

The Romantic Conception of Life: Science and Philosophy in the Age of Goethe. By ROBERT J. RICHARDS. Chicago and London: University of Chicago Press. 2002. xix + 571 pp. \$35. ISBN 0-226-71210-9.

Robert J. Richards's major study of the Romantic conception of life sets out to demonstrate at least three complex points: first, the interactions between life and work in the early German Romantics; second, that Goethe was a Romantic; third, that Darwin was influenced by Romantic *Naturphilosophie*, and that his theory of evolution is continuous with it. Thus, Richards has set himself a truly interdisciplinary and comprehensive task for which he deserves praise. The difficulty of his undertaking becomes apparent when one thinks of the conceptual, philosophical, and scholarly difficulties implied in this combination of questions concerning autobiography and notions of subjectivity, the possible meanings of Romanticism, and Goethe's convoluted relationships with the personages of his times (and thus his complex position with respect to its various movements, however constructed). Not least, there are the questions surrounding the emergence of biology and the shifts in scientific paradigms from the eighteenth to the nineteenth century, and in particular as to the true nature of Darwinian evolution.

The first part of the book deals with some of the main figures and ideas of early German Romanticism (the Schlegels, Novalis, Caroline Böhmer, Fichte, Schleiermacher, and Schelling), the second introduces the scientific conceptions of the 'Romantic' conception of life (Blumenbach, Kant, Kielmeyer, Reil, and, again, Schelling), and the third is on Goethe and his 'genius for poetry, morphology, and women' (subtitle). The middle chapter is about half as long as the first and last, and the epilogue on the 'fundamental ways in which Romantic thought gave shape to Darwin's conception of nature and evolution' (p. xix) is even shorter. Overall, Richards's intention is 'to show how concepts of self, along with aesthetic and moral considerations—all tempered by personal relationships—gave complementary shape to biological representations of nature' (p. xviii).

The study's principal strengths and weaknesses can be shown by discussing some exemplary points from the main thematic areas, concentrating on the Goethe chapter and the epilogue. Richards provides the reader with an introduction to Goethe's life and to his work on morphology, hinged on the Italian journey as a turning point in his life, another less pronounced one being his growing autobiographical interests. Richards discusses all central texts on plant and animal morphology in detail, whereas surprisingly (given Goethe's notion of morphology as a universal science), there is an almost total neglect of the *Farbenlehre*, and of his work in geology. This has important consequences. The theory of colour is Goethe's mature expression of his philosophy and history of science. Yet Richards does not consider the 'autobiographical turn' much in this context, nor does he take notice of the crucial importance of Goethe's instruction for the employment of theory 'to use a bold expression—with irony' (p. 439 n.), or of his criticism of the 'Newtonian' type of abstraction. This may have to do with the fact that Richards explicitly takes his cue from Helmholtz's lectures of 1853 and 1892 on Goethe, arguably not the most promising starting point if one wishes to demonstrate the influence of 'the erotic authority of nature' (p. 327) over Goethe, and 'the complementarity of the poetic and scientific conceptions of nature' (p. 329). Helmholtz always held on to a radical difference between a poet's intuition based on perception and a scientist's rational analysis based on experiment, a distinction he knew well how to play down upon celebratory occasions. Richards's reading of him simply conflates the difference: 'Both aesthetic intuition and scientific comprehension drove down to the type, to the underlying force that gave form to the surface of things. Exercising aesthetic intuition within the realm of science, therefore, would not introduce anything foreign, but only aid the scientist in comprehending the fundamental

structures and forces of nature' (p. 329). What is problematic here, and in other places of Richards's argument, is the equivocation of, in this case, 'structures' (i.e. form) with 'forces', and of 'aesthetic intuition' with 'scientific comprehension' that is achieved on a rhetorical level only: both 'drive down' to something fundamental.

As far as the erotic authority of nature is concerned, it mainly, and predictably, comes in the form of women, particularly one in Rome. There was, Richards claims, a 'deep emotional and aesthetic connection between Goethe's experience of female forms—in literature and life—and his ideal biological structures. The eternal feminine and the eternal plant were for Goethe both ideals of beauty and models for the comprehension of their many instantiations—illustrated in the former instance by the many women Goethe conjured up in his autobiographical writings and sung of in his poetry' (p. 396). The author's translation of the pertinent Roman Elegy renders 'Rücken' as 'spine' and 'Hüfte' as 'thigh' (p. 399). These morphological errors may be permissible in the interest of rhyme and rhythm, but less so the metamorphosis into a 'counting along her vertebrae' in the discussion that follows (p. 400). In short, Richards wishes to push the case for a Romantic Goethe—a blend of Spinoza, Schelling, and Oken with some Schiller thrown in for critical awareness: 'Goethe thus reaffirms a Schellingian Spinozism: God, nature, and intellect are one' (p. 490). He ignores the modern Goethe who provided a pluralist framework for science within its historical context, who discussed the interactions between art and science as separate yet in communication with each other, and who constructed and staged himself as a public persona.

When looking at the epilogue, we find a presentation of Darwin as a successor to Goethe under the influence of Alexander von Humboldt, and of his theory as little more than a studious concoction of *Naturphilosophie* and plenty of time: 'Indeed, one might even say, without distortion, that evolutionary theory was Goethean morphology running on geological time' (p. 407). And likewise, 'The *Naturphilosophen* usually invoked special causal forces to explain the instantiation of archetypes and their progressive variations, forces that were transformations of physical powers—for example Schelling's polar forces or Goethe's *Bildungstrieb*. With Darwin that force became natural selection' (p. 518). This is a bold statement, and Richards certainly is right when he insists on the presence of Romantic influences in Darwin's view of nature. However, he distinguishes enough neither between Goethe's 'Typus', a methodical tool, akin to the *Urphänomen* (with all the intricate qualifications about how to obtain it), and the archetypes of other scientists of the age, nor between Goethe's talk of *Bildungstrieb* and *Kraft*—which he used ironically 'um des Vortrags willens'—and other contemporary notions of life forces (presented, with all their differences, in the second part of Richards's book) on the one hand, and Darwin's natural selection, an ultimately statistical theory, on the other.

Hardly anyone would deny that Darwin's theory of evolution owes a lot to earlier developmental thinking, but in Richards's argument the difference between development and evolution (the nineteenth-century sense of the word) simply disappears; and along with it the difference between Goethe's methodology based on the senses and setting out from observable phenomena, and that of nineteenth-century science based on deduction and setting out from principles. Darwin, like many others, is interesting because he helped to bring about the movement from the one to the other, and it was this movement which accompanied the transition from natural history to a history of nature. Along the way, and throughout at least the nineteenth century, old ideas had to patch up what the new type of science could not explain: for example, why cats with blue eyes are always deaf. But if Darwin therefore invoked some idea of interactive harmony within nature, this should not distract from the fact that the ontology of his thought, like that of Helmholtz, was fundamentally mechanistic, atomistic, and quantitative. Similarly, no great scientist, including Darwin, has ever

denied the importance of the imagination for scientific thought, and its role, including associated rhetorical strategies, has by now received considerable attention. Still, there remains a crucial difference between talking of ‘castles in the air’ as preparing scientific ground (context of discovery), as Darwin did (p. 536), and saying that they ‘not only aided him in the discovery of natural selection, but also deeply structured that discovery’, as Richards does (ibid.).

Richards’s intentions in writing this book are very much to be welcomed: it puts the finger on a large number of questions that are central to the history of science and philosophy. His answers, however, too often depend on equivocations which, paradoxically, reinstate old dichotomies, rather than resolving them. There are parts of the study that will read like a textbook to those familiar with the subject matter. But then there are excellent passages in which Richards performs high-quality detective work and makes important and subtle points: for example, the British reception of Goethe’s inclusive archetype through Oken’s and Carus’s version of it, where there is one element, vertebra, or leaf, from which all else is derived (pp. 442–44, p. 453); a meticulous chronological reconstruction of the Goethe–Oken controversy over priority concerning the vertebral theory of the skull, showing that Oken could not possibly have stolen the idea from Goethe (pp. 497–502); and the discovery, on the flyleaf of Darwin’s copy of Richard Owen’s *On the Nature of Limbs*, of a handwritten remark, saying that he takes Owen’s archetypes not as ideas but as real (p. 532).

The Romantic Conception of Life, one feels, is the work of someone whose real strength lies in analysis and detail, rather than synthesis and overview. In any case, it seems to be a project which calls for the collaboration of philosophers, historians of science, and literary scholars.

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