

epilepsy on particular. Two chapters cover the chemistry of epileptogenic substances and the pharmacology of anti-convulsants. The major effort of the presentation of this material is to provide a background for the central thesis of the book—a neurophysiological model for psychomotor epilepsy.

Conceptually, the model is based on the primary excitation being in Ammon's horn and that there is a series of barriers influencing the primary focus. These barriers are serially: the temporal lobe, the medial structures of the brain, the neocortical region, the lower part of the brain stem, and the spinal cord. This model does indeed serve as a framework for sorting a variety of experimental data, but serves only in this capacity and does not generate new insights into mechanisms. The volume has nearly a hundred pages of bibliography.

It is with regret that this volume cannot be recommended—certainly not for students or house officers, and the experienced clinical neurophysiologist will be disappointed.

RICHARD D. WALTER,  
UCLA Medical Center,  
Los Angeles, Calif. 90024 (U.S.A.)

**Serotonin — new vistas, histochemistry and pharmacology.** Vol. 10 — E. Costa, G. L. Gessa and M. Sandler (Editors). (Raven Press, New York, 1974, 329 p., \$19.75).

**Serotonin — new vistas, biochemistry and behavioral and clinical studies.** Vol. 11. — E. Costa, G. L. Gessa and M. Sandler (Editors). (Raven Press, New York, 1974, 428 p., \$19.75).

These two volumes are the result of a symposium held in Italy and dedicated to B. B. Brodie, a most remarkable pharmacologist. Perhaps it is fitting that the current outstanding investigators of the role of serotonin in brain function should meet at this time to summarize our current knowledge. It is my personal opinion that these two volumes are going to stimulate much new research on the function of serotonin in the brain. As the titles suggest, various aspects including histochemical, pharmacological, biochemical, behavioral and clinical are covered. Researchers interested in the central nervous system actions of serotonin will find these volumes important sources of our present knowledge. Of interest to electroencephalographers are the papers on the role of serotonin in sleep. This only constitutes a small percentage of the total number of papers presented. Most electroencephalographers should know that these important volumes exist. It is recommended that all medical libraries purchase copies of these excellent books. The Editors are to be congratulated on a job well done and Raven Press for maintaining high publication standards. It is too bad that the books are as expensive as they are but that seems to be only a sign of the times.

EDWARD F. DOMINO,  
University of Michigan,  
Ann Arbor, Mich. 48104 (U.S.A.)

**Synaptic transmission and neuronal interaction.** — M. V. L. Bennett (Editor). (Raven Press, New York, 1974, 388 p., \$19.75).

It is now widely accepted that much of the integrative action of nervous systems depends not only on the anatomical design of neural circuits, but on the function of the synapses within these circuits at membrane and molecular levels. As the editor of this book stresses, many neurobiologists take the synapse to be the primary focus for processing neuronal information. The intent of this volume is to acquaint the reader with the newer developments in thought, technique, and direction that synaptology is providing to neurobiologists for understanding neuronal interactions as a primary basis for the functional operation of nervous systems.

This draws from a very wide variety of disciplinary approaches to neurobiology, and it is comprehensive in its inclusion of most of the recent advances in neurobiology. Among the more interesting approaches discussed are tissue culture techniques, electrical noise from post-synaptic membrane ionic channels, neural correlates of behavior, biochemical isolation of receptors, and the physical modeling of neuronal systems. Each of the articles is written by a pioneer in a particular field of neurobiology. The articles are sufficiently comprehensive to explain both technical details and the significance of scientific results in advancing our understanding of synaptic function.

Perhaps, because of the contributors' intimate association with the specific topics discussed, the chapters tend to be somewhat isolated from each other. Therefore, the assemblage of these chapters into a book is somewhat discontinuous. Lateral and cross-references are few. Large trends and historical continuity within the field of synaptology have to be inferred by the reader. Two efforts are made to provide perspectives in the book. One of these, the editor's introduction, is far too brief to do justice to this goal. The second of these by Harry Grundfest opens the first section of the book ("Conventional Synapses"). While excellent as an overview of synaptic functions at the cellular level, Grundfest's chapter falls short of providing the reader with an overall understanding of the relation of neurochemistry and neuronal interactions to such behavioral correlates as learning and memory. If each of the other major sections ("Unconventional Synapses", "Neurochemical Approaches" and "Developmental and Plastic Changes") had similar review chapters, the book would be greatly improved. This mild criticism should not keep researchers and students interested in neuronal function from reading it. There is a wealth of information contained within. Indeed this book has all the general characteristics we now associate with symposia volumes — intense focus on narrow avenues of research by authoritative experts chosen because of their commitment to understanding particular fractions of a given field of endeavor.

WM. J. ADELMAN JR. AND DANIEL L. ALKON  
Laboratory of Biophysics, JR,  
National Institute of Neurological Diseases and Stroke,  
National Institutes of Health,  
Bethesda, Md. 20014 (U.S.A.)