ESSAY REVIEW

HUNTING ROBERT BOYLE: MICHAEL HUNTER AND BOYLE’S LIFE AND LETTERS

by

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Robert Boyle (1627–1691) was the dominant figure in late seventeenth-century English science, his reputation only later overshadowed by Newton in the early 1700s. Boyle's discovery of his law that demonstrated the inverse relationship between the pressure applied to a gas and its volume, his work on acids and alkalis, his theories of corpuscularianism (a form of early atomism), and his dedication to experiment made him an iconic figure in the early Royal Society. His air pump that refuted Aristotle’s premise that nature abhorred a vacuum adorned the frontispiece of Thomas Sprat’s History of the Royal Society (1667). The artist prominently placed the glass globe with its ‘engine’ next to his portrait of King Charles II. The pundits and Thomas Hobbes notwithstanding, Boyle’s work was clearly not ‘much ado about nothing’.

That is the Boyle familiar to most of us. But go beyond the air pump and $pV = K$, and we find that Boyle had a commitment to religion even more significant to him than his dedication to experimental science. He served on committees to propagate the gospel to Native Americans, having the New Testament translated into Algonquian; he spent much of his life in scrupulous and often agonizing casuistry or examination of his conscience; and he speculated that palingenesis (the supposed chemical resurrection of plants from their ashes) was evidence for the resurrection of Christ. In fact, much of his career was spent in gathering scientific evidence that he hoped would verify religious truth, as well as occurrences of miracles that showed the hand of the divinity in humankind’s affairs. Boyle’s will even funded a series of lectures whose purpose was to defend religious truth against what he perceived as a rising tide of atheism. Although the original Boyle lectures took place annually between 1692 and 1732, they were revived in 2004 by Dr Michael Byrne and are held at St Mary-le-Bow Church, London. The lectures are still dedicated to the challenge of elucidating the relationship between science and the Christian religion.

These revelations about Boyle, and the challenge of reconciling Boyle’s spiritual and scientific beliefs and pursuits, has been addressed by Michael Hunter in his very fine, intellectually stimulating, and sometimes frustrating biography, Boyle: between God and

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This biography represents the summation of Hunter's long and distinguished academic career, which has been dedicated to deepening our understanding and knowledge of early modern science and Boyle's life and work. It is a reflection of Hunter's strengths as a scholar.

At the beginning of his career, Hunter displayed his talent for analysing the interrelationship between piety and natural philosophy in the seventeenth century with his acclaimed *Science and society in Restoration England* (1981). In a historiographic tour de force, he explored the relationship of the Royal Society to the natural philosophy of the Interregnum, and demonstrated how the Society achieved, and failed to achieve, its goals from 1660 to 1700. In his analysis he also queried whether the Merton thesis was true—asking whether Puritanism or Anglicanism contributed to the involvement of its followers in science, and subsequently discussing whether science was perceived as a threat to faith. Hunter scrupulously covered all arguments on each side of the then-scholarly divide, adding material and interpretations of his own gleaned from an exhaustive search in the archives.

So the stage was then set for the themes that subsequently dominated his work: the relationship between early modern science and religion set in and without the context of the Royal Society, and the importance of archival evidence. It is little wonder that another of Hunter's monographs, this time on John Aubrey and the realm of learning—was characterized by Thaddeus Trenn as ‘based on intimate familiarity with manuscript sources...’, which meant that ‘future Aubrey scholars will... find no manuscript leaf unturned’. (The reviewer also commented that these researchers would probably dream about yellowing folio leaves in their sleep, an occupational hazard!)

Hunter's subsequent publication of a monograph and edited collections on Boyle, and his thorough familiarity with the Royal Society archives, made him an obvious choice to be a lead editor of Boyle's *Works* (14 volumes, 1999–2000), his *Correspondence* (6 volumes, 2001), and his work diaries. He also has produced a catalogue and scholarly commentary about Boyle's vast archive, illustrating its treasures and often frustrating gaps as papers were destroyed or simply lost as a result of the vagaries of time and circumstance. Boyle's Web newsletter (formerly and cleverly entitled ‘On the Boyle'; see http://www.bbk.ac.uk/boyle) has recently included an online edition of the Boyle papers themselves to make them more accessible to the scholarly community and interested public. Drawing on his vast editorial and archival experience, Hunter even published in 2007 a fine handbook about textual editing for developing scholars.

It is therefore not surprising that Hunter's latest biography of Boyle uses every scrap of manuscript evidence to flesh out Boyle's character—a challenge because many of Boyle's private papers were thrown away after his death by his biographer Thomas Birch and his collaborator Henry Miles, having been dismissed as inconsequential. In danger of intellectually disembowelling Boyle, Hunter tries to compensate with a thorough search through the sources that were available. He describes Boyle's naughty doodles as a child in books in the Eton library, and documents the natural philosopher's 'first and only sexual advance to which he had been subjected' by two friars in Florence, and Boyle's subsequent taking of a vow of chastity and adoption of Stoicism as a guiding life philosophy. We learn with some fascination that Boyle was subject to a what he described as a 'raving' mind with accompanying mood swings; that he stuttered; that he adopted a plain diet with a good deal of gruel; and that he could be credulous, losing money to an alchemical cheat called Georges Pierre des Clozets, who played on Boyle's
desire for admiration and sympathy. In a clever use of sources, Hunter effectively illustrates Boyle’s valetudinarianism, probably exacerbated by alchemical experiment involving prolonged exposure to mercury, by means of an analysis of Boyle’s vast collection of recipes, both medical and chemical. With his characteristic equivocation and intense examination of his conscience, Boyle agonized whether to publish his collection, worrying that he might undercut the medical profession or be accused of indiscretion or ‘peddling dangerous nostrums’. The biography’s sheer density of facts from archival sources is impressive, and the work deserves and indeed requires a close reading.

But this density of facts can also at times be frustrating. Although Hunter’s archival research is admirable, he displays a marked and rather puzzling hesitance to interpret this intriguing manuscript evidence to delineate the nature of Boyle’s character. Boyle was an intellectual colossus and certainly deserving of reverence, but that can be taken too far. For instance, in the light of the Pierre affair, one might ask whether Boyle was any more or less credulous than his contemporaries when approached by alchemical cheats or early modern magicians. Historians of chemistry know that Robert Plot (1640–96), the first chemistry professor at Oxford, entered into a contract with an alchemist to make the philosopher’s stone, and the work of Tara Nummedal has shown how allegations of fraud shaped alchemical practices and prospects. Non-specialist readers, however, are not provided with any points of comparison that could be used to comprehend Boyle’s actions.

Boyle also was convinced by the powers of Valentine Greatrakes (1628–83), who claimed that he could heal those suffering from various complaints by stroking them. Hunter reports that Boyle was interested enough to meet ‘The Stroker’, and even borrowed Greatrakes’s glove to ‘heal’ a patient. Yet, after this tantalizing glimpse, we are simply told that when Greatrakes left London, ‘Boyle’s and other’s interest in him seems to have come to an end’. As Hunter is currently composing a larger work on magic and the paradoxical role of the Royal Society in its decline, a further analysis of this episode would have been appropriate and welcome. This is particularly so because Boyle collected evidence of the miraculous to show the divinity’s workings in nature, a major theme of the biography.

We also learn that Boyle went from reading French romances and writing his own versions of them in his youth to a total rejection of physical romance. His vow of celibacy replaced sex with a ‘Seraphic Love’ of God, expressed in his publication of the same name (1659). Certainly the concept of seraphic or Neoplatonic love was not uncommon in the early modern period. For example, the work of Frances Harris has shown us that Boyle’s friend John Evelyn (1620–1706), although in an affectionate and respectful marriage, also had a ‘seraphic friend’ in Margaret Godolphin, née Blagge (1652–78), a ‘maid of honor’ or attendant of the queen’s household. These Neoplatonic friendships were prevalent at Parisian salons and stemmed from the Renaissance idea that the inner and outer beauty of the idealized beloved could inspire one to spiritual goodness. Such a relationship was a love of the soul rather than a relationship based on physical lust, and, as Harris remarked, a ‘spiritualizing of desire’. But the reader learns nothing of this context, which is surprising because Hunter is intimately au fait with Harris’s scholarship: he edited John Evelyn and his milieu with Harris in 2003. Hunter does tell us that Evelyn responded to Boyle’s work Seraphic Love by ‘singing the praises of matrimony’, and that Evelyn subsequently felt he had to apologize for his comments. Boyle apparently ‘reacted in quite a negative manner towards the original letter as if his celibate state had become genuinely important to him’. But that is all. Surely, although
there are dangers of putting one’s biographical subject on the Freudian couch, Hunter provides no clues as to what extent Boyle’s celibacy was an expression of his pious and evidently rather tortured spiritual life. Hunter simply will not speculate, even in a footnote.

However, as a purely intellectual biography, the work excels. The major scholarship on Boyle, ranging from Shapin and Schaffer’s brilliant yet controversial *Leviathan and the air-pump* to more recent work by Principe and Newman concerning Boyle’s alchemy and his relationship to John Locke, is treated with a deft hand and presented in a balanced and dispassionate fashion. Hunter’s own analyses of Boyle, including his propensity to organize works under ‘heads of inquiry’ that represented a systematic Baconianism, or his discussions of Boyle’s writings about the chemistry of human blood, are subtle and cogent. The bibliographic essay at the end of the book thoroughly covers all the seminal work in the field and describes the very latest scholarship, including Rhodri Lewis’s book on universal languages and the Royal Society, and articles by Peter Anstey, Harriet Knight and Noel Malcolm. There is even an extremely helpful chronology of Boyle’s whereabouts in an appendix that is crying out for an interactive application on the Web; perhaps the map of the natural philosopher’s movements will appear on Hunter’s Web site. His iconographic analysis of the portraits of Boyle is also illuminating, a reflection of his creation of an Arts & Humanities Research Council-funded digital library of British printed images to 1700 (see http://www.bpi1700.org.uk/).

Hunter concludes his biography with a chapter about Boyle’s legacy, noting that his contemporaries portrayed him rather blandly as one of the ‘good and great’. This cardboard cutout of his character persisted until the rise of the history of science as a discipline. With *Boyle: between God and science*, Hunter has certainly provided another dimension, effectively demonstrating that science and religion went hand-in-hand in Boyle’s intellectual life. It was not for nothing that Boyle had a pious habit of pausing every time God’s name would pass his lips. And there is no doubt that this work is the first significant full-length intellectual biography of Boyle in 40 years, and that it will be the standard reference for the foreseeable future. The biography is also reasonably approachable for an audience outside one composed of historians of chemistry; Hunter does not just preach to the converted, and that is a significant achievement in itself. However, the nature of Boyle’s inner life, casuistical and conflicted as it was, seems at times to have eluded Hunter’s grasp. Fewer letters and more life, please.

NOTES

1 See http://www.stmarylebow.co.uk/ for information about the Boyle lectures.
4 The Merton thesis is an argument that connects the Protestant pietism with the rise of experimental science, inspired by the work of Max Weber. See for example, Steven Shapin, ‘Understanding the Merton thesis’, *Isis* 79, 594–605 (1988).


10 Ibid., pp. 183–185.

11 Ibid., p. 235.


