

REVIEW

ELECTRICITY AND ESPIONAGE IN EIGHTEENTH-CENTURY
ITALY

Paola Bertucci, *Viaggio nel paese delle meraviglie. Scienza e curiosità nell'Italia del settecento*. Turin: Bollati Boringhieri, 2007.
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Jean-Antoine Nollet (1700–1770), as both a teacher and a researcher, was one of France's leading experimental philosophers and instrument makers in the mid-eighteenth century, who from 1753 held the new chair of experimental physics at the Paris *Collège de Navarre*. Yet today he remains a virtually forgotten figure, remembered only for his spat with Benjamin Franklin over the nature of electricity. We still await a definitive biography. The present work makes no claim to provide this, but it provides a sensitive and detailed analysis of a major episode in his scientific career – his visit to Italy in 1749. In the 1740s, Nollet was one of many European experimental philosophers developing the new science of electricity, whose utility still remained to be shown. In the previous two years, many northern scientists had been fascinated by the reports coming out of Italy that the Venetian scholar Gianfrancesco Pivati and other Italian experimenters had supposedly managed to transfer the curative power of medicines contained in an electrified tube to an electrified patient. Nollet and his northern colleagues, however, had been unable to replicate the experiment, and the French cleric was anxious to visit Italy to see the cure for himself. For some five months Nollet toured the peninsula, meeting with the leading Italian experimentalists (both male and female) and testing Pivati's claims. He returned a convinced sceptic, and delivered a damning verdict on Pivati and his tube to the Paris *Académie Royale des Sciences*, of which he was a member. The Italians were accused of being insufficiently rigorous in their experiments

and too ready in general to accept marvels and miracles. Consequently, Italian science was dismissed for its credulity. Additionally, the French perceived Italian scientists as being old-fashioned and producing knowledge of little significance.

Nollet's public account of his Italian tour, however, masked a much more complex reality. Nollet was not the concerned investigator after truth he claimed to be. As he travelled around Italy, unbeknown to his hosts, he was involved in scientific espionage: for in return for paying for the trip, the French Government instructed him to collect information about silk cultivation, in order to reduce French dependence on imported Italian silk. This Nollet duly did, especially during his stay in Savoy. He also treated the visit as a business trip, gaining lots of orders for instruments. Moreover, his travel diary and the correspondence left by the people he met, reveal that he was far less dismissive of Italian science than his official pronouncements suggest. The Frenchman was anxious to connect the *Académie Royale des Sciences* with Italy's leading scientists, and so was busy constructing a correspondence network of his own. Consequently he was far more accommodating and respectful of the views of Pivati's supporters than he later made out. Not surprisingly, therefore, the debate over the tube did not end with Nollet's public pronouncements and natural philosophers continued to look for a medical use for electricity.

In carefully reconstructing Nollet's Italian tour, Bertucci shows us the Italian Republic of Letters at work in the mid-eighteenth century, with all its rivalries. It was a republic occupied by women as well as men – one of the most important figures Nollet recruited for his correspondence network was the Bolognese Laura Bassi, well known for her pioneering role as a female scientist – and its centre was not public academies or universities but the private laboratories run by aristocrats, such as Maffei of Verona. It was also very creative. Despite Nollet's dismissive comments (reiterated by many other Frenchmen, as Françoise Wacquet showed in her 1989 study, *Le modèle français et l'Italie savante*), Italy played an important role in the development of the science of electricity in the mid-eighteenth century. This helps to explain the even more positive contribution of Volta at a later date. Indeed, Bertucci insists that it was the very fact that the Italians were so interested in the marvellous which accounts for their scientific fecundity. Bertucci has written a compelling and innovative microhistory that is an important contribution to our understanding

of how science was made in the eighteenth century. This is an impressive first book and deserves to be widely read.

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