

Paola Bertucci. Artisanal Enlightenment. Science and the Mechanical Arts in Old Regime France. New Haven and London: Yale University Press; 2017. 300 p. ISBN: 978-03-00227-41-3. 40 \$

The first persona that comes to the mind of a historian thinking of the French Enlightenment is undoubtedly the *savant*. Diderot, d'Alembert and colleagues represent the essence of this epoch, combining *raison* and *esprit*. Their political and epistemological project materialized in the *Encyclopédie*. Paola Bertucci puts forward a powerful argument in order to revise this view. Her thesis is condensed in the title of her book *Artisanal Enlightenment*. She would like to challenge "the conception of the Enlightenment as an exclusively intellectual movement." (28) Bertucci builds and expands on the work of Pamela H. Smith, Pamela O. Long and other scholars of early modern artisans focusing on issues such as the epistemological dimension of the crafts and embodied knowledge. Bertucci's key-witness for this revision is the *artiste*. She uses this term (always in italics) to refer to a heterogeneous group of French "makers-thinkers". The *artiste* works with both his hands *and* his mind. He is no ordinary craftsman, yet instead innovative, pursues the common good and is endowed with *esprit*. The quest of the *artiste* to guide France toward improvement and progress culminated in the short-lived Société des Arts (1728-early 1740s). This Société forms the centre of Bertucci's book, both conceptually and structurally. *Artisanal Enlightenment* is divided in three parts, consisting in two chapters each. Part 1, «The Natural History of the Arts», describes the discourse on the mechanical arts that eventually led to the foundation of the Société des Arts which is dealt with in part 2. Part 3, «Writing and Making», asks for the legacy of the Société.

Part 1 astutely describes the quest to gather all kinds of technological expertise from the late seventeenth to the early eighteenth century. This project followed Francis Bacon's programme but also Colbert's state-centred vision how to actively develop the French economy. The objective was to produce a multi-volume «History of the Arts» in order to recover lost practical knowledge as well as to stimulate new inventions. A potential source of knowledge were the artisans. Yet craftsmen suffered from a bad reputation, in particular in the eyes of the French *savants*. They were supposedly secretive, slaves to routine and rules imposed by the guilds and thus unable to innovate, badly educated,

prone to drinking and other vices, only interested in material gain and thus not trustworthy.

The project «History of the Arts» never saw the light of day. It proved too ambitious and costly (in particular the numerous plates). Yet the decades of discussion about the need of a systematic and collaborative improvement of the mechanical arts had given rise to a sort of group consciousness of the *artistes*. This led to the foundation of the Société des Arts in 1728 by the clockmaker Henry Sully. So far our knowledge of this society was limited. This changed when Olivier Courcelle recently discovered a wealth of sources in a local German archive, in particular the minutes of a number of meetings and information about members. The sources are online (www.clairaut.com) and Bertucci is thus able to provide a fine-tuned portrait of the Société des Arts. The appendix of the book contains an informative list of 172 known members. Bertucci can show that membership of the Société was quite heterogeneous, both professionally and socially. Among the members were clockmakers, mechanics, metal workers and geometers, but also engravers, painters, sculptors as well as surgeons.

The Société was organized in nine «focus areas: agriculture and economy, animal economy; manufactures (textile, dyeing, and leather tanning); military and civil architecture; the building of ports and ships; horology and mathematical instrument making; optical glassmaking; metallurgy; and *arts du gout*» (p. 122). In many respects it was modelled on the Académie des Sciences (e.g. different classes of members). The relationship between the two bodies was complicated as both *artistes* and *savants* claimed to lead the enlightened project of improvement. Who was to advise the French state on practical matters such as machines, trade, manufactures and industrial processes? Who was to elaborate the much needed reliable judgment on the feasibility of new inventions? Bertucci stresses the political dimension of the *artistes'* project. They wanted to shape French economic policies through their technological expertise.

The *artistes* (and thus the Société des Arts) insisted that practical knowledge is not only equal but even superior to theoretical knowledge. Only first hand knowledge of materials and specific practices, including bodily experience, allowed for a constant improvement of the mechanical arts.

Why did the Société des Arts not even last two decades? One reason was the lack of commitment of its patron, the count of Clermont, who in the 1730s was busy to serve the king. Yet possibly more important were the inherent contradictions of the Société in the Ancien Régime, as Bertucci points out. On the one hand the members vowed to pursue the common good and praised the value of collaboration, on the other hand they tried to climb up the social

ladder, searching for patrons and —if they were in the same business— even competed with fellow members. The «project of the Société des Arts was neither meritocratic nor democratic» (p. 141).

Historians have argued before that the Société played a role in the «prehistory» of the *Encyclopédie, ou dictionnaire raisonné des sciences, des arts et des métiers* (the full title already indicates this), whose publication started in 1751. Yet only Bertucci is able to show in convincing detail how crucial the Société was for the flagship project of the French Enlightenment, both in terms of its agenda (achieving progress through collaboration in the mechanical arts) as well as on a personal level (many members of the Société became authors of the *Encyclopédie*). At the same time Diderot was able to gloss over the major contributions the Société and thus to maintain the social and epistemological hierarchy between *savants* and *artistes*.

Yet *artistes* did not restrict themselves to the workshop. «Through writing, and above all publishing, *artistes* circulated a discourse on their own distinctive way of knowing». As Bertucci shows they propagated their ideas on industrial innovation but also on educational reform directed at a broad audience in numerous articles, books, and memoirs. In the last chapter she focusses on two influential *artistes*, who embodied the spirit of the Société even after its demise. The Abbé Nollet, an instrument maker known for his research in electricity, prominent teacher and industrial spy argued that «the pedagogical value of machines rested in the fact that they materialized rational thinking and thus they were tools of enlightenment». Jacques Vacaunson, well known for his invention of automata, in a sense radicalized the discourse of the *artistes*. He advocated to perfect machines and not the workers, i.e. to relocate the «skill out of the body of the artisan and into the machine» (203).

Artisanal Enlightenment is an impressive achievement, reconstructing the discourse on the mechanical arts from the late seventeenth to the late eighteenth-century as a coherent narrative. Bertucci's book is well written and also very nicely illustrated; its structure is exemplary and contributes to the force her argument.

The uneasy relationship between *savants* and *artistes* is seemingly a very French story. Future investigations should explore how the mechanical arts and their role in improvement were discussed in other milieus of the European Enlightenment. ■

Oliver Hochadel

IMF-CSIC, Barcelona

ORCID: 0000-0002-4983-1118