## H-Net Reviews

**Richard C. Sha.** *Imagination and Science in Romanticism.* Baltimore: Johns Hopkins University Press, 2018. 344 pp. \$59.95, cloth, ISBN 978-1-4214-2578-8.

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Imagination and Science in Romanticism delivers on its titular promise: to connect Romantic science and literature through a study of the imagination. Richard C. Sha exposes a false binary between these categories by giving us the imagination in science and the science of imagination in literature of the Romantic period. The arts and sciences have long been treated as "two cultures." Early in the development of science as its own discipline, admonitions were issued from both sides: against imagination, as in Francis Bacon's "idols of the mind," and against science's detached worldview, as in William Wordsworth's preface to Lyrical Ballads (1798). This extensively researched book is a major contribution to a growing body of scholarship in Romantic science studies: Sha interfuses science, literature, and philosophy, to recenter the pivotal role of the imagination in Romantic thought. In contrast to historicist critiques of the Romantic imagination's idealist and sometimes deluded escapism, Sha posits an embodied imagination that can "work with reason rather than against it" (p. 155).

Sha shifts conversations on the imagination from ontology toward phenomenality and epistemology in ways that liberate the subject from some of its ontological baggage. Throughout, he establishes a Kantian role for the imagination in structuring experience that emphasizes embodied subjectivity. For scientists and writers alike, the imagination brought them closer to, rather than further away from, "phenomenality, the feltness of experience" (p. 3). In particular, the imagination was central to theory and hypothesis in science, as it "could point to new ways of seeing previously unknown forms of what the Romantics considered matter" in an era defined by scientific discovery (p. 2). As the author repeatedly shows, in Romantic science, "one has to imagine a thing to prove it true" (p. 154).

Chapter 1 introduces the history of imagination in Romantic science and philosophy, followed by a study of the dynamism of matter in Percy Shellev's Prometheus Unbound (1820) in which both matter and emotion operate as forces. Sha links the plasticity of language and matter in Shelley to explore the radical implications for Shelley's sense of both human and nonhuman agency. Chapter 2 moves from physics and chemistry to neurology to demonstrate how William Blake locates the imagination, a "creative generation," in the nerves that does not result in determinism or reductionism but rather allows for an emergent self and even the soul in Vala, or The Four Zoas (1893). Chapter 3 further situates the imagination in the body through a study of the effects of physiology on Samuel Taylor Coleridge's influential theory of the imagination. Sha establishes a "much more modest Coleridge" who "positions himself between the transcendental philosopher and the natural philosopher" where the imagination cooperates with reason (pp. 184, 175-76). The book concludes with a study of gender and imagination in obstetrics and gynecology applied to Mary Shelley's *Frankenstein* (1823). While this science is well documented in relation to Shelley, Sha employs it to make new arguments about the novel's main characters, reading both Victor Frankenstein and the creature as underdeveloped abortive figures who "substitute imagination for personhood," thereby revealing the dangers of the imagination operating without reason (p. 226).

The book's strengths derive first from the expansive scope of research, particularly in the history of science. Sha gives us detailed close readings and context for primary works by scientists, including "Davy, Faraday, Boscovich, Priestly, Kant, Mary Somerville, Goethe, Haller, Humboldt, Orsted, Swedenborg, Blumenbach, Buffon, Saumarez, Erasmus Darwin, Smellie and Von Baer," among others (p. 27). In particular, Sha's knowledge of the contemporary scientific issues and discoveries within the field of neuroscience as a member of the Center for Behavioral Neuroscience enhances the chapter on Blake. The author also provides useful signposting throughout, particularly of key claims and in ending chapter summaries, which helps bring together many interwoven strands. Any issues in the text are primarily structural due to its scope, with a lengthy first chapter that does not turn to Percy Shelley until more than halfway through. Without a conclusion and with each chapter focused intently on connections between science and literature, less space remains for explicit considerations of resonances between the four key literary Romantic figures themselves.

For each literary writer, Sha demonstrates a sense of constant flux and dynamism in both language and conceptions of matter that eschews fixed categories. Sha complicates the false binary between science and the imagination using Coleridge's application of the science of polarity in his theory of the imagination, in which extremes are not purely oppositional but part of the same continuum, as in attraction/repulsion. Indeed, Sha calls attention to and often challenges supposed oppositions, many key to Romantic thought, throughout the text: matter as inert/force, material/immaterial, matter/imagination, matter/spirit, science/poetry, subject/object, unity/loss, unity/ multeity, vitalism/materialism, vitalism/mechanism, organic/inorganic, simplicity/complexity, dynamic/static, individual/collective, metaphysics/ physics, inner/outer, monism/dualism, thought/ thing, form/mass, etc.

Overall, the evidence across chapters from both literature and science fully substantiates Sha's central claim for an expanded sense of the imagination that includes Romantic science and reason along with it. Beyond a significant contribution to criticism of Romantic literature, this book is a rich resource and model for how to do interdisciplinary scholarship well. If there is additional discussion of this review, you may access it through the network, at https://networks.h-net.org/h-environment

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