

their subsequent return to normal behaviour under "treatment".

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Le Basi Fisiche dell'Energia Nervosa e del Pensiero. (The Physical Bases of Nervous Energy and of Thought.) By GIACOMO PIGHINI. Parma: Battei. 1959.

The author, who will be 90 years old this year, is a prolific writer with over 200 publications to his credit between monographs and shorter papers. He has published also a number of substantial books, some of them well in advance of current thought at the time, such as, for example, one on *Brain Biochemistry*, which was published in 1915. The interests of Pighini are very wide, as documented in a number of biographical books (on Spallanzani in 1929, on Napoleon in 1938, on Galileo in 1948, on Verdi in 1951). The present book of some 330 pages is arranged into four main portions and an epilogue. The author was already 83 years old when this book appeared in print and it is remarkable how up to date the wide reading of Pighini must have been. The main thesis is that thought processes cannot be separated from other type of better known physiological activities. The brain should be considered not only as the organ through which thought can be expressed, but also as the site of mental processes. In spite of the fact that this book must have been prepared well before 1959, when it appeared, the author gives appropriate importance to "macro-molecular structures" as the basis of various kinds of biological processes of which thought is an integral part. A very large number of quotations ranging from the Bible to Spallanzani, from Pavlov to Locke, from Peters to Balzac, from Darwin to Goethe, and from Shakespeare to Sherrington, are given as a running commentary to biochemical explanations.

The main chapters, however, are not only down to earth, but nicely written and with a great deal of information from various fields. In the first part the biophysical foundations of nervous and mental activities are discussed, and the title of the first chapter is "The mind is a function of the brain". Other chapters include "The shape of molecules and their function in living tissues to which they participate"; "Relationships between the structure of nervous elements and the conduction velocity of the stimulus"; "Bioelectrical transmissions in plants"; "The chemico-hormonal relations and the nervous system"; "The unity of ends and means in the fundamental functions of life"; these are all part of the first group of chapters. The second group goes under the heading "Anatomo-physiological

mechanism of sensory and thought processes". The third group covers "The evolution of nervous structures in relation to psychological development" and a large amount of data is presented in terms of comparative physiology, comparative psychology and developmental processes. The fourth group goes under the title of "The organic basis of comparative psychology" where, for example, the early studies on hemispherectomy by Krynauw (1950) are quoted appropriately, though so often forgotten in the English literature.

In conclusion, although the book gives the impression of being rather diffuse and somewhat rambling on occasions, it contains a great deal of well-digested and integrated information on comparative biology, psychology, biophysics with more than a sprinkle of philosophy and poetry. The book is well written and the large number of quotations are listed at the bottom of each page. The misprints are not too many considering that the price of the book is only about 23s. at the current rate of exchange.

G. PAMPIGLIONE.

Introduction to Psychology. By JAMES O. WHITTAKER. Philadelphia and London: W. B. Saunders Company. 1965. Pp. 631.

This is another American textbook of psychology covering a very wide field and profusely illustrated. It is accompanied by a student work book which contains objective type questions to test his understanding of the text. Intensive competition in this field has led to a high standard of excellence, and this book is no exception; I would rate it superior to most in general arrangement, comprehensiveness, up-to-dateness, and intelligibility. Unfortunately, it has certain defects, also common in American textbooks, precisely in those areas which are of most interest to readers of this journal, i.e. personality, mental illness, and intelligence. These defects take various forms which can only be briefly illustrated. One is their lack of scholarship, which would not be tolerated in other chapters. As an example, Whittaker attributes to Jung the view that all people are either extraverts or introverts. Even a cursory reading of Jung of course makes clear that he held a very different view. Such an error may not seem important, but the reader may like to imagine what he would feel if Whittaker had attributed the four-colour theory to Helmholtz and the three-colour theory to Hering! No textbook writer would be allowed to get away with such an error, but they have been getting away with the same misinterpretation of Jung's view for the last 30 years. Another