

in recent years, and the publication of the present volume is welcomed. Clinicians and others with special interests in porphyrins will be grateful to Prof. C. Rimington for having undertaken the task of translating the book into English.

The main value of the book lies in the chapters dealing with the clinical and pathological aspects of porphyrins. Here Prof. Vannotti draws upon his own wide experience and his intimate knowledge of the clinical literature. Many original papers, to which reference is made, have appeared in European journals not readily available, and this feature makes the book particularly valuable to the English-speaking reader. Specialists will not always agree with Prof. Vannotti, for example, in his assessment of vitamins in the treatment of porphyria. There is also some doubt whether some of the methods, such as those recommended for the separation of porphyrins, are sufficiently reliable or accurate according to modern standards. Nevertheless, this book will be of value to the clinician or pathologist interested in porphyrias or other conditions in which increased amounts of porphyrins are excreted.

Prof. Vannotti states in his foreword that this book "is, in no sense, a mere revision of the older monograph, but a new book embodying modern conceptions of pigment metabolism". But the reader who expects on seeing the title and sub-title an up-to-date account of the organic chemistry, physical chemistry, biosynthesis or metabolism of porphyrins will be somewhat disappointed. The structural chemistry is given in a very elementary form, and the physical chemistry is curiously old-fashioned. Neither can the treatment of the general biochemistry of the porphyrins be considered satisfactory. Thus no reference is made to the important work of Granick, which shows that porphyrins are precursors of chlorophyll in algae. Recent results elucidating, by means of isotopes, the steps leading from glycine and succinic acid to porphyrins are mentioned, but are not adequately discussed, nor are they woven into the general fabric of the book.

One feels therefore that, while this book of Prof. Vannotti will be of great value to the medical, and particularly clinical, reader, it cannot be recommended as a general introduction into the chemistry, biochemistry or biology of porphyrins.

A. NEUBERGER

## PSYCHOLOGY AND MYTHOLOGY

### The Origins and History of Consciousness

By Dr. Erich Neumann. (Translated by R. F. C. Hull.) Pp. xxiv+494+27 plates. (London: Routledge and Kegan Paul, Ltd., 1954.) 30s. net.

THIS book is *not* concerned, as its title might lead the unwary reader to suppose, with the classical problem of the emergence of consciousness in the evolution of living matter: it is concerned with the emergence of consciousness from 'the unconscious mind'. The central theme is yet another psychological variant of the thesis that 'ontogeny recapitulates phylogeny'. What is distinctive of this variant is the idea that both the ontogenetic and the phylogenetic sequence correspond to that of a series of mythologies, these mythologies being symbolical projections of struggles within the human psyche.

"It is the task of this book", writes the author, "to shew that a series of archetypes is a main constituent of mythology, that they stand in an organic relation to one another, and that their stadia succession determines the growth of consciousness". This is fairly clear, but the author proceeds: "Normally the archetypal stages are lived through without disturbance, and the development of consciousness proceeds in them just as naturally as physical development proceeds in the stages of bodily maturation. As organs of the psyche's structure the archetypes articulate with one another autonomously, like the physical organs, and determine the maturation of the personality in a manner analogous to the biological hormone-components of the physical constitution".

Gathering momentum, the argument plunges to quite incredible depths of obscurity. The following is fairly representative of the style and texture of the exposition: "Besides possessing an 'eternal' significance, the archetype also has an equally legitimate historical aspect. Ego consciousness evolves by passing through a series of 'eternal images', and the ego, transformed in the passage, is constantly experiencing a new relation to the archetypes. Its relation to the eternality of the archetypal images is a process of succession in time—that is to say, it takes place in stages. The ability to perceive, to understand, and to interpret these images changes as ego consciousness changes in the course of man's phylogenetic and ontogenetic history; consequently the relativity of the eternal image to the evolving ego consciousness becomes more and more pronounced".

The work, however, is clearly addressed to advanced students of Jungian psychology, and for them no doubt it is an essential text. It is commended to them in a foreword by Jung himself. He describes it as beginning where he himself, were he granted a second lease of life, would start to gather up the *dissecta membra* of his own writings. He commends it, too, as presenting "a unique history of the evolution of consciousness", and as representing the body of myths as the phenomenology of this same evolution.

It would certainly seem that the author has something important to say, but it is difficult not to believe that what he has to say could have been said more clearly.

C. A. MACE

## CHEMICAL SPECIFICITY IN BIOLOGICAL INTERACTIONS

### Chemical Specificity in Biological Interactions

Edited by Frank R. N. Gurd. (Memoirs of the University Laboratory of Physical Chemistry Related to Medicine and Public Health, Harvard University—No. 3.) Pp. xv+234. (New York: Academic Books, Inc.; London: Academic Books, Ltd., 1954.) 6 dollars.

A PART from the introductory chapter by the late Dr. E. J. Cohn, this book consists of two independent parts, the first of which is made up of five papers, as follows: the effects of X-ray and other radiations on proteins and living tissues, by S. Warren; physical and chemical properties of the steroids related to protein binding, by R. B. Turner; biochemical problems of the steroid hormones, by T. F. Gallagher; some studies on the active principles of the posterior pituitary gland, by V. du Vigneaud; and the influence of ion-exchange chromatography