

## **Malcolm Dick and Caroline Archer-Parré (eds.), James Watt, 1736–1819: Culture, Innovation, Enlightenment**

**Liverpool: Liverpool University Press, 2020. Pp. 280. ISBN: 978-1-7896-2081-8. £80.00 (hardback). ISBN: 978-1-7896-2082-5. £24.99 (paperback).**

Yohann Guffroy

Ecole polytechnique fédérale de Lausanne

This volume of ten texts is the result of a symposium that took place at the University of Birmingham in 2016. Unlike other biographies and books on James Watt's life, this one does not deal with the steam engine, or his business relationship with Matthew Boulton or the Soho manufactory. The authors propose a sociological portrait of Watt, exploring different aspects of his personality and his early career, mainly through his correspondence with his wives, Margaret (née Muirhead) and Ann (née MacGregor), and his son James Watt junior. This important archival material is presented in detail in the tenth chapter, by Fiona Taite, who was appointed to the Archives of Soho Project in the year 2000 to recatalogue the papers of James Watt and his family. She explains precisely how all of these papers have been preserved and have come down to us. This material is the strength of this book because, thanks to it, the authors can explore from the inside subjects like his relation to the transatlantic trade and slavery, the role of his wives in his professional life, his political ideas or his involvement in various social networks.

In the introduction, editors Malcolm Dick and Caroline Archer-Parré present a state of the art from the first biographies written after Watt's death to those published following the two-hundredth anniversary of his death. They draw the evolution of the perception of James Watt, from a 'genius' to a complex personality engaged not only with the steam engine but with plenty of other activities and networks. This book is part of a historiographical renewal spanning the last forty years.

In the first chapter, Peter M. Jones deals with the milieu in which Watt grew up and the factors that may have led to his intellectual development. Jones's hypothesis is that Calvinism played a role in the intellectual development of the Watt family, beginning with the grandfather and the uncle. As Kate Croft shows in the third chapter, an important role was also played by Watt's wives, Margaret and Ann, who helped their husband coordinate his professional network and run his workshop in Birmingham. In my opinion, this chapter is particularly interesting because it helps to highlight that wives of scientists were not confined to the domestic sphere but were often fully engaged in their husbands' business, like Marie-Anne Paulze Lavoisier, who translated the texts of her husband Antoine Lavoisier and drew chemical drawings. In the fourth chapter, Larry Stewart focuses on James Watt junior and his political travel to France during the French Revolution. The correspondence between father and son reveals Watt senior's political convictions, his views on the Great Revolution and its reverberations in England, and his devotion to the English Crown.

The fifth chapter connects the themes of family and network. Frank A.J.L. James explains how James Watt and his sons, James junior and Gregory, contributed indirectly to the rise of Humphry Davy, who became in 1798 the superintendent of the Medical

Pneumatic Institution in Bristol. Among other things, James shows how local or global scientific networks are based on individual careers and personalities even when organized around an institution. This insight is further developed in the following two chapters. By presenting Watt's relationship with two young enthusiastic chemists, Joseph Black and James Kair, Kristen M. Schranz shows how Watt acted as a coordinator and a guide, thus becoming a 'central sun' in this domain, as Muirhead once called him. Through the study of correspondence, this chapter reveals the vital role played by Watt in the circulation of chemical knowledge at the end of the late eighteenth century. In Chapter 7, David Philip Miller argues that Watt's natural philosophy, especially the chemistry of heat, has been essential in his understanding of the steam engine, as well as his work with Beddoes. The most interesting part of this chapter is concerned with what the author calls 'the sites [and institutions] of natural philosophy' (p. 178–6); that is, scientific societies, laboratories and the manufactories. According to Miller, Watt's philosophy was articulated through books and conversations, but also through material practice and production.

Material production is the main theme of Chapters 2, 8 and 9. Stephen Mullen explores Watt's youth as a pretext to write on the development of the Glasgow harbour and its inscription in the transatlantic trade and on the relationship between slavery and Watt's family, especially his father. Mullen's contribution is important because it sheds light on the less known topic of Watt's commercial implication in the triangular trade. Ben Russell, in the eighth chapter, tries to show that the objects in Watt's laboratory preserved in the Science Museum are more than simple material items. Indeed, their study unveils different implicit aspects, such as the mode of production, the useful knowledge, the organization of work, the site and the advertisement. Russell shows that a material history is essential to think about the figure of a scientist/engineer. Finally, in Chapter 9, Nina Baker traces the 'James Watt organ' preserved in the People Palace Museum of Social History in Glasgow. Through the study of letters, newspapers and bibliography, she shows that even if Watt made different musical instruments and some organs, this specific organ has probably been misattributed to Watt after his death.

This book is rich in interpretations of Watt's figure, showing that a 'genius' is not a lonely individual but a part of a large network of sociability, ideas and practices. It also manages to reimagine the steam engine not as the end of a journey, but rather as one stop in a long process of maturation.

doi:10.1017/S0007087421000613