



Afterword: Dismiss the Antiquary at Your Peril

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This special issue eruditely demonstrates the deep interconnections between British antiquarianism, natural philosophy and medicine in the eighteenth and nineteenth centuries. These stimulating papers, representing the state of the field, include: analysis of classical antecedents for balneology; Sir Isaac Newton's attempts to restore the *prisca sapientia* and use of mathematics to reform knowledge of antiquity; editors and autograph collectors who preserved the still extant correspondence (and hence the intellectual geography and networks) of early modern antiquaries; and the re-enactment of ancient landscapes and relics using geological theory and three-dimensional museum exhibits. As Susan Pearce pointed out, Jeremiah Milles, in his presidential address to the Society of Antiquaries in 1781, remarked that 'History, Science and Art may claim an equal share in the Attention and Labour of the Antiquary'.¹

Antiquarianism also involved something more: inspired discernment. William Stukeley, the famous eighteenth-century antiquary, observed that '[i]n the study of Antiquities, as in all others, judgment, genius is necessary'.² As genius and interdisciplinarity were often inherent to antiquarian pursuits, I will discuss more generally antiquarianism and what it constituted in this period, before analysing its particular relationship to natural philosophy in the Royal Society.

Two impulses or practices were at the heart of early modern English antiquarianism.³ The first stemmed from the humanist tradition, inherited from continental philologists like Guillaume Budé (1467-1540) and their Italian predecessors such as Lorenzo Valla (1406-1457). English intellectuals in this group, such as John Leland (1502-1552), analysed the etymology of words and sought linguistic and verbal remains to understand the historical record. The second form of antiquarianism, which became more prevalent by the end of the seventeenth century, was practised by those scholars who considered the landscape in their analysis of ancient objects and buried artefacts. The early Royal Society was also involved in projects that integrated natural history and antiquarianism, particularly before the establishment of the Society of Antiquaries in 1717. Antiquarianism was 'cognate with natural history at the very least in the sense that the type of activity involved (field work, collection, display, classification) was of a similar character'.⁴ For Robert Hooke (1635-1703) the work of a natural historian was similar to that of an antiquary who studies man-made objects. For instance, he remarked that:

There is no Coin [that] can so well inform an Antiquary that there has been such or such a place subject to such a Prince, as these [fossil shells] will certify a Natural Antiquary, that such and such places have been under the Water, that there have been such kind of Animals, that there have been such and such preceding Alterations and Changes of the superficial Parts of the Earth. And methinks Providence does seem to have design'd these permanent shapes, as Monuments and Records to instruct succeeding Ages of what past in preceding [ages].⁵

Several members of the Royal Society were also physicians, and the doctor's habit of interpreting symptoms seems to have made them sensitive to visual evidence; after all, 'like artists, they were trained observers'.⁶ Reading clues to make diagnoses also ripened early modern physicians' ability to understand and contextualise the empirical details of ancient artefacts and the processes by which they were created. Recent analysis of English virtuosity has claimed that antiquarianism and nascent archaeology were fundamentally bound up with an appreciation of the classics. However, the empiricism of the physician and the apothecary requires a fundamentally different set of skills from those used in philology.⁷ Rosemary Sweet has also drawn attention to the contribution of eighteenth-century antiquaries and classicists to the development of archaeology, but it seems that we also have to look among the seventeenth-century physicians to trace the discipline's origins.⁸

These connections were made evident in the Royal Society of the first half of the eighteenth century, particularly during the presidency of Martin Folkes (1690-1754), who promoted an admixture of antiquarianism and natural philosophy.⁹ Folkes was an English antiquary, bibliophile, art patron, mathematician, numismatist, astronomer and protégé of Sir Isaac Newton. His unique distinction was his simultaneous presidency of both the Royal Society of London and the Society of Antiquaries, being president of the former from 1741 to 1753 and of the latter from 1750 until his death in 1754. Natural philosophy and antiquarianism were thus seen as intimately related: the Society of Antiquaries and the Royal Society had many common members and held their meetings on the same day. Folkes may have attempted to unite the two groups into one organisation; amalgamation would have made sense financially to the mathematically minded Folkes, who kept a tight rein over the Royal Society's finances.¹⁰ Papers on antiquarian and archaeological subjects comprised between 6 and 7 per cent of articles in the *Philosophical Transactions*, particularly as the Antiquaries' own journal, *Archaeologia*, was not launched until 1770. Folkes's attempts at consolidation reflected the simple reality that natural philosophy and antiquarianism were part of the same intellectual enterprise.

What would being president of a society dedicated to the material past have to do with leading a society dedicated to natural philosophy? In the eighteenth century the ability to observe nature was thought to make natural philosophers well suited to understand the empirical details of ancient artefacts and how they were created. Naturalists, experimentalists, chymists and physicians of the early modern British world were also archivists and antiquaries, and their work in the latter sphere was central to prosecuting their work in the former.

In a sense, Folkes's promotion of antiquarian pursuits in the Royal Society went counter to science as knowledge based on things rather than words.¹¹ Richard Sorrenson has noted that these unedifying impressions of the Royal Society during this period stemmed also from the belief that the institution failed to match the standard that Newton had set in the *Principia*; it also stemmed from negative opinions voiced by the society's critics, such as John Hill, and from the popularity of *Reflection on the Decline of Science in England* (1830), by Charles Babbage (1791-1871).¹² As an example, Rousseau's survey of English science in the eighteenth century heavily relies on satirists such as Swift, Steele and Hill to conclude that the Society 'from 1680 to 1780 fared ingloriously, except during Newton's presidency'.¹³ It seems, however, that the Royal Society in the eighteenth century manifested considerable strengths in technological innovation, setting new standards in experimental precision and refined instrumentation, with Folkes at the centre of such activity.¹⁴ Folkes's attempted reunification tells against the current historiographic assumption that

this was the age in which the ‘two cultures’ of the humanities and sciences split apart, never to be reunited.

Indeed, in his own work Folkes also represented a characteristic paradox of his era: an ‘ancient’ in his cultural sympathies and affinities, yet a ‘modern’ in the analytical and scientific techniques he applied to antiquarian and natural philosophical study. I argue that we need a subtler interpretation than one solely relating his work and administrative priorities to the battle of the books, or the respective virtues of ancient versus modern learning – and, as this special issue demonstrates, this is a point that holds for antiquarianism more broadly. Both ancient and modern approaches had their utility; for example, in his Italian travels Folkes used elements of his collection of antiquities to measure the Roman ‘foot’ in building and to assess the fidelity of the Renaissance architect Jacopo Sansovino (1486–1570) to the Vitruvian canon of ancient Rome.¹⁵ And, conversely, Folkes made use of principles from Newtonian physics to comprehend Roman and Renaissance architectural engineering.

To what extent was antiquarianism simply a continuation of the Newtonian programme of the ‘physical sciences’ in the Royal Society? In his early career Folkes was known for his mathematical and astronomical work, before switching to antiquarianism and archaeology in his later intellectual life. Folkes’s contributions to mathematics and astronomy have been overlooked owing to Babbage’s claim that mathematical sciences were not in evidence in the Royal Society in the eighteenth century. There was in fact a nexus of important mathematicians, including Abraham de Moivre (1667–1754) and Colin Maclaurin (1698–1746), as well as several of their students. Folkes accomplished innovative work in mathematical optics and probability, and made significant observations of solar eclipses and aurora borealis. Folkes and Philip, second Earl Stanhope (1714–1786), together studied higher plane curves and gravitational attraction of ellipsoids, of interest to Newtonians, and algebraic analysis, of increasing relevance to eighteenth-century mathematicians.¹⁶

Folkes’s Newtonianism extended to his co-editorship with Thomas Pellett (1671?–1744) of Newton’s *The Chronology of the Ancient Kingdoms Amended*, a work analysed by Alessio Mattana in this volume. In the auction catalogue of Folkes’s books after his death, item 5,114 was: ‘An Abstract of Chronology of Sir Isaac Newton, which Mr Folkes sent to Sir Isaac, he not being at that time able to find his own, and which he returned with corrections in his own hand, *bound in Russia*, 4 to’.¹⁷ This copy was obtained from France ‘by one who had it from Mons^r Conti’s MS’;¹⁸ Folkes wrote in the introduction to the manuscript that in 1726 he had lent his copy to Newton himself, who had mislaid it among his papers. Newton then returned the manuscript to Folkes, ‘with a few corrections under his own hand not a month before his decease’. As Folkes indicated,

some days after he asked me for it again telling me he had up and down corrected such passages as occurrd to him, but that he would now collate it throughout with the original which he had found, and correct whatever errors were yet remaining in it. I accordingly carried it to him the next time I waited upon him, and the last I had the Honour of seeing him, but found him already taken ill, so that I brought it back again in the same condition: and have since caused it to be bound up to keep by me whilst I live as a valuable token of the friendship that Great man was pleased to honour me with.¹⁹

Newton’s work came from his interests in antiquity which bore on the origin of civilisation; he used astronomical records in Hipparchus’ *Commentary* to create his timeline of human history, in particular the periodicity provided by the precession of the equinoxes to date historical observations of the heavens.²⁰ Most of Newton’s chronology was based

on an attempt to re-date the history of the Greek, Egyptian, Assyrian, Babylonian and Persian empires. For example, in reworking data that he took from the Hellenistic Commentary of Hipparchus, Newton sought to identify historical colures. (A colure is the meridian that passes through the poles of the celestial sphere and cuts the sun's apparent path through the heavens at the points that it has reached at the solstices or, alternatively, at the equinoxes.) The region of the heavens identified by such a colure shifted over time, owing to the precession of the equinoxes, and thus its description could in theory generate precise dates.

Folkes used the same Newtonian rationale when he produced a stereographic map of the Farnese globe, the oldest surviving depiction of this set of Western calculations.²¹ Richard Bentley published Folkes's map in his edition of Manilius' *Astronomica* in 1739. Folkes measured the globe when he was in Rome and made a plaster cast which he exhibited to the Society of Antiquaries on 7 July 1736, arguing that the declination of the Arctic and Antarctic circles corresponded to a particular latitude for the observer whose observations were adopted by the sculptor; a detailed analysis of the globe would reveal the latitude and epoch for the observations incorporated in the globe. Folkes concluded that the globe dated to the time of the Antonine emperors.

Folkes's interests in chronology was later a topic of great import as he, as Royal Society president, and James Bradley (1693-1762), by this time Astronomer Royal, checked the legislative draft bills for the Gregorian calendar. As the Royal Society was also heavily involved in the reform of the Gregorian calendar in 1752, Folkes's interests in mathematics, astronomy and antiquarianism simply found their *métier* during his presidency, following Newtonian precepts. In fact, Folkes's antiquarian publications on numismatics, such as his *Tables of English Silver and Gold Coins* (1763), and his pronounced interest in metrology could be seen as a reflection of Newton's interest in the reform of the coinage when an officer of the Mint.²²

During the eighteenth century antiquarianism manifested itself in natural philosophy and the practices of the Royal Society in other ways. We see an increasing interest in preserving private papers for posterity by depositing them in public archives and publishing them posthumously, and antiquaries were central to this process:

The natural philosopher emerges as a public individual through his instantiation in posthumously printed editions and in an archive, particularly through the transfer of private collections into public hands. The sense that some private papers are worth preservation in public institutions (such as the Ashmolean Museum and the Royal Society Archive) and even preservation by the state, emerged in the history of science in the eighteenth century—before it arose in the nineteenth, and even the twentieth centuries, in the history of literature.²³

As they collected, transferred, discussed, and published documents, virtuoso antiquaries found ways of authenticating their documents and thus rendering them, if not authoritative sources, at least starting-points for further discussion and experimentation. At the beginning of the seventeenth century, manuscript collectors sought 'signs of the reliability of a text rather than a document'.²⁴ For example, the 'destruction of the original manuscript in the publication of Bacon's works illustrates what little regard the holograph manuscript attracted, other than as an indication of the text's authenticity'.²⁵ But by the eighteenth century this attitude was changing. Alongside their antiquarian interests, Fellows of the Royal Society also engaged in collecting the scientific works of their own recent past. Naturalists applied bibliographical tools developed for the study of antiquity and more distant history to papers of the relatively recently deceased, and increasingly allocated attention to palaeography, provenance and marks of authenticity, such as monograms.

Acquiring private information regarding the final resting papers of collections became the mark of the eighteenth-century scholar and a tool for the recovery and preservation of knowledge at risk of being lost, something that Julian Pooley witnessed at first hand in his investigation of the Nichols family. The naturalist Emanuel Mendes da Costa (1717-1791), Royal Society clerk and keeper, mentioned in Julian Pooley's article, was interested in the provenance of natural history specimens for the purposes of research and worked tirelessly, and with some relish, to restore the Royal Society Museum, or Repository (which was in a parlous state after Francis Hauksbee's long tenure as secretary), donating large numbers of items from his own collection. He described it as an 'Augean task', comparing it to the labours of Hercules.²⁶ However, Mendes da Costa also was an antiquarian generally interested in the material past, as a Fellow of the Society of Antiquaries who consulted and traded in Judaic *objects of vertu* and manuscripts. Mendes da Costa's correspondence illustrates the fact that by the mid-eighteenth century the Royal Society was interested in recovering the afterlives of the early history of its naturalists, for the purpose of both antiquarianism and natural philosophy.²⁷ Da Costa was both FRS and FSA during a time when the two organisations were nearly amalgamated, a process that first began with Folkes obtaining a royal charter for the antiquaries.

Amalgamation never occurred, but, as natural philosophy and antiquarianism went hand in hand, writing the history of the Royal Society and preserving its archives preoccupied its fellows. Folkes actively encouraged fellows to pass along manuscript materials in their possession that elucidated the history of the Royal Society. The naturalist Revd Dr Henry Miles (1698-1763) responded by donating letters by Henry Oldenburg (c.1619-1677) and John Beale (c.1608-1683) to the Royal Society collections.²⁸ Miles was a fellow of the Society of Antiquaries and Royal Society with some pronounced scientific interests, but primarily known as the editor and transcriber, with Thomas Birch (1705-1766), of Robert Boyle's manuscripts, which were purchased from Boyle's apothecary.²⁹ Then again, Miles and Birch are also known for throwing away many of Boyle's private papers after his death, having dismissed them as inconsequential, reflecting a common eighteenth-century editorial practice of eliminating materials that could be construed as non-scientific, embarrassing or too personal.

Even by the second half of the eighteenth century, as the divide between arts and sciences is thought to have widened, the antiquary's object-oriented approach to evidence continued to shape the natural sciences. As the article by Allison Ksiazkiewicz has shown, this object-oriented approach was evident in the geological sciences, particularly in how geo-landscapes were visualised, as well as in the understanding of geological history and the design and formation of strata. Hooke's parallels between fossils and archaeological artefacts were prescient. As shown by Pearce, even in the nineteenth century, when disciplinary divisions were beginning to ossify, material culture, both in the form of natural history specimens and historic objects, creatively interacted in William Bullock's three-dimensional museum exhibitions. As Pearce states, Bullock's exhibitions stimulated

new ways of studying flora and fauna, including human fauna, which led to developing ideas of evolution, natural selection and ecology, and anthropology. Equally significantly, it played a part in producing the shift in vision from that concentrating on classified form and appearance, which characterised eighteenth-century understanding of the material world, to that concerned with 'real' historical content, which came to characterise nineteenth-century thinking, a considerable cultural movement.

Thus, you dismiss the antiquary at your peril. Antiquarianism is seminal to understanding natural philosophy in this period and its social networks and intellectual geography in London and beyond. Looking at interactions between the Society of Antiquaries and organisations such as the Royal Society and considering the role of public museums and travel writing in intellectual developments demonstrate the ‘confabulatory life’ of the scholar, the diffusion of scientific knowledge through informal discussion with colleagues.³⁰ Henry Guerlac has commented that ‘as historians of ideas we are happiest when we can navigate from the firm ground of one document to the next, and we are prone to forget how great a part travel, gossip and word-of-mouth have played in the diffusion of scientific knowledge, indeed of knowledge of all sorts’.³¹ Perhaps we are remembering this today.

NOTES

1. Quoted in Joan Evans, *History of the Society of Antiquaries* (Oxford: Oxford University Press, 1956), p.176.
2. William Stukeley, ‘Preface’, to *The Medalllic History of Marcus Aurelius Valerius Carausius*, 2 vols (London, 1757), vol. I.I.
3. David Woolf, *The Social Circulation of the Past: English Historical Culture, 1500-1730* (Oxford: Oxford University Press, 2003), p.142-50. For other studies of early modern English antiquarianism, see Angus Vine, In *Defiance of Time: Antiquarian Writing in Early Modern England* (Oxford: Oxford University Press, 2010). Some of this background material has been taken from Anna Marie Roos, “‘Only meer love to learning’”: A Rediscovered Travel Diary of Naturalist and Collector James Petiver (c.1665-1718)’, *Journal of the History of Collections* 29:3 (2017), p.388-9.
4. David Miller, “‘Into the valley of darkness’”: Reflections on the Royal Society in the Eighteenth Century’, *History of Science* 27:2 (1989), p.160.
5. Robert Hooke, *The Posthumous Works of Robert Hooke; Containing His Cutlerian Lectures, and Other Discourses Read at the Meetings of the Illustrious Royal Society* (London: R. Waller, 1705), p.321.
6. Peter Burke, ‘Images as Evidence in Seventeenth-Century Europe’, *Journal of the History of Ideas* 64:2 (2003), p.294.
7. See Craig A. Hanson, *The English Virtuoso: Art, Medicine, and Antiquarianism in the Age of Empiricism* (Chicago, IL: University of Chicago Press, 2009).
8. Rosemary Sweet, *Antiquaries: The Discovery of the Past in Eighteenth-Century Britain* (London: Hambledon Continuum, 2004).
9. See Anna Marie Roos, *Martin Folkes (1690-1754): Newtonian, Antiquary, Connoisseur* (Oxford: Oxford University Press, forthcoming).
10. For Folkes and finances see Royal Society Library, London, RS/MS/645. The connections between the two organisations were analysed by George S. Rousseau and David Haycock, although my interpretation of Folkes in my forthcoming book will be substantially different. See George S. Rousseau and David Haycock, ‘Voices Calling for Reform: The Royal Society in the Mid-Eighteenth Century: Martin Folkes, John Hill and William Stukeley’, *History of Science* 37:118 (1999), p.377-406.
11. Vera Keller, Anna Marie Roos and Elizabeth Yale, ‘Introduction’, in Keller, Roos and Yale (eds), *Archival Afterlives: Life, Death and Knowledge-Making in Early Modern British Scientific and Medical Archives* (Leiden: Brill, 2017), p.1. We might think, perhaps of Walter Houghton’s attempt to ‘winnow’ the ‘genuine scientist’ from those who encouraged only the ‘dilution and distortion of the scientific mind’. For a discussion of Houghton, see Hanson, *The English Virtuoso*, p.8.
12. Richard Sorrenson, ‘Towards a History of the Royal Society in the Eighteenth Century’, *Notes and Records of the Royal Society of London* 50:1 (1996), p.29-46.

13. George Rousseau, 'The Eighteenth Century: Science', in Pat Rogers (ed.), *The Eighteenth Century* (London: Holmes & Meier, 1978), p.158.
14. Sorrenson, 'Towards a History', p.30-31. See also Geoffrey Cantor, 'The Rise and Fall of Emanuel Mendes da Costa', *English Historical Review* 116 (2001), p.584-603. For other scholars that have challenged this declinist narrative see: Andrea Rusnock, 'Correspondence Networks and the Royal Society, 1700-1750', *British Journal for the History of Science* 32 (1999), p.155-69; Richard Sorrenson, 'George Graham, Visible Technician', *British Journal for the History of Science* 32 (1999), p.203-21; Palmira Fontes da Costa, 'The Culture of Curiosity at the Royal Society in the First Half of the 18th Century', *Notes and Records of the Royal Society of London*, 56 (2002), p.147-66; Anita Guerrini, 'Anatomists and Entrepreneurs in Early 18th-Century London', *Journal of the History of Medicine and Allied Sciences*, 59 (2004), p.219-39; and Palmira Fontes da Costa, *The Singular and the Making of Knowledge at the Royal Society of London in the 18th Century* (Newcastle upon Tyne: Cambridge Scholars Publishing, 2009).
15. Anna Marie Roos, 'Taking Newton on Tour: The Scientific Travels of Martin Folkes, 1733-1735', *British Journal for the History of Science* 50:4 (2017), p.569-601.
16. David Bellhouse, 'Lord Stanhope's Papers on the Doctrine of Chances', *Historia Mathematica* 34 (2007), p.173-86. The papers are 2nd Earl Lord Stanhope/Folkes letters, Kent Record Offices, Canterbury, U1590/C21.
17. *A Catalogue of the [...] Library of Martin Folkes, Esq., President of the Royal Society [...] Lately Deceased; Which Will Be Sold by Auction by Samuel Baker [...] To Begin [...] February 2, 1756, and to Continue for Forty Days Successively (Sundays Excepted)* (London, 1756), p.155. The manuscript sold for 14 shillings.
18. Folkes provided the copy owned by the Lincolnshire antiquary Maurice Johnson, of the Spalding Gentlemen's Society, to friends in England. This 'Short Chronicle from the First Memory of Things in Europe to the Conquest of Persia by Alexander the Great' has recently been sold at Sotheby's on 17 December 2019, lot 1. As the catalogue notes: 'Newton and Johnson were correspondents; and given their mutual interest in history and antiquities – Newton was in fact an honorary member of the antiquarian society Johnson headed – it would have been entirely natural for Newton to gift Johnson a copy of this text' (<https://www.sothebys.com/en/auctions/ecatalogue/lot.1.html/2019/science-technology-online-n10172> [accessed 10 May 2020]); see Scott Mandelbrote, 'Newton and the Evidences of the Christian Religion', in Scott Mandelbrote and Hellmut Putte, *The Reception of Isaac Newton in Europe*, 3 vols (London: Bloomsbury Academic, 2019), vol. II; Saint-Omer: Bibliothèque d'Agglomération du Pays, MS 786, 'An Abstract of Chronology by sir Isaac Newton' (<https://ccfr.bnf.fr/portailccfr/ark:/06871/004D03011645> [accessed 10 May 2020]). My thanks to Scott Mandelbrote for this reference.
19. Saint-Omer: Bibliothèque d'Agglomération du Pays, MS 786.
20. See for instance, Cornelis J. Schilt, 'Manuscripts and Men: The Editorial History of Newton's Chronology and Observations', *Notes and Records: The Royal Society Journal of the History of Science* (2019), published online, doi:10.1098/rsnr.2018.0069.
21. Kristen Lippincott, 'A Chapter in the "Nachleben" of the Farnese Atlas: Martin Folkes's Globe', *Journal of the Warburg and Courtauld Institutes* 74 (2011), p.281-99.
22. Martin Folkes, *A Table of English Silver Coins from the Norman Conquest to the Present Time* (London, 1745).
23. Keller, Roos and Yale, 'Introduction', p.13.
24. Keller, Roos and Yale, 'Introduction', p.16.
25. Keller, Roos and Yale, 'Introduction', p.16. See also Richard Serjeantson. 'The Division of a Paper Kingdom: The Tragic Afterlives of Francis Bacon's Manuscripts', in Keller, Roos and Yale (eds), *Archival Afterlives*, p.1-29.

26. Letter from Mendes da Costa to the Royal Society dated 13 September 1763, Royal Society Library, London, AB/1/2/1/63.
27. For recent work on Da Costa, see the Google slide show and PhD work of Dr Aron Sterk (<https://artsandculture.google.com/exhibit/emanuel-mendes-da-costa-1717-1791/gAKCbodaZKtiIA> [accessed 8 May 2020])
28. See Henry Miles to Henry Baker, 26 March 1745, John Rylands Library, Henry Baker Correspondence, Eng MSS 19, vol. II, fol. 33.
29. Keller, Roos and Yale, 'Introduction', p.7.
30. Mordechai Feingold, 'Confabulatory Life', in Pietro D. Omodeo (ed.), *Duncan Liddel (1561-1613): Networks of Polymathy and the Northern European Renaissance* (Leiden: Brill, 2016), p.22-34.
31. Henry Guerlac, *Newton on the Continent* (Ithaca, NY: Cornell University Press, 1981), p.46.

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