

*The Tragic Sense of Life: Ernst Haeckel and the Struggle over Evolutionary Thought.*

By ROBERT J. RICHARDS. Chicago: University of Chicago Press. 2008. xx+551 pp. \$39; £20.50. ISBN 978-0-226-71214-7.

Robert J. Richards sets out to put the record straight on the life and career of Ernst Haeckel, the crusading promoter of Darwinian thought in the German-speaking world and a central figure in German intellectual culture around 1900. Richards wastes few words on the creationists, whose responses to Haeckel's views are predictable. He has his most important arguments with reputable English-speaking scholars—Peter Bowler and Stephen Jay Gould among others—who have emphasized the differences between Haeckel and Darwin, very much to the detriment of Haeckel, rather than the affinities between them, which Richards shows to have been strong. Richards finds evidence, for example, that Darwin thought along similar lines to what Haeckel called the 'biogenetic law', namely that the embryonic development of each individual organism recapitulates the development of the phylum to which the species in question belongs. He gives full accounts of those senses in which Haeckel forced the argument about evolution in his publications and lectures when empirical evidence was not yet available to support his position; but he is also able to point to occasions when the hunches that Haeckel backed—e.g. the speculation that palaeontological evidence of the 'missing link' would be found in Java, which was very soon confirmed by Eugène Dubois—turned out to be well founded. He also mounts a serious challenge to the notion that Haeckel was an anti-Semite, and places in a judicious historical perspective the connection that some have perceived between Haeckel's notion of an evolutionary hierarchy of human races and the racial eugenics of National Socialism.

Richards never really clarifies the sense in which he sees Haeckel's conception of life as 'tragic', as his title proclaims. Given the immense confidence and optimism with which Haeckel propounded his belief that science would ultimately provide answers to all the riddles of the universe, particularly in his popular book *Die Welträthsel* (1899), there is an unresolved paradox at the heart of Richards's project. There can be no doubt that the death through illness of his first wife on his thirtieth birthday was, for Haeckel, a catastrophe of the highest order which cast a heavy shadow over his subsequent relations with women, but Richards openly acknowledges that he can provide no hard evidence that it directly affected his scientific thinking. While this matter naturally has its place in such a book as this, the prominence it is given seems to have distracted the author's attention from some of the more intriguing features of Haeckel's thought and of the intellectual culture he inhabited. Although there may be a nice sentimental appeal in the notion that Haeckel's pantheism was his way of conceiving the immortality of his beloved, Richards omits to mention the curious turn in Haeckel's late writings, *Gott-Natur* (1914) and *Kristallseelen* (1917), towards the notion that inorganic matter might itself be in some sense 'animate' (*beseelt*)—nor are these essays listed in his bibliography. Overall, Richards's narrative could have been more compactly

organized, and some of the historical information that he works into it could have been more carefully checked.

The book is, however, informative about the specific nature of Haeckel's contributions to marine biology, about the nature of his scientific training (under Rudolf Virchow and Johannes Müller in particular), and about the legacy of Romantic nature philosophy and the pantheism of Goethe and Spinoza which is evident in Haeckel's exposition of evolutionary thought. It describes the objections to Haeckel's arguments that were raised in his lifetime, on both scientific and religious grounds, culminating in the establishment of the learned Keplerbund to combat the perceived materialist influence of the Monistenbund that Haeckel founded in 1906. As befits a biography of someone whose public reputation was firmly associated with visual images—of radiolaria, of embryos, and of family trees of evolutionary descent—the volume is richly illustrated, and its extensive bibliography makes it a helpful resource for English-speaking scholars who may wish to enquire further into this area.

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