

Ian Mitchell's Scotland-related BOOK RECOMMENDATIONS

12 – *James Watt – Miller*

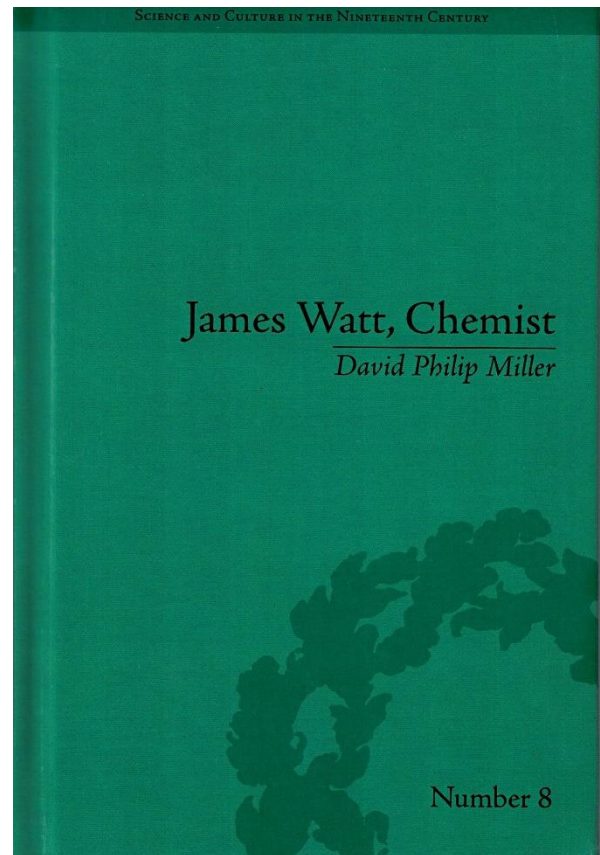
JAMES WATT, CHEMIST

Author: David Philip Miller

Publication info: Routledge, 2016 (first published 2009), part of the “Science and Culture in the Nineteenth Century” series
(available on Amazon, [click on cover image for link](#))

Keywords: James Watt, steam engines, chemistry, Scotland, history of science, history of engineering

Reviewer: Ian Mitchell, 8 July 2018



Reason to read: In April 2017, Nicola Sturgeon made her most high-profile international defence of Scotland as a potentially independent nation, outside the UK, in a speech at Stanford University in California. In the course of it, she said Scotland had “led the world into the industrial age [with] James Watt’s steam engine... So we want to apply our innovation and engineering expertise to help lead the world into the low carbon age.” This book reveals how misleading a statement that was. Though Scottish by birth and upbringing, Watt learned his trade in London, did much of his pioneering work in Birmingham, lived in Wales after he made enough money to pose as a gentleman (he turned down a knighthood because he thought he deserved a higher honour), died in his other home in Staffordshire and is buried in Birmingham. Without the Union, Watt would have most likely got no further than being an instrument and toy maker in Glasgow as, though movement of intellectuals was possible in the eighteenth century, movement of mere mechanical geniuses was much harder, unless they were emigrating to the United States or accepting a post in Catherine the Great’s Russian bureaucracy. The Glasgow civic mafia even tried to prevent him working in his trade, saying he had not completed the *seven-year* apprenticeship the city required. So far from being an advertisement for the dream of independence, as Ms Sturgeon assumes, Watt’s life illustrated the value of the Union. Imagine if Britain had gone into the Napoleonic wars without the Boulton & Watt steam engine and the associated beginnings of the industrial revolution!

Main talking points:

1. The myth-making: this started almost immediately after Watt's death in 1819 when Francis Jeffrey wrote in the *Edinburgh Review* that Watt should not be considered merely the "improver" of the steam engine, but he "should rather be described as its *inventor*." (p. 7) (emphasis in original) Professor Miller describes the stages in the myth-making, including the circumstances surrounding the famous painting of James Watt, under the eye of an irritated "Aunt Miss Muirhead" while he watches the family kettle generating steam when he should have been reading, studying or being active in some other way appropriate to life in middle-class, Covenanted Greenock in the 1740s. But that was just the start. Like Ms Sturgeon, though with more of an excuse (she presumably hires expert speech-writers), the world has taken this image as the defining one of James Watt's life. Little could be further from the truth.
2. In the early nineteenth century, Watt was just as famous for having been the first to understand the *nature* of steam, and the fact that water is a compound whose two elements can be separated by boiling. He was, argues Professor Miller, as much a chemist as an engineer—hence, the title of this book.

Thought(s) provoked: Just how easy it is for lazy-minded or dishonest people to misuse the details of the lives of famous people in order to promote an agenda which has nothing to do with the person concerned. Millions did it with Jesus; Stalin did it with Lenin; now Ms Sturgeon is doing it with James Watt.

Incidental interest: The massive patent battles that Watt's partner, Matthew Boulton of Birmingham (who was the businessman in the firm), had to fight in order to establish ownership of the rights to the various inventions James Watt had registered. Industrial Britain was as crooked then as commercial China is today.

Surprising points: There is a fascinating world of meaning behind the correction which James Watt's son, James Junior, made to a letter describing Watt's mythical kettle-watching activities. The letter came from the daughter of a woman, Mrs Marion Campbell, who had spent much time in the Watt household when James Senior was young. In 1835, with the battle of the myths raging about the discovery of the nature of water, James Jnr. asked for a memo from Mrs Campbell's daughter about the kettle incident. "On examining this document closely, however, it became apparent that the original words, in Miss Campbell's hand, had been edited, if ever so slightly. The word 'power' had been struck through and the word 'properties' written above it." (p. 25 – Miller notes how Sotheby's were taken in by this correction when publishing a catalogue for the "James Watt Sale" in 2003!) Now the sentence said he had been "investigating the *properties* of steam..." The reason seems to have been that only below-the-saltish people like engineers would be interested in "power", while gentlemen researchers were distinguished by their austere pursuit of the "properties" of substances. Watt's main competitor in the race to be accredited as the pioneer of the chemistry of water was the aristocratic, rich and semi-autistic Henry Cavendish who had "been trained in the best and most rigorous school of inductive philosophy. Cavendish was, after all, a Cambridge man, Watt a Scottish autodidact." (p. 54) It should be added that Professor Miller has written a separate book entirely devoted to this controversy, called *Discovering Water: James Watt, Henry Cavendish and the Nineteenth-Century "Water Controversy"*.

Negative issue(s): Assumes a familiarity with both Watt's life and chemistry. Two chapters of informative background would have been helpful to the lay reader.

Style: Direct language, but curiously indirect thinking. We are often told what did *not* happen but left wondering what *did* happen. A successful advocate would have made a better fist of getting the submissions in the right order, and presenting them with maximum clarity so that we, the judges, can understand the case being made.

Amusing bit(s): None (look at the cover!)

Author: David Miller is Emeritus Professor in the school of Humanities and Language at the University of New South Wales. He is a former Chair of the National Committee for History and Philosophy of Science of the Australian Academy of Science.

Link(s): You can see Prof. Miller talking in Cambridge about the eighteenth-century concern with longitude: https://www.youtube.com/watch?v=pCKJmHENK_c

Overall recommendation level: MEDIUM HIGH, IF WATT IS YOUR THING

About the reviewer: Ian Mitchell is the author of four books, including *Isles of the West* and *The Justice Factory*. He is writing a multi-volume study of Russian and Western constitutional history to be called *Russia and the Rule of Law*. He lives in Campbelltown and can be contacted at ianbookrec@gmail.com. For other reviews in this series, see: <https://www.moffatrussianconferences.com/ian-mitchell-s-russia>