

Aspects of Vision

Human Color Perception. A Critical Study of the Experimental Foundation. JOSEPH J. SHEPPARD, JR. Elsevier, New York, 1968. xviii + 196 pp., illus. \$10.

Sheppard's aim in *Human Color Perception* is to provide a work which is brief but yet comprehensive enough to be of value to active research workers. In his view, most books dealing with color are so encyclopedic but at the same time so lacking in experimental details that their usefulness is seriously limited. This book attempts to meet the problem by presenting discussions of selected experimental results and summaries of the conclusions that might be drawn from them. A wide variety of topics is covered. In my opinion the material dealing with color mixture and the standard observer is particularly lucid and well presented.

There are no chapters on color blindness or on color theory. This does not mean that the author is uninterested in theory. His book, which discusses and reinterprets experimental results from physics, physiology, and psychology, is permeated with color theory. Many generally accepted ideas are subjected to rather sharp attack. Thus it is only natural that the book will not please all of its readers. Some of the chapters are based upon a narrow sampling of experimental reports and these reports are given unusual interpretations. There is a tendency to concentrate upon the irregularities and inconsistencies which exist among various sets of data without giving adequate consideration to the many instances where agreement is found. For example, the treatment of spectral sensitivity becomes involved with the shoulders or humps which often appear on the luminosity curve. One is left with the impression that the humps seldom approach statistical significance and have not as yet provided information that is leading to an improved understanding of color processes. Furthermore, the book regards all attempts to resolve the luminosity curves into component processes as "failures" because they have not agreed with simple additive linear models. Admittedly, many accounts of the components of the luminosity curve have been overly optimistic. Nevertheless, I am not ready to agree that they have not been of considerable value.

Another example is given by the negative conclusions which the author reaches regarding trichromatic theory after his consideration of retinal physi-

ology. These might not have been the same if he had made a more comprehensive search of the literature. No mention is made of Tomita's work with receptor potentials or of Riggs, Johnson, and Schick's investigations of the human electroretinogram. Only brief mention is made of retinal densitometry and the rather important results of Rushton and of Weale and their associates. Microspectrophotometry is played down because there is some possibility that its account of cone photopigments is strongly toned by receptor waveguide complications. It is not certain, however, that this problem will be as bad as Sheppard suggests. Let us hope that the reader does not become so discouraged that he tends to discount microspectrophotometry and other physiological approaches altogether.

The custom of naming temporal and flicker phenomena after their discoverers may be of questionable value with reference to the progress of visual science. One objection to this practice is that it gives the reader a sense of false security. For example, calling brightness enhancement the Brücke-Bartley effect may lead one to believe that it is better understood than actually is the case. Extensive use of names may lead to needless disagreement. I would prefer not to say that stabilized viewing produces a Ditchburn-Ratliff effect, as Sheppard does, because the pioneering work of Riggs and others is not acknowledged. Yet, if everyone's contribution is recognized, ponderous statements may result. An example is cited from the present work: ". . . the Prevost-Fechner-Benham effect and the Brücke-Bartley effect are but particular manifestations of the Broca-Sulzer effect."

Human Color Perception rightly calls attention to many of the difficulties which currently exist in our understanding of color processes as well as in the theories we use to account for them. But not all topics are covered with equal accuracy or in equal depth. A complete critical account of color would necessarily be more detailed. While this book is not recommended for a beginner in the field of color because of its unorthodox approach, it will be of interest to persons who are already active in this area, and, in particular, to those whose work is given critical examination.

JOHN C. ARMINGTON

*Department of Psychology,
Northeastern University,
Boston, Massachusetts*

Storytellers

American Indian Mythology. ALICE MARRIOTT and CAROL K. RACHLIN. Crowell, New York, 1968. xiv + 211 pp., illus. \$7.95.

Reading this compilation by two anthropologists of stories originally told by Indians of the United States would be a busman's holiday for any anthropologist interested in oral art, and would also please any adult who wishes an introduction to Indian sacred myths, popular tales, and traditions that could be shared with most of the family. The compilers have collected most of the narratives themselves—whether in the native languages or in English is not stated, so far as I can discover—and have added a few from published collections of other recorders. To their selections are added a 17-page introductory essay on Indian prehistory, history, and culture, including the oral art; for each of the 36 narratives a prefatory page or two dealing specifically with the tribe telling the story and giving other relevant information, together with a concluding statement to identify the narrator and the collector or the published source; and finally a bibliography. The two dozen or so photographs, attractive as they are, are, unfortunately I think, mostly of artifacts rather than of people doing things in their tribes. The impersonality is at variance with the dynamic, holistic approach that the compilers exhibit in their commentaries and in their retelling of the narratives and that makes what was meant to be heard and not read stay alive and not die or deflate on the printed page.

Marriott and Rachlin have that rare gift which Charles Perrault also had of presenting orally transmitted narratives in a written style that appeals to all readers despite cultural differences. They somehow capture for the page the atmosphere of oral narration. When it is a Cheyenne "little story," that entertains and instructs, the reader seems to join, as the commentary describes the scene, the adults lounging against the tipi wall, feasting on dried fruit or sausages, and listening to the storyteller, seated in the place of honor, with the children near him. We learn only so much of Hopi sacred mythology because we are "not even a tiny bit Indian—Cherokee even." We laugh at Bear hastily putting his moccasins on wrong after an all-night gambling game and waddling forever after. And at an informal gathering at the Native Ameri-