



Ambix

ISSN: 0002-6980 (Print) 1745-8234 (Online) Journal homepage: <https://www.tandfonline.com/loi/yamb20>

The Structures of Practical Knowledge

Marieke Hendriksen

To cite this article: Marieke Hendriksen (2019) The Structures of Practical Knowledge, Ambix, 66:1, 88-90, DOI: [10.1080/00026980.2018.1557790](https://doi.org/10.1080/00026980.2018.1557790)

To link to this article: <https://doi.org/10.1080/00026980.2018.1557790>



Published online: 13 Dec 2018.



Submit your article to this journal [↗](#)



Article views: 78



View related articles [↗](#)



View Crossmark data [↗](#)



Citing articles: 1 View citing articles [↗](#)

This argument is at its most successful in *Fictional Matter* when Thompson attends closely to the transmutable status of textual representation. In her epilogue she considers Lavoisier's coining of "oxygen" which, she points out, provides an empirical label for an otherwise unknowable entity: an interaction made even more complex by the associations of the word's prefix with piercing sharpness or acidic taste – none of which human beings directly experience in relation to the element. This is the unfixed, chemical experience of realism. Thompson concludes: "are words like 'oxygen' ... realistic in the sense of Watt's stipulation that 'the writer's exclusive aim is to make the words bring his object home to us in all its concrete particularity?' I have argued throughout my book that they are not" (278–79). Her chapter on Henry Fielding's "Alchemical Imaginary" (191) provides a neat example of this. In the novel *Joseph Andrews*, a letter from a Justice of the Peace with terrible spelling (and "inadvertent cognomens") exposes a corruption of the law even within the very words masquerading it as fairness. The misspelling "Justasses," Thompson explains, "effects its own justice, both in the medium of words and, on Locke's terms, outside it, in the world of perceptible things" (215–16). There is, as she concludes in her epilogue, no "concrete particularity" of the object: texts make meaning through productive, reciprocal encounters, just as the poison inflicted upon the unfortunate nun was produced by corpuscular interaction.

Beginning with a chapter on "Boyle's Doctrine of Qualities," *Fictional Matter* proceeds to read Locke's corpuscles within literary history and establishes a key understanding for the whole book: "human understanding proceeds from sensory ideas, but the insensible particles that stimulate perception must be represented by words" (23). Thompson's remaining chapters explore, in turn, direct engagement with corpuscular chemistry in the novels of Daniel Defoe, Jonathan Swift, Henry Fielding and Samuel Richardson. The scope of her study in doing so is impressive, taking in the context of chemical medicine shaping Defoe's *A Journal of the Plague Year* (1722); eighteenth-century corpuscular understandings of race in relation to Boyle's and Newton's conflicting treatments of colour; Fielding's alchemical reading of social status; and the corpuscular understandings of shared air shaping *Clarissa*, which encourage the reader to rethink the particularity of Richardson's most famous heroine (24–25).

Fictional Matter: Empiricism, Corpuscles, and the Novel is a bold and truly interdisciplinary study. Thompson's arguments are as subtle and as ingenious as the corpuscles that inform them, which makes for an invigorating and occasionally daunting read. The scholarship, however, is worth the intellectual commitment: *Fictional Matter* should be a necessary influence on current and future studies of literature and science.

© 2018 Cassandra Gorman
DOI 10.1080/00026980.2018.1554616

CASSANDRA GORMAN
Anglia Ruskin University



The Structures of Practical Knowledge. Edited by MATTEO VALLERIANI. Pp. xii+491, illus., index. Springer: Cham. 2017. £117. ISBN: 978-3-319-45670-6.

In this volume Matteo Valleriani has brought together sixteen essays on the epistemology of early modern practical knowledge, with the aim of understanding "how the transfer of practical activities transitioned to a circulation of practical literature, and, finally, how codified practical knowledge became part of the theoretical and conceptual structures that were being established during the early modern period" (p. 1). In his introductory essay, the most theoretical piece in the book, Valleriani distinguishes three levels of knowledge production mechanisms: the knowledge structure of practical activities, the social structures

of knowledge, and its conceptual structures. In his foreword, he speaks of “the Matrix,” a stable structure of epistemic economy with cognitive, social, and material dimensions, as a model to explain knowledge-intensive projects from the Renaissance to the Industrial Revolution. Moreover, Valleriani admits that he longs to identify continuities in history and to create an epistemological narrative. Yet if the essays in this volume – by Elizabeth M. Merrill, Elaine Leong, Viktoria Tkaczyk, Jochen Büttner, Sven Dupré, Eileen Reeves, Pamela O. Long, Wolfgang Lefèvre, Dagmar Schäfer, Ursula Klein, Pietro D. Omodeo, Richard L. Kremer, Pamela H. Smith, and Bruce T. Moran – show anything, it is that the ways of structuring and codifying practical knowledge in the early modern period were myriad.

Valleriani defines practical knowledge as knowledge that follows a defined workflow and that is needed to obtain a product or outcome, such as an artefact, a healed patient, or a mathematical result. Recent historiography has shown that the supposed dichotomy between artisans and scholars in the early modern period was more of a continuum than a divide, and the essays in this volume persuasively show that the distinction between practical and theoretical knowledge was a very fluid one, too, although some explicit reflection on theory and practice as contemporary actors’ categories would have been helpful. The requirement of a “defined workflow” is somewhat problematic, as several of the essays suggest that such workflows are largely tacit and are only, and definitely not always, defined and made explicit in the textual and material codification of practical knowledge. This seems to imply that, according to Valleriani’s definition, practical knowledge only exists if it has been or can be made explicit. Moreover, as Leong demonstrates, certain kinds of practical literature, such as recipes, are characterised by a certain “thinness” (p. 65). These texts are more about the “what” rather than the “how” or “why” – various workflows may lead to the same result, and the same workflow can be mapped onto different systems of explanation. Nor does the “defined workflow” take into account phenomena such as what Dupré in this volume calls “the codification of error”: writing down what *not* to do, rather than what to do.

Thus, Valleriani’s statements regarding the nature of early modern practical knowledge and its circulation and codification through interactions, texts, images, and objects open a discussion rather than conclude it, which is an admirable feat and a welcome addition to existing scholarship. The essays in the book cover a wonderfully diverse range of fields of knowledge, from theatre engineering, metalworking, woodblock printing, and astronomy to architecture, ballistics, artisanal knowledge, and brewing. Some essays analyse the diverse motivations for the textual, visual, and material codification of practical knowledge. For example, Tkaczyk demonstrates that writing about practical knowledge could serve to commodify it and elevate its status, while Smith shows with a number of case studies from mining and metalworking that larger belief and knowledge systems not only structured practical knowledge, but that objects in turn also structured and reinforced knowledge systems. Other chapters study how seemingly stable objects changed and were changed by shifting claims to natural knowledge. For example, Moran explores how woodblocks were re-used and re-purposed, and how they changed epistemic status while remaining stable in substance, and, in a certain sense, transformed into something else.

Most of the essays in this volume are solidly researched and written, and form an important contribution to the ongoing discourse about the nature of early modern knowledge, either as part of the collection or independently. There are some minor issues with the structure of the book as a whole, though. A quarter of the contributions focus on architectural knowledge, and although this was certainly an important field of practical and theoretical knowledge, it creates a somewhat unbalanced impression. Where, for example, is painting, a field of practical knowledge that was purposely and heavily theorised in the early modern period to elevate it to the status of a liberal art? Another missed opportunity is the fact that only one contribution – Schäfer’s chapter on architecture and jade models in eighteenth-century China –

discusses non-western European knowledge. Finally, the length of the essays varies wildly, ranging from a mere sixteen pages to an unwieldy fifty-plus, which makes it somewhat difficult to read the book as an integrated whole and as the narrative the editor wants it to be. Hopefully this will not put off scholars of early modern knowledge, as this volume contains some truly novel approaches to and insights into the structures of early modern practical knowledge.

Funding

This work was funded by the European Research Council under the European Union's Horizon 2020 Research and Innovation Programme [Grant Agreement No. 648718].

© 2018 Marieke Hendriksen
DOI 10.1080/00026980.2018.1557790

MARIEKE HENDRIKSEN
Utrecht University



The Chemical Works of Carl Wilhelm Scheele. By ANDERS LENNARTSON. Pp. xi, 110, illus., index. Springer: Cham. 2017. £53.30. ISBN: 978-3-319-58180-4.

Historians of chemistry can be divided into two types: those who have pursued the science themselves to degree level or beyond, and those who have not. Many would argue, taking the view that no historian can hope to escape their own world view, that the former inevitably bring their knowledge of method, theory and the present state of the art to their historiography. It cannot be denied that there are advantages to this additional background knowledge. Dry accounts of laboratory activities and monochrome descriptions of the substances being manipulated can be more richly coloured by the tacit knowledge that historians with their own experience of chemical investigation can bring to bear on their historiography. Of course, no historian of chemistry can be said to be ignorant of certain nuggets of current knowledge that would not have been available to their historical actors. Modern knowledge of the mixture of gases that comprise the air we breathe and the molecular formula of water are impossible for even the most sheltered historian to avoid. We all bring our chemical knowledge, such as it is, to our historiographical practice. That being said, however, the level of chemical learning being brought to historical enquiry is often made manifest in the historical writing itself. Scientists with an interest in the history of their science are more usually interested in elucidating events, ideas, and actions that might be said to have contributed to the current state of scientific knowledge. After all, as a friend once said to me, “what is the point of studying wrong chemistry?”

These historiographical musings are unlikely to produce surprise or amazement in an Ambix subscriber. The work being reviewed brings these historiographical issues to the fore, however, prompting the reviewer to revisit her views on the subject. This short book seeks to catalogue and describe the published work of Carl Wilhelm Scheele, the eighteenth-century chemist best known for his work on heat, fire, and the discovery of oxygen. It is the work of a distinguished chemist who has developed an interest in the history of chemistry, especially Swedish chemistry and stereochemistry. The reader is forewarned what kind of history to expect, and indeed the introduction by the author, which discusses his decision to employ modern chemical nomenclature and to include chemical equations, serves to buttress this impression. Perhaps indicative of the difficulties of reading eighteenth-century chemistry through a resolutely twenty-first-century lens is the fact that Lennartson is unable or