

The Life of Science in the Scottish Enlightenment

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A Review of

Robert G.W. Anderson and Jean Jones (ed.), *The Correspondence of Joseph Black* (2 vols, Farnham: Ashgate, 2012) ISBN 978-0-7546-0131-9, Hardback, 1582pp. £300.

The appearance of a published edition of the correspondence of a major figure of the Scottish Enlightenment is always a significant scholarly event. The emergence of this collection of Joseph Black's complete letters, the result of a long-term project undertaken by Robert Anderson and the late Jean Jones, is no exception.

Black is a good candidate for having been the greatest scientific mind to adorn eighteenth-century Scotland, an accolade he would potentially earn against some stiff competition which includes his friends the young engineer James Watt and the geologist James Hutton, his older academic colleague William Cullen and the great expositor of the Newtonian system in the previous generation, Colin Maclaurin. Black's original contributions to chemistry and physics, including being the first man to isolate "fixed air" (the name at the time for carbon dioxide) and the first to explain the phenomenon of latent heat, made him a figure of genuinely international stature. This was appropriate, for Black had perhaps the most cosmopolitan roots of any of the Scottish Enlightenment's major participants. Entering the world in France in 1728 to a Belfast-born father in the wine trade and a mother from Aberdeenshire, he returned to Scotland and was first a student at both Glasgow and Edinburgh and then, like Cullen, served successively as a professor at both institutions, acquiring a deserved reputation as a brilliant and widely-admired lecturer and experimental demonstrator who influenced many in the next generation.

The correspondence presented here is not the first glimpse we have had of Black's letters. Nearly a century ago a selection was published by Sir William Ramsay as *The Life and Letters of Joseph Black* (1918), while nearly fifty years ago there appeared Eric Robinson and Douglas McKie's edition of the important letters that flowed between Black and Watt. But most of the eight hundred letters in the Anderson and Jones edition are indeed printed for the first time, and they afford an unprecedented insight not only into Black's family life and his far-flung professional network (extending as far as America, represented here by correspondence with Benjamin Rush in Philadelphia, no. 753) but also into his broader cultural and intellectual development.

There are some frustrating gaps in the run of evidence with which the editors were obliged to work. For example, although Hutton was a close friend no correspondence between the two men appears to have survived although it seems highly unlikely that none was ever composed. The same might be said of Joseph Priestley, Black's great English contemporary and scientific colleague with whom no evidence of correspondence has come down to us though, given the intellectual connections between the two pioneering chemists and the knowledge that they knew each other's work intimately, it is extremely difficult to believe that none actually existed. Probably because of their close proximity to each other in Edinburgh there is also relatively little communication with Adam Smith, another friend whose executor Black, along with Hutton, eventually became.

It should be added that the chronological spread of the letters is a somewhat problematic matter, with nothing that is extant written before the age of 19 and a strong survivor bias towards the latter years of the century when Black was an older and established scientific and cultural figure. This is particularly vexing in so far as the bulk of Black's most creative work as an experimental chemist took place in the 1750s and 1760s and less correspondence is unfortunately known to exist for this period than might ideally be desired. Thematically the range of the surviving letters is also truncated, perhaps surprisingly so. Nothing here reflects on religion, that most intriguing and contentious of philosophical themes among the enlightened Scottish intelligentsia, and very little illuminates Black's thoughts on contemporary politics (though no. 801 references French involvement in "the troubles in Ireland" in 1798 and no. 802 joyously hails Nelson's victory at the Nile that same year).

Nevertheless a key feature of the correspondence taken as a whole is the evidence it presents of Black's work as a chemist active in a wide range of practical fields, all the more important a resource because of his notable reluctance, uncommon among the leading lights of the Scottish Enlightenment, to publish his own work (despite, it has to be said, some good-natured but ultimately unsuccessful prodding from well-meaning friends that is revealed in the surviving letters). Some of the correspondence, indeed, concerns Black's own experimental findings, such as a 1787 letter to the Bo'ness pottery manufacturer and ironmaster John Roebuck (no. 497), described modestly by its expert author as "a few hints" but in reality an extended treatise on aspects of the chemistry of glazing, and a 1782 letter to James Flint, a St Andrews professor of medicine, recounting Black's recent experiences when testing the composition of a new drug compound he had been sent (no. 267).

The historical interest of the correspondence is therefore considerable but the scholarly standards of the edition are if anything even more impressive. Anderson and Jones provide a detailed account of Black's life and works as well as a forensic analysis of the letters as a whole. Each individual piece is thereafter supplied with extensive background information in footnotes, while a fine biographical register at the end of the second volume allows the reader easily to identify all of Black's known correspondents. Finally, a comprehensive bibliography and meticulous index complete the work.

It is sad that Jean Jones did not live to see the fruits of her labours with Robert Anderson. But this edition of the Black correspondence, certain to be a standard reference source for historians of eighteenth-century science and for students of the Scottish Enlightenment too, will stand as a fine testament to her scholarly powers.