although the writer apologizes for its being of rather an elementary type, it is nevertheless very well done and fully illustrated, occupying some fifty pages.

We think it is a pity that a similar chapter was not added on electro-encephalography. This subject is so much to the fore in modern work that we feel that both the student and the general practitioner would appreciate a chapter telling them what it all means. G. W. T. H. FLEMING.

Mental Disease and Social Welfare. By HORATIO M. POLLOCK. New York: State Hospitals Press, 1941. Pp. 237. Price $2.

The sixteen chapters of this book are devoted to various social aspects of mental illness and most of them have previously been read or published elsewhere.

The most interesting chapter (written with the help of Dr. B. Malzberg), and one which has not previously been published, is that dealing with the expectation of mental disease, not only at birth, but at every age of life. The life table method of analysis is used and the data are segregated by sex and nativity. The statistics apply to the State of New York and show that approximately 4·5 per cent. of persons born may, under existing conditions, develop mental disease and become patients in the hospitals for mental disease.

An interesting fact mentioned in Chapter XII is that the results of metrazol treatment of dementia praecox raise grave doubts as to its use. Insulin is clearly superior.

In his review of thirty years of alcoholic mental disease the author asks four questions, and if the answers to these four questions are in the affirmative, then the drink habit should be encouraged; if not it should be strongly discouraged. The questions are:

(1) If the taxes paid by the liquor traffic are not largely from the earnings of the poor?

(2) Does the drink habit make workers in all occupations more reliable and efficient?

(3) Does the free use of alcohol promote health and good citizenship?

(4) Does alcohol lessen crime and accidents?

The author has undoubtedly served a useful purpose in gathering together these reliable statistical studies so that laymen in particular can have easy access to them. G. W. T. H. FLEMING.

Mathematical Biophysics. By NICHOLAS RASHEVSKY. Chicago, 1939. Pp. 340. Price 18*s*.

The book is divided into three parts, entitled: (1) Mathematical biophysics of vegetative growth, (2) Mathematical biophysics of excitation and conduction in peripheral nerves, (3) Mathematical biophysics of the central nervous system. Over half of its pages are concerned with neurophysiology. We may state at once that the author is clearly an expert mathematician.

The first part of the book is much the most satisfactory. Here the author discusses the thermodynamic consequences of the hypothesis that a cell is a metabolizing entity, i.e. that it is continuously producing and absorbing chemical substances. A cell will set up gradients of the concentrations of substances, and these gradients will produce osmotic and other known effects. He shows that even so simple a hypothesis as this will explain adequately many known facts in cellular physiology. Thus, he shows that a cell, if most of the diffusion is outwards, must become unstable after exceeding a given size, and must then

break into two. Further, two such cells would repel one another. On the other hand, if the diffusion is chiefly into the cell, then it should not divide but should attract similar cells, and if the similar cells cannot move, then long filaments will tend to spread and bridge the gap between them. This latter case is obviously pertinent to the growth and form of neurones. The applications are too many to be described in detail here.

Part II is described adequately by its title, and is of interest chiefly to the specialist.

Part III is perhaps the least satisfactory part of the book. It is an attempt to apply mathematics to conditioned reflexes, discrimination, *Gestalt* problems, rational thinking, etc. The method of approach is chiefly to hypothesize some particular type of neuronic circuit, specially devised for the occasion, and then to show by the known elementary properties of excitation and inhibition (from Part II) that such a circuit will have properties something like those of the conditioned reflex, etc. The whole method is of very doubtful validity, or even advantage. It is easy enough, given special circuits, to show that they have special properties. But this completely avoids the basic problem, which is to discover why the neurones do not form merely chaotic circuits in their arrangements. The psychology of Part III must be considered superficial and the mathematics therefore trivial.

Nevertheless much of the book is important and substantial.

W. R. ASHBY.

Diseases of the Nervous System. By F. M. R. WALSHE, *O.B.E.*, M.D., D.Sc., F.R.C.P. Second edition. Edinburgh: E. & S. Livingstone, 1941. Pp. xvi + 325. Price 12*s.* 6*d.*

The fact that a second edition of this useful book has been called for within one year is good testimony to its popularity. A number of small additions have been made, the chapter on intracranial tumour has been recast, pituitary diseases have been given more room, and additions have been made to the chapters on acute infections of the nervous systems, on head and spinal injuries, and on lesions of the spinal nerves. G. W. T. H. FLEMING.

Psychology and Mental Disorders for Nurses. By J. W. FISHER, M.R.C.S., D.P.M. London: Edward Arnold & Co., 1941. Pp. viii + 120. Price 4*s.*

This small book is based on the author's Adlerian views, but one cannot avoid the conclusion that it is just a little bit above the head of the average nurse. To read the table of contents will frighten many would-be readers of the book. The book will in many ways supplement the "Red Book" of the R.M.P.A., but it covers the same ground and may prove to be quite superfluous when the new edition of the Red Book appears. We dislike the term "mental syphilis"; there cannot be syphilis of the mind!

G. W. T. H. FLEMING.