

centuries, Denis was the leading advocate in France for transfusing good, healthy blood into diseased patients. Such procedures, the mathematician noted, had an advantage over blood-letting in that the overall blood volume could be maintained. The fact that the donor was non-human was of little consequence to Denis.

To establish the context surrounding medical wisdom of the period, Moore summarizes pertinent elements of Cartesian and Harveian philosophy as well as the new experimental philosophy that was being espoused by England's Royal Society and emulated by France's Académie Royale des Sciences. We gain a glimpse of the channels through which men like Denis advocated innovative experimental procedures in order to gain favour, thereby accelerating their societal rise. The rivalries so typical in histories of England and France are played out here in the claim of priority over which nation's natural philosophers had first uncovered the benefits of blood transfusion.

Denis transfused some five or six ounces of the calf's blood into Mauroy through a series of quills that he had connected into one continuous pipeline. Although not the first time he had performed such a transfusion into humans, it was his first time for using this technique in attempt to cure a patient who was deemed physically well, but mentally deranged.

What initially appeared as an "incredible cure" (p.154), soon took a deleterious pathway upon which, after three transfusions over a series of weeks, Mauroy died and Denis was indicted for murder. Using the documentary evidence from the trial and contemporary European medical writings, Moore sets up a debate between all of these authorities in a manner similar to Walter Cronkite's 'You Are There' US innovative television series of the 1950s. Although this setting is admittedly fictitious, it is believable as it is based solely upon accurate, contemporary accounts. At the conclusion of this scintillating scene, we find that Denis was acquitted, but the magistrate's decision that "no transfusion should be made upon any human body without the approval of the physicians of the Parisian Faculty [of Medicine]" (p. 205) dealt

a death knell to such experimentation in the ensuing decades. Indeed, the need to gain consensus from such a divisive professional body prohibited further attempts at transfusion for 150 years.

Some readers may be bothered by Moore's readiness to skip forward within his chapters, filling the readers with more up-to-date information of the subsequent findings about blood and transfusion. Indeed, it was a bit disconcerting to jump into twentieth-century blood typing and incompatible transfusion knowledge in the midst of his chapter on 'Denis' route to the top'. Perhaps such information should have been relegated to an epilogue or added to the otherwise helpful timeline of seventeenth-century blood transfusion at the close of the book. Doing this towards the final pages would reinforce the timeliness of a history of blood transfusion. It would also have allowed the author to include references leading curious readers to more thorough histories of the importance of blood and modifications of blood transfusion over time. An index would also have been of immense help.

Upon reflection, I am left craving more medical and scientific history to be delivered in such a lively manner. Perhaps BBC television should be thinking how best to feature Moore's important historical writing before an even wider audience, one that it clearly deserves.

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**Walter Bernardi and Luigi Guerrini** (eds), *Francesco Redi, un protagonista della scienza moderna: documenti, esperimenti, immagini*, Biblioteca di Nuncius, Studi e Testi 33, Florence, Leo S Olschki, 1999, pp. xi, 388, L 75,000 (paperback 88-222-47191).

The twenty papers in this collection aim to create a comprehensive image of the physician and courtier Francesco Redi (1626–1698). The book is divided into four overlapping sections: Redi's laboratory work as it appears in his notebooks; his relationship with the science of his time; Redi viewed through the social context of

the Medicis' Tuscany; and a final section that covers iconography, archival research and his literary works. The authors have gone to the fountain-head and analysed his laboratory notebooks—hundreds remain—and show that Redi worked in various experimental traditions. As well as the well-known experiments on insects and vipers, there are other reports in the notebooks of work on many species including marine creatures. In addition there are accounts of experiments in physics, as shown in Maria Conforti's paper on "glass drops" and in Ferdinando Abbri's on chemical substances. And behind the experiment one always finds theoretical issues, from atomism to anti-spontaneism.

The papers of Antonella Bonciani, Stefano Casciù, and Walter Bernardi demonstrate how, while to all appearances a radical empiricist who drew on many sources for his books, including iconographic sources, Redi wanted to carry out empirical work on a large scale and used his social and courtier's skill to this end. He was an entrepreneur with multiple interests who had leadership qualities, above all organizational abilities. To bring together the hunter and the scholar, the barber and the poet, in a shared experimental enterprise presupposes management skills that are not necessarily attributes of the courtier. He looked for new talent, including artists whom he set to work with microscopes, as Lucia Tongiorgi Tomasi describes. His efforts to establish a school were fruitful, and many disciples and scholars joined his circle. In cases of scientific disagreement they performed experiments under the supervision of Redi and Malpighi bringing new facts to light, for instance in the generation dispute. Thus if there are good and bad patrons, Redi probably belonged to the former. Sometimes not claiming authorship for his writings, he would write important parts of a book which later appeared under a disciple's name, as is revealed by Luigi Guerrini's paper on the causes of the shock produced by the torpedo signed by Stefano Lorenzini. Another of his roles was that of arbitrator, which, as Susana Gómez López recounts, enabled him to unify the Galilean scholars in a shared endeavour.

For Redi what was at issue was the authority of the Ancients, which several papers discuss. This controversy is clearly illustrated by the debate between Redi and the Jesuit Filippo Buonanni over the spontaneous generation of molluscs and fungi studied in Michela Fazzari's paper, Redi's ambiguous relationship with the old tradition of natural history, analysed by Alessandro Ottaviani, and the linguistic choice he made when collaborating in the *Crusca* Lexicon. Alberto Nocentini describes how, unlike his colleagues at the Crusca Academy, he ordered his lexical entries according to the spoken, not the written language. In addition, Oreste Trabucco shows how Redi's rejection of the authority of Ancients was evident in the way he used anatomy as a weapon against the Aristotelians.

Redi was also a physician, and the papers by Carla Doni and Domenico Bertoloni Meli discuss respectively his practice at the bedside and his relationship with Malpighi on anatomical research. Michelle Rak studies Redi the writer, who was so much the product of the baroque period. In addition, the book contains an archival survey of Redi's library by Lorella Mangani, a study of the thousands of Redi's manuscripts untouched in Florentine archives by Piero Scapecchi, and a comprehensive bibliography.

Despite what Bernardi calls the failure of Redi's attempt at "big science", his scholarly endeavour was carried on by others in France and in the rest of Europe during the Enlightenment. The book shows well how Redi reconciled the life of a courtier, and the patronage he wielded, with a great number of experimental enterprises in which there was active freedom of research. This new and complex image allows historians to go beyond the easy-to-sell icon of Redi the courtier that stems from Paula Findlen's works. Rebellious against authority, dogmatism and scholasticism, Redi actively contributed to shaping new forms of knowledge.

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