Cultures of Knowledge: Technology in Chinese History brings together articles by eleven scholars focusing on how technological knowledge was produced, accumulated and communicated in traditional China (especially from the tenth to the eighteenth centuries) with three contributions by European specialists who compare the Chinese and Western experiences in this area.

One useful way to approach this volume might be to begin with Pamela Long’s masterly “Technological Transmission in China and Europe: A Comparative View.” Though serving to comment mainly on the first section (‘Internode’) articles by William T. Rowe (“Political, Social and Economic Factors Affecting the Transmission of Technical Knowledge in Early Modern China”) and Dagmar Schäfer (“Silken Strands: Making Technology Work in China”), it also provides an excellent introduction to much of the best scholarship dealing with the European developments crucial for understanding the comparisons that play so important a role in this volume (even if there is no hint of this in its title).

One might then turn to Francesca Bray’s “Chinese Literati and the Transmission of Technological Knowledge: The Case of Agriculture” and especially its final two sections which highlight many of the most important points made (or not made) in this volume by showing how agriculture/agronomy occupied a unique position that made it in certain crucial ways unlike other “technologies.” At the same time, many of the questions one asks about writings on agriculture, such as “how far across the social spectrum the audience for or authorship of nongshu [agricultural books] might have stretched at different periods or in different regions” (p. 316, fn. 66), are obviously also relevant for examining other technologies.

The second section of the book, ‘Imperial Court,’ examines, in Wolfgang Lefèvre’s felicitous phrase, “symbolic technology politics” or how the imperial court made use of its control over prestigious technologies such as
hydraulic works (Liu Heping, focusing mainly on court efforts in the northern Song) or imported artistic metalwork techniques (Luo Wenhua, describing how skilled migrant craftsmen from Nepal were enlisted by the Qianlong emperor in the seventeenth century) to bolster its political prestige. Perhaps the most important conclusion to come out of this section is Lefèvre’s suggestion that Chinese emperors could reinforce their authority by picturing themselves (or having themselves pictured) as technological leaders/work-masters in a way that one does not find among Western rulers.

The book’s third section deals with those gathering places (‘Agora’) that were the sites of activities, often overlapping, in which technology played a significant role. Two Chinese “locales” are treated at length in Anne Gerritsen’s discussion of ceramic technology at Jingdezhen 景徳鎮 and Susan Naquin’s masterful and elegant examination of “temple culture” over five centuries in Shouzhou 濟州, Anhui. While reminding us of the skimpiness of the surviving sources relating to temple art and architecture (and what appears to be more than one case where the author was refused permission to examine surviving items of interest), Naquin nevertheless displays a remarkable knack for drawing every last bit of information out of what is available. When lack of evidence forces her to speculate, her speculations are invariably persuasive. One finishes this article with a real feeling for the environment in which the technologies relating to temples were practiced and, insofar as the sources permit, how and by whom.

In the next to last article in this section, Joachim Kurtz discusses the rhetorical strategies found in six Jesuit works in the seventeenth century that attempted to introduce Western technology to the Chinese, show its usefulness, and convince the Chinese scholarly elite that European learning (including Christianity) was compatible with China’s civilization. Finally, Matteo Valleriani focuses on comparisons between the roles of officials in the leading technologies of Renaissance Venice (e.g., shipbuilding and glassmaking) and Florence (especially architecture and military engineering), and those in China, judging their activities to be different but crucial in both civilizations.

The fourth and final section of the book, ‘Scholarly Arts,’ leads off with Martina Siebert’s piece focusing on the Chinese predilection to trace the “origin of things” (wù yuán 物原), including technology, in their culture back to the beginnings. (She includes a very handy chart providing detailed information on some twenty-two examples of encyclopedias on “The Origin of Things” that illustrate just how important this element was in the historical-mindedness of the Chinese.)

Martin Hoffman, in his examination of biographies in the standard histories of officials noted and admired for their technical achievements
(often large-scale construction projects), makes the perhaps counterintuitive point that the authors of these accounts rarely connect these skills with “groundbreaking inventions or advances in a specific craft” but rather stress the personal exceptionability of their subjects. In contrast, local histories often introduced craftsmen who were renowned for producing one or more products that helped create the distinctiveness of a place. By extension, the skills displayed by the craftsmen may well have been seen to confer on a location a special character.

Finally, Marcus Popplow’s “Two Cultures Speaking with One Voice? Invention, Ingenuity, and Agricultural Innovation in Pre-industrial European and Chinese Discourse” quite successfully discusses the Siebert, Hoffman and Bray contributions from a Europeanist’s perspective while pointing out that “the study of pre-industrial discourses on technology is not a well developed field for either culture.” (p. 328) He stresses, with interesting discussions of invention, ingenuity, and agricultural innovation, the need for further efforts to formulate and test better categories for comparative studies in order to avoid falling back on stereotypes.

Despite several very well written and stimulating contributions, this book overall will be no one’s easy read. The four main section titles, for example, all tend in varying degrees to be quirky and/or uninformative. Perhaps the most unfortunate is ‘Agora,’ with its inevitable suggestion of Greek togas. The editor, not very helpfully, explains that: “In creation and maintenance, construction projects represent agoras, that is, marketplaces in which technological knowledge was communicated, generated or unheard, facilitating or compromising the needs and demands of the day.” (p. 157) Moreover, much of the book cries out for a careful editing. There are not only far too many minor mistakes or infelicities in English usage but also not a few sections where the phrasing to a greater or lesser extent obscures the author’s intended meaning. It would be a shame if these problems were to lead to neglect of the abundant fine scholarship to be found here.