Malarial Treatment of G.P.I.,"
			Dr. L. C. F. CHEVENS.
	February 15	{	"Intracranial Pressure,"
			Prof. J. S. B. STOPFORD, M.D., F.R.S.
			"Adolescent Insanity,"
			Dr. H. DOVE CORMAC.
	March 14	{	"Physiological Interpretations of Some Mental Processes,"
			Dr. H. DOVE CORMAC.
			"The Significance of Early Symptoms and Early Treatment of Mental Disorders,"
			Dr. L. C. F. CHEVENS.

“ TRYING ” MENTAL CASES BY JURY.

AN encouraging instance of changing attitudes for the better with regard to the problem of mental diseases is observed in a statement made by a prominent jurist, Supreme Court Justice Humphrey J. Lynch, of White Plains, New York, at a meeting of the Orange County Bar Association, held in Newburgh, New York, on May 26. Speaking in opposition to suggestions that Grand Juries and trials of civil and criminal cases by juries be abolished, Judge Lynch declared emphatically that an exception must be made in connection with procedures attending the commitment of mentally sick persons.

“ The only exception which I would make,” he said, “ is to reform our present judicial system to provide that in cases where mental competency is the issue, trial by jury should be abolished. Determination of mental conditions is one of the most difficult, complicated and technical problems with which the human mind has to grapple. The question of the sanity or insanity of an individual ought not to be determined by laymen, however sincere and well-meaning, but without technical knowledge of mental disorders. Such cases should be determined by Judges in the light of careful examination and testimony by mental experts who are called, not as witnesses for or against a given defendant, but as experts in the field of mental medicine, and qualified to testify as to mental abnormalities in the same way that physicians testify about physical health, engineers about technical engineering problems or architects about architectural issues. A man with a mental disease is not a criminal, but a sick man, and his case should be decided accordingly. The unfortunate victims of mental disease are not committed to prisons in these days, except where they have been proved guilty of criminal acts, but are sent to State or private hospitals for the protection of themselves, their financial interests or the protection of the community.”

It is to be hoped that both the bench and the bar will universally adopt this enlightened point of view.—*Mental Hygiene Bulletin*, June, 1927.

THE STATUS AND REGISTRATION OF MENTAL NURSES.

At the XIIIth Annual Conference of the National Asylum Workers' Union, held at Caxton Hall, Westminster, on July 6, 1927, the following resolutions regarding the status and registration of mental nurses were adopted:

“ That pressure be brought to bear upon the General Nursing Council to accept holders of the Medico-Psychological Certificate on payment of a registration fee.”

“ That in the opinion of this Conference the only real and effective method of raising the status of mental nurses is by the introduction of an Educational Examination embodying a national syllabus for all new entrants to the Mental Hospital Nursing Service, and we hereby instruct our representatives on the J.C.C. to press forward this question at the earliest opportunity.”

A resolution in favour of advising nurses to obtain the State Mental Nursing Certificate irrespective of obtaining the Medico-Psychological Nursing Certificate was lost.

HONOURS.

Prof. G. M. ROBERTSON, M.D., F.R.C.P.Edin., to be Hon. F.R.C.S.Edin.
Dr. M. J. NOLAN to be J.P. for County Down.

OBITUARY.

Il Senatore LEONARDO BIANCHI, M.D., April 13, 1927.
Sir HORATIO BRYAN DONKIN, M.D.Oxon., F.R.C.P., July 26, 1927.

NOTICES BY THE REGISTRAR.

REGULATIONS FOR DIVISIONAL PRIZES.

(Adopted at the Annual General Meeting, Edinburgh, July 19, 1927.)

No. 1.—Two prizes of £10 and £5 respectively will be awarded annually by the Association (provided sufficient merit be shown) for the best paper read during the preceding calendar year at a Divisional Meeting by an Assistant Medical Officer or Assistant Physician in a Psychiatric or Neurological Institution or Service. (*See also Regulation No. 7.*)

No. 2.—Competitors must be members of the Association.

No. 3.—Only one paper by a competitor can be entered during any competitive year. The same applies to a paper entered by more than one author.(1)

No. 4.—Only papers certified by the Secretary of the Division (in the absence of the Secretary, the Chairman of the Meeting) to have been read at a meeting of the Division and to be eligible for this competition can be entered. Divisional Secretaries are to withhold their certificates in cases where there has occurred material alterations or additions.

No. 5.—Papers certified as eligible for the competition shall be forwarded to the Registrar not later than April 30 of the following year. They shall be submitted to the Examiners for the Certificate in Psychological Medicine for report and then adjudicated on by the President. Publication shall not invalidate a paper for adjudication.(2)

No. 6.—The results shall be announced, and the prizes awarded, if any, by the President at the Annual Meeting in the year following the competitive year.

No. 7.—Papers by more than one author can be entered and any prize awarded be divided between the authors.

No. 8.—If in any competitive year one or two papers only are submitted for competition the Council may withhold either or both prizes; or it may, after considering the report of the Adjudicator, and if in its opinion the paper or papers are of outstanding merit, award a first or second or both prizes, at its discretion.

¹NOTE 1.—This means that the joint-authors (though separately eligible) cannot enter another paper in the competitive year.

NOTE 2.—The original MS., certified in accordance with Regulation No. 4, is to be submitted. Only under exceptional circumstances can a certified reprint of a published paper be accepted, but a reprint, where possible, should accompany the certified original MS.

St. Andrew's Hospital,
Northampton.

DANIEL F. RAMBAUT.
Registrar.

NOTICE OF MEETING.

Quarterly General Meeting.—November 17, 1927, at 19B, Tavistock Square, London, W.C. 1 (British Medical Association House).

APPOINTMENTS.

FORD-ROBERTSON, W. M., M.B., Assistant Medical Officer, Bacteriologist and Pathologist, St. Andrew's Hospital, Northampton.

SHEPHERD, C. F. A., M.R.C.S., L.R.C.P., D.P.M., Senior Assistant Medical Officer, Hampshire County Mental Hospital, Knowle.

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- Psychotherapie auf behaviouristischer Basis, von *Prof. Simon Fleischmann*. Arbeiten aus der Deutschen Forschungsanstalt für Psychiatrie in München, *Zwölfter Band*.
- Archives of Neurology and Psychiatry, Maudsley Hospital, vol. iv, edited by *Dr. F. L. Golla*.
- Neurosen und ihre Ätiologie, by *Prof. Simon Fleischmann*.

Books received for review :

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