

Scholarly Works

(1) Dissertation

"Conceptual and Generational Change in German Physics: The Case of Electricity, 1800-1846." Princeton University, Program in History and Philosophy of Science, December 1974 (PhD awarded January 1975). Advisor: Thomas S. Kuhn.

(2) Books and Pamphlets

Robert Mayer and the Conservation of Energy. Princeton: Princeton University Press, 1993. xxiii + 439 p. Click here for reviews. [{REVIEWS}](#)

The Form and Function of Scientific Discoveries. Washington, D.C.: Smithsonian Institution Libraries, 2001. viii + 32 p. Also published electronically at www.sil.si.edu.

(3) Articles, Essay Reviews, and Essays

"La Rive, Arthur-Auguste de," in Charles C. Gillispie, ed., Dictionary of Scientific Biography, 16 vols. (New York: Charles Scribner's Sons, 1970-1980), Vol. 8, 1973, pp. 35-37.

"La Rive, Charles-Gaspard de," *ibid.*, pp. 37-39.

"Ohm, Georg Simon," *ibid.*, Vol. 10, 1974, pp. 186-194.

"Schweigger, Johann Salomo Christoph," *ibid.*, Vol. 12, 1975, pp. 253-255.

"From Galvanism to Electrodynamics: The Transformation of German Physics and Its Social Context," *Historical Studies in the Physical Sciences*, Vol. 9, 1978, pp. 63-159.

"Ampère, the Etherians, and the Oersted Connexion," *British Journal for the History of Science*, Vol. 13, Pt. 2, No. 44, July 1980, pp. 121-138.

"What Should We Do with the Monster? Electromagnetism and the Psychosociology of Knowledge," in Everett Mendelsohn and Yehuda Elkana, eds., *Sciences and Cultures: Anthropological and Historical Studies of the Sciences* ("Sociology of the Sciences: A Yearbook," Vol. 5; Dordrecht & Boston: D. Reidel Publ. Co., 1981), pp. 101-131.

"Teleology with Regrets," essay review of Timothy Lenoir, *The Strategy of Life: Teleology and Mechanics in Nineteenth-Century German Biology* (Chicago &

London: University of Chicago Press, 1989), in *Annals of Science*, Vol. 47, No. 3, May 1990, pp. 291-300.

"'Why Are You a Vegetarian?' On the Historicity of Becoming vs. the Rationality of Being and Other Practical Matters," *Mad River: A Journal of Essays*, No. 2, Spring 1991, pp. 5-10. Nominated for a Pushcart Prize.

"Reflections on the Study of Marginal Science," *Newsletter for the History and Sociology of Marginality in Science*, Vol. 2, Issue 2, Fall 1990 [published December 1991], pp. 1-3.

"Robert Mayer and the Conservation of Matter," *Bulletin for the History of Chemistry*, No. 13/14, Winter/Spring 1992-93 [published August 1994], pp. 27-29.

"Physics and Naturphilosophie: A Reconnaissance," *History of Science*, Vol. 35, Pt. 1, No. 107, March 1997, pp. 35-106.

"Colding, Ørsted, and the Meanings of Force," *Historical Studies in the Physical and Biological Sciences*, Vol. 28, Pt. 1, 1997 [published May 1998], pp. 1-138.

"Objectivity, Relativism, and the Individual: A Role for a Post-Kuhnian History of Science," *Studies in History and Philosophy of Science*, Vol. 29, No. 3, September 1998, pp. 327-344.

"Possible Kuhns in the History of Science: Anomalies of Incommensurable Paradigms," *Studies in History and Philosophy of Science*, Vol. 31, No. 1, March 2000, pp. 87-124.

"Are Spirits the Untouchables of Academia? Situated No Legitimacy in Feminism," forthcoming in *International Journal of Parapsychology*.

(4) Book Reviews and Commentaries

Review of Kurt-R. Biermann, *Alexander von Humboldt ("Biographien hervorragender Naturwissenschaftler, Techniker und Mediziner," Bd. 47; Leipzig: B.G. Teubner, 1980)*, in *Annals of Science*, Vol. 39, No. 1, January 1982, pp. 89-91.

Review of Hans Niels Jahnke and Michael Otte, eds., *Epistemological and Social Problems of the Sciences in the Early Nineteenth Century* (Dordrecht & Boston: D. Reidel Publ. Co., 1981), in *Annals of Science*, Vol. 39, No. 2, March 1982, pp. 193-198.

Review of Klaus Bonik et al., *Materialistische Wissenschaftsgeschichte: Naturtheorie und Entwicklungsdenken*, ed. Helmut Bien et al. ("Argument-

Sonderband," AS 54; Berlin: Argument-Verlag, 1981), in *Isis*, Vol. 73, No. 267, June 1982, p. 281.

Review of Geoffrey N. Cantor and Michael J.S. Hodge, eds., *Conceptions of Ether: Studies in the History of Ether Theories 1740-1900* (Cambridge, New York, & Melbourne: Cambridge University Press, 1981), in *Science*, Vol. 216, No. 4547, 14 May 1982, pp. 725-726.

Review of Immanuel Franksen, H.C. Ørsted: A Man of the Two Cultures (Birkero/d: Strandbergs Forlag, 1981), in *Annals of Science*, Vol. 39, No. 6, November 1982, p. 609.

Review of Enrico Bellone, *A World on Paper: Studies on the Second Scientific Revolution*, translated by Mirella and Riccardo Giacconi (Cambridge: The MIT Press, 1980), in *Physics Today*, Vol. 37, No. 1, January 1984, pp. 89-90.

Review of Lubos Novy, ed., *Impact of Bolzano's Epoch on the Development of Science* ("Acta historiae rerum naturalium necnon technicarum," Special Issue 13; Prague: Institute of Czechoslovak and General History of the Czechoslovak Academy of Sciences, 1982), in *Annals of Science*, Vol. 41, No. 6, November 1984, p. 593.

"Open Peer Commentary" on Harry Redner's "Pathologies of Science," in *Social Epistemology: A Journal of Knowledge, Culture, and Policy*, Vol. 1, No. 3, July-September 1987, pp. 255-257.

Review of Christa Jungnickel and Russell McCormmach, *The Intellectual Mastery of Nature: Theoretical Physics from Ohm to Einstein*, Vol. 1, "The Torch of Mathematics, 1800 to 1870" (Chicago: University of Chicago Press, 1986), in *Annals of Science*, Vol. 45, No. 1, January 1988, pp. 104-107.

Review of Stephen G. Brush, ed., *History of Physics: Selected Reprints* (College Park, Md.: American Association of Physics Teachers, 1988), in *Isis*, Vol. 80, No. 301, March 1989, pp. 158-159.

Review of Marcello Pera, *The Ambiguous Frog: The Galvani-Volta Controversy on Animal Electricity* (Princeton: Princeton University Press, 1992), in *Journal of Interdisciplinary History*, Vol. 23, No. 4, Spring 1993, pp. 796-798.

Review of Kathryn M. Olesko, *Physics as a Calling: Discipline and Practice in the Königsberg Seminar for Physics* (Ithaca & London: Cornell University Press, 1991), in *Physis. Rivista internazionale di storia della scienza, Nuova serie*, Vol. 29, 1992, Fascicolo 2, pp. 625-630.

Review of Friedrich Wilhelm Joseph Schelling, *Ergänzungsband zu Werke Band 5 bis 9. Wissenschaftshistorischer Bericht zu Schellings naturphilosophischen Schriften 1797-1800* (= F. W. J. Schelling, Historisch-kritische Ausgabe, Reihe I:

Werke, Ergänzungsband zu Band 5 bis 9) (Stuttgart: Frommann-Holzboog, 1994), in *Isis*, Vol. 87, No. 2, June 1996, pp. 366-367.

Review of Frederick Amrine, ed., *Goethe in the History of Science*, 2 vols. (New York [etc.]: Peter Lang, 1996), in *Isis*, Vol. 88, No. 3, September 1997, pp. 547-548.

Review of Hans Christian Ørsted, *Selected Scientific Works of Hans Christian Ørsted*, ed. and trans. Karen Jelved, Andrew D. Jackson, and Ole Knudsen (Princeton: Princeton University Press, 1998), in *Isis*, Vol. 90, No. 4, December 1999, pp. 819-820.

Review of Steve Fuller, *Thomas Kuhn: A Philosophical History for Our Time* (Chicago & London: University of Chicago Press, 2000), *Metascience*, Vol. 10, No. 2, July 2001, pp. 164-171 (part of a review symposium with author's reply, pp. 160-179).

Review of Peter Machamer, Marcello Pera, and Aristides Baltas, eds., *Scientific Controversies: Philosophical and Historical Perspectives* (New York & Oxford: Oxford University Press, 2000), *Isis*, Vol. 92, No. 3, September 2001, pp. 577-578.

(5) Unpublished Works

"Introduction--1980" (41 pp.) and "Index" (17 pp.) prepared for the planned reprinting of my dissertation in the Arno Press series, "History of Physics, 1800-1950," edited by Gerald Holton and Katherine Sopka.