Attempts to understand the relationship between brain activity and behavior are ancient. Hippocrates deduced that personality characteristics were a direct result of the balance of bodily humors. Galen, a prominent figure in Roman medicine, performed animal dissections to understand brain behavior-relationships. He concluded that the cerebellum, being of rather hard substance, controlled motor movement and the cerebrum, somewhat softer in comparison, was the recipient of sensation. Thus, began the journey to modern day neuroscience and our current understanding of the neuroanatomical and neurochemical basis of behavior. Thus, also begins the first chapter of *Neuroscience: Exploring the Brain* by Bear, Connors and Paradiso.

Designated by the authors as “essential for students of introductory neuroscience, neurobiology, and physiological psychology,” this book covers virtually every topic important to the budding neuroscientist. The book is divided into three major sections. In Part I, “Foundations,” the authors begin by reviewing historical approaches to understanding the neuroanatomical and neurochemical basis of behavior. From there, they present an exhaustive and comprehensive discourse on the cells of the nervous system. This includes explanations of the structure of the neuron and supporting glia, the electrophysiological mechanisms of neuronal transmission, the neurochemical component of synaptic transmission, and the neurotransmitter systems. The authors end Part I with a chapter on the embryological development of the central nervous system and use this as a method of introducing the overall structure of the cerebrum and cerebellum.

In Part II, “Sensory and Motor Systems,” the authors begin the set of chapters on the functioning of the cerebrum and cerebellum. Historically, neuroscientists have attempted to explain brain functioning based on cen-
ters of functioning. For example, the superior temporal gyrus of the temporal lobe would be presented as the center for receptive language. Most of this was gleaned from studies of individuals who had sustained discrete trauma to specific parts of the brain and suffered concomitant deficits. However, this approach ignores the importance of the interplay and integration between various centers in the brain in creating "behavior." A more comprehensive and modern approach to brain-behavior relationships is to explore pathways of functioning, and this is the technique used by these authors. In Part II, there are chapters on the chemical senses, the eye and central visual system, the auditory system, the somatic sensory system, spinal control of movement and brain control of movement. In each chapter, the reader is taken from an understanding of gross anatomical structures to a microscopic explanation of neuronal and neurochemical functioning for the modality covered.

In the final section, "Brain and Behavior," the emphasis is on understanding the limbic structures and their relationship to overall brain and body functioning. Emotions, language, attention and memory are just a few of the topics covered in Part III. These topics are presented on the backdrop of other chapters on the chemical control of brain and behavior, rhythms of the brain and wiring of the brain.

Virtually every page of this book is beautifully illustrated with color photographs, pictures, diagrams and tables to assist the reader in understanding the often abstract concepts being presented. Each chapter ends with a brief summary, a listing of key terms and a set of questions to help the reader in reviewing what knowledge was garnered. In addition, there are highlighted boxes entitled "Paths of Discovery," "Special Interest," and "Brain Food" that present historical stories about the neurosciences, information about current research on brain-behavior relationships, and advanced material for students who desire additional learning. There is also a glossary at the end of the book which explains major concepts.

The book is written in a clear and coherent style with careful editing to make it appear that each and every chapter was penned by the same author. Although the book is intended for undergraduate students, the depth and breadth of each chapter really requires that the reader have a basic understanding of biochemistry and physiology, and at times, may even still be a challenge. For the novice to the neurosciences, I would recommend that the book be tackled under the tutelage of an experienced teacher.

The one major drawback to the book is that it only references pathology as a means of illustrating normal brain functioning. As a practitioner in neuropsychiatry, I really yearned for more information in this area. In this decade, it behooves every mental health professional to have at least