Part II.—Reviews.

Oedipus, Myth and Complex. By P. Mullahy. London: Allen & Unwin, 1948. Pp. xix + 538. Price 37s. 6d.

The theories of psycho-analysis and its derivatives are described in this book with notes and bibliography, and Jebb's translations of the Oedipus Rex, Oedipus at Colonus, and Antigone are included.

The first four chapters are devoted to Freudian theory. In the second and fourth of these respectively its later modifications and applications to mythology are particularly well done. An extract from Plato shows how near he was to the modern theory of dream formation. The later chapters are of less significance to most British psychiatrists. They are given to the work of Adler, whose theories are too superficial ever to have attracted the latter, though, requiring little emotional effort for their understanding, they have fascinated the general physicians and public, and to Jung with his interesting and deliberate flight from reason to magic. Rank's conjectures that all happiness ends with the birth trauma and that truth is subjective are described, for he has a following in the U.S.A. Karen Horney's view that neurosis is a character disturbance is shown to have much to recommend it, but she is too preoccupied with typology. This also mars Fromm's theories which are intermediate between Freud's and Adler's. Sullivan's theories that satisfactions are related to muscular tensions seem incomplete and his ideas on child development seem limited to the American scene. A concluding chapter critically evaluates all these views.

Their relationship to the Oedipus is not everywhere apparent; nevertheless on cultural grounds it was a happy thought to include Sophocles's trilogy in this volume. The introduction, by Fromm, contains this amazing sentence on p. iv: "We know much about the atom, we know less about the living cell, and we know even a great deal less about the mind." In the body of the book the writing, though generally adequate, is spoiled by the current vulgarisms of "due" when "owing" is meant on pp. 54, 64, 68, 252, and "so as" instead of "in order" on p. 254. The book is expensive.

E. S. STERN.

Frustration. The Study of Behaviour without a Goal. By NORMAN R. F. MAIER. London: McGraw-Hill, 1949. Pp. xiii + 264. Price 21s.

The first part of this book describes experiments by the author, using the Lashley jumping apparatus, in which rats were given the choice of two alternatives, one being rewarded and the other punished. By jumbling these consequences the problem was made insoluble. Thus the animal was frustrated. In such cases Prof. Maier commonly found that the response became fixated, the experimental rat invariably making one particular choice regardless of the consequences, even if the situation had long been altered so that these were constant and predictable. This property of fixation could only be altered by "guidance," otherwise it seemed to persist indefinitely. Severe punishment aggravated it, but reward may occasionally cause some relief. These results are clearly of great importance if universally valid, but recent experiments in England have not been quite so definite.

Nevertheless the work is of great interest. The author suggests that its

application to man would indicate that recidivism and compulsive behaviour result from frustration and this explains their intractability to punishment and recognised treatment respectively. He enlarges the matter further but does not point out that it is incompatible with the doctrine of freewill, a philosophical consequence of some importance. It is particularly in the latter part of the book that he develops the implications and applications of his theory. He suggests that there may be conflict between goal-motivated and frustration-instigated behaviour as well as between two choice situations. He applies his theory well to child management, though it must be admitted that nothing startling emerges in the final result.

These researches are refreshing in their interest and originality, and even if they should be disproved Prof. Maier has given us a novel and stimulating view of our daily problems.

E. S. STERN.

Cell Growth and Cell Function. By Professor Torbjoern O. Caspersson. New York: W. W. Norton & Co., Inc. London: Chapman & Hall. Pp. 185. Figs. 91. 28s.

For twenty years the author and his school have studied the biochemistry of the intact cell, using chiefly the methods of ultraviolet spectrography applied to the microscopic image. By using a variety of wavelengths for the photomicrography, and by comparing the observed absorptions with those of known substances, he has been able to deduce with some confidence the chemical nature of many important cellular constituents. A picture can thus be built up showing not only the global quantities but also the naturally occurring gradients of concentration. In his Salmon Lectures the author summarized his work, and this book presents his results in expanded form.

It can certainly be recommended. Profusely illustrated and well bound, it contains much information that will interest the biochemist and histologist. The psychiatrist, too, will be interested, for Caspersson studied the nerve cell and found, rather to his surprise, that it is remarkably active in protein synthesis, being at times inferior in activity only to the developing ovum. Why this should be is still unknown, though there is evidence that the synthesis plays an important part in normal neuronic function. It was the idea that this synthesis might be faulty in schizophrenia that first led his colleagues Hydén and Hartelius to treat this condition with malononitrile.

W. Ross Ashby.

Pavlov: A Biography. By B. P. Babkin. London: Victor Gollancz, Ltd., 1951. Pp. 365. 258.

Professor Babkin, who died just before the book was published, was a pupil of Pavlov's at the Institute of Experimental Medicine and worked with him for over ten years. The two became close friends and remained so throughout their lives, though they had to separate eventually when Babkin went to Canada. Here Babkin wrote the book, and though the location made some Russian material and information unavailable, it left the author free from any suggestion of political pressure. As a Russian, a lifelong friend, and a professional physiologist, the author was obviously well qualified for the task.

The resulting book is excellent. It is written in good English and is rich in facts. It reveals Pavlov's genius, yet is by no means blindly hero-worshipping. All those who have been thrilled by Pavlov's discoveries will want to know something of the man himself: Babkin's book will give the information they want.

W. Ross Ashby.