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malize links between ideology—also social and religious loyalties—and specific elements of knowledge production (pp. 30–31). She insists that these sources can help us grasp the process through which contested scientific ideas and practices become fixed (*Fixierungen*) by creating and circulating *Nachrufen* as a kind of biographical genre.

One of the more interesting aspects of Echterhölter's work is her framing of the study, which upends conventional divisions between early modern and modern European history in its focus on the period from 1710 to 1860. She shows how obituaries produced in this period have much in common, including their participation in efforts to legitimize the professionalization of the natural sciences (p. 29) and their status as an amalgamation of rhetorical forms (pp. 36–44). Indeed, Part 1 of the book considers the impact of funerary orations (*Leichenpredigt* or *Totenreden*), laudatory speeches given in academic venues (*die akademische Lobrede*), medallions, portraits, and prizes on the genre. In the rest of the book, Echterhölter looks closely at specific obituaries: namely, Samuel Formey's account of Pierre-Louis Moreau de Maupertuis, Maupertuis's ode to Charles-Louis de Secondat de Montesquieu, Wolfgang Sartorius von Waltershausen's reflections on Carl Friedrich Gauß, and Emil Du Bois-Reymond's homage to Johannes Müller.

Medallions were frequently noted in the *Nachrufen* published between 1710 and 1860, and Echterhölter points out that they usually were discussed in the same place: toward the end, between descriptions of the unique aspects of an individual's character and a list of works about or produced by the figure under consideration (p. 142). As an example, she cites Johann Christoph Gottsched's *Gedächtnisrede* about Christian Wolff, which presented copies of five commemorative medallions in the text. Three of these medallions commemorated Wolff's victorious return to Halle in 1740, almost twenty years after his legendary banishment from the city. Echterhölter explains how the copies served as visual tools embedded in the *Nachrufen* that constructed a myth about Wolff's resilience and "fixed" elements of his philosophical program (pp. 146, 149). Yet I wondered: For whom and at what cost? What was at stake? Apart from a vague reference to philosophy's victory over theology, the author offers no discussion of the very real institutional context surrounding Wolff's expulsion from Halle and, ultimately, his return. While the Wolff medallions may in fact have played important roles in stabilizing myths about his philosophical pro-

gram and persona, the sociopolitical struggles he faced while endeavoring to popularize his ideas are crucial to understanding how and why the myths about him emerged in the first place. Wolff's struggles were much more than "shadowy encounters" or discursive skirmishes; they were as real as the medallions themselves and made their mark long before copies or accounts of them began circulating in his *Nachrufen*. Although fascinating, there are limits to the kind of insight into the actual debates and struggles animating thought collectives in the past that these sources can provide.

KELLY J. WHITMER

Angela Bandinelli. *Le origini chimiche della vita: Legami tra la rivoluzione di Lavoisier e la biologia di Lamarck.* (Biblioteca di Nuncius: Studi e Testi, 71.) ix + 252 pp., illus., bibl., index. Florence: Leo S. Olschki, 2013. €27 (paper).

The full title of ("The Chemical Origins of Life: Connections between Lavoisier's Revolution and Lamarck's Biology") and the arguments developed in the book under review are best understood by paying attention to a couple of statements that the author places quite late. On page 207, Angela Bandinelli declares her belief that the history of chemistry has so far played the role of Cinderella among the disciplinary histories of the sciences, a role that Bandinelli wants to reassess, and possibly overturn, by focusing on an all-important migration of concepts and methodologies from chemistry to the burgeoning life sciences at a crucial time circa 1800.

The concepts and methodologies in question are those usually credited to Lavoisier and the Chemical Revolution. According to Bandinelli, their transfer to the life sciences brought the latter to their modern condition, implying the adoption of a similar, quantitative approach to both living and nonliving phenomena. In this reconstruction the heroes are Lavoisier, Armand Séguin, and Lazzaro Spallanzani, while the villain is Lamarck, who resisted the Chemical Revolution and is often regarded (falsely, according to Bandinelli) as one of the originators of modern biology. The author's arguments that aim to restore the contribution of chemistry to the birth of the life sciences are further sustained by her adherence to a number of broad philosophical assumptions inspired by the work of the chemist-turned-philosopher Ilya Prigogine, which are discussed at length in the appendix.

The book is divided into three chapters. The first begins with a discussion of Stephen Hales's *Vegetable Staticks* and concludes with a reassertion of the radical discontinuity between Lavoisier's work and that of earlier chemists, represented by Hales. The highlight is Bandinelli's claim that it was only with Lavoisier and his ability to "weigh gases" that chemistry finally took off "toward modernity," producing momentous effects in neighboring fields (p. 71).

The second chapter surveys the controversy between the followers of phlogiston and the adepts of the new chemistry through the articles published in two leading journals: the *Observations sur la Physique* (from 1794 the *Journal de Physique*) and the *Annales de Chimie*. Here the author's main claim is that the duel between the two parties, which took place through the 1790s and saw the victory of the new chemistry, had the power to convince even the reluctant Lamarck to abandon, in 1802, his earlier view of life as inexplicable by the tools of ordinary science and to adopt a chemical approach when discussing animal heat (pp. 74, 116–117).

The topics addressed and the thread of the arguments developed in Chapter 3 are more nuanced and complex. The goal pursued by the author is ostensibly that of showing how some key publications and controversies marking the history of the life sciences during the second half of the eighteenth century referred back to, and benefited from, contemporary developments in chemistry. The examples offered include Gabriel-François Venel's article "Chymie ou Chimie," for the *Encyclopédie*, the controversy over generation that involved Georges-Louis Leclerc Buffon, John Turberville Needham, Charles Bonnet, and Lazzaro Spallanzani, and the latter's experimental researches on respiration.

The strength of the book, in my view, is Bandinelli's abundant and mostly accurate use of primary sources. The weakness is the insufficient problematization of interpretive notions such as disciplines, modernity, and revolution. These are used repeatedly and quite loosely throughout the book, without the author showing awareness of the rich debate over interpretive issues documented in works such as John McEvoy's *The Historiography of the Chemical Revolution* (Pickering & Chatto, 2010) and in the rejoinder to McEvoy's views by several scholars who have been publishing extensively in the field over the past two decades (see "Historiography in a Metaphysical Mode," *Metascience: An International Review Journal for the*

History, Philosophy, and Social Studies of Science, 2012, 21:41–57).

GIULIANO PANCALDI

■ Modern (Nineteenth Century to 1950)

Poonam Bala (Editor). *Contesting Colonial Authority: Medicine and Indigenous Responses in Nineteenth- and Twentieth-Century India*. xviii + 157 pp., index. Lanham, Md.: Lexington Books, 2012. €49.95 (cloth).

Poonam Bala's edited volume brings together contributions from several researchers working on the dynamics of the encounter between diverse medical knowledge(s) and practices present in colonial India (British and Portuguese) and Burma. On the basis of Thomas Kuhn's "paradigm" concept and her own work, Bala proposes the idea of "paradigms of defense" to refer to the negotiated forms of medical knowledge and practice resulting from the encounter between "Western medicine" and "Indian medicines." Those paradigms are mainly defined as tropes of resistance to the Western medical knowledge and practices that gained ground with colonial rule, resulting in the downplaying and depreciation of local medicines and science. Counteracting this imperial dominance, the Indian elites reformulated the local medical systems' cultural and scientific background, claiming their legitimacy and depicting them as part of the Indian national identity. However, despite the rhetorical equation of "Western medicine" with colonial power, they did not altogether reject the dominant scientific models that had been inculcated by the colonial power; rather, they appropriated and reinterpreted these models to legitimize local knowledge according to local contexts and interests.

The case studies gathered in *Contesting Colonial Authority* analyze different instances of response to the dominant Western medical models that took place at diverse levels: health care institutions, women's health care, medical education, medical associations, charities, pharmaceutical technologies, and sanitary interventions. We are confronted with the complexity and diversity of voices, values, and perspectives at play, as well as with the tensions and disputes within the Indian society revealed in this encounter.

Thus, the revival of Ayurveda and Unani medicines is considered under different perspectives in the context of political tensions and power disputes involving science and the representation of Indian medical systems. Beyond the