

Reviews

CLINICAL SCIENCE

Pathologic Physiology: Mechanisms of Disease. Edited by W. A. Sodeman, M.D., F.A.C.P. (Pp. 808. £2 17s. 6d.) Philadelphia and London: W. B. Saunders Company. 1950.

During the present century a large amount of time and money has been devoted to the study of symptoms and disturbed bodily processes, and the results of this kind of study, often called clinical science in this country, are here described under the heading of pathologic physiology. It cannot be said that the study of symptoms has yielded the harvest which Mackenzie and Lewis prophesied, and few people nowadays would expect that it would. It has taught us a great deal about the late effects of disease but little about disease prevention. Clinical science is largely a matter of refined observation, whereas the great advances of knowledge come from experiment, where "God gives the increase." The most fruitful discoveries by clinicians in the last 25 years have been the therapeutic action of liver and cortisone each discovered by an experiment which was unexpectedly successful. Nevertheless, a large amount of useful information about pathological physiology has been acquired, and in certain fields, such as the surgery of the heart and lungs, it has been the indispensable basis for advance. In codifying this information Dr. Sodeman has had the help of some 25 collaborators, all of whom have made contributions to knowledge.

The book is complete and deals with all the broad categories of disease, with the curious exception of the central nervous system. The discussion of the endocrine glands, including the adaptation syndrome, is most competent, and there is a good section on the locomotor system, though it contains perhaps more morbid anatomy than pathological physiology.

A book like this must avoid at least three dangers. Many of the papers published by clinical investigators have little practical or aesthetic value, and the student should not be taught facts just because they are known. On the other hand, he should be shown that there are glaring gaps in our knowledge, as, for example, the mechanism of oedema of the lungs and hydrothorax, or the life history and function of the white blood cells. Finally, a book on pathological physiology should not be cluttered up with pure clinical medicine. This book has not entirely escaped these dangers, and in consequence it is too long. Apart from this, it is a first-rate textbook which will educate the student in the underlying principles of the interpretation and treatment of disease. The book is well produced, with a restrained use of illustration, a good index, and a full bibliography to each chapter.

L. J. WITTS.

INTELLIGENCE

The Psychology of Intelligence. By Jean Piaget, D.Sc. (Pp. 182. 15s.) London: Routledge and Kegan Paul. 1950.

This is a difficult book. The medical reader will probably wish to consign it to the academic psychologist, who may well be tempted to hand it on to the philosopher. None the less it should be read by everyone with an interest in the fundamental problems of mind.

The author, a pioneer in child psychology, has now turned his attention to the general theory of intelligence and thought. Despite the intricacy of the argument and the somewhat forbidding style, Professor Piaget's book is one of the very few theoretical treatises in psychology deserving of genuine intellectual respect.

First, the author reviews definitions of intelligence couched in biological terms and finds them in some respects wanting. Next he considers experimental studies of thinking (for the most part German), only to dismiss them as having leaned too heavily on the dictates of formal logic. He then discusses the relation of thinking to simpler sensorimotor skills and firmly establishes a genetic position. Finally, Professor Piaget develops his own interesting (if difficult) theory of intelligence. Broadly, he supposes that intelligence comprises a hierarchy of operations which fall into various "groupings"—for example, spatio-temporal, arithmetical, and deductive. These groups of operations show their own sequences and modes of development, and are said to provide the basic framework for logical thought. Although an analysis of this character may seem unduly theoretical, there is no doubt that it will set a good example. Intelligence testing governed by bad theory or no theory at all has had its day.

The translators of this book have wrestled nobly with the difficulties of the original and deserve warm commendation.

O. L. ZANGWILL.

THE ADRENAL CORTEX

On the Experimental Morphology of the Adrenal Cortex. By Hans Selye, M.D., Ph.D., D.Sc., F.R.S.(C.), and Helen Stone, B.Sc. (Pp. 105; illustrated. 16s. 6d.) Springfield, Illinois: Charles C. Thomas. Oxford: Blackwell Scientific Publications. 1950.

Professor Selye's prolific experiments on the adrenal gland have made his name inseparable from that organ. Not all workers have been able to assess adequately the conclusions to be drawn from his results, which are often complex. Selye himself has compiled several reviews putting forward in detail his own stimulating interpretations of his experimental results. In this monograph he attempts a synthesis of his experimental findings in so far as they bear on the varied morphology of the adrenal gland itself. The book therefore is of interest primarily to students of adrenal histology and pathology. But since the main aim of his experiments is the elucidation of function the book inevitably contains much of interest to all who speculate on the complexities of adrenal behaviour.

After a brief introductory section the author passes to a detailed account of a series of experiments on rats designed to elucidate some of the factors leading to adrenal hyperplasia or atrophy. He shows that a fairly close proportionality exists between the effect of corticotrophin and the protein content of the food. Thyroxine is shown to increase adrenal size, and methyl testosterone to reduce it, being more potent in producing adrenal involution than is D.C.A. Professor Selye then proceeds to an intensive analysis of adrenal histology as derived from his experimental animals. Twenty different types of histological change are listed, ranging from atrophy, hypertrophy, and hyperplasia to cytolysis, haemorrhagic infarction, and toxic involution. Attempts are made to analyse the experimental circumstances under which each of these changes can be produced. The great variety of histological pictures encountered