students) and directly responsible for the foundation of Rensselaer Polytechnic Institute in Troy, New York, via the patronage of Stephen Van Rensselaer, whom Eaton met through DeWitt Clinton.

Spanagel has a wonderful talent for spinning out these connections. He demonstrates the indebtedness of the Hudson River School of landscape painters to the geology of Amos Eaton and is able to show convincingly that some of Thomas Cole's most famous paintings (especially "The Subsiding of the Waters of the Deluge," 1829) illustrate the direct influence of Eaton's geological theories. He also shows how woven together were politics, science, and art, in a world where William Cooper, father of James Fenimore Cooper, was an economic partner of Stephen Van Rensselaer, where William Cullen Bryant was a botanical student of Amos Eaton, where a good bit of the Federalist/Antifederalist antagonism could also be read off as a contest between Yale and Columbia.

Spanagel makes the point emphatically that in this "Golden Age of Civic Institutions and Public Life" (p. 50) we are not dealing with overlapping elites, but entering into a world where scientists are congressmen and governors, where writers and painters are scientists, and where science and economic development of natural resources are axiomatically connected in the minds and activities of these multitalented individuals. As we now live in an era in which science is hard-pressed to justify itself in terms of economic benefit to society, it is interesting to see the extent to which this was true in the early history of New York State—and that rather than raising ethical issues, it was entirely unproblematic.

The specific scientific content of Spanagel's book focuses principally on the geology of Amos Eaton, though it makes ample room for the highly original and important scientific discoveries of DeWitt Clinton. These men were naturalists and field observers whose scientific work ran parallel to the more florid nature writing of contemporary travel narratives. They were interested in biological and geological systematics, field mapping both geographic and geological, the discovery of economically useful minerals, and the development of trade and agriculture. They were tireless educators and founders of scientific societies. They shifted easily from scientific, to political, to religious discourse. It is interesting to see how many enduring institutions are the legacies of this handful of individuals, and we are not dealing here with the usual suspects: James Hall, Joseph Henry, and so on.

I want to emphasize, in concluding my review, what a good and interesting read this is, and that what is most novel and most striking are the numerous connections that others have perhaps seen—one here and one there—but that Spanagel has woven into a rich network that makes deep cultural sense. L. Pearce Williams (a lifelong resident of the region where Spanagel's story unfolds) often argued that the best sort of book is not a completely finished thing, but a woven tapestry leaving open threads on every margin where others can join in to help finish. This is very much that sort of a book, and I look forward hopefully to seeing much more of this integrative style of work from Spanagel and others who share his enthusiasm for this ambitious and fruitful approach to the history of American science.

Mott T. Greene

Yvette Kosmann-Schwarzbach (Editor). *Siméon-Denis Poisson: Les mathématiques au service de la science*. (Histoire des Mathématiques et des Sciences Physiques.) xiii + 522 pp., illus., bibl., index. Paris: Éditions de l'École Polytechnique, 2013. €26.60 (paper).

Poisson (1781–1840) was a prominent mathematician in France during his lifetime, but even if he is well known among scientists today, he has not attracted a lot of attention from historians of science. For this reason, this collection of essays on his life and works—a new edition of a book first published in 1981 to celebrate the bicentennial of Poisson's birth, to which six new chapters have been added—is worthy of interest.

After an introduction by the editor, Yvette Kosmann-Schwarzbach, who notes that Poisson's contribution to mathematical and physical sciences has not always been fully recognized—be it during his lifetime or after his death—the book is divided into seven sections. The first one is about Poisson's life

and institutional role. It contains three chapters: a biographical notice by Pierre Costabel; a paper by Ernest Coumet on Poisson's training at the École Polytechnique (in which interesting archives are reproduced); and finally, a paper by Bernard Bru that shows the key role played by Poisson in the field of scientific education as a member of the Conseil Royal de l'Instruction Publique (Royal Council on Public Education)—a part of his career that is still mostly unexplored by historians.

The next four sections are devoted to Poisson's works in mathematics (sec. 2), mechanics (sec. 3), physics (sec. 4), and probability and statistics (sec. 5). Four of the fourteen chapters that form these sections are new; the ones that had already been published have mostly been revised. Taken as a whole, these chapters give a picture of Poisson's interest and contributions to mathematics and physics. The authors display true erudition in showing how Poisson's research relied on, and in turn inspired, the works of his contemporaries, notably Laplace and Lagrange. For example, Robin E. Rider examines Poisson's work on algebra in relation to not only the earlier developments in this field (by Bézout and Euler) but also the training that Poisson received at the École Polytechnique; David H. Arnold describes how Poisson dealt with the Laplacian heritage in mechanics. Other articles take Poisson's work as a point of departure to give an overview of the history of a specific field; this is the case with Adolph P. Youschkevitch's chapter on integration and Alain Albouy's chapter on the history of the equations of analytical mechanics. Several of the articles in these sections analyze how future generations used Poisson's work, discussing in particular the origin and evolution of concepts such as Poisson's integral, Poisson's constant in electricity, or Poisson's law in probability theory.

The question of Poisson's posterity is also the main topic of the sixth section, which was not included in the first edition of the book. Entitled "Poisson's Brackets after Poisson," it deals with modern developments of Poisson's brackets, from Poisson to the twentieth century. The volume ends with a seventh section by Pierre Dugac that lists Poisson's works and gives informative—and interesting—complements about each of them. A bibliography (partly updated) and an index conclude the book.

This book is the only complete volume dedicated to Siméon-Denis Poisson. Given the role he played in research as well as in the institutional and scientific life in France in the first half of the nineteenth century, it should be of interest to all historians of science working on that period. However, most of the chapters (even some of the new ones) are written according to an outdated approach of history of science, whose goal seems to be to rehabilitate or at least to assess Poisson's works according to modern standards and whose method is to list "important" predecessors and followers. This approach leads the authors to divide Poisson's works between disciplines, such as mathematics, optics, and so on, without questioning the historical meaning of such a division at a time when the "analytical art" was considered the universal way to scientific knowledge (on this point, see Poisson's letter; p. 463). Similarly, the reader is told about controversies, polemics, and debates between Poisson and his contemporaries, about Poisson's quick scientific ascent thanks to Laplace's support, and about the ups and downs of his posthumous recognition, but none of these issues is really put in the context of Parisian scientific life at the time, and no historical perspective is provided.

These weaknesses notwithstanding, this volume fills a research gap and provides an accessible and informative introduction to Poisson's works and life.

Caroline Ehrhardt

Susanne Lettow (Editor). *Reproduction, Race, and Gender in Philosophy and the Early Life Sciences*. (Philosophy and Race.) vi + 294 pp., index. Albany: State University of New York Press, 2014. $85 (cloth).

The author's aim in bringing together the contributions to this volume is to inquire into processes of the co-emergence of notions of race, gender, and reproduction in the decades around 1800. In this period, all these concepts were in the making, influenced by philosophical ideas, which, as becomes readily