Mathematical Psychology by Donald Laming. London: Academic Press, 1974. 388 pp. £8.20.

This is about the fourth undergraduate text in mathematical psychology to be published; its emphasis is on the psychological side of the subdiscipline, and it would need to be supplemented with other texts if the reader wants to do mathematical psychology himself and not just know what some of it looks like.

The level of the text is suitable for third year students who have done a little university mathematics, and who are acquainted with current research in learning and cognitive processes. There is too much on reaction times (which can be very dull), little on scaling, and nothing on social psychology or the rigorous end of psycholinguistics, which is altogether an unbalanced mixture for a beginner. The treatment of sequential interactions uses Markov chains, which is not the clearest or most general approach; this reviewer feels that the topic should have been handled through time series or left out. Chapters 1 and 18, giving three mathematical ideas from which Laming derives models, are useful but could have been used more emphatically to structure the book. The strength lies in the amount of experimental data which Laming relates to models, but against this he is weak on questions of goodness-of-fit. Verdict: background material, but not a first course text; the choice of content is too idiosyncratic.

R. A. M. Gregson

Psychology and Common Sense by R. B. Joynson. London: Routledge and Kegan Paul, 1974. xi +112 pp.

This book gives a systematic exposition of the views which the author has already broached in journal papers. His first chapter supports the frequent view of the layman that much of what psychology teaches he already knew before and of the rest much does not seem to be concerned with human nature. This situation is attributed by Joynson to the behaviourist phobia for mentalism which he elaborates on in the second chapter. The third and fourth chapters are devoted to a discussion of the breakdown of objective experiment. The fifth presents evidence of and arguments for the return of mind to psychology. This inevitably leads to a discussion of the possible status of mind in the philosophy of the psychologist. In the sixth and final chapter the question of "The Philosopher's Task" is taken up in the light of the viewpoint developed.

This is a small but highly important monograph which highlights some central issues in psychology today. It usefully emphasises the

importance of philosophical assumptions in determining the development of a science both with regard to its goals and its methodology and it underlines the danger of refusing to face up to philosophical issues. At times the author wields his critical broadsword in sweeps which may seem to be indiscriminately destructive but his challenges are clear and provocative and will hopefully lead to a useful review and better integration of the basic theoretical assumptions of his readers.

The present reviewer finds himself strongly in sympathy with the basic viewpoints: attention to common sense, the danger of outlawing mentalism (psychophobia?) and the need to establish a sound philosophical basis for our study. It is this last which is least effectively achieved. Joynson suggests that epiphenominalism was a half-way house in the transition from dualism to behaviourism and that similarly identity theory may be a half-way house on the return journey and in doing so he seems to imply that we may have to content ourselves with dualism as the psychological choice.

To the reviewer this appears to be just an example of conceptual rigidity. The crucial aspect of mental experience is affect rather than cognition, which in its essentials could be manifested by an automaton using electronic feed-back. If we simply recognised affective feed-back as another aspect of the objective world there would be no difficulty in conceiving of an organism as a sub-system in the hypothetical objective world which we assume to account for the consistencies in our experience. As psychologists which should be able to recognise that a unified cognitive system is essential for adequate functioning: two independent systems would be chaotic, two parallel systems just absurd.

John Adcock

Radical Psychology, edited by P. Brown. London: Tavistock, 1973. Hardback $9.95, Paperback $3.05.

This is a book with intellectual bite from a group of perceptive people with social concern that includes psychiatrists, psychologists and philosophers. It reveals the inadequacies of various approaches to the study and treatment of dysfunctional man, and, following colonial, social and sexual revolution from the late 1950s in Algeria to the mid-1960s in the U.S.A. to the world scene at present, it asserts the need for man to be studied in his total social context rather than as an apolitical organism apart from it. The point has been made many times before by humanitarians and reformers, and even by some psychiatrists and psychologists, but it needs to be said again and again—even though 'social relevance' is already beginning to be a characteristic of some of the research publications in other books. It is a pity that the author chose some almost absurd examples to ridicule individual psychotherapy as compared with the more substantial examples against

'conspirational' psychiatry and sex-role stereotypy that he gave. He might also have added an index for convenient reference. Never mind, the book is well worth reading, and, the paperback edition, well worth buying.

A. J. W. Taylor

Surface Colour Perception by Jacob Beck. Cornell University Press, 1972.

Anyone who believes that things look as they do because our senses exactly mirror the external world should read this book. Its central aim is to show why objects remain unchanged in appearance despite massive changes in the intensity and spectral composition of the light they reflect. In other words, it is concerned with colour constancy—one of the major constancies of perception. Beck's review of this phenomenon makes a commendably sharp distinction between the observed findings and theoretical interpretations of them. The theoretical positions are classified into "sensory" (going back to Ewald Hering) and "cognitive" (stated clearly by Herman von Helmholtz). By sensory theories, Beck means theories that attempt to account for colour constancy in terms of reflected light alone(a forceful modern exposition can be found in T. N. Cornsweet's *Visual Perception*). By cognitive theories, he means theories that explain colour constancy by taking into account wider factors, including the observer's interpretation of the nature of the illumination falling on the scene. Beck's review of the experimental evidence shows that the sensory theories do not fare well: Ernst Mach's famous demonstration with his folded visiting card provides one decisive refutation, and Beck's own variation on the Gelb effect provides another. But neither does Beck find Helmholtz's position fully supported. Instead, he prefers the notion that sensory signals are matched to a "schema", and the matching is only partly determined by information about illumination. Nevertheless, when he writes that "perceptual mechanisms involve both inferential and organizational processes" (p. 175), and when he emphasizes that by "inference" he does not mean "the explicit and deliberate type of inference which occurs in thought" (p. 176), he comes close to adopting Helmholtz's concept of *unbewusster Schluss.* The writing is always clear, but the close reasoning and relentless analysis do not make for quick reading. More illustrations might have eased the reader's passage through its 200 pages, especially if they had the impact of the photograph shown on page 138: it provides a stunning demonstration of the effect of turning a picture upside down on the perception of its whites and blacks.

R. J. Irwin

The Psychology of Consciousness by R. E. Ornstein. San Francisco: W. H. Freeman, 1972.

In this book Ornstein attempts to integrate knowledge from two radically different approaches to consciousness: the experimental psychology of the West and the esoteric psychologies of the East.

After emphasizing the limitations of a purely behaviouristic approach to psychology, Ornstein presents material on the selectivity and relativity of perception and outlines work on the functional asymmetry of the brain. His key thesis is that the two hemispheres are associated with two different but complementary modes of consciousness, one (the left) rational, verbal, linear, and analytic, the other (the right) intuitive, spatial, wholistic, and diffuse. The time dimension is experienced as linear in "left hemisphere consciousness" and as "present-centred" in "right hemisphere consciousness". The second section of the book contains an introduction to traditional esoteric psychologies, a summary of meditation and yogic techniques and a description of the associated altered states of consciousness which Ornstein suggests are of the right hemisphere mode. In the last section he reviews research on biofeedback which he sees as an important synthesis of Eastern and Western methodology. The book concludes with a chapter on an "extended concept of man" which views man in relation to his geophysical environment and includes an ability for "paranormal communication".

Ornstein deals with a fundametal problem in psychology and succeeds in his goal of synthesis. But there is to this reviewer something awry about Ornstein's dualistic theory of consciousness. While it cannot be doubted that the two modes Ornstein defines are widely reported, ordinary consciousness would seem to many to be a continuously changing and infinitely variable phenomenon (James' "stream"). Transmission across the corpus callosum is rapid and both hemispheres are involved in parallel in the conscious experience of normal humans. Except in rare cases of split brains, there is no evidence whatsoever that only one hemisphere operates at any given time. Ornstein is very vague on the question of the interaction between the two modes: he states that they are "semi-independent". Can the verbal mode of consciousness be "aware of" the second non-verbal mode? Presumably it can. How else would Ornstein be able to write a description of it? In which case the dividing line between two modes of consciousness would seem to be somewhat difficult to draw.

Reservations aside, *The Psychology of Consciousness* is an ambitious, provocative, and refreshingly speculative contribution. It is beautifully written and points are illustrated with a number of amusing anecdotes and drawings. It should not be missed by any psychologist interested in this important twilight area. The path to enlightenment may be long and hazardous but Ornstein shows us a number of exciting possibilities for the psychology of the future.

David F. Marks