tion, morphometrics (comparison of shapes and forms), and distortion correction. Like the first section, some chapters elucidate the application of specific algorithms through discussions of specific uses which have been developed.

It is difficult to determine the target audience for this work. According to the author, "This book will be of interest to all students, clinicians, and researchers in disciplines relating to imaging of the structure and function of the nervous system." While the discipline is undoubtedly interesting, if not fascinating, to a broad range of people, I am not certain how much the non-engineer/computer scientist will gain from this book. It would seem more appropriate for the scientist interested in the technical details of the field. Because of the inconsistency in the focus and level of detail, however, one should probably not consider it a thorough textbook of the science of neuroimaging. For the reader with enough background to understand and appreciate this work, it is a worthwhile introduction to this new and exciting field.

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Vision and the Brain: Organization of the Central Nervous System. Edited by Bernard Cohen and Ivan Bodis-Wollner. New York, Raven Press, 1990. 364 pp. $125.00.

While experimenting with retinal ganglion cells of cats in 1966, Enroth-Cugell and Robson made one of the major breakthroughs of the century in vision research. They showed that these cells, capable of firing action potentials, are organized in relation to simple receptive fields on the retina centralis. This work pioneered the ongoing effort to understand how light-induced signals are graded, distributed, and processed from the retina to the thalamus to the cortex (and within the cortex), making visual function possible. Vision and the Brain: Organization of the Central Nervous System, edited by Bernard Cohen and Ivan Bodis-Wollner, attempts to bring the reader up to date on the latest research in this fascinating and dynamic field.

Vision and the Brain is volume 67 in a series published by the Association for Research in Nervous and Mental Disease. The organization has been sponsoring a new volume about once a year since 1920. Vision and the Brain is the product of 37 authors, and contains 161 illustrations. It is drawn from the authors' original works and compiled from eighteen papers, each complete with a set of references. The volume is supplemented with an extensive index.

Vision and the Brain reads more like a textbook than a collection of many authors' writings. In general, each chapter provides a clear and concise overview of the topic under consideration that the non-expert can easily understand and appreciate. This overview is followed by descriptions of potential domains of research as well as a summary of the authors' pioneering work in the field. The book begins with a thorough examination of the functional and pharmacological organization of retinal cells. Here, much attention is given to the horizontal cell and the role of dopamine as a modulator of lateral inhibition—a phenomenon that aids in the visual recognition of edges. Next, the authors discuss the different transmitters mediating systems within the lateral geniculate nucleus, thus summarizing the pre-cortical processing of visual input.
Most of the book is dedicated to describing the complex interpretation of images at the level of the cortex. A summary of the encoding of objects in their shapes, color, movement, and depth is provided in an enjoyable chapter which explains some of the rationale behind optical illusions. This material is followed by a detailed analysis of neural velocity field computation, recognition of facial expression, motion processing, and the coordination of eye movement. An interesting discussion of the use of positron emission tomography to help map visual cortex functioning is also included.

For the neurology student, this book can be an amusing and up-to-date summary of visual processing systems. For the clinician, it also sheds light on the visual disturbances associated with such conditions as Parkinson’s disease, Alzheimer’s disease, and multiple sclerosis. For the vision researcher, it serves as a convenient collection of some of the field’s pioneering work. In any case, it comes with a hefty price tag.

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LIVING MEDICINE: PLANNING A CAREER, CHOOSING A SPECIALTY. By Peter Richards, M.D., Ph.D. New York, Cambridge University Press, 1990. 187 pp. $39.50.

Most medical students will read anything they can find on the subject of choosing a specialty. Nonetheless, as Living Medicine: Planning a Career, Choosing a Specialty is written by the dean of a London medical school and much of the material is British-system-specific, American medical students are likely to get frustrated and put the book down as quickly as they picked it up.

With a little time, an open mind, and, perhaps, a sincere interest in the British medical system, even American medical students can benefit from reading Living Medicine. Not only will they gain a feeling of what things are like for their peers across the Atlantic, but reading about another country’s medical system might help them to see their own system more clearly and give them a better idea of what they expect from it.

The book is very well written and covers all aspects of a career in medicine, including ethics, descriptions of the various specialties, opportunities in research and public health, and the stresses one is likely to encounter during training. For a book with the words “choosing a specialty” in the title, though, the descriptions of the specialties seemed rather brief. As soon as the reader begins to get an idea as to whether he or she is suited for a certain specialty or not, the author moves on to describe the next one.

The volume is also chock-full of historical vignettes and interesting quotations. These, along with Dr. Richards’s thoughtful and distinctively British writing style, give the text a certain validity and make the medical profession seem—even in today’s world—like a noble one indeed.

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