

**Tim Fulford and Sharon Ruston, eds., *The Collected Letters of Sir Humphry Davy*, Oxford: Oxford University Press, 2020. 4 vols. 2,320 pp. £467.50. ISBN: 9780198705864.**

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The British chemist Sir Humphry Davy (1778-1829) is a fascinating figure for many reasons. Today, he is remembered primarily for his scientific achievements. He distinguished himself early on by discovering the effects of nitrous oxide (i.e., laughing gas). He went on to harness the electric power of the voltaic pile to decompose chemical substances, which in turn led to the discoveries of various chemical elements such as sodium and potassium. He established that chlorine is an element at a time when it was regarded as a compound, and he also played a role in the discovery of the element iodine. And he invented the miners' safety lamp that bears his name.

That said, Davy was a multi-faceted figure, and he is also remembered for his literary pursuits. He was a poet and was friends with some of the greatest poets of his age, including Robert Southey (1774-1843) and Samuel Taylor Coleridge (1772-1834). In their estimation, Davy could have distinguished himself in poetry had he not chosen to devote himself to science. His interest in poetry, and in literature more generally, continued throughout his life. When, in his final years, illness prevented him from pursuing his scientific interests, he devoted himself to writing. His final book, *Consolations in Travel, or the Last Days of a Philosopher* (1830), was a series of fictional dialogues that was published after his death.

As a result, Davy's life and work have attracted the attention of scholars and researchers across the disciplines, including scientists (especially chemists) who are interested in the history of their discipline, those who take science as their object of study (e.g., historians, philosophers, and sociologists of science), and those who study literature. Regardless of which discipline we call home, those of us who have an interest in Davy owe a great debt to Tim Fulford and Sharon Ruston for editing the first edition of Davy's collected letters. This debt extends to Jan Golinski, Frank James, and the late David Knight, who are listed

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as advisory editors, as well as Andrew Lacey, who is recognized for providing assistance in preparing the collection.

It's worth dwelling on the fact that Davy died nearly 200 years ago, and that this very first edition of Davy's collected letters has only recently been published. Davy was a towering figure in the early nineteenth century, and one might wonder why it took so long for such a collection to be published. One plausible reason why is that, as the editors note, Davy did not generally keep drafts or copies of his letters (1: ccxlv). As a result, tracking down his letters is a rather difficult task that scholars have not taken up until relatively recently.

This collection grew out of the Davy Letters Project, which involved all of the scholars listed above. The project began in 2008, and its starting point was a typescript of 763 of Davy's letters compiled by the late Davy scholar June Fullmer, who passed away in 2000. The project involved tracking down hundreds of letters that were unknown to Fullmer. A total of 1,315 letters are published in this collection. Davy is the author of 1,202 of those letters. Seventy-one letters written by his wife Jane, thirty-five letters written by his brother John, and seven letters written by others are also included due to their relevance to Davy's life. Letters written to Davy are not included in the collection, though the editors refer the reader to the relevant sources for those letters when it is possible to do so. Only a third of these 1,315 letters had been published in some form before, many of them as excerpts in John Ayrton Paris's (1785-1856) and John Davy's (1790-1868) biographical works on Davy in the mid-nineteenth century. This collection is the first time that these 1,315 letters have been published together. They are published here with extensive annotations from the editors that provide readers with essential background information.

Besides this edited collection, one of the concrete results of the Davy Letters Project is a website that provides free access to transcriptions of the letters published in the collection.<sup>1</sup> It's fair to say that the collection is outside the price range of most scholars, and accessing a library copy may be difficult for some of us. The Davy scholars involved in this project have done us a great service by making these letters available online free of charge. Moreover, since the database is searchable, the website is an invaluable resource even for those of us who have access to a hard copy of the collection. That said, the letters on

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<sup>1</sup> The Davy Letters Project is available at [www.davy-letters.org.uk](http://www.davy-letters.org.uk).

the website lack the annotations that are included in the collection, and the collection contains the definitive transcriptions of the letters.

It is, of course, entirely appropriate that the collection contains additional resources that the website does not. In addition to the annotations mentioned above, those resources include an introduction which focuses on Davy's letters, what they reveal about his life, and the roles that his correspondences played in his life (1: ccvii-ccxliv). This introduction gives a good sense of the importance of Davy's letters and what we can learn from them. In what follows, I summarize some of the main points that the editors make about what Davy's letters reveal about his life and the context in which he lived, and I illustrate some of those points by reference to Davy's letters.

In his early days working at the Medical Pneumatic Institute in Bristol, Davy carried out his scientific work while also associating with poets like Southey and Coleridge. As the editors put it in their introduction, letters to his circle of friends during this period "featured a shared language in which revolutionary liberty and social justice, sought by communion with nature, featured large" (1: ccx). A good example is an 1800 letter to Coleridge, in which Davy wishes that his

torpid organs that now rest confined in a *prison of civilisation* ie [sic] a house, be where their ideas are, with you, wandering over majestic mountains, cooled by the breezes of health, or sleeping upon brown leaves beneath the unclouded heaven or floating on lakes coloured by the suns of evening. (1: 80)

The editors emphasize that letters like these provide us with a window to the formation of the movement that we now call Romanticism.

The next major period in Davy's life was spent in the Royal Institution in London. During this time, Davy's letter writing was quite different from that of his days in Bristol. As the editors put it:

Davy's correspondence had, by 1808, become that of an experienced man of business on behalf of the Royal Institution and the Royal Society. His letters were rarely confessional or self-reflective . . . (1: ccxv)

It was during this period that he made his most important scientific discoveries. In my opinion, one of the editors' most intriguing suggestions regarding what we can learn from Davy's letters during this period concerns what they reveal about how he practiced science. Davy's correspondents included the foremost men of science throughout Europe. The editors suggest that Davy's "discoveries proceeded not from a coherent theory but from his ability to garner, and then incorporate into his experimental practice, suggestions received from correspondents" (1: ccxvi). Davy's aversion to theories is well documented, and Davy's letters are an important source of information when it comes to understanding his experimental practice. A good example here is Davy's 1808 letter to Jöns Jacob Berzelius (1779-1848), in which Davy discusses his attempts to use the voltaic pile to decompose the earths. He writes:

Since I have been favoured with your papers, I have however made new & more successful attempts, & by combining your ingenious mode of operating with those that I before employed, I have succeeded in obtaining sufficient quantities of amalgams for distillation. (1: 234)

Unfortunately, as the editors note in the annotations, the letter from Berzelius that Davy is responding to here has not been found (1: 235).

In 1812, Davy's life changed significantly in two ways: he was knighted and he married Jane Apreece (1780-1855), a wealthy heiress. As the editors note, in the romantic letters that he wrote to Jane during the early stages of their relationship, Davy expressed himself in the sort of poetic, personal way that he did during his early days in Bristol (1: ccxvii). It's perhaps worth noting that some of the most vivid descriptions of Jane's character that we have today come from Sir Walter Scott (1771-1832), who was a distant cousin of Jane, and whom Davy knew at least since 1805. In one such description, Scott commends Jane for the strength she exhibited while seasick in the Hebrides (1: ccxviii).

Davy's letters are also a significant source of information regarding his invention of the miners' safety lamp and the accusations that he had plagiarized from George Stephenson (1781-1848). The lamps that miners used at the time triggered explosions by igniting flammable gases in the mines, and Davy was asked to design a lamp that prevented these explosions. Davy's letters during this period allow us to trace the development of the safety lamp. They also show

us how he used his correspondence to gain support for his claim of priority over Stephenson. In their introduction, the editors describe Davy's "ill-judged warning letters" to people he suspected of supporting Stephenson in the priority dispute (1: ccxxv). For example, he sent a letter to John Bowes, tenth Earl of Strathmore and Kinghorne (1796-1820), in which Davy inquires whether Bowes provided his consent to give his name to "an opinion . . . which every man of real science in the Kingdom knows to be false and of which even the expression is absurd" (3: 67). He sent a similar letter to James Losh (1763-1833), a lawyer and businessman (3: 71). Although Davy's correspondence may have been imprudent at times, he won the priority dispute and was awarded a baronet for his invention.

Davy's scientific achievements eventually led to him serving as president of the Royal Society (1820-27) shortly after the death of Sir Joseph Banks (1743-1820), who had served as its president for over forty years. His letters during this period are also quite revealing. He used his correspondence to gain support in his campaign to become president. According to the editors, Davy's correspondence during his time as president show him to be "a forerunner of the institutionalized, professional scientist who spends his or her later career dealing with administration and fundraising rather than in laboratory experimentation" (1: ccxxvi).

That said, Davy's experimental work continued when he was presented with another opportunity to use his scientific knowledge for the public good. The Admiralty needed a method for preventing the corrosion of the copper sheathing of their ships' hulls. Davy developed a method for doing so. However, it was not entirely successful because it had an unfortunate side effect—marine life began growing on the ships' hulls to such an extent that the ships became unmanageable. The editors note the "erratic," "intemperate" nature of Davy's correspondence regarding this failure and the subsequent blow to his reputation (1: ccxxviii). For example, Davy responded to a piece about his work in *The Times* with a letter to the editor in which he states that "every thing relating to me in that paragraph is false" (3: 493).

The next major change in Davy's life occurred in 1827, when he suffered a stroke. As a result, he resigned from the presidency of the Royal Society, left public life, and traveled around Europe until he passed away in Geneva in 1829. His correspondence changed significantly. His main correspondents were his brother John, his old friend Thomas Poole (1766-1837), and his wife Jane.

Although their marriage was a troubled one and she did not join Davy in Europe, Davy wrote to her frequently. The editors describe Jane as Davy's "muse" during this time, and they note that his letters to her provided the foundation for Davy's final books: *Salmonia* (1828) and the posthumously published *Consolations in Travel* (1830), both of which took the form of philosophical dialogues set in nature (1: ccxxix).

In general, the editors' introduction provides a useful overview of Davy's correspondence throughout the major periods of his life. This introduction is written primarily for people who already have enough interest in, and knowledge about, Davy to motivate them to examine a collection of his letters. Although the introduction is biographical, it is not a biography in the traditional sense, and the focus is always on Davy's correspondence. I think the choices that the editors made in this regard are exactly right. There are many books that readers can consult if they want a biography of Davy, and most readers of his collected letters will probably already be familiar with many of the details of Davy's life.

In addition to the introduction, this collection contains a number of additional resources that are worth commenting on, if only briefly. Volume 1 includes short biographies of Davy's correspondents as well as other people who were significant to his life (1: lxvii-ccvi). These short entries range from a few lines to a few pages. As the editors note (1: ccxlviii), the entries on some of the more famous figures are shorter if the information about their lives is readily available elsewhere and if there is not much to say regarding Davy's relationship to these figures. In general, the entries focus primarily on explaining the relationship between these figures and Davy himself, and on providing information about more obscure figures when such information is not easily accessible elsewhere.

The end of volume 4 contains a "Chemical and Technical Glossary" (4: 319-46). One of the challenges of reading work in chemistry written in the early nineteenth century is to understand the terminology, which often differs significantly from the terminology that chemists use today. This glossary will be of great help to readers who lack the background in the history of science that would be necessary for fully understanding the discussion of various scientific issues in Davy's letters.

Volume 4 also contains two bibliographies. The first is a "Bibliography of Davy's Manuscript Notebooks and Publications" (4: 347-57). This

bibliography contains the notebooks, manuscripts, books, and articles that the editors consulted in preparing this collection. This bibliography is, in turn, followed by a “General Bibliography” which includes the many works that the editors consulted in preparing this collection, and which also acts as a useful guide to the literature on Davy and related topics (4: 359-437). This general bibliography is quite extensive and includes publications from Davy’s time as well as more recent secondary literature on Davy and related topics. Since Davy was quite at home in both scientific circles and literary circles, it was necessary for the editors to consult the relevant primary source material regarding both science and literature in late-eighteenth and early-nineteenth century Europe. The editors also consulted more recent literature on Davy and related topics, which includes work in science studies (history, philosophy, and sociology of science) as well as literary studies.

I think this general bibliography provides a good sense of what a monumental task it is to edit a collection of Davy’s letters. The expertise required to do so spans both the humanities and the sciences. The editors have done an excellent job consulting the relevant literature and editing this collection, which is an invaluable resource for anyone with an interest in doing scholarly work on Davy.