

A second difficulty of multiple authorship is inadvertent omission of topics or cursory treatment with the expectation that others will provide adequate coverage. I shall mention but two examples. In the chapter on transmission of the nerve impulse, the treatment of the Hodgkin-Huxley thesis is compressed into a little more than 1 page out of a total of 45. In the chapter on synaptic transmission, major emphasis is placed on postsynaptic events; little attention is devoted to presynaptic ones. Problems of this nature may be solved by having an introductory or concluding chapter that summarizes, gives perspective to, and supplements the materials presented in the chapters of any one section. Indeed these may have been the instructions given to those chosen to write introductory chapters. In any event, Eccles performed this task in exemplary fashion for the section on neuron physiology.

Each chapter follows a basic plan, yet individuality of expression does not seem to have been stifled by too rigid formalization. A summary of chapter contents is presented first, and this is followed by a brief historical résumé. Because this résumé emphasizes major contributions of the past, only a person thoroughly conversant with both the old and new literature could present it succinctly and in proper perspective. Each author then continues with the development of the present status of his subject, presenting a background of classical concepts, a description of modern investigative methods, quantitative data, and new ideas that have emerged from recent work. Each chapter ends with an extensive bibliography; unfortunately, the titles of original journal articles are not given.

The book is profusely illustrated and the quality of illustrations is good. However, many of the illustrations, because they do not fit into either a single or a double column, are placed off-center and to one side, and the legends are placed off-center and to the opposite side. Space is wasted, and the page imbalance is compounded: page 285 is a horrible example of the way not to arrange illustrations. Just why figures, slightly too wide to fit into a single column, were not further reduced, and why those a bit less than double-column width were not reduced less are mysteries to me. While such liberties with symmetry do not impair my comprehension, they do hurt my esthetic sensibility.

The *Handbook of Neurophysiology*

is not a textbook in the usual sense; it is far too detailed for either the casual reader or the beginning student. Furthermore, it presupposes a reasonable background of information and some knowledge of current literature. It will no doubt be of greatest interest and use to teachers of physiology and to beginning investigators. However, in volume 1 the ophthalmologist and otologist will find a wealth of fundamental information on visual, vestibular, and auditory processes. The neurologist and neurosurgeon will find much of interest and value, not only in volume 1, but no doubt in the next two volumes as well. These clinical specialists will profit from a study of volume 1 in direct proportion to their interest in the fundamental aspects of their respective disciplines. Little applied pathophysiology is included in any chapter except that which deals with epileptic seizures. Volume 1 will serve as a reference and bibliography source for many in all fields of biological science. The index prepared by W. Himwich will be particularly helpful to those who use the book in this fashion.

The organization of volume 1 is logical, with one exception. The section on brain potentials and rhythms seems out of natural order; just why it was placed between the sections on neuron physiology and sensory mechanisms is not immediately apparent.

Reviewing the first volume of a three-volume series is somewhat akin to reviewing a three-act play after seeing only the first act. Both are hazardous undertakings, for what may seem an inconsistency or an omission in the first volume or act may be clarified, justified, or included later. The publication of volume 1 of the *Handbook of Neurophysiology* is a significant accomplishment. Coupled with volumes 2 and 3, it will constitute a monumental treatise on the subject.

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Science and Public Policy. Dael Wolfle.

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From the vantage point of his position as executive officer of the American Association for the Advancement of Science, Dael Wolfle is well qualified to speak authoritatively and informatively on the intricate interrelations of

science and public affairs. In these three pithy and well organized Montgomery Lectures delivered last spring at the University of Nebraska, he sets forth with commendable clarity and incisiveness the nature of the basic administrative, organizational, and policy problems which confront government, industry, education, and the individual citizen as a consequence of the development of science and technology as dominant factors in contemporary society.

Wolfle's statements of basic principles are sound and sensible and rooted in practical experience. Intelligent formulations and observations abound. This brief volume will undoubtedly be frequently quoted in discussions of the interconnections of science and society. Its succinct review of the scientific revolution and of its impact upon industry, the federal government, and educational institutions provides an excellent summary of recent developments.

Wolfle pleads for an increase in the level of support for basic scientific research by industry and private philanthropy, as well as by government; for recognition of the question of over-all top-level guidance for scientific activities as the number one problem facing science in the federal government; and for deliberately planned innovations in our educational system which will permit significant improvements while retaining the principle of freedom of action by states and local communities. His definitions of fundamental problems and issues are precise and valuable.

He is less persuasive, however, in his proposed solutions. Wolfle presents his own positions logically and eloquently, but one is not always certain that he has included all the relevant considerations in his analyses. It is questionable, for example, whether the "ultimate solution" of the difficulties inherent in the relations between scientific research and the military lies in the re-establishment of an Office of Scientific Research and Development along the lines of the justly praised World War II agency. Wolfle also supports the Berkner proposal for a limited type of Department of Science and Technology and the Klopsteg plan for financing higher education. Whatever the final fate of these suggestions, we can be grateful to Wolfle for his forthright and thoughtful presentation of the issues involved. Participants in future debates of these proposals will have to respect his considered judgments.

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