Book reviews


This is a further book dealing with the inter-relationships between epilepsy and psychiatry. Once again it represents the proceedings of a symposium, this one held in Denmark. It consists of a number of chapters each of which is followed by a brief discussion on the subject matter. At the very least it proves that those interested in this area meet regularly to discuss the issues involved. Those who have read The Pharmacology of Epilepsy edited by Dr Trimble and published by the same house in 1985 will be struck that some of the chapters and authors cover similar subjects, though in slightly different ways. The advantage of this particular publication is that the coverage is rather broader and the review articles rather more comprehensive, useful and well written. There is a good chapter discussing the controversy over the existence of the "epileptic personality" and a number of chapters that deal with the associations between hypersexuality, hypergraphia and other personality traits and temporal lobe disorders. The relevance of antiepileptic drugs to psychiatric disorders, and the association between psychosis and epilepsy are again exhaustively explored.

The introductory chapter leaves itself open to some criticism by using a classification for seizures which has subsequently been updated by the 1981 International Classification. This chapter also gets into difficulty when discussing the psychiatric disturbances associated with non-convulsive status. It appears to use the term petit mal status to cover all absence status.

This is overall a helpful book in that it is reasonably coherent and comprehensive in its coverage. On the whole neurologists will find it more useful than the previous Pharmacology of Epilepsy and those uncertain as to which book to purchase would be well advised to consider this rather than the former.

DAVID CHADWICK


In the long history of the physiological psychology of learning and memory, the mechanisms underlying the processes of storage and retrieval of information have been the most difficult to investigate and thereby remain poorly understood. This reflects at least in part the legacy of Lashley's well-known failure to find the "engram", and a number of often poorly-controlled studies in the 1950s and 1960s which purportedly, but not convincingly, demonstrated changes in protein synthesis as correlates of memory. However, recent advances in the brain sciences with the consequent rapid growth in technologies available to explore brain function, together with the detailed descriptions of memory impairments observed in individuals (such as H.M.) with specific brain lesions, has encouraged a vigorous growth in research aimed at elucidating this vital interface between the brain and cognition.

In this volume, the latest in the excellent Oxford Psychology Series, Gabriel Horn reviews some twenty years of personal research directed towards this goal. The reader is led from a brief account of early studies of habituation to a novel stimulus, a simple non-associative memory, to a detailed, but still ongoing, analysis of the mechanisms of imprinting in the domestic chick, a process whereby the young chick will form an attachment to its mother or an artificial substitute. This comparatively complex behaviour proves to be particularly interestingly heuristic in the study of memory mechanisms as it contains a number of behaviourally dissociable components: the imprinting object will act as an unconditional stimulus for approach in the naive chick; it will act as a reinforcer in other learning tasks; and it will lead to processes that form a recognition memory of the object.

The rationale behind the experimental approach taken by Horn and his colleagues is compelling. Carefully considering the necessary control procedures, they intentionally describe changes in uptake of radio-labelled amino acid and RNA metabolism in the forebrain roof as a consequence of imprinting. Subsequently, autoradiography localises the protein synthesis and turnover as well as increased energy metabolism following imprinting in one part of the forebrain roof, the intermediate and medial part of the hyperstriatum ventrale (IMHV). In a later chapter, ultrastructural changes in the IMHV as a consequence of imprinting are discussed. There follows a detailed discussion of a large number of studies where focal lesions are made in this and other regions of the chick brain and their effects on the acquisition and retention of both imprinting and non-imprinting tasks are assessed. Parallels are deftly drawn between the behavioural dissociations observed following such lesions in the chick and the memory deficits and amnesias seen following cortical and subcortical lesions in primates and humans. Further, the excellent detailed description of the anatomical connections of the IMHV is considered in relation to anatomical connections and structures implicated in mammalian memory.