A Tour of the Senses: How Your Brain Interprets the World By John M. Henshaw. 288 pp. Baltimore, MD: Johns Hopkins University Press. 2012. $29.95 (cloth).

A Tour of the Senses is a fun grab-bag of a book. Opened to almost any page, it contains some interesting fact or statistic, presented in a clear and accessible style. Henshaw is a Professor of Mechanical Engineering at the University of Tulsa and targets his book at a very general audience, the sort of readers whose first reaction will be that he is "a bit of a wacko" (pg. 6) for claiming (correctly) that we have more than five senses. As an introduction to sensation for a general audience, the book works reasonably well. It provides a gentle and entertaining introduction that is never dull and in places highly compelling.

Henshaw's background as an engineer (rather than a neuroscientist or psychologist) is apparent in his overall approach to sensation, which presents the senses as a collection of gadgets such as might be found in a fancy new car or tablet computer, so many accelerometers and pressure transducers, thermometers and gyroscopes. As a matter of exposition, there is much to be said for this approach, and it certainly plays to Henshaw's strengths as a writer. He clearly has a knack for describing how things work and his descriptions of the physical substrate of sensory stimuli and the mechanics of the sensory receptor organs are fine examples of clear technical writing and form the highlights of the book. Particularly enjoyable are the descriptions of the middle ear and cochlea, underlying the sense of hearing, and of the vestibular system, mediating the sense of balance and spatial orientation.

A Tour of the Senses is divided into three broad sections on "Stimulus," "Sensation," and "Perception." The section on Stimulus describes the different types of physical stimuli that we are able to sense, with chapters on Electromagnetic, Chemical, and Mechanical stimuli. The second section on Sensation describes how the different sensory organs convert these stimuli into electrical nerve signals. The final section on Perception describes how the brain interprets these signals. The separation of the latter two sections on Sensation and Perception is traditional and mirrors the approach of most textbooks on the topic. The inclusion of an entire section on Stimulus, however, is a surprising choice, and unfortunately mostly unsuccessful. Because the sensory organs are (as Henshaw argues) essential devices that convert physical stimuli into electrical nerve signals, there is an intimate link between the nature of the stimulus and the nature of the organ. The second section, on Sensation, thus, feels somewhat repetitive. For example, we learn about the physical nature of light in Chapter 1 ("Electromagnetic Stimuli") but then have to review this material when we get to Chapter 5 ("Vision"), making the three intervening chapters seem like a detour.

On the whole, the sections on Stimulus and Sensation provide a good, clear overview of sensation. These sections alone may make the book worthwhile for readers unfamiliar with the topic. The final section on Perception, however, works less well and may simply leave readers confused about what the key issues even are. In Chapter 8 ("Remembering the Present"), Henshaw describes the brain mechanisms involved in constructing full conscious percepts from sensory inputs. Though the book is subtitled "How your brain interprets the world," it feels as though Henshaw is out of his depth here. He introduces the reader to the idea of neurons and synapses and gives some impressive statistics about neuron connectivity, then abruptly drops the topic. It is surprising at this point that the concept of receptive fields of sensory neurons is not introduced, nor anything about topographic maps in the sensory cortices, nor anything about what is known about neuronal computation such as the classic and Nobel Prize winning studies of David Hubel and Torsten Wiesel (1998). Thus, on the whole, the Perception section flits from topic to topic, leaving each only partly developed. Certainly, any full coverage of these issues is beyond the scope of a book intended for a general audience. The patchy coverage of key issues, however, is all the more mystifying given curiously extended detours, such as fully half of Chapter 9 on "Perception and Culture" being given over to a discussion of the economics of food portion size. On the whole, this section feels cobbled together out of odds and ends, each being interesting enough on its own, but which do not come together to provide any coherent story about how perception works. Though some excellent examples are given, such as the demonstration of perceptual "filling-in" of the blind spot on the retina, the reader is not given sufficient theoretical depth to interpret them, so that they come across as mere curiosities.

A Tour of the Senses is a fun book, which may be of interest to anyone who's ever wondered how the eye or the ear works. As an introduction to one of the central fields in Psychology and Neuroscience, however, the book disappoints. This is a whistle-stop tour of the senses, which will be unlikely to interest anyone with more than a passing familiarity with sensation and perception.

LITERATURE CITED

Hubel DH, Wiesel TN. 1998. Early exploration of the visual cortex. Neuron 20:401–412.

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Mechanisms of Life History Evolution: The Genetics and Physiology of Life History Trade-offs. Edited by Thomas Flatt and Andreas Heyland. xxvii + 478 pp. New York, NY: Oxford University Press. 2011. $144.00 (cloth), $79.95 (paper).

In my initial reading of *Mechanisms of Life History Evolution*, I was somewhat frustrated by the time I finished the first of a pair of chapters comprising the Concluding Remarks. The first remarks chapter calls evolutionary developmental biologists to the carpet to pay more attention to life history theory. My concern gave way to great enjoyment because of the rarely seen lively exchange across both concluding chapters between Stephen Stearns (whose works are cited many more times throughout this