

The 400th anniversary of the Sedleian Professorship of Natural Philosophy, the oldest scientific Chair at the University of Oxford, provides a welcome opportunity to reflect on the individuals who have held this position in the past, from Edward Lapworth, who was appointed in 1621, to my immediate predecessor, Sir John Ball, who retired from the Chair in 2019.

This volume weaves together the personal stories of the Sedleian Professors with descriptions of their academic achievements. It has to be said that they are a disparate group; if one were to imagine a class reunion, it isn't clear they would have much in common with one another. The 17th Century incumbents were primarily physicians. In the 18th Century the Chair became something of a sinecure: post holders appear to have focused more on their ecclesiastical interests than on scientific teaching or research; many seem to have had no discernible credentials in Natural Philosophy. From the end of the 18th and through the 19th Centuries there was a slow and somewhat uneven transition to what we would now recognise as a Chair of Natural Philosophy, beginning with the election of the astronomer Thomas Hornsby in 1782, the first scientifically active Professor of Natural Philosophy for almost a hundred years. Hornsby oversaw the establishment of the Radcliffe Observatory in the final decades of the 18th Century.

Since the beginning of the 20th Century, the Sedleian Professorship has been held by some of the leading figures in applied mathematics and mathematical physics, including Augustus Love, who made important contributions to the theory of elasticity and to wave propagation, especially in the context of the Earth Sciences, Sydney Chapman, who is renowned for his contributions to solar-terrestrial physics, George Temple, who did significant work in mathematical physics, Albert Green, who was a leading researcher in continuum mechanics, Brooke Benjamin, who did seminal work on mathematical analysis and fluid dynamics, and Sir John Ball, who is distinguished for his foundational research into the mathematical theories of elasticity and material science, and their connections to the calculus of variations.

Over the past 400 years the Sedleian Chair has been held by some remarkable characters, and it is illuminating to have their stories brought together in this volume. Reading them in chronological order gives a fascinating insight into the development of science in universities during this period.

It is understandable that the early Sedleian Professors would be physicians: in the 17th Century Medicine was one of the most active and rapidly developing areas of scientific research. This group includes Thomas Willis, who was an important figure in the development of the understanding of the brain and nervous system.

What is, perhaps, surprising is that the important ideas introduced elsewhere in Natural Philosophy, by Galileo and Newton for example, took a relatively long time to influence teaching and research in the subject in Oxford. The early statutes required the Sedleian Professor to lecture specifically on Aristotle's *Physics*, and it was not until 1810 that these were changed to stipulate lectures 'in Natural Philosophy as grounded on Mathematical Principles, and particularly in the Principia [...] of Sir Isaac Newton'. Nevertheless, it is striking how, once it had decided to act, the University then made a conspicuous success of

the Chair, appointing a succession of leading applied mathematicians through the 20th Century. It could be argued that the history of the first 400 years of the Chair throws as much light on the evolution of decision-making procedures within universities as it does on the development of science.

This volume follows on from a meeting held in June 2022 at the Bodleian Library in Oxford and supported by the British Society for the History of Mathematics. Christopher Hollings and Mark McCartney organised that meeting and have edited this book. They are to be congratulated for having drawn together contributors who have produced such vivid and insightful biographies.

Almost certainly Sir William Sedley, who made the original bequest that funded the Chair, would not have anticipated the intellectual trajectory it has taken over the past 400 years. That is as it should be in a dynamic and evolving field of study, but one might hope that he would be pleased to see the state it has achieved since the start of the 20th Century. It is their ability and mindset to plan over such long timeframes that makes universities such singular institutions.

Since the middle of the 19th Century, the Sedleian Professors have, in addition to their university appointments, also been Fellows of The Queen's College in Oxford. By convention, only the Sedleian Professor or the Patroness of the College may operate the orrery in the Upper Library there. I suspect that this tradition is one that Sedley would have appreciated.

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