Book Reviews

Wave Theory of Aberrations. H. H. Hopkins. New York: Oxford Univ. Press, 1950. 169 pp. $3.00.

Book titles can be misleading, for actually less than half of the present book deals with the wave theory of lens aberrations. The derivation of the properties of aberrations from the shape of the image-forming wave front is an old science, and the transfer from wave-front to ray aberrations is a straightforward matter, since rays are merely the normals to the wave front. In this little book, Dr. Hopkins has made a useful collection of these derivations, based largely on Conrady's papers of 1905 and 1918–20, with some additional proofs and formulae of his own. A large part of the book is, however, devoted to ray-tracing methods and computing procedures, which are quite conventional and have little relation to the title. Indeed, many of the author's statements will be found intact in Conrady's *Applied Optics and Optical Design.*

One would have expected to find that a book on the wave theory of aberrations would also include the effects of diffraction in the elementary image. A consideration of the mutual interference of Huygenian wavelets, originating at every point on the wave front as it emerges from the lens, enables us to compute the detailed light distribution or fine structure of the elementary image associated with each aberration. Unfortunately this approach to the subject has been entirely omitted in the present book.

The mathematics involved is simple, but the inclusion of a few numerical examples would greatly help the reader to understand the formulae. The book should be useful to anyone engaged in lens computation or design.

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Dementia Praecox or the Group of Schizophrenias. Eugen Bleuler; translated by Joseph Zinkin. New York: International Universities Press, 1950. 548 pp. $7.50.

Bleuler's monumental work on schizophrenia is probably the most important book ever written in psychiatry, dealing as it does with this most common and protean of diseases of the mind. What makes the book so important is not that schizophrenia is so common but that it is so frequently not recognized. In this book Bleuler delineates with great clinical acumen, and describes in clear language, the disease he named schizophrenia and removes it from that artificial and rigid classificatory system of a multiplicity of mental diseases that Kraepelin gave psychiatry at the beginning of the century. Kraepelin masterfully described and classified the *symptoms* of the two psychoses dementia praecox and manic-depressive states; Bleuler had the sagacity to recognize the *nature* of the disease, and had the courage to say that in medicine one cannot base diagnosis upon either the prognosis or upon the course of the disease, but only upon knowledge and recognition of the disease.

The fundamental manifestations of schizophrenia are seen in a specific loosening of associations, in disturbances of affect, and in autistic thinking. These may result in ambivalence, blocking, and autism. Such gross manifestations as delusions and hallucinations (psychosis) are, according to Bleuler, only accessory symptoms, and for the diagnosis relatively unimportant.

Since the majority of schizophrenics are not psychotic, but since the majority of these nonpsychotic schizophrenics do also demonstrate neurotic symptoms, it becomes exceedingly important to differentiate diagnostically between schizophrenia and the neuroses, as the latter are not diseases of the ego. The symptomatological differentiation between neuroses and psychoses still in use today is a Kraepelinian heritage which should give way to the understanding of the disease schizophrenia, which frequently straddles both. Bleuler's contribution to psychiatry is as significant as is the ability to diagnose liver disease before jaundice is visible, in internal medicine, or nephritis before signs of edema occur, or coronary disease before coronary accidents take place.

The book was published in German in 1911, during a period of great diagnostic activity but also of therapeutic nihilism (aside from Freud and his then small circle of students). Now, 40 years later, the pendulum has swung, and we appear to be in a period of diagnostic nihilism and therapeutic anarchy. It is most timely, then, that this great book—which should be on every medical student's desk and on every physician's reading shelf—has finally been translated into English. Joseph Zinkin deserves high praise for his lucid translation, as does Gregory Zilboorg for his long advocacy of the belated undertaking.

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Cell and Psyche: The Biology of Purpose. Edmund W. Sinnott. Chapel Hill, N. C.: Univ. North Carolina Press, 1950. 121 pp. $2.00.

In his John Calvin McNair Lectures, the distinguished author gives a popular presentation of his biological world view. The distinctive character of life is organization. This central problem presents itself in the orderly distribution and cooperation of enzymes and other biocatalyzers, as well as in the control of morphogenesis shown, for example, in the formation of sporangia of slime molds from a mass of ameboid cells, in the regulation of innumerable chemical re-