

to square with several facts: (i) The feminine depiction of such qualities as truth and virtue antedates not only Christian neo-Platonism but even Plato—Wisdom already appears to Parmenides as a woman, as do of course the nine muses to poets since Homer. (ii) Whatever the favored place enjoyed by women in the Renaissance court, they were conspicuously absent in the avowedly neo-Platonist academies in the early modern period. And (iii) other, non-feminine neo-Platonist imagery rarely surfaces in the iconography Schiebinger discusses. In short, neo-Platonism and the feminine personification of science do not correlate in symbol or practice. It is equally dubious to make Kant bear witness to the decline of the feminine icon on the strength of a passage that is rather an instance of its survival—outcast metaphysics likened to mourning Hecuba—and moreover to make misogyny responsible for this decline when all emblems, not just female ones, were fast disappearing from frontispieces of learned works. A similar lack of attention to text and context plagues Schiebinger's attempts to align cosmology and gender. Given the subtlety and originality of the questions she poses, the reader is doubly disappointed by such unpersuasive answers.

The moral Schiebinger draws from her tale of women let into (and booted out of) early modern science is that scientific impartiality is incompatible with partial representation in science. On her account, a science that excludes women is also one that willy-nilly excludes certain topics and approaches, and, still worse, tricks out misogyny in scientific dress. The failure of universalism in science therefore, claims Schiebinger, carries with it a failure of objectivity. There is an undeniable kernel of truth in this view about the dismal inevitability of ideology when the balance of power is badly askew, and Schiebinger presents a good deal of damning evidence to this effect for her period. Yet because this evidence testifies to false consciousness as well as to ideology, it is not clear that the presence of more women in science would by itself remedy distorted science about women: the most egregiously feminized skeleton of 18th-century anatomy was the work of the Frenchwoman Marie Thiroux d'Arconville, and conversely, the most radical and outspoken defenders of women's intellectual rights were M. J. A. N. Condorcet and John Stuart Mill. We need a far more nuanced view of the relationships between power, interest, and knowledge, not to mention gender, in order to unravel their tangled history in modern science. But Schiebinger is no doubt on the right track when she makes specific lives and events speak, parable-fashion, for general themes,

instead of ascending prematurely into grand, synthetic theory that can instruct by precept but not by example.

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Hörstadius and Beyond

The Neural Crest. Including a Facsimile Reprint of *The Neural Crest* by Sven Hörstadius. BRIAN K. HALL. Oxford University Press, New York, 1988. viii, 303 pp., illus. \$60.

This book is in essence a chimera comprising a facsimile reprint of a seminal text published 39 years ago onto the front of which has been grafted an overview putting that original monograph into the context of current developmental biology. The host in this operation is Sven Hörstadius's *The Neural Crest: Its Properties and Derivatives in the Light of Experimental Research*. On publication in 1950 it constituted the first major scholarly work on the neural crest—a transient cell population in vertebrate embryos that gives rise to, or contributes to, a number of unique features (for example, the entire autonomic nervous system and much of the craniofacial skeleton and connective tissue, including that of the gill-branchial arches). Research interest in this structure has increased almost exponentially since the '50s, to a considerable extent because of Hörstadius's text. Talking with embryologists who were active at that time, one soon begins to appreciate the impact its publication must have had. The original version has long been out of print (my own much-valued copy was a gift from a colleague upon his retirement), and this reappearance is to be welcomed. Hörstadius's own work, whether on the vertebrate neural crest or on echinoderm embryology (his other area of achievement), was characterized by dexterous experimental manipulation and rigorous experimental design; his writing is characterized by carefully wrought argument and analysis. Consequently, his book is a joy to read, and some of the questions raised are as pertinent now as in 1950.

How does the graft itself fare in this chimera? Brian Hall has taken on the demanding task of updating Hörstadius's text by reviewing the neural crest literature published since 1950. As a researcher with active interests in both developmental biology and evolution, Hall is well positioned to provide such an overview. Clearly one of the major changes is the much wider appreciation of the pivotal role of the neural crest in vertebrate evolution. The dramatic increase

in interest in this area has focused on the construction of evolutionary scenarios and on the identification of neural crest origins in protochordate forms (a topic of research activity still in its infancy). Hall's overview is excellent in covering this ground and that of the "neurocristopathies"—a collective term for those tumors and dysmorphologies arising in neural-crest-derived tissues or within organ systems with a contribution from the neural crest. There is, however, a curious bias in Hall's overview in that he does not give in-depth coverage of melanogenesis, gliogenesis, and neurogenesis. This is not an oversight but the author's stated intention (see p. 6 for a justification), and it is disappointing given the parallel exciting developments in the analysis of pigment-cell, glial, and neural differentiation and the current ideas on lineage within the autonomic and peripheral nervous systems.

This criticism, however, should be put into perspective. As an overview of the neural crest spanning evolution, developmental biology, comparative embryology, oncology, and syndromology, the book is unique. Although it remains slightly flawed in its developmental coverage, it is nevertheless an exciting read—ambitious in scale, with some fascinating anecdotal material (for instance, of the 38-year delay in the publication of J. P. Hill's analysis of the marsupial neural crest due to his reluctance to depart from strict adherence to the germ layer theory). The juxtaposition of the old and the new, the Hörstadius and the Hall, does in fact work remarkably well.

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All About Some Algae

The *Chlamydomonas* Sourcebook. A Comprehensive Guide to Biology and Laboratory Use. ELIZABETH H. HARRIS. Academic Press, San Diego, CA, 1989. xiv, 780 pp., illus. \$145.

Few books are awaited as eagerly, particularly among its particular audience, as Harris's *Sourcebook*. For those who work with or are interested in *Chlamydomonas* the finished product is worth the wait. Every aspect of work on *Chlamydomonas* since research on these algae became popular in the early 1950s is reviewed. Mentioned also are earlier studies, including the initial discovery of these organisms over 200 years ago and the eventual naming of the genus by Ehrenberg in 1833.

The genus *Chlamydomonas* includes at least 459 species of single-celled, flagellated al-