of cells in vitro and the biochemistry of neoplastic astrocytes are all considered before a description of the clinical manifestations and pathology of astrocytic tumours is given. In the last two chapters of the book, various immuno-, chemo- and radio-therapeutic regimens which have been used in the management of glioma patients are outlined and certain innovative techniques are discussed.

The author set himself a difficult task in writing a comprehensive text on the astrocyte and in many respects has coped admirably. However, inevitably, any communication in such a rapidly developing field as glial cell neurobiology may quickly require revision; indeed, I believe this is already apparent. The inclusion of current immunological data on the possible multipotentiality of glial cells in vitro and a more comprehensive treatment of the relationship between different intermediate filament proteins in the developing astrocyte would have been valuable. The chapters covering the in vitro aspects of neoplastic astrocytes might have included an account of proposed assay systems for malignant transformation, such as increased plasminogen activator and reduced cell surface, fibronectin, and perhaps, more quoted information on the predictive value of cell culture for therapeutic regimens. One also feels that, in retrospect, the author might have chosen to omit—without detriment to the text—the sections on the clinical aspects of astrocytomas which have received comprehensive coverage in specialised volumes.

Nevertheless, this book represents a cohesive, well-written account of both the structural and functional aspects of normal and neoplastic astrocytes. Although some of the electron micrographs are of rather poor quality, the book is lavishly illustrated. The text also carries an extensive bibliography and offers the reader the opportunity to study the literature on this fascinating cell in greater detail. I have no doubt that this concise and readable book will appeal to neuroscientists, pathologists and clinicians alike and will prove to be a valuable aid to students of neurobiology.

GEOFFREY J PILKINGTON


The present volume is a product of a course held at the Rockefeller University on the topic of motivation. To any physiological psychologists this is sufficient recommendation. The scientists at the Rockefeller over the past two decades have made fundamental contributions in both theoretical and experimental fields germane to understanding motivational mechanisms. The volume does justice to their work and to the subject in general by the superb quality of the contributions from scientific colleagues elsewhere.

Many volumes directed to this topic have appeared in recent years but this is the best I have seen. The market for this book lies principally with graduate psychologists and research workers in the area. I doubt that this volume would be read from cover to cover by scientists or clinicians outside this area of research. However, since motivation is defined as that which causes us to act in a particular way an understanding of its mechanisms must be of interest to psychologists and psychiatrists of many persuasions. The range of topics covered, the quality of writing and the substantial size of the contributions means that individual chapters would serve as an excellent introduction to many of the topics covered. The volume may therefore be of interest to a very wide range of scientists. Stress, pain, thirst, obesity, taste, hypothalamic functions are all represented. What is unusual is to find theoretical issues dealt with in such a critical and scholarly way in chapters juxtaposed with the physiological data.

I would recommend this volume for advanced undergraduate and graduate teaching but also it is to be hoped that psychologists and clinicians will gain appreciation of the blend of theory and experimental fact which makes physiological psychology such a fascinating subject.

S IVERSON


For more than 60 years, the annual meetings of the Association for Research in Nervous and Mental Disease have provided a forum for timely assessment of progress in a chosen field. Epilepsy has been the theme on three occasions—in 1922, in 1946 and in December 1981. This volume presents the proceedings of the latter meeting in a well-edited and high-quality format.

The contributors have been chosen wisely to cover three main areas of epilepsys research. Of the six chapters devoted to basic scientific aspects of epilepsy two are of particular interest to clinicians. In one of these, Robert Collins and colleagues describe regional metabolic and pathological consequences of focal seizures in experimental animals. In the other, Charles Ribot describes light and electron microscopic studies of foci induced by alumina gel in the monkey cortex that show a selective loss of GABAergic inhibitory terminals.

Various aspects of the pharmacotherapy of epilepsy are discussed in six chapters. The principles of pharmacokinetic studies and their application to the clinical use of anticonvulsant drugs are admirably presented by Van der Kleijn and colleagues. A long review of the mechanism of action of antiepileptic drugs inevitably leaves many questions unanswered. In a discussion of drug efficacy Roger Porter emphasises the importance of seizure diagnosis to choice of therapy, but concludes that novel agents are still required. Two brief contributions consider side effects and teratogenicity of anticonvulsant drugs.

The final section of the volume discusses diverse clinical topics. These include chapters concerned with the preoperative evaluation of patients with complex partial seizures, using respectively surface and depth electrographic techniques and emission computed tomography. The two chapters concerned with behavioural factors provide a marked contrast in approach. Carl Dodrill illustrates the merits of psychometric analysis, Norman Geschwind those of speculative insight.

This book, in surveying the field of epilepsy research, reveals rather starkly what has yet to be achieved. There has been a remarkable development in the techniques of neuroscience research. These have not yet been properly exploited in the field of epilepsy. In the next few years these should have a major impact on clinical research and practice. Another gap of 30 years before it is necessary to review progress is inconceivable.

BRIAN MELDRUM