A System of Physicks (Compedium Physicae)

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Circa 1700

Mss.530.Sy8

American Philosophical Society
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Table of Contents

Summary Information

Repository	American Philosophical Society
Creator	Morton, Charles, 1627-1698
Title	A System of Physicks (Compedium Physicae)
Date	Circa 1700
Call number	Mss.530.Sy8
Extent	1.0 Volume(s) 141 p.
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Location	LH-MV-E-9
Language	English
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Abstract	Charles Morton's "System of Physicks" was among the most important texts in natural philosophy in early America, used to teach science and the scientific method to students at both Harvard and Yale from the late 1680s through the 1720s. This fair copy was probably transcribed at one of those institutions in about 1700, and is a fairly complete accounting of Morton's best known work.
Preferred Citation	Cite as: Charles Morton, A System of Physics, American Philosophical Society.

Background note

The son of a parson, Charles Morton (1627-1698) was raised under the sway of Puritan thought in the bucolic reaches of Cornwall as the English revolution was brewing. At twenty, he was enrolled at Puritan-controlled Cambridge, but after the expulsion of the Royalists from Oxford, was "intruded" in New Inn Hall and later at Wadham College, from which he received his bachelor's degree in 1649 and masters in 1652.

Although there is little to suggest that Morton had any inclination to science prior to his arrival at Oxford, he entered into a remarkable group of scholars at Wadham who epitomized the new empiricism and who would form the core of the Royal Society. Among his peers were Robert Boyle, William Petty, and Christopher Wren, each of whom were committed empiricists -- using experiment, apparatus, and mathematical logic rather than scholastic reasoning alone. Although Morton does not appear to have been their intimate, he embraced their scientific approach, interpreting it within the context of his increasingly devout Puritanism.

Following receipt of his masters degree, Morton probably served as a pastor in Cornwall until 1660, when the Restoration of the monarchy brought a renewal of restrictions on Puritanism generally, and his dismissal from his pulpit as a non-conformist. Never one to waiver in the face of adversity, he ventured to Newington Green, where he established a "dissenters' academy," a school for the education of those excluded from the universities by their refusal to swear conformity to the Church of England (and implicitly, fealty to the King). In the classroom, he emphasized the lessons he had learned at Wadham: Aristotelianism tinged with the currents of Descartes and Boyle, the application of scientific logic and rigor, and staunch piety. Morton taught in the vernacular, preparing brief, but systematic manuscript expositions of each subject, which his students copied for themselves in attempting to master the material. His reputation, at least in retrospect, was embellished by the talent of the students he attracted to Newington, including Samuel Wesley (father of John and Charles) and Daniel Defoe.

Reflecting his broad education, Morton's "systems" included expositions of politics, logic, natural philosophy, and mathematics, although not all of these have survived. To view them as a whole, however, as a coherent curriculum, provides a better perspective on their value in Morton's intense religious devotion and his holistic perspective on divinity and creation. Yet Morton's plans would not come to full fruition in England. When the Anglican and Royalist establishment began to step up their campaign against dissenters and their academies in the 1670s, Morton became a favored target. Badgered, arrested, and excommunicated, he held out until 1685, when he wisely opted to answer the call to emigrate to the more congenial confines of the New World.

In Boston, Increase Mather ruled over Harvard with an absolutism to make Charles II jealous. Mather would have known of the Puritan hero, Morton, just as Morton would have known of the Puritan experiment at Harvard, and Mather appears to have dangled the Harvard presidency as a lure. When Morton arrived in Boston in June 1686, however, he soon found that the problems of a dissenter's life could not so easily be shed. Just prior to his arrival, the Massachusetts had been revoked in an effort to extend royal dominion more completely over the colony, and the delicate political position of the college made installing a political undesirable like Morton unwise. Morton stepped graciously aside

from the presidency, and in November, accepted the call as pastor of the distinguished First Church of Charlestown, Mass., from which pulpit he resumed his assault on the unholy, attacking the unpopular royal government of Edward Andros, earning arrest for sedition in the process (but also acquittal before a Puritan court).

Although deprived of the presidency, Morton nevertheless began to teach Harvard students almost immediately, and his System of Physics, also known by its Latin name, the Compendium Physicae, became a staple of the curriculum there -- and later Yale -- for almost 40 years. In many ways, the work lies on the fulcrum of physical knowledge, drawing upon medieval or ancient sources at the same time that it draws upon Boyle, Wallis, and Hooke. It is dominated by an Aristotelian ethos, and roughly follows in the long tradition of Scholastic use, but at the same time, it is reflective of the new trends in thought in the seventeenth century, paying a debt to Cartesianism -- even if at arm's length -- as well as to Boyle and Hooke.

Morton was named Vice President of Harvard in June 1697, but by that time his health was already in serious decline. He died in Charlestown on April 11, 1698, a death earning special notice in the diary of Samuel Sewall.

Scope & content

The "System of Physicks" is an early, fair copy of Charles Morton's Compendium Physicae, used as a textbook in natural philosophy at Harvard and Yale between 1687 and about 1728. Judging by the handwriting, binding, and similarity to other known copies, it was probably made in about 1700, however there are no indications of who might have been responsible for its transcription. It is a relatively complete copy, including all of the mnemonic couplets and quatrains at the end of each chapter and all of the illustrations.

While the text of the "System of Physicks" was probably completed prior to Morton's emigration, each of the fewer than twenty surviving copies of the Compendium can be traced to Harvard or Yale. Copies of Morton's "System" are currently located at the American Antiquarian Society (3 copies), Yale (2 copies), Harvard (2 copies), the Boston Public Library, the Bodleian Library, the University of Pennsylvania, and the Massachusetts Historical Society (5 copies), with an imperfect copy at the William L. Clements Library.

The provenance of the A.P.S. manuscript is imperfectly known, but there is a bookplate of the noted book collector, John Frederick Lewis, pasted on the inside of the original boards with the notation that Lewis gave the book to Arthur Goodspeed in 1925.

Administrative Information

Publication Information

American Philosophical Society 2001

Provenance

Acquisition Information

Gift of Arthur W. Goodspeed, 1961.

Processing Information

Catalogued by rsc, 2001.

Related Materials

Related Material

The APS houses several other treatises on early modern natural philosophy, including David Evans' "Aliquot Rudimenta Philosophiae", (written in New Jersey in 1747), John Questebrune's "A Short Introduction to Natural Philosophy", , (Ireland, 1718-1720), Joseph François Marie's Philosopiae Quarta Pars Seu Phisica, , and an unidentified Italian treatise from the early 18th century.

Indexing Terms

Genre(s)

- Educational Material
- Manuscript Essays

Subject(s)

- Education

- Physics--Early works to 1800
- Science and technology

Other Descriptive Information

The book was first examined for unusual features and sewing construction, and was then disbound and surface cleaned with cleaning pads and vinyl erasers. The leaves were then photocopied and three facsimiles were produced. The folios were guarded with Kisukishi paper to reinforce the folds. The leaves were sewn three-on on alum tawed goatskin thongs. The spine was lined with wheat strach paste and Kisukishi paper,then headbands were sewn on thongs. The book was covered in a paper case constructed of Bartram green Renaissance paper, lacing the thongs through the cover. The originals covers and in a portfolio and housed with the book. Treatment completed by Hedi Kyle and Denise Carbone, March 1997.

Other Descriptive Information

This collection is a manuscript copy of Charles Morton's "System of Physicks," which was used as one of the primary textbooks for teaching natural history in early America. The MOLE entry contains a detailed discussion of the text, its provenance, and its author.

Bibliography