has been done since the early work of Thudicum on phrenosins, etc., but what an amazing amount of work remains to be done! Work has been done in recent years on bromine and iodine content, ammonia and adenylic acid, non-protein nitrogen, amino-acids, colloidal states of lipoids in normal and pathological brains, shifting in the ratio of lipoids, phosphatides, cerebrosides, organic phosphorus, sulphatides, cholesterol, glutathione, lactic acid, and the enzymes, including cytochrome and the dehydrogenases. Work is required on nutritional disturbances, including starvation,the chemical nature of the Nissl bodies, the significance of phosphocreatine, and the effect of acetylcholine and eserine on mental states. Much work is required on subjects like colloids, refraction, osmotic pressure, and the fibrin content of blood-serum.

In his conclusions the writer points out that what is urgently required are "Correlated individual statistics on the sociological, clinical, physiological and biochemical aspects, i.e., many types of studies on the same individual case and on the selected groups. An ideal team would include a sociologist, a psychiatrist, a psycho-analyst, an experimental psychologist, an anthropologist, an internist, a physiologist, a geneticist, a chemist, a pathologist, and an expert librarian of the polygot type, with the broad-visioned, clinically trained psychiatrist to serve as the binding-post, else the investigation would enter a multitude of diverse channels leading away from rather than towards the central object of study. It should be emphasized that co-ordinators must be very carefully selected, as this function cannot be carried out by those with strongly prejudiced minds; moreover, very few men are able to evaluate widespread visions, situations and needs, and at the same time focalize intensively on a central problem. We cannot remember ever hearing the problem of the direction of research so well stated. So much time and money has been and is being wasted on futile research on an obsessional basis and almost completely devoid of vision, and of control by normal material.

There is an extremely well-chosen and wide bibliography at the end of the various chapters. We can recommend this book very strongly to those who wish to gain an idea of the immensity of the problem in dementia præcox. We would warn them that the problem is considerably larger than even this book indicates.

G. W. T. H. FLEMING.

Principles and Practice of Recreational Therapy for the Mentally Ill. By J. H. DAVIS, M.A. London: William Heinemann (Medical Books), Ltd. Pp. xviii + 206. Price 15*s*.

This book gives an account of the practice and principles of resocializing physical therapy. Recreational therapy is defined as "any free, voluntary and expressive activity, motor, sensory or mental, vitalized by the expansive play spirit, sustained by deep-rooted pleasurable attitudes and evoked by wholesome emotional release prescribed by medical authority as an adjuvant to treatment". We do not feel altogether confident that some of the recreational activities given as therapy we have seen applied were "free and voluntary" or accompanied by "pleasurable attitudes".

The book is called the "Principles and Practice", and in the contents Part I is described as the principles, but there does not appear to be any Part II, which we should have presumed to be the practice; however, the practice is duly presented. Chapters are devoted to education and re-education, interest and effort, classification of activities, tests of various kinds, various

exercises, and finally the aims and objectives of recreational therapy. We wonder whether swimming is altogether a safe exercise for suicidal patients.

The book serves a very useful purpose for those who wish to apply recreations in a systematic manner—given the staff to do it with. Individual attention is very necessary in most cases.

The proof-correcting might have been more carefully done, i.e., "catonic" for "catatonic", and "exogeneous" for "exogenous". We would like to see a different definition of psychotherapy than "treatment of disease by analysis, mental suggestion and persuasion". G. W. T. H. FLEMING.

The Intellectual Functions of the Frontal Lobes. By R. M. BRICKNER, M.D. New York: The Macmillan Company, 1936. Pp. xvi + 354. Price 15*s*.

The author gives an excellent and most interesting account of the clinical results of the surgical removal of the larger part of both frontal lobes.

The symptoms showed only an impairment of the completeness of mental processes, but no alteration of their fundamental nature. The only real function which the author considers as primarily affected is the elaborate association into complex structures of the simpler engrammic products associated in the more posterior parts of the brain. He concludes "that the frontal lobes are not intellectual centres in any sense except, perhaps, a quantitative one, and that they play no specialized role in intellectual function. They add to intellectual intricacy in a quantitative manner only, by increasing the number of possible associations between engrams which have already been aggregated to a complex degree in other parts of the nervous system".

The clinical and experimental work is given in great detail.

G. W. T. H. FLEMING.

The Self in Psychology. By A. H. B. ALLEN. Kegan Paul, Trench, Trübner & Co., Ltd.

The Logical Structure of Science. By A. CORNELIUS BENJAMIN. Kegan Paul, Trench, Trübner & Co., Ltd.

Towards a Law of Creative Thought. By ROSAMOND E. M. HARDING. Kegan Paul, Trench, Trübner & Co., Ltd.

One feels justified, though the author in each case may quite properly be outraged by the idea, in including these three books in a single review. No insult is intended, nor is the reviewer more than usually fatigued. No doubt the authors will realize that sparsity of comment is not necessarily paucity of interest.

The reason for classifying these books together is that all three are preoccupied with those unifying tendencies existing in science to-day. Miss Harding's book deals with that contagion of inspiration whereby the same stimulant motive is reflected in different spheres of activity. Mr. Allen's book, *The Self in Psychology*, is of a nature to be expected at a time which sees the activity of the Marburg School, and Mr. Benjamin's thesis on *The Logical Structure of Science* aims at the elucidation of the inter-relationships between the different component subjects of science.

Miss Harding's book will make no appeal to those readers inoculated with