concerns about vaccine safety, it is vital that doctors have a good understanding of how vaccines work so they can assuage patient concerns. The rest of the book is divided into several sections that focus on the inflammatory response, infections in individual organ systems, and infections generated by different kinds of agents: bacteria, viruses, prions, fungi, and protozoa and helminthes. Of particular note is the chapter on health care-associated diseases, which is an important issue due to antibiotic resistance.

Each chapter follows roughly the same format with highlighted boxes focusing on diagnostic and drug treatment approaches. For those students and ambitious doctors who want to test their knowledge, the book ends with a review and self-assessment of more than 100 questions. Professors could easily divide up these questions for testing periodically over the course of a semester or year and/or they can be used to prepare students for medical exams. Almost all the multiple-choice questions are presented as clinical cases.

Harrison's Infectious Diseases is necessarily general, but chapters end with further readings, which is a nice feature for those clinicians who want or need a more in-depth understanding of a particular disease. Both aspiring doctors and current clinicians can benefit from this book. It would also be an excellent supplemental textbook for a graduate or upper-level undergraduate pathology course.

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Modular Evolution: How Natural Selection Produces Biological Complexity. *By L. Vinicius. Cambridge, UK: Cambridge University Press; 2010. 235 pp. US $48.00 Paperback. ISBN: 978-0521429641.*

Evolutionary biology is a fascinating field with a degree of conceptual complexity that is unique among the biological sciences. As such, many biology students may find that discussions of evolutionary biology tend to wax esoteric and become almost philosophical. This can make the details of the discipline seem aimless or wandering to uninitiated readers. Such issues will not be a problem for readers of *Modular Evolution*.

Modular Evolution has a refreshingly narrative structure. It begins with fundamental discussions of the nature of evolutionary biology and covers relevant debates from the evolution of multicellularity to the basis of human culture. Each chapter introduction artfully sets the stage, biologically and historically, with the subject discussed in a flowing, chronological fashion. The conclusions generally summarize the material and introduce the reader to the next chapter.

The material is discussed in an engaging fashion with examples that are typically crisp and simple. Moreover, the narrative structure enables the reader to follow the development of ideas, thus facilitating understanding of a concept. Unfortunately, the book could benefit from more diagrams. For example, *Drosophila* embryogenesis is discussed in the context of the evolution of development, but the process of embryogenesis is difficult to envision from a strictly verbal description. In such instances, the book would benefit from illustration. Those diagrams that are included, however, are clear, informative, and well integrated.

The author does not shy away from the nature of biological complexity. Notably, he does not settle for the Biological Unit Concept, which focused on the aggregation of biological units into interdependent "superunits," but instead presents his own. He defines biological complexity as having a basis in "Schroedinger's principle of Order from Order," such that each carrier of modular information produces a disposable phenotype for selection to act upon, which can itself evolve into an information carrier, creating hierarchal levels of information. Based on this, the complexity of an organism should be determined by the number of levels in which information is stored. Organisms with both a genetic and developmental code (multicellular organisms) are more complex

than organisms with only a genetic code (unicellular organisms).

The author's model is dependent on the modular nature of information encoded at each level of organization. Yet although the author mentions information modularity throughout the book, the importance of information modularity is not demonstrated emphatically enough. An instructor with this book should consider spending time with students solidifying its importance.

Altogether, *Modular Evolution* is a fascinating book that dives into current topics in evolutionary biology while offering an intriguing framework for understanding biological complexity. The author also presents enough evidence to invite a lively critical analysis of this framework by students. Finally, the cover of this book is startling but apt. It features a Lego man tearing open his chest to reveal more Legos inside. Legos are discrete building blocks — modules themselves. This immensely complex organism is made not from a continuum of structures, but a collection of modules.

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Nerve Cells and Animal Behaviour. *Third Edition. By Peter Simmons and David Young. New York: Cambridge University Press; 2010. 292 pp. US $42.99, Paperback. ISBN: 978-0521728485.*

Nerve Cells and Animal Behaviour is an interesting short book that aims to introduce lecturers to neurophysiology using some vertebrate examples and some invertebrate examples (although from a phylogenetics point of view, it would rather be more correct to say the examples describe vertebrates, ecdysozoa, and few lophotrochozoa).

The book begins with a short introduction of key neuroscience concepts such as how a neuron generates action potential or how to define an interneuron. This introduction is easy to read and makes the book accessible to anyone with at least a basic understanding of biology who wants to be introduced to neuroethology. The next seven chapters describe in detail several well-studied behaviors. The first chapter, for instance, describes the toad and cockroach case as a predator and prey example and relates how neurophysiology is involved. The authors begin by explaining how the toad sees the prey, how it is able to project his tongue to catch the cockroach, and how the cockroach reacts. Each step is described in terms of the type and function of the involved neurons, which generates a better understanding of the biology behind such behaviors.

Later on, in the fifth chapter, the authors describe the eyes and the vision of insects. In this chapter, one can learn about compound eyes, how photoreceptors function, how the signal is processed in the brain, and finally how the insect will respond. Other chapters feature the startle behaviors in crayfish and fish and the sensory maps used by hunting bats and owls as well as how the nervous system generates and control rhythmic movements, how bees and rats learn to change behavior, and how crickets and birds generate songs.

All the chapters are well-written and easy to understand. The only possible problem with this book is that the layout could have been improved; for example, the authors might have included better illustrations. It is, however, truly wonderful that each chapter begins with general observations of animal behavior, which are then reformulated by Peter Simmons and David Young into more scientific questions. The authors subsequently use the details of the neuronal mechanisms to explain the observed behaviour. By doing so, they describe some key experimental results that introduce the lecturer to the development and progression of modern neurophysiology. For these reasons, *Nerve Cells and Animal Behaviour* is a great introduction to behavioral science.

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