Review
Reviewed Work(s): The Young John Muir: An Environmental Biography by Steven J. Holmes
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1997. In such a case one would expect uneven quality in the chapters, but this volume is an exception. Every article is worth reading at least once. The editor grouped the articles into six sections: Functions and Teleology; Evolutionary Psychology; Innateness; Philosophy of Mind; Philosophy of Science; and Parallels Between Philosophy of Biology and Philosophy of Psychology. All of the contributors to this volume are philosophers or have been versed in philosophy, but this group also reflects training in or great awareness of biological topics and of consciousness studies. So, the title of the volume is apt.

Several of the chapters piqued my interest and deserve attention. Charbel Niño El-Hani and Antonio Marcos Pereira give an excellent defense of the supervenience of biological properties upon physical properties (Chapter 16). J Kim serves as their dialogical partner. Kim recognizes the difficulty of "downward causation" from supervenient properties to base properties. El-Hani and Pereira, however, charge Kim with having too narrow a view of causality and instead propose that an Aristotelian formal and functional kind of causality be applied to the relation of higher and lower order properties. Thus, biological (or mental) properties are interdependent with the lower-order properties (chemical or physical), but not simply reduced to the latter. They are not suggesting either a substance dualism or a property dualism per se, but rather one should take a holistic view of the supervenience relation. Although Gary Hatfield's essay, Mental Functions as Constraints on Neurophysiology: Biology and Psychology of Vision, is placed in a different section from that of El-Hani and Pereira, it is similar in the sense that both reject a radical reductionistic approach to the mind-brain relation. Hatfield gives several examples wherein if psychology did not "lead and constrain" neurophysiology, the research of the latter would be without intelligible context and therefore would not exist in the first place. I believe that this is an important point that should not be overlooked by certain members of the consciousness studies movement. Continuing in the "ecumenical" spirit of much of this anthology, Thomas Polger and Owen Flanagan argue that metaphysical naturalism as an approach to the mind-body problem is best served by the "natural method" in which three endeavors cooperate with each other: 1) phenomenological reports, 2) theories of cognitive science, and 3) neurophysiological data. None of the three should attempt to go it alone in respect to the search for an explanation of consciousness. Again, as in most cases in this anthology, a research study is presented to support their thesis. Polger and Flanagan's position in this essay seems eminently reasonable.

In respect to the discussion (controversy?) by André Ariew and William Wimsatt on innateness in evolution (Chapters 7 and 8) in which Ariew defends "canalization" and Wimsatt supports "generative entrenchment," I find their respective positions informative in regard to the relations existing among phenotypes, genotypes, and environmental factors. The concept of innateness as applied epistemologically in philosophy seems so far removed from its use in biology as interpreted by Ariew and Wimsatt that the term itself should be retired. Possibly, that is what the two authors intend. In the chapter, Genes and Codes: Lessons from the Philosophy of Mind?, Peter Godfrey-Smith performs a semantic analysis (conceptual analysis) on terms such as "code," "translation," "represents," "information," "reading," and "template" as used by those working with DNA and genes. It is clear from Godfrey-Smith's analysis that these terms are often used by biologists in a figurative sense. Such an analysis should be helpful conceptually to both philosophers and biologists.

In a certain sense, if one can say that Godfrey-Smith is performing a "contextual analysis," so too does Valerie Hardcastle in her chapter, Understanding Functions. She contends that instead of applying one of the "three major strands" in the philosophical discussion of function to the role it has in biology, one should attend to "how scientists build functional descriptions in the first place" (p 37). And I thought that ordinary language philosophy was dead! As far as the section on evolutionary psychology is concerned, I found the various authors to be very civil in respect to the claims of this movement even though none of them accepts this approach to psychology. If one is tempted to appropriate evolutionary psychology as a definitive approach to understanding human behavior, then I would urge them to read this entire section.

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THE YOUNG JOHN MUIR: AN ENVIRONMENTAL BIOGRAPHY.

By Steven J Holmes. Madison (Wisconsin): University of Wisconsin Press. $22.95 (paper). xv + 309 p; ill.; index. ISBN: 0-299-16150-1 (hc); 0-299-16154-4 (pb). 1999.

John Muir (1838–1914) is a revered icon of American environmentalism whose ideas about wilderness continue to resonate deeply in both popular and academic circles. Yet until recently scholars interested in the development of Muir's thinking have had little to guide them—several autobiographical writings, William F Badè's *The Life and Letters of John Muir* (1924. Boston (MA): Houghton Mifflin Company), and Linnie Marsh Wolfe's Pulitzer Prize winning biography, *Son of the Wilderness: The Life of John Muir* (1945. New York: A. A. Knopf).

Only in the last two decades, with the opening of the Muir papers and the expansion of environmental studies, have several major new biographies appeared. According to Steven Holmes, these recent studies continue to be unduly influenced by earlier publications.

Holmes proposes to reconstruct the real John Muir through an enterprise he dubs "environmental biography," by which he means "a richly textured account of the development of his patterns of relationship with specific environments—natural, domestic, and built—in which he lived and moved and had his being over the course of his lifetime" (p 9). He argues that it is important to pay special attention to the ways in which Muir's "relationships with particular places were shaped and given meaning through personal psychological dynamics, through specific ideas and feelings, through interpersonal relationships, through cultural influences and social structures, through the memories and images of the loved (or feared) places of his past, and through his apprehensions of the larger forces and powers of the universe" (p 9). A particular form of psychoanalysis, object relations theory, provides the theoretical underpinning for the story, but Holmes also draws widely from other fields, which range from environmental and social history to gender studies and geography.

To complete his ambitious agenda, Holmes has adopted two strategies. First, he focuses the narrative around three specific themes: the young Muir as "wild child," the role of religion in shaping Muir's ideas, and the use of metaphors of domesticity to characterize Muir's relationship with the natural world. Second, Holmes limits his coverage to the first half of Muir's life. As with previous examples of psychohistory, many of the author's claims are necessarily conjectural, but the results are nonetheless interesting, accessible, and often insightful.

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THE CORRESPONDENCE OF CHARLES DARWIN. *Volume 11: 1863.*

Edited by Frederick Burkhardt, Duncan M Porter, Sheila Ann Dean, Jonathan R Topham, and Sarah Wilmot. Cambridge and New York: Cambridge University Press. $85.00. xlii + 1038 p + 11 pl; ill.; index. ISBN: 0-521-59033-7. 1999.

This volume is part of a monumental project that has adhered to the highest standards of scholarship. Since 1974, teams of researchers, led by Frederick Burkhardt in the United States and Sydney Smith in England, have gathered approximately fourteen thousand letters to and from Darwin, mostly from the University of Cambridge library, with the rest reflecting the worldwide connections of the founder of modern evolutionary biology. The multivolume correspondence will be an authoritative reference, and in addition, there are ample resources for fresh thinking about the sources and implications of Darwin's ideas.

The 1863 volume displays Darwin's massive scientific correspondence, which served the synthesizing naturalist as his eyes and ears on recent discoveries. He showed patience, curiosity, and an ardent commitment to his theory of species development through natural selection in, for example, his exchanges with naturalists in Trinidad, Cape Town, Ceylon, and New Zealand. In addition, early in the year, he built a greenhouse on his property at Down. It provided a place to house tropical plants sent by correspondents and to engage in experimental breeding to assess the development of species variation. The editors even include lists of Darwin's "hothouse plants" (pp 746–753).

Less than four years after the publication of *The Origin of Species,* Darwin took an avid interest in tracking the reception of his ideas. For example, he assessed books by his friends, Charles Lyell's *Antiquity of Man* and Thomas Henry Huxley's *Evidence as to Man's Place in Nature* (both published in February of 1863), explicitly in terms of their degree of support for his theory. He admired Huxley's bold display of anatomical similarities between humans and apes, while he was "fearfully disappointed at Lyells [*sic*] excessive caution in expressing any judgment on Species or origin of man" (p 181). In this period before the publication of *The Descent of Man* in 1871, Darwin was still publicly cautious about this human application of his theory and was avidly looking for work that would prepare the public and the scientific community for this shocking proposition.

Nonspecialist readers will enjoy the riveting details of science and personal life that the letters and all the editorial commentary provide. The book is an inside look at the founder of Darwinism struggling to make his theory a success.

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THE CAMEL'S NOSE: MEMOIRS OF A CURIOUS SCIENTIST.

By Knut Schmidt-Nielsen; illustrations by Kathryn K Davis. A Shearwater Book. Washington (DC): Island Press. $24.95. xi + 339 p + 8 pl; ill.; index. ISBN: 1-55963-512-6. 1998.

Autobiographies deserve more attention than they get, especially from younger scientists. In particular, they provide a much needed counterpoint to scientific papers. Articles, even reviews, deliberately distort history—what editor allows or what reader will endure all of our missteps, blind alleys, and conceptual peregrinations? One gets from this book