

Where Old Meets New: Commemorating the Savilian Professorships in an Online Exhibition

In recent years, New College Library has expanded its digital presence greatly, making full use of the latest technology. An extensive programme has been launched to digitise the library's manuscripts, rare books, and most important Archives items. The Library's social media presence has also grown from strength to strength and a video series, *Curators' Choice*,¹ has been developed to bring New College's unique collections to as large an audience as possible. The creation of a set of online exhibitions is the obvious next step to complement these initiatives, as such exhibitions have the potential to bring together the library's digitised images and video content on one site and dedicated to one particular theme—a goal achieved during the creation of the library's first online exhibition, *English Literature Through the Ages*.² This Note highlights the second online exhibition produced by the library, *Geometry and Astronomy*, which focuses on the Savilian professorships in both subjects, based at New College. It aims to explore this important and interesting part of New College's history, to showcase the unique library collections in these areas, and to provide a preview of the online exhibition itself, which has just been launched.³

The Savilian Chairs in Geometry and Astronomy were founded just over 400 years ago, thanks to the generosity of Sir Henry Savile (1549–1622). A respected member of the university, Savile had matriculated at Brasenose College at the age of only twelve, becoming a fellow of Merton College four years later.⁴ Although known for his theological studies—he edited the works of the Early Church Father John Chrysostom⁵—his real passion was mathematics. Savile used his wealth to establish two chairs, dedicated to the study of geometry and astronomy, with the first incumbents the geometer Henry Biggs (1561–1643) and the astronomer John Bainbridge (1582–1643). Whilst the work of the Savilian professors was to be grounded in tradition—particular emphasis was given to the works of the Ancient Greek astronomers and geometers—Savile also stipulated that the very latest research should be both studied and taught, recommending the work of even controversial contemporary astronomers such as Copernicus.

Due to the nature of this article, only a very brief history of the Savilian professorships is possible.⁶ Even the most cursory overview of the professorships in just one century, though, reveals that a number of influential astronomers, mathematicians, and geometers have held the posts.

Arguably the most famous holder of any Savilian professorship was the architect, mathematician, and astronomer Sir Christopher Wren (1632–1723). Gifted from a young age, Wren split his time between Oxford, where he had first studied at Wadham College, and London, where he was chair of astronomy at Gresham College and where he completed much work—most notably, of course, St Paul's Cathedral following the Great Fire of London. Wren was elected as the Savilian professor of astronomy on 5 February 1661, lecturing in 1662 on 'spheres, on the date of Easter . . . and on navigation'.⁷ His astronomical and wider scientific work with colleagues in

¹ For more information visit: <www.new.ox.ac.uk/curators-choice> (Accessed: 12 December 2024).

² This online exhibition can be found here: <www.new.ox.ac.uk/english-literature-through-the-ages/welcome> (Accessed: 12 December 2024).

³ The new online exhibition can be found here: <www.new.ox.ac.uk/geometry-and-astronomy/welcome> (Accessed: 30 December 2024).

⁴ R. D. Goulding, 'Savile, Sir Henry (1549–1622)', *Oxford Dictionary of National Biography* (8 August 2024) <<https://doi.org/10.1093/ref:odnb/24737>> (Accessed: 12 December 2024).

⁵ A copy of these works is still held by New College Library today, as well as at several other libraries in Oxford: <https://solo.bodleian.ox.ac.uk/permalink/44OXF_INST/35n82s/alma990155600580107026> (Accessed: 12 December 2024).

⁶ A more thorough history can be found within the online exhibition, as well as in the following book, first published to celebrate the quatercentenary: William Poole and Christopher Skelton-Foord (ed.), *Geometry and Astronomy in New College, Oxford: On the Quatercentenary of the Savilian Professorships, 1619–2019* (Oxford: New College Library and Archives, 2019).

⁷ Kerry Downes, *Christopher Wren* (Oxford: Oxford University Press, 2007), p. 16.

Oxford and London was particularly influential, promoting scientific research in the country and even leading to the foundation of the Royal Society.⁸ The eighteenth century then saw the election of another famous astronomer as Professor of Geometry—Edmund Halley (1656–1742). Arguably, though, he was in the chair less suited to him. Most famous today for the comet named after him, he was the first Savilian professor to reside on New College Lane, within the college estate. Halley had been interested in both geometry and astronomy from an early age. When he started at The Queen’s College in 1673, at the age of seventeen, he took with him a set of state-of-the-art instruments, said to be superior to those used anywhere in the university at the time.⁹ Thankfully, he could make use of such equipment and talents, both at Oxford and in Greenwich, as he was also appointed Astronomer Royal.¹⁰ Although not a household name today, Halley’s fellow Savilian professor in the astronomy chair, David Gregory (1659–1708) also proved to be extremely influential in the fields of mathematics and physics. A close confidant of Isaac Newton, Gregory was the first person to write a textbook that promulgated Newton’s revolutionary gravitational theory and was a staunch supporter of his work,¹¹ directly influencing the work of one of the most famous scientists of all time. Savile endowed his professorships with the aim to enhance the study of astronomy and geometry within the university. Even the three short examples mentioned here demonstrate that he more than achieved his goal, advancing the study of both fields greatly.

As the Savilian professorships have been based at New College for several hundred years, it is not surprising that New College Library has amassed a significant collection of manuscripts and rare books relating to both subjects. The collections are explored in more detail within the online exhibition itself, with particular emphasis on the library’s most important items in these subject areas.¹² In terms of geometry, these include a fascinating book that preserves Henry Savile’s own lectures on Euclid in one volume, dating from 1621,¹³ and an early work of algebra, dating from 1685.¹⁴ This latter volume was particularly popular when published, as it contained not only a theoretical, but also a practical focus. The astronomy collections at New College Library are arguably even more significant. A particularly important example is part of the library’s significant manuscript collections—MS 281. Dating from the thirteenth century, it is a copy of Ptolemy’s *Almagest*, a work that was the authoritative textbook of theoretical astronomy for several centuries. In total, 13 books cover the full range of mathematical astronomy. Today, it is particularly well-known for its discussion of the ‘Ptolemaic’ system, a geocentric system¹⁵ that placed the Earth at the centre of the solar system, with all planets and the sun orbiting around it. Donated to the college by John Farley¹⁶ in the fifteenth century and exquisitely illuminated (as can be seen in the image below), this manuscript may well have been consulted by Savile himself.

⁸ *ibid*, p. 15.

⁹ Allan Chapman. *Comets, Cosmology, and the Big Bang: A History of Astronomy from Edmond Halley to Edwin Hubble 1700–2000* (Oxford: Lion Hudson, 2018), p. 44.

¹⁰ *ibid*, p. 65.

¹¹ Anita Guerrini, ‘Gregory, David (1659–1708)’, *Oxford Dictionary of National Biography* (3 January 2008) <<https://doi.org/10.1093/refodnb/11456>> (Accessed: 12 December 2024).

¹² To discover more about the geometry collections visit <www.new.ox.ac.uk/geometry-and-astronomy/geometry>, and the astronomy collections, <www.new.ox.ac.uk/geometry-and-astronomy/astronomy> (Accessed: 30 December 2024).

¹³ This book is held not only at New College Library (BT3.179.16(1)), but is also still in several other libraries across the university: <https://solo.bodleian.ox.ac.uk/permalink/44OXF_INST/35n82s/alma990130015300107026> (Accessed: 12 December 2024).

¹⁴ This book has the shelfmark BT3.188.7: <https://solo.bodleian.ox.ac.uk/permalink/44OXF_INST/35n82s/alma990135525760107026> (Accessed: 12 December 2024).

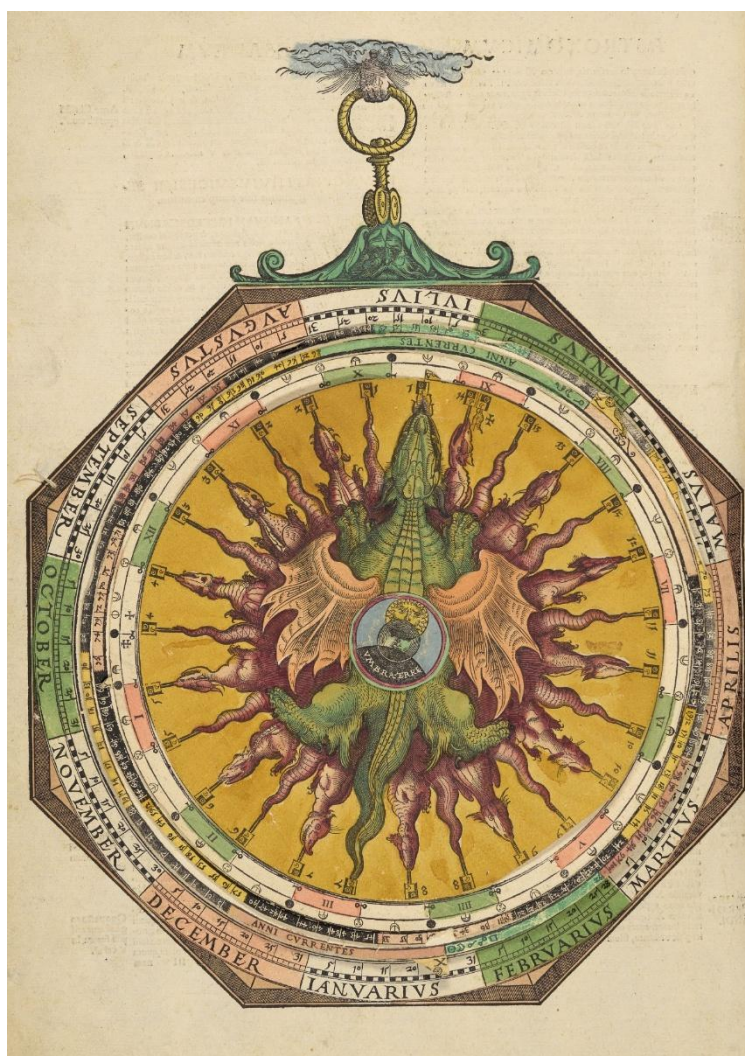
¹⁵ Albert Van Helden, *Measuring the Universe: Cosmic Dimensions from Aristarchus to Halley* (Chicago: University of Chicago Press, 1985), p. 41.

¹⁶ For more information about the provenance of this manuscript see: James Willoughby, ‘[John Farley \(d. 1464\) and the Finessing of MS 281](#)’, *New College Notes* 15 (2021), no. 2.



Close-up image showing the exquisite illumination that appears in the manuscript
New College Library, Oxford, MS 281, f. 122v [detail]

This and the following images © Courtesy of the Warden and Scholars of New College, Oxford



An example volvelle—the dragon's head spins to the desired position in the diagram

New College Library, Oxford, BT1.70.2, f. [27]v

In terms of the library's printed collections, the most outstanding astronomical item has to be the *Astronomicum Caesareum*, which dates from 1540.¹⁷ Written by the German mathematician and imperial astronomer Peter Apian (1495–1552), it is designed to aid the reader in calculating a range of astronomical and astrological phenomena. This is done using the intricate 'volvelles', which can turn by three hundred and sixty degrees. One of the most spectacular in the volume is pictured to the left.

Essentially a 'paper computer',¹⁸ the reader uses the given examples to learn how to correctly use the volvelles to predict other events. The volvelles rely on the geocentric model to predict phenomena correctly, so the book is not completely accurate. Despite this inaccuracy, though, it remains an important work in the history of science—one that effectively blended art and science together and showcased what could be achieved with the still relatively new technology of the printing press.

The creation of an online exhibition to showcase both the

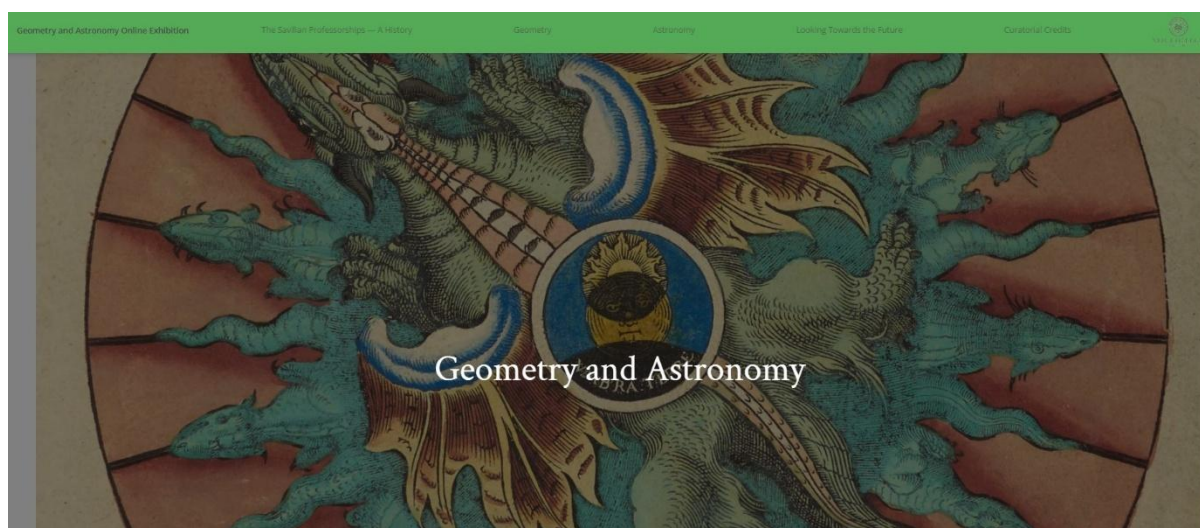
history of the Savilian Chairs and the library's extensive astronomical and geometrical collections has a number of advantages, effectively building on the work to commemorate the quatercentenary

¹⁷ A rare book, it is held in only four libraries in Oxford: <https://solo.bodleian.ox.ac.uk/permalink/44OXF_INST/35n82s/alma990127690660107026> (Accessed: 12 December 2024).

¹⁸ Lars Gislén, 'A Commentary on the Volvelles in Petrus Apianus' *Astronomicum Caesareum*', *Journal of Astronomical History and Heritage* 21 (2018), 135–201, at p. 135.

of their foundation in 2019.¹⁹ Indeed, such an exhibition is the perfect opportunity to showcase these collections, as demonstrated in the secondary literature of both librarianship and museum studies. Firstly, such online exhibitions have the advantage that they can be accessed ‘at any time and from any place’, greatly increasing the number of potential readers.²⁰ Crucially, they also offer the chance to provide much greater access to the college’s collections than traditional exhibitions, not only to those unable to physically come to the library but also to a demographic that may not be comfortable accessing an exhibition within a traditional university setting.²¹ Likewise, these exhibitions are inherently adaptable, with research demonstrating how libraries have added more elements over time to make the exhibitions more complex and more interactive.²² This process has already started at New College, as the navigation, image placement, and menu options have all been improved even in the short time since the launch of *English Literature Through the Ages* at the start of 2024. Finally, online exhibitions have the advantage of highlighting specific collections²³—collections that may not be well-known outside of an institution but worthy of research. Online exhibitions can raise their profile in both the organization and further afield, demonstrating the value of their ongoing preservation in the library and the role of the parent organization in supporting this process.

Geometry and Astronomy has been developed with these advantages in mind, aiming to effectively adapt the text from the physical exhibition and physical publication for an online audience.



The homepage of the *Geometry and Astronomy* online exhibition

As can be seen from the homepage of the exhibition, pictured above, full use of colour and an attractive digitised image aims to draw the reader into the exhibition from the start. As the reader scrolls down the homepage, the menu structure shown at the top is then revealed in more detail with the use of feature boxes. These feature boxes show how the online exhibition is structured—when a reader clicks on one they are taken to the relevant page of the exhibition that focuses on a different topic.

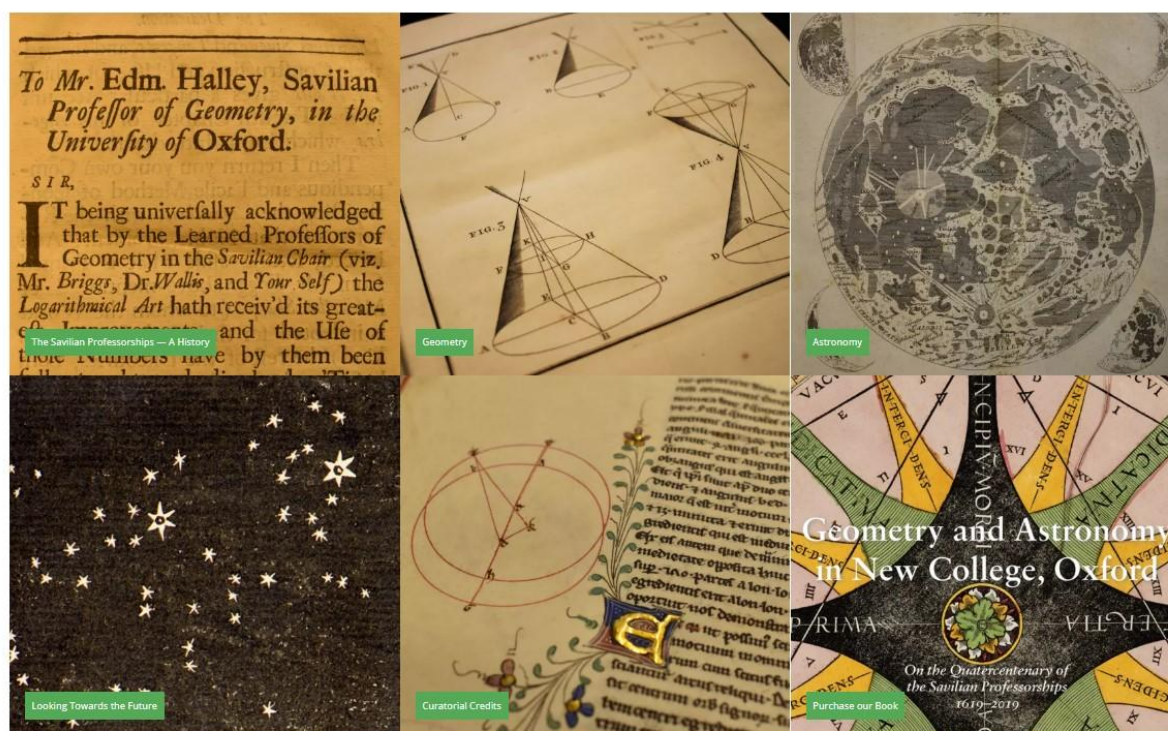
¹⁹ In 2019, New College celebrated this anniversary with a series of lectures, the publication of the book mentioned above, a library exhibition, and the purchase of a new telescope for the Senior Common Room. More information can be found here: <www.new.ox.ac.uk/savilian-400th> (Accessed: 12 December 2024).

²⁰ Isabelle Becker et al., *Virtual Museums—A Plea—Around the Clock, Around the World* (Berlin: Deutscher Kunstverlag, 2024), p. 93.

²¹ *ibid.*, p. 93.

²² Youngok Choi and Emma Brodfuehrer Hastings, ‘Exploring the Use of Digital Exhibits by Academic Libraries’, *The Journal of Academic Librarianship* 50 (2024), 1–14, at p. 1.

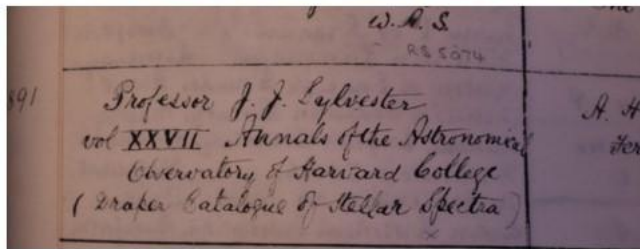
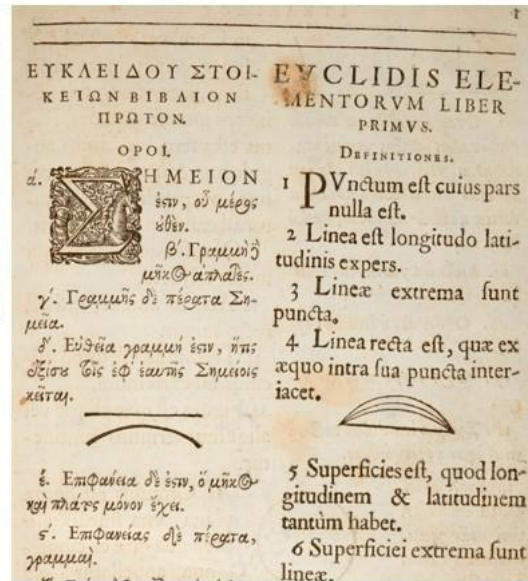
²³ *ibid.*, p. 4.



Feature boxes used in the *Geometry and Astronomy* online exhibition

This structure aims to build on the advantages of the online format, as the menu deliberately gives the reader choice. It is possible to read the entire text as a narrative from start to finish, but likewise it is possible to read the text in any chosen order, with the reader given the opportunity to focus on the parts of the exhibition that are most of interest. Likewise, at the bottom of each tab, two further feature boxes are included that link to the previous and subsequent pages. Together, they aim to allow the reader to navigate seamlessly through the exhibition and to quickly reach the parts of it that are most of interest.

Throughout the exhibition, a wide range of digitised images are also used to showcase the variety of the library’s collections in this area. Some of these are used decoratively, to serve as an eye-catching background image for a banner. Others reproduce interesting pages from specific books, whilst others are taken from manuscripts or to demonstrate provenance information. As online exhibitions naturally cannot include the objects themselves, high quality and engaging digital imagery is fundamental to making the exhibition interesting for the reader. Several of these images were first digitised as part of the library’s digitisation programme, so the online exhibition format gives the library the opportunity to fully utilise these images.



Clockwise from top left:

- (1) An image used as the background for a banner—a way of breaking up the text in an attractive way
- (2) A digitised page from an item discussed in the exhibition
- (3) A digitised page from the Library Benefactors' Book, adding useful provenance information

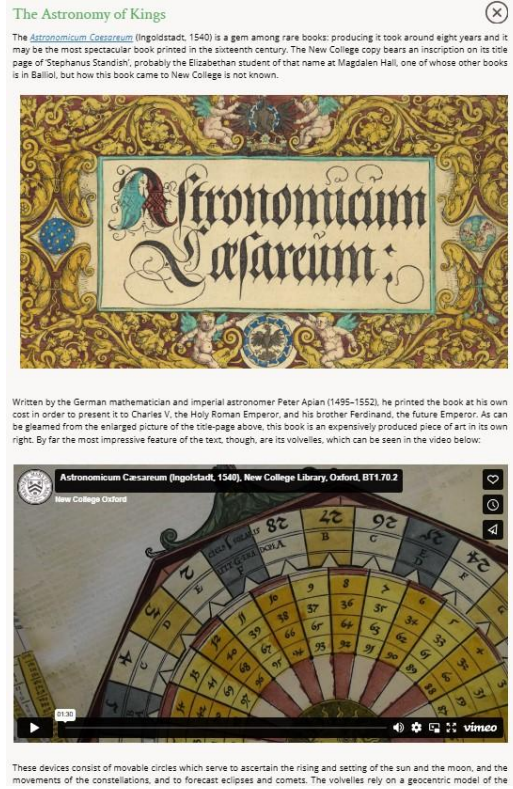
The content is deliberately designed to be interactive, making full use of the online format when compared to a traditional text publication. At certain points in the exhibition, image 'hotspots' have been included to draw the reader's attention to particular parts of an image. In the example shown below, the reader clicks on a question mark on a digitised map of Yorkshire from 1579 to reveal an enlarged image that depicts a hand-drawn addition by a member of the Savile family. When this page of the exhibition is opened, animation is included on the question mark to make it even more noticeable to the reader, as it both expands and contracts to attract the eye.



New College Library is fortunate to own a copy of the Saxton Atlas from 1579, which was owned by the Savile family. The first atlas produced of any country in the world, here you can see part of the map of Yorkshire, which shows the Savile lands. New College Library, Oxford, [BT1.47.9](#).

The image hotspot used in the *Geometry and Astronomy* online exhibition

Elsewhere in the exhibition, drop-down arrows are included, which, when clicked, reveal further information. In the example below and to the right, this further information relates to specific items in the library’s collections. These arrows have two main advantages. Firstly, they improve the reader’s navigation around the exhibition, helping to break up larger pieces of text. Secondly, they again make the exhibition more interactive, giving the reader the opportunity to focus on particular items that they are most interested in.



Left: The unexpanded drop-down arrows within the main body of the text
 Right: An example drop-down arrow that has been expanded, which includes more information about a particular book and video content

Finally, video content has been included to further enhance the exhibitions interactive nature. In the example above, a video has been included to demonstrate the volvelles that are included in New College’s *Astronomicum Caesareum*, discussed above. Such video content provides a useful break for readers that do not wish to read lots of plain text and helps to give the reader a sense of the object’s use and size.

As this Note has shown, the Savilian professorships are an important part of New College’s long history. The development of an online exhibition in this area is an excellent way to showcase this history—and an interesting area of the library’s collections—to a wider audience. The exhibition will be promoted fully at the start of the next calendar year and will remain freely accessible, available at any time of day and, it is hoped, to a very wide range of readers. Going forwards, it is hoped to build on the success of our library’s first two online exhibitions with the creation of a series of such exhibitions in the future, constantly adapting them to future developments in available technology. Such developments have already been previewed, with other libraries and cultural institutions investigating the use of both virtual reality technology and linked data to improve and curate the experience of the reader.²⁴ The online exhibitions created by New College Library, therefore, will be deliberately organic, adapting not only to different topics and areas of interest, but also changing in format as a result of technological change.

Will Shire
 Deputy Librarian
 New College, Oxford

²⁴ Daniele Monaco et al., ‘Linked Open Data in Authoring Virtual Exhibitions’, *Journal of Cultural Heritage* 53 (2022), 127–142, at p. 127.