

role of the cerebellum and basal ganglia in the production and control of movement, which came originally from the clinic, and appeared originally in *Kybernetik*. Now that slow viruses are in fashion—and will, no doubt, be held responsible for everything from kuru to corns—it is very useful to have a good summary of the facts regarding the presence of clearly demonstrable virus elements and of immune responses to those viruses. From the group of papers grouped in this section I would especially call attention to those by Koprowski and by Gibbs and Gajdusek. The presentation by De Wied and his associates on the relationship between the administration of adrenocorticotrophic hormones and their effects upon behavior and other indices of neural function deserves to be read carefully. Their work is not very well known to many clinical neurologists but, in view of the liberal use of ACTH in the treatment of neurological patients, it should be.

Other sections of the book can best be used by graduate students and investigators in basic neurosciences as a means of learning what is going on in fields of research other than their own. Among them special mention must be made of the sections on invertebrate neurons and behavior and on circadian oscillations and organization in the nervous system, particularly the essays by Pittendrigh and Jouvet.

I want to end by emphasizing the extraordinary importance of programs such as the ISPs to the Neurosciences, not so much for their interdisciplinary approach (which in some other hands has only led to hodgepodge), as for the opportunity given to specialists to explain their data and hypotheses in a manner comprehensible to the novices among the audience. Most of them succeeded very well indeed.

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**Chemical approaches to brain function, Vol. 5.** — S. Ehrenpreis and I. J. Kopin (Editors). (Academic Press, Inc., New York, 1973, 260 p., \$19.50).

This represents the fifth volume of a continuing series in neuroscience research. The quality of this volume is at a very high level. Outstanding researchers review their respective fields of specialty.

The book begins with a section by S.D. Silberstein on the sympathetic ganglia in organ culture. This is followed by J. T. Coyle's description of the development of catecholaminergic neurons of the central nervous system. Next there is a logical presentation by F. E. Bloom and his colleagues on studies on the function of central noradrenergic neurons. U. Ungerstedt reviews the effects of selective lesions of central catecholamine pathways and Cotzias and his colleagues summarize the effects of inhibitors and stimulators of protein synthesis on the cerebral actions of L-DOPA. B. Eichelman reviews the action of catecholamines and aggressive behavior. This is followed by S. H. Snyder and his associate's contribution on the role of amino acids as central nervous transmitters from a biochemical point of view. The book ends with a very thorough review by Karczmar and his associates on an interdisciplinary approach to the study of behavior in related mice types.

This small volume is an excellent summary of research in this area and is of definite interest to neuroscientists. Its special emphasis is on the chemical aspects and as such is of interest to electroencephalographers as background material. The book is recommended for medical libraries as a reference source.

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**Event-related slow potentials of the brain and their relations to behavior.** — W. C. McCallum and J. R. Knott (Editors). (Electroencephalography and Clinical Neurophysiology, Suppl. 33. Elsevier, Amsterdam, 1973, 390 p., \$53.50).

Some years ago a prominent electroencephalographer having heard some of the first papers on the Contingent Negative Variation (CNV) commented "This sounds as though it will turn out to be one of the most important waves in EEG". It seemed, in fact that an aspect of EEG data had been found which would reflect higher cognitive function and for that reason have important theoretical and clinical applications. Ten years have passed and this book, based on a Congress in 1971, is an answer after the first decade to the rather optimistic comment. I suspect that no one would say that the original promise had yet been fulfilled!

This book which consists essentially of Congress Proceedings is a very informative compilation for those who wish to bring themselves up to date on the progress that has been made in regard to this very puzzling phenomenon. The editors can be congratulated on the format in which the data are presented which enables readers at various levels of EEG and psychological sophistication to obtain useful information with a minimal effort. This results largely from the fact that excellent summarizations and digests appear at intervals throughout the book as the topic unfolds.

The title, "Event-Related Potentials" has been wisely chosen so that the discussion would not be limited to the CNV, but could be viewed in the larger context of other important related phenomena such as the P<sub>300</sub>, the premotor potentials, etc. The material is conveniently discussed under six headings: methodology, physiological mechanisms, developmental aspects, CNV and behavior, autonomic relationships and clinical application. The review of the literature and the comments on acceptable findings is given for each section. Thus, the busy reader could obtain a good overview of the whole subject by reading only the section reviews.

The Congress wisely emphasized the areas that needed critical review. Thus, much attention is given to the differences in methodology employed even by leaders in the field which make comparison of results difficult. Future research efforts should benefit greatly by these discussions. Another difficulty encountered by the outside reader coming into this area has been that many workers approach their data in terms of a preconceived psychological or physiological theory. Discussion of their work inevitably reflects this terminology making it difficult for those not immersed in the field to differentiate fact from theory. Both Donchin and Hillyard tackle these problems and the new investigator entering this field will have the advantage of their penetrating analyses.