From the psychiatric point of view the major objection to accepting the diagnosis is the length of the final illness, 1810–1820. The authors attempt to avoid this difficulty by suggesting that this last phase was due to 'senility'. If that were so, one would not have expected the king to have lived for as long as he did.

Historical diagnosis is a diverting game which we must all be allowed to indulge in from time to time. However, it is an essentially trivial matter which is usually impossible to resolve. Much more serious are the underlying assumptions which run through this book. The first concerns the supposed culpability of psychiatric patients. We are asked to believe that if a patient is diagnosed as suffering from an unexplained illness such as manic-depressive psychosis or from a neurotic disorder he is being 'maligned', whereas if he is found to have a known biochemical disturbance he is 'not mad' and only the unfortunate object of an accident of heredity. The second assumption is that some lessons can be learnt from these diagnostic exercises. 'The royal malady' they tell us 'may perhaps again—as in 1788—serve psychiatry by indicating the direction of its future progress.' Brave words, but what do they really mean? Should we be screening all our patients for porphyria? Or should we be concentrating all our efforts into biochemical research?

I have dealt at some length with the discussion of George III's diagnosis because this constitutes the main part of this book. However, the most interesting and least contentious chapters are those which deal with Georgian psychiatry, the political consequences of the king's madness and its impact on social policy. The excellence of this section makes it all the more regrettable that the authors ever took that course in biochemistry without tears.

RAYMOND LEVY.

## WHAT MAKES REINFORCERS REINFORCE?

**Human Motivation.** By M. D. VERNON. London: Cambridge University Press. 1969. Pp. 190. Price 45s.

Professor Vernon's book fills a definite gap in psychological literature and is sure to be widely read. (It is also issued as a paperback.) Many psychologists regard motivation as one of the key processes among the determinants of behaviour; the experiments carried out in the field, however, have been done mainly with animals and have studied very simple drives such as hunger.

Professor Vernon, who has not previously written on the subject, considers that we can learn little about human motivation from the vast literature on animal instincts and drives. Behaviour in humans is less reflex, less instinctive, and much less stereotyped than in animals. Moreover, specific organismic states cannot be associated with a great deal of human behaviour which is obviously motivated. The author therefore has ample justification for wide consideration of biological, subjective and environmental factors, organizing the compendious information available in ten separate areas: The nature of motivation (instinct and drive); motivation in children; biological needs (homeostasis, sexual and maternal behaviour); emergency reactions (fear and fight); emotions; activation and arousal; social motivation (group membership, affiliation, conformity, power and dominance); Goal-directed behaviour (interests, sentiments, level of aspiration, achievement motivation); frustration and conflict.

Very many studies have been abstracted, which makes the book particularly useful as a reference work. Some important information has had to be severely compressed; the 'Freudian theory of instincts' is dispatched in a single page (p. 44). The report of one investigation follows so precipitately on another that at times the reader is brought low by mental ataxia. Unfortunately the 'Index of Authors' is confined to those workers whom Professor Vernon refers to by name in her text; those represented by numerals can be found only by searching through the unalphabetic bibliography compiled separately for each chapter. The section of the book headed 'Notes and References' provides only the latter.

Professor Vernon scarcely discusses theories of motivation. Her reason is that they are largely irrelevant to human motivation. In general it may be said that motivation is concerned with the drives leading to behaviour, and with reinforcements which affect goal-directed behaviour positively or negatively. The book has an informative chapter on drives—in modern psychology the concept of drive has been modified to refer to the energy which makes an activity occur, regardless of what goal the activity leads to. (The term 'goal' or 'incentive' is used to refer to the environmental circumstances influencing behaviour—a goal denotes the end-result of an act.) The book also has a chapter on goal-direction, by which is implied the purposive aspects of behaviour. One of the central problems in the study of motivation is the way in which behaviour becomes organized in relation to goals. Theoretical considerations of the interrelationship between drive and incentive would appear to be highly relevant to the book's purpose.

Skinner, to whom Professor Vernon does not refer, has shown how behaviour becomes goal-directed as a result of prior reinforcement. A reinforcer is an event which occurs immediately after

a response, and which subsequently increases (e.g. food) or decreases (e.g. a shock) the future probability of that response. It is a matter for some surprise that the term 'reinforcer', in wide use to refer to incentives determining behaviour, does not have an entry in Professor Vernon's index.

What makes reinforcers reinforce—i.e. alter the probabilities of response occurrence—some authors view as perhaps the most important problem in psychology. Hull, who receives only one brief mention from Professor Vernon (p. 10), has proposed that events which reinforce do so by virtue of the fact that they reduce drive. Contrary to earlier views of psychological hedonism—i.e. that reinforcers produce learning because they give rise either to pleasure or to pain—Hull attributed the reinforcing powers of all events to drive reduction.

Whether or not Professor Vernon finds the reduction of drive strength through satisfaction of the relevant need an adequate hypothesis to account for learning, she may agree that more attention would be warranted in a subsequent edition to the relation between motivation on the one hand and learning on the other, in view of the fact that relationships between drives and incentives are learned.

Students of psychology and psychiatry approaching the subject will probably do well to read this excellent book in conjunction with *Motivation*, edited by D. Bindra and J. Stewart, No. UPS1 in the Penguin Modern Psychology Series, a collection of source papers in which the development of motivational concepts is set out clearly.

H. J. WALTON.

## ECLECTICISM CONTESTED

**Behaviour Therapy; Appraisal and Status.** Edited by C. M. FRANKS. McGraw Hill. 1969. Pp. XXV + 730. Price £7.14.0.

Behaviour therapy has suffered, more than most subjects, from premature theorising and from repetitive review articles, each expounding some new permutation of the results of the same few pieces of original research. So the appearance of yet another volume of reviews must prompt the questions whether the subject is now ready for re-appraisal, and if so, what this volume has to offer which its predecessors did not provide.

To the editors the answer is clear. The book sets out to be more comprehensive than any previous review—to appraise the whole literature in one volume, and to look forward to the future as well as back on past achievements. Dr. Wolpe, who writes the foreword, expresses the additional hope that its readers will avoid an eclectic approach and will not try to mingle behaviour therapy techniques with psychodynamic treatment. 'The theoretical orientation of the eclectic', he asserts, 'is invariably barren . . .' Even Lazarus, the co-author of one of his books, is reproved—'Eclectics who have started from a behaviouristic position (e.g. Lazarus, 1967) are in this respect no better off than the other'.

The book succeeds in the editor's aim—and, unfortunately, in Wolpe's as well. The literature review is extensive; the seventy closely printed pages of references will be invaluable for anyone seriously interested in the subject and shows beyond doubt that the last few years have seen a huge output of new research which is ripe for review. Some of the reviews are, if anything, a little too extensive, and the general reader's attention may wander at times as review is piled on review, not all of which are easy reading.

It is disappointing that the second aim, espoused by Wolpe, has also been achieved. The contributors have set their eyes so firmly on behaviour therapy and its attendant theories that they seldom look on either side to see what other approaches to psychiatry may have to say about the same problems. Davison has some pertinent criticisms of psychologists who are so wedded to operant conditioning theories that they do not consider any other psychological theory to explain their findings. But even he does not look beyond learning theory. The same criticism can be made of the rest of the book—little or no notice is taken of the years of research into the clinical problems which are the objects of the behavioural treatment. If only the authors paid as much attention to the clinical problems as they do to the niceties of learning theory. Even Davison's review is written with psychiatric concepts as crude as 'sick talk' and 'psychotic behaviour'.

It is a truism to say that books of multiple authorship are uneven in quality and this is no exception. Twenty three contributors have written the twenty chapters. Among the best are a valuable historical survey by Franks; a review of experimental studies of desensitization and fear by Lang; Rachman and Teasdale on aversion therapy; and Kanfer and Saslow on behavioural diagnosis. Other topics include extensive reviews of the outcome of desensitization, of operant therapy, teaching machine and self-control techniques and many others.

This is certainly a book which anyone interested in behaviour therapy will wish to refer to and one which should take its place in a postgraduate library. It has all the virtues—and many of the faults—we have come to associate with the behavioural psychologists' approach to the treatment of psychiatric illness.

M. G. GELDER.