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stipulating the unity of sense of the world that contains the actual particulars of field physics” (p. 140). Weyl’s group-theoretic proof of the uniqueness of this infinitesimal metric grounds the essential distinction between the a priori (infinitesimal) nature of the space and the a posteriori orientation of the metric that depends “on the fortuitous distribution of matter and energy” (p. 155). As much as Ryckman succeeds in showing that Weyl developed a coherent and fascinating program combining philosophy and foundational physics, he mentions only the physical reasons why Weyl came to abandon his theory after 1925. But didn’t Weyl’s 1926 “Philosophy of Mathematics and Natural Science” contain enough philosophical changes that Schlick, in his critique against Husserl (“Erleben, Erkennen, Metaphysik,” Kant-Studien, 1926, 31), was prompted to endorse Weyl’s new approach in a note added in second proof?

Chapters 7 and 8 amount to a veritable rehabilitation of Eddington’s philosophical views by integrating his axiomatic world-building into a largely Kantian outlook. “The necessary synthetic unity will come through a ‘world geometry’ axiomatically constructed to ensure that its invariant objects satisfy the objectivity postulate of ‘the point of view of no one in particular’” (p. 188). This led to a geometry, even more general than Weyl’s, based on an affine connection and tensorial identities that achieve the synthesis. From this a priori perspective, one arrives at the laws of gravitation and electromagnetism by acknowledging “that the apparatus that measures the world is itself part of the world” (p. 199). This renders Einstein’s equations definitions of matter and empty space in the sense that “the world radius of curvature everywhere supplies the standard of measured lengths with rods and clocks” (p. 233). One wishes that today’s cosmologies could be philosophically reconstructed in such a diligent way.

MICHAEL STÖLTZNER

Aaron Sachs. The Humboldt Current: Nineteenth-Century Exploration and the Roots of American Environmentalism. xii + 496 pp., illus., figs., bibl., index. New York: Viking Press, 2006. $29.95 (cloth).

Aaron Sachs’s impressive study of Alexander von Humboldt’s influence on nineteenth-century American explorer-scientists reexamines terrain long familiar to historians of science and of exploration. It also advances a post-postcolonial perspective on Humboldt’s influence in the United States that is ultimately an argument about the history of environmental thought and activism in America in general.

First of all, Sachs says that exploration science in nineteenth-century America was deeply shaped by Humboldt’s example and his work. More important, Humboldt’s immersion in native cultures and environments engendered in him an appreciation for them and a humility in the face of what he encountered. Going out to another place and returning with stories about it also encouraged in Humboldt a critical perspective about the cultures he came from. This spirit of humility and appreciation of ecological relationships, as much as Humboldt’s scientific discoveries and innovations, made up a “Humboldt current” that coursed through the efforts and accomplishments of American explorer-scientists.

The book develops its arguments mainly by telling lots of stories—really good stories—about American scientific expeditions and the explorer-scientists who led them. The exemplary American Humboldtians around whom the stories coalesce are the Antarctic explorer and author of the 1839 tale “Mocha Dick; or, The White Whale of the Pacific,” J. N. Reynolds; the mountain climber, geologist, and first head of the U.S. Geologic Survey Clarence King; a survivor of a famously ill-fated 1879 Arctic exploration, George Melville; and the wilderness wanderer, glaciologist, and nature writer John Muir. All of them followed and expanded the Humboldtian agenda of exploring unknown regions and interacting with the people who inhabited them, in the interest of science. All expressed the Humboldtian ethos of boldness combined with humility and an appreciation for the connectedness of nature and humans.

The Humboldt Current is an important corrective to the influential indictment of Humboldtian science as unalloyed imperialism by the postcolonial theorist Mary Pratt. It is also, like some of the nineteenth-century accounts of exploration that it explores, a richly textured narrative that mixes scholarly analysis and observation with personal accounts. It is often, for those who have not yet yielded to twenty-first-century demands for a short attention span, a glorious read. But the book also suffers from an excess of narrative virtue—just what constituted the “Humboldtian current” is obscured by the abundant tales Sachs tries to float in it. While he makes a convincing case for the influence of Humboldt on the principal characters of the book, his argument that exploration gave them a special understanding of natives and even made them environmental justice pioneers might be greeted with skepticism by some scholars. The depiction of Muir, whose influence on twentieth-
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