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Selling the silver: country house libraries and the history of science

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Country houses have long acted as scholarly research centres, and the contents and organization of their libraries reveal how knowledge was created and transmitted through scientific networks: they provide material evidence of intellectual and social cultures. Manuscripts are particularly appreciated in this regard because they are unique, but individual books also differ and copies of the same book are not always identical – they might be annotated by authors and readers, and the printed text can vary as well – so they also carry invaluable historical information. When libraries are broken up, access to the past is permanently blocked.

The importance of books

Scholars need libraries as extensions of their brains. Sherlock Holmes declared that 'A man should keep his little brain attic stocked with all the furniture that he is likely to use, and the rest he can put away in the lumber-room of his library, where he can get it if he wants it' [1]. Like Holmes, historians are detectives who analyse evidence of past events. Libraries provide essential clues for understanding how their owners thought and worked, and – just as importantly – provide lenses for inspecting a vanished culture, revealing how knowledge was gathered, classified and transmitted.

Throughout history libraries have been destroyed by accident, design or neglect [2]. The process continues today: one spectacular example is the on-going dispersal of the library at Shirburn Castle (Figure 1) that was built up across several generations by successive Earls of Macclesfield. The printed books in the Macclesfield Library, many of the greatest rarity, are being auctioned by Sotheby's in an as yet unspecified number of sales, which will include five devoted to printed books in natural history and the mathematical sciences [3]. By contrast, a large group of scientific manuscripts from the Macclesfield Library, including letters and papers by and about Sir Isaac Newton, have been purchased by the Cambridge University Library, with assistance from the Heritage Lottery Fund, for £6.37 million [4].

It is difficult for major institutions to consider purchasing the entire contents of libraries to add to their collections because this inevitably results in a duplication of holdings. Their reluctance is understandable but unfortunate, because it ignores two significant features of books and libraries that are not sufficiently understood. First, two copies of the same book are not necessarily identical: the printed text can vary from copy to copy and annotations might modify the text and give evidence of reader response [5,6]. Second a library is much more than the sum of its parts because of the interrelationship of the books it contains, both intellectual and physical. The original arrangement of the books on the shelves, for example, might be significant and signs indicating the degree and nature of their use might become meaningless once the books are dispersed, and some become inaccessible. Libraries are unique collections of unique books.

In the commercialized heritage world, books are second-class citizens. Although art galleries and museums raise vast sums of money to prevent other national treasures from being exported, books are neglected

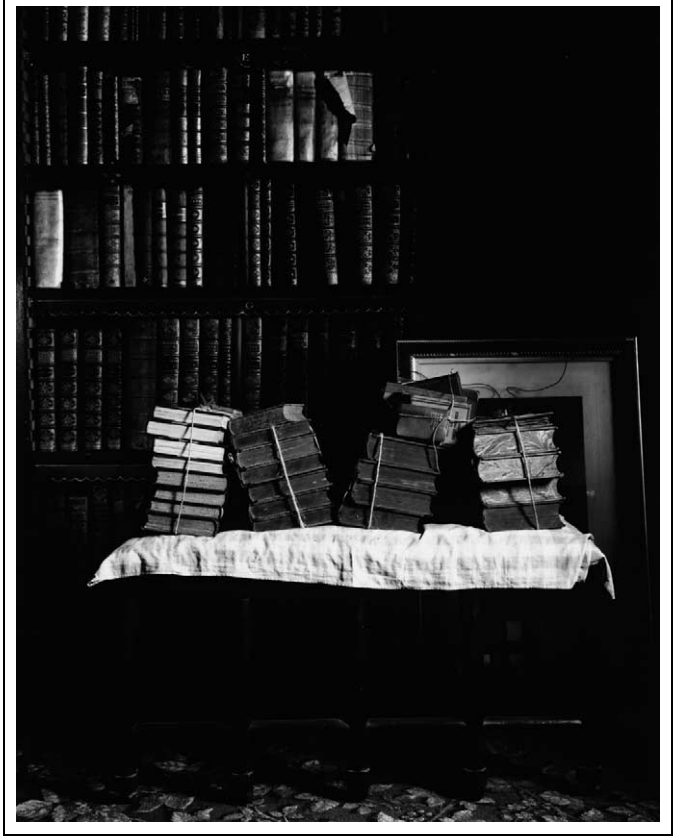

Figure 1. Partial view of the library at Shirburn Castle shortly before the books were removed to Sotheby's. Image supplied by, and reproduced with permission from, Sotheby's (photography by David Smith).

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because they are viewed as passive carriers of ideas rather than as material objects that are informative in their own right. Curators are eager to acquire autographed manuscripts, which are self-evidently unique and carry that magic aura of intimate contact with a great hero or historical figure. However, books were also personal possessions that can yield valuable details about their owners' origins, influences and interests (Figure 2). Furthermore, because they vary from copy to copy the distinction between printed and hand-written books is not as clear-cut as is generally supposed [7]. As collections of these unique documents, libraries provide countless clues for forensic historians.

Despite the recent outcry when Keele University sold a collection of early mathematical books that had been formed in the 20th century, little attention was paid to the sale of the far older personal library of James Watt [8]. This was not only a collection of important books, but also the physical manifestation of the intellectual life of a founder of the industrial world. Now, without any public discussion, the Macclesfield Library is being broken up. Far more than simply a collection of old books belonging to one man, it is a fabulous treasure trove containing many of the most significant books, owned and annotated by several leading British figures in the history of European science (Figure 3). Formed in the 17th and 18th centuries, this is a coherent collection that was the working library of an intellectual and scientific powerhouse.

The historical value of the Macclesfield collection was recognized long ago. When some of its scientific correspondence was published in 1841, the editor welcomed the family tradition of providing open access: 'The autograph originals were supplied by the Earl of Macclesfield…and the same liberality which laid open the library to inquiry at once assented to any use being made of such among its contents as from their nature might be likely to promote the history of science [9]. However, by the time that Cambridge University bought some manuscripts in 2000, it was well known that access to the rare books and manuscripts had become extremely limited. The manuscripts – the so-called 'Newton Papers' (although they include the work of many others) – can now be consulted by scholars, but the dispersal of the printed books will hide forever some of the evidence concealed inside them. In addition, as historic objects, they will become far less significant because their context will have been destroyed forever [10].

Figure 2. Johannes Hevelius, *Machinae coelestis* (Gdansk, 1673–1679). The Macclesfield copy contains a presentation inscription from the author to Henry Oldenburg, secretary of the Royal Society, addressed as 'amico honorando' ('to an honoured friend'). It includes the exceptionally rare second volume, most copies of which were burned in the fire that destroyed Hevelius' observatory at Gdansk. Image supplied by, and reproduced with permission from, Sotheby's (photography by David Smith).

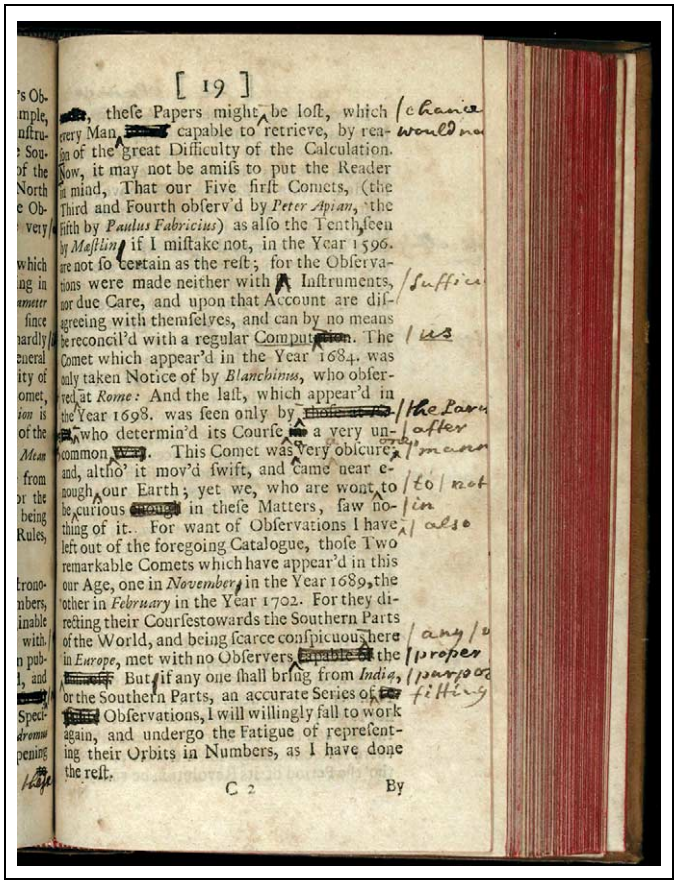

Figure 3. Edmund Halley, *A synopsis of the astronomy of comets* (London, 1705). Halley marked up this copy of the English translation of his famous paper on comets for a second edition. Other items that had belonged to Halley were also in the Macclesfield Library, including a previously unknown chemical notebook. Image supplied by, and reproduced with permission from, Sotheby's (photography by David Smith).

Why collections matter

The United Nations Educational, Scientific and Cultural Organization (UNESCO) International Code of Ethics for Dealers in Cultural Property states that 'Traders in cultural property will not dismember or sell separately parts of one complete item of cultural property' [11]. Although the Code offers no interpretation of what items 'of cultural property' might be, libraries are strong candidates.

Libraries of famous individuals – Newton, Antoine Lavoisier and the Herschels – have been closely studied, and sale catalogues reveal the contents of many more libraries, such as those of Robert Hooke and Edmond Halley. Interpreting such libraries is complicated, and demands some background knowledge. For example, because scholars often had access to several libraries, the absence of a book from their private collection does not mean that they had not read it. Nevertheless, their own books can provide evidence of their interests. When the historian Stephen Snobelen noticed two dirty strips down the outside edges of Newton's bible, he deduced that Newton was most interested in Ezekiel, Daniel and Revelations (S. Snobelen, personal communication). Newton turned down the top or bottom corner of the pages of books to point to a particular word: he was even sufficiently vain (or insecure) to mark the places where his own name was mentioned. He maintained this unusual dog-earing practice throughout his life – 274 of his 862 books in Trinity College, Cambridge betray his habit, which has bequeathed us a fascinating insight into his reading [12]. Furthermore, a few years ago Christie's in New York offered a leaf from the Gutenberg bible with an eyebrow hair embedded in the ink, 'conceivably from the master himself' [13]. How long will it be before historians are routinely DNA fingerprinting old books to see who handled them?

Country house libraries have received less attention, perhaps because they are considered social spaces [14]. But some of them were scenes of great intellectual activity. Shirburn Castle is an outstanding example of how some private homes acted as research centres during the 17th and 18th centuries. The first four Earls of Macclesfield made astronomical observations, conducted experiments and patronized scholars; all were Fellows of the Royal Society and they also published scientific papers in the *Philosophical Transactions*.

Many historians are less interested in uncovering the idiosyncrasies of great geniuses than in analysing how science was practiced. Country house libraries, built up over generations and used by the owners as well as their guests and protégés, offer forensic opportunities. Because in the past there were few publicly accessible libraries, scholars based at home needed to acquire a private collection of books. Working libraries like the one at Shirburn Castle were used by a scientific community of different generations and social classes. The library of a great house could act as a magnet, drawing a wider community to the house: wealthy friends of the owner (including some intellectual women); clergymen; local self-made men; and sometimes estate employees, such as the gardener, were encouraged to use the library [15]. Libraries yield evidence about people as well as ideas (Figure 4).

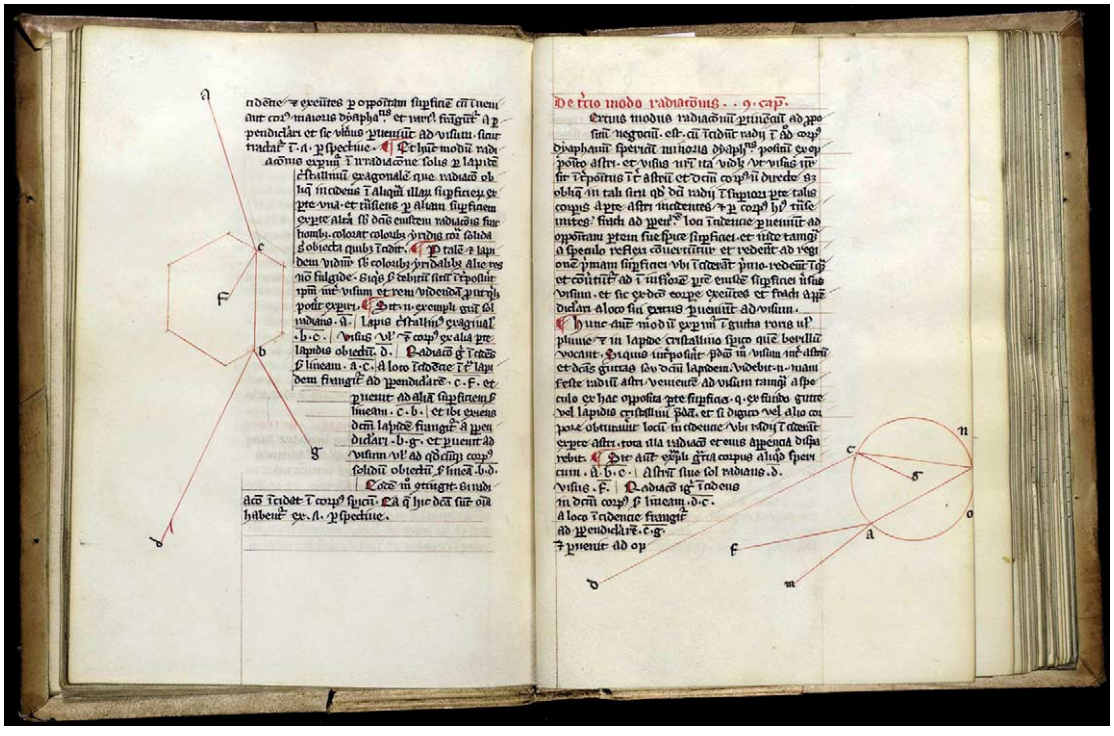

Figure 4. Dietrich von Freiberg, *De iride* (Western Germany, mid-14th century). Written on vellum at the Dominican convent of Würzburg, this is a manuscript of an important medieval text on optics that contained the first scientific explanation of the rainbow. It was sold in the separate sale of medieval manuscripts, which were mostly scientific, but did include the Macclesfield Psalter (now in the Fitzwilliam Museum in Cambridge). Image supplied by, and reproduced with permission from, Sotheby's (photography by David Smith).

The Macclesfield library

The present condition of libraries does not immediately reveal their complete history. The Macclesfield library once supported an astronomical observatory and a chemical laboratory, but in the 1760s it was transformed into a symbol of gentlemanly status. Duplicates were sold off, damaged books were attractively rebound and many short books and pamphlets in paper wrappers were bound together in tract volumes with gilt-lettered spines.

The founder of the Macclesfield fortunes was the first Earl, Thomas Parker (1667–1732), a wealthy lawyer and Fellow of the Royal Society who was forced to resign from his post as Lord Chancellor after being convicted of corruption. Undeterred, he continued to accumulate fine books and – just as importantly for the Library – was a generous patron whose protégés included the Newtonian mathematician William Jones. Originally entering the Macclesfield household as tutor to the Earl's son, Jones collected many thousands of books, including what contemporaries considered the most valuable mathematical library in England. Jones bequeathed his collection to the second Earl of Macclesfield, and most of the 3000 scientific titles now being auctioned off were once his.

Jones purchased widely in the mathematical sciences, using bibliographies and sales catalogues as his guides to build up a vast collection. He also read his books, often annotating them in the margins and on inserted leaves. Jones was concerned with the applications of mathematics because he had previously been a navigation teacher, and the Shirburn Castle Library contains numerous practical books on arithmetic, navigation, surveying, dialling and so on. Many of these are extremely rare, because manuals were often used until they disintegrated, or were owned by forgotten practitioners whose libraries have not been preserved. Such books are certainly not the usual fare in country house libraries.

One of Jones's most important acquisitions was the library of John Collins, a gossipy mid-17th-century mathematics teacher who corresponded with Newton, Isaac Barrow and many of Europe's most innovative mathematicians. The value of Collins' manuscripts is well recognized, but the books he owned have too often been overlooked [16]. They are also of great significance. As an editor, Collins was involved in seeing a number of important texts through the press, so his correspondence is full of publishing information that can often be linked with specific books in the collection. Because he intended to write a book on English mathematical achievements, Collins's archives contain some of the most important documents in the history of British mathematics, including key items concerning the priority dispute over calculus between Gottfried Leibniz and Newton [17]. Guided by Newton, Jones used these to publish not only a calculus primer, but also an anonymous and supposedly impartial report on the debate.

Jones's pupil George Parker (1697–1764), the second Earl of Macclesfield, was particularly active in his scientific pursuits at Shirburn, setting up the chemical laboratory and observatory, which he equipped with the finest instruments and clocks. For advice, Parker consulted James Bradley (later England's Astronomer Royal), who had been born at Shirburn – although disappointingly little is known about his early life; as assistants, he recruited a stable boy (Thomas Phelps) and a shepherd (Bartlett). Elected a Fellow of the Royal Society in 1722, Parker later became its President and introduced the calendar reforms that brought Britain in line with other European countries.

The third Earl, Thomas Parker (1723–1795), was also a Fellow of the Royal Society, and – like his forebears – was a major intellectual figure and patron. Thomas Parker consolidated and tidied up the library, after which it remained virtually untouched for two centuries.

Lost opportunities

When the hammer falls on the final scientific lot from the Macclesfield Library in 2006, what was reputed in the 18th century to be the finest mathematical library in England, although little used since, will have been dispersed. One positive result of this is that Sotheby's has provided magnificent catalogues, planned by Paul Quarrie to provide as thorough documentation of the items being sold as is possible in the circumstances. Well-illustrated, with expert descriptions in fine detail by Quarrie, Charlotte Brown and Charlotte Miller, these catalogues will make the contents of the Library far more widely known than if they had remained at Shirburn Castle.

Nevertheless, the losses to scholarship are grave. Jones and Collins both annotated their books, some of which have longer notes on separate sheets loosely inserted; in addition, manuscripts treatises by Collins and others are being sold. Moreover, many of the books acquired second-hand for the Library – such as its example of Nicolaus Copernicus's *De Revolutionibus* (Figure 5) – have important provenances and notes, because both Collins and Jones were interested in the historical development of mathematics and science.

Further evidence will be destroyed if some of the hundred or so tract volumes – the groups of pamphlets bound together on the orders of the third Earl – are broken up again into their separate parts so that they can be sold at a greater profit. This will almost certainly happen. The exact number is still not known, but Jones collected 500–1000 pamphlets. Only by preserving them together and studying signs of their use can historians study the connections between them and their owners.

There is very little justification for separating manuscripts, which are often inaccurate copies of original documents, from annotated books that contain original and usually unknown texts. Stop-press corrections, cancels, errata leaves and other supplements to a text or illustration further change a book and might not be present in all copies of it (Figure 6). In many ways each book is a unique document, which can never be fully described in a catalogue entry. Information overlooked at this stage will be virtually impossible to retrieve after the books have been scattered, and such textual differences go unnoticed when research is concentrated on a few copies in major libraries, or on surrogates of single copies that are available via the internet once they have been digitized.

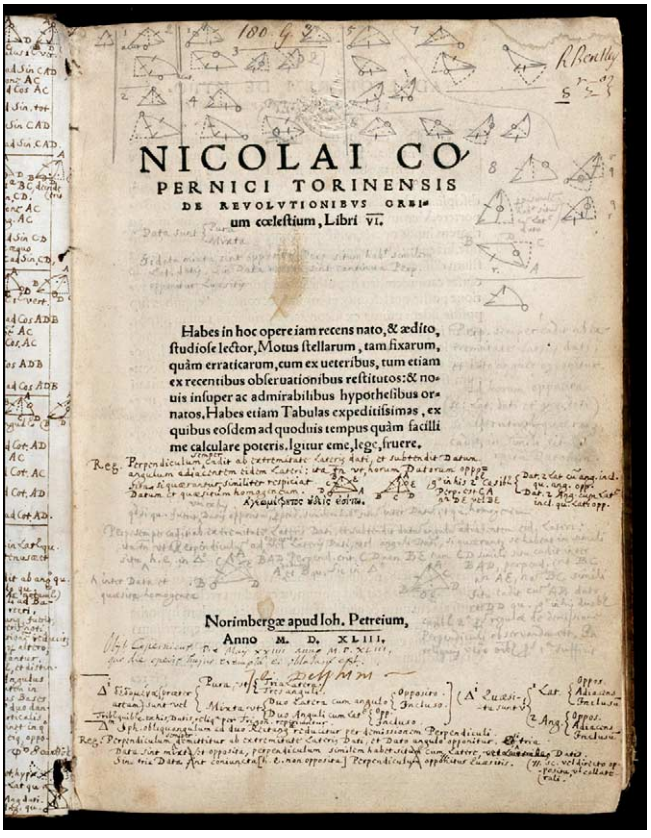

Figure 5. Nicolaus Copernicus, *De revolutionibus orbium coelestium* (Nuremberg, 1543). This heavily annotated copy of this famous book was owned by the Oxford astronomer James Greaves (1602–1652). Now in private hands, it provides an insight into the way astronomy was studied and understood in the generation before Newton. Greaves' scientific papers are in the Bodleian Library. Image supplied by, and reproduced with permission from, Sotheby's (photography by David Smith).

Conclusion

Many of these books will eventually find their way into institutional libraries, but much information will have been lost by then. The Macclesfield Library stems from an organic process of growth and pruning, its final form reflecting the intellectual attitudes of people who made and used it, and who also held a central place in the history of British science. Having access to an intact library is the only way to ensure an accurate knowledge of both the texts available to the users of that library and how they were used. Clues that present themselves to the alert detective when books are side by side, will be hidden forever when they are separated. Even books that seem insignificant now might yield information in the future. Old books are not interchangeable: each one is a document belonging to a particular archive. Splitting up a library resembles demolishing archaeological information by displaying finds in a museum and then destroying the site. We should consider the importance of leaving libraries intact so that future generations studying them can explore new avenues of enquiry.

Donors and funding bodies should have considered the possibility of purchasing and conserving the Macclesfield collection to make it available for study and public display. After all, the sum of money involved, about £15 million, is not out of line with the cost of recent public acquisitions.

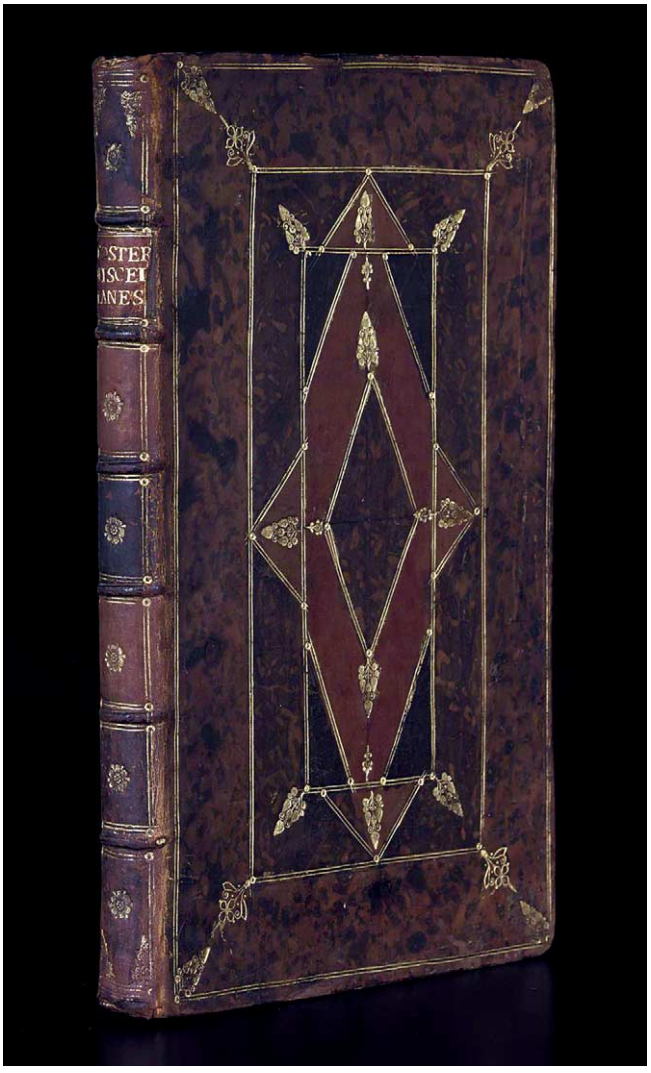

Figure 6. Samuel Foster, *Miscellanies* (London 1659), binding 320×215×30mm. John Collins edited this collection of works on astronomy and instrumentation after the author's death. This is the editor's copy with a previously unrecorded errata leaf changing the sense of several passages in a very unusual binding for the period. Newton owned a copy of this book, which is now in the Royal Society library. Image supplied by, and reproduced with permission from, Sotheby's (photography by David Smith).

Money has often been found to retain heritage objects, even those with only a weak British connection (such as Raphael's *Madonna of the Pinks*, which cost £35 million), or those with no historic context (such as the Becket Casket) [18]. At the very least there should be some public debate about the national significance of preserving great libraries such as the Macclesfield Library at Shirburn Castle.

Studying the library as a whole would have given historians a semi-transparent window for inspecting an important site of scientific activity in the 18th century. The classification of the documents it contained into two types of historical evidence called 'manuscripts' and 'books', and then dispersing the 'books', renders this window to the past totally opaque.

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