The earlier chapters are primarily concerned with the sifting of various definitions concerning meaning, some from linguistic and philosophical contexts. However, one gathers that Dr. Creelman feels that meaning is ultimately to be found by scientific and causal explanation. In dealing scientifically with the private event she hopes to cement the gap between the psycho-experimentalist and the psychotherapist. This latter statement can be taken as an aim of her book. The subsequent chapters are concerned with the close scrutiny of the concepts derived from the American and Russian conditioning experiments. The reader is presented with a consolidation of research, ranging from early conditioning to methods which have paved the way to present day operant conditioning. As regards Russian experimentation, the author gives a summary of verbal regulation of behaviour and first and second signalling systems. She is anxious to fit these theories in with her pre-supposed definition of meaning.

The final part of the book is in the form of a discussion comprised of an evaluation of American and Russian theories. It is revealed that there is a tripartition of American work on meaning, covering (1) verbal conditioning methods with emphasis on G.S.R. reactions, (2) scaling methods such as the Semantic Differential, (3) Associationistic theory including the recent refined methods for computation of Association strength. Dr. Creelman adds her view of meaning within the context of Russian experimentation as—a complex interconnected response system, including visceral, sensory as well as cognitive elements. She concludes by admitting that meaning still remains chimerical, and adds a plea for the collection of more data and refined methodology.

The aim of this book is its own limitation. To attempt to prosecute an essentially subjective notion such as meaning entirely within the confines of an experimental methodology immediately sets a limitation on the derived results. Objective research can only deal with empirical realities. Jaspers has pointed out, however, that "Meaning attains empirical reality only so far as it is manifested in objective, meaningful phenomena of expression, action and creation . . . Though every step in understanding is linked to objective phenomena, all understanding nevertheless remains interpretation, however much the certainty of understanding increases with the extent to which phenomena are concordantly interpreted. Another possible way of understanding is always at hand." This means that to approach meaning by purely objective methods is by necessity incomplete.

Dr. Creelman has taken her definition of meaning as the involvement of words with their meanings, and thus is bound to explain meaning within lexical parameters. On the whole this book has presented the reader with an astonishing range of work on conditioning from early days until the present time. Dr. Creelman has evidently had clinical experience, but unfortunately her sensitivity to the individual in his environment does not come through in the context of this book. The search for objective knowledge concerning meaning cannot replace the subjective experience of it, but only provides an additional approach. However, as regards the experimental investigation of meaning this book provides the reader with an intelligently selected field of research.

ALICE FERRIS.

The Unconscious (6th Bonneval Conference, under the direction of Dr. HENRI EY with the collaboration and participation of many contributors). Bruges: Desclées de Brouwer. 1966. Pp. 424. Price 450 Belgian francs.

This comprehensive volume, psychoanalytically orientated of course, is prefaced by some introductory remarks couched in the courtly phraseology and erudite language which we are accustomed to expect from Dr. Henri Ey.

He points out that modifications in the text had to be undertaken having regard to the fact that its preparation began in 1960. The prolegomena cover extensively material relating to what is known of the Unconscious in general and in particular. There are references to the "Masters of Thought", including Aristotle, Kant, Hegel and so on up to the present time, with especial regard to the Copernican revolution inherent in Freud's discoveries.

Then follow a series of disquisitions on every discipline which can be related to the unconscious. An attempt is made to reconcile Freudian theory with Jacksonian organicism. Sartre receives an honourable mention. Cognate topics comprise sociology, phenomenology, philosophic thought, neurophysiology, neurobiology, anthropology, psychopathology, genetics and language.

In one section, Dr. Paul Ricouer makes the point that Freud, Nietzsche and Marx appear before contemporary philosophers as protagonists of suspicion and piercers of masks!

Subsequently, an endeavour is made to establish some sort of balance sheet of the enormous mass of research material comprising theory, facts, experiments, practical approaches, EEG techniques, and so on.

Each presentation involves a most meticulous and detailed description of every known Freudian mechanism, of all the information available in regard to the structured psyche in association with cortical and subcortical anatomy and histology.

One stands humbly and somewhat breathless before this enormous mass of erudition, coloured by classicism and documented by the most comprehensive and detailed references to the literature. It is impossible to do justice to the immensity of the coverage and the vast amount of research and toil involved.

Some of the papers are followed by discussions, which here and there appear to be composed of metaphorical spun-silk dialectical verbal cobwebs wound about each other by the participants. Always, however, the last word remains with Dr. Ey, who gently admonishes the over-enthusiastic, and whose temperate remarks add emollients to potential acrimony.

All in all, this is a splendid volume, but one for the specialist in a very narrow field. However plangent the prose, there is nothing here for the practical realist and nothing for the therapist. It is well produced and comparatively free from printer's errors. The only reservation relates to the irritating footnotes, which tend to detract from the fluidity of the text.

As a venture into the higher flights of philosophical psychology this is a book thoroughly to be recommended to the scholar and armchair philosopher who knows and loves the French language.

H. C. Beccle.

Primate Behavior—Field Studies of Monkeys and Apes. Edited by Irven DeVore. New York: Holt, Rinehart and Winston, Inc. 1965. Pp. xiv + 654. Price 66*s*.

This is an excellent account of the behaviour of non-human primates in their natural habitats. The main body of the book is composed of detailed accounts by field workers who have been (and still are) carrying out prolonged observational studies, mainly in Africa and India. Baboons, macaques, langurs, howler monkeys and lemurs all have at least one chapter devoted to them; there are two accounts of chimpanzees and one of the mountain gorilla. There is a generally high standard of reporting, and a sensible balance is struck between detailed descriptions of individual sequences of behaviour and generalizations derived from months of observation. In further chapters, particular topics, such as parental behaviour and communication, are discussed with reference to the findings in several species. Additional chapters serve to synthesize the individual contributions and point out possible applications to the study of human behaviour.

Apart from the pioneering studies of C. R. Carpenter on the gibbon and howler monkey, most of this work has taken place in the last few years. On the whole it appears to confirm the observations made on animals in captivity, and it extends them considerably. It is interesting to reflect that this is the first book in English on the social life of monkeys and apes since Zuckermann's classical monograph of 1932.

We are already familiar with the stimulating contributions of comparative ethology to our ideas about behaviour, but these have so far been largely derived from observations on fish and birds. This new wealth of information about more closely related species is therefore particularly welcome. The book can be strongly recommended, and is of course essential in any psychiatric library.

John Price.

3. PATHOLOGY AND PHYSIOLOGY

Amines and Schizophrenia. Edited by H. E. Himwich, S. S. Kety and J. R. Smythies. Oxford: Pergamon Press. 1967. Pp. 290. Price 75*s*.

This volume contains a series of papers, originally delivered at a symposium, together with a record of the discussion that followed each paper. In these days, when a book written in the old-fashioned way by a single author rarely seems to come to the reviewer, how are these compilations to be judged? By the eminence of the authors? Then this one rates highly, with Kety, Himwich, Richter and Smythies and others almost as eminent. By the speed with which it has been published? The publishers cannily make no mention of the date of the original symposium, although it must have been when interest in the pink spot was at its height. Now that the interest has waned and the pink spot has been shown not to be due to dimethoxyphenylethylamine, some of the papers have a dated look, with an air of controversy that no longer exists. This is inevitable, however rapid the publication, in a field where advances (and also retreats) are continually being made.

Another way to judge a symposium is to decide on the evidence of the book whether one would have liked to be present. By this criterion, at least for this reviewer, the present book is very successful—even though the symposium was held in Atlantic City. It must have been a fascinating meeting, and many of the papers retain their interest. There is a great deal of information, of a more solid and scientific sort than is easily available elsewhere, about hallucinogenic amines and their possible role in schizophrenia. Some of the most interesting contributions have nothing to do with schizophrenia. Thus Professor Jenner, billed