



# RODGER FRIEDMAN RARE BOOK STUDIO



1 MYSTIC CIRCLE, TUXEDO PARK, NY 10987

## GALILEO AND NEWTON

1.

### THE SURREPTITIOUS SECOND ITALIAN PRINTING

Galilei, Galileo. *Dialogo... Dove ne i congressi di quattro giornate si discorre sopra i due massimi sistemi del mondo Tolemaico, e Copernicano; proponendo indeterminatamente le ragioni filosofiche, e naturali tanto per l'una, quanto per l'altra parte. In questa seconda impressione accresciuto di una lettera dello stesso, non piu` stampata, e di varj trattati di piu` autori, i quali si veggono nel fine del libro.* Florence [but Naples]: [Lorenzo Ciccarelli], 1710.



Second Printing. Quarto (27cm); 6 preliminary leaves, 458, [30] pages, 1 leaf, 83 (i.e. 81) pages. Title page printed in red and black, with the engraved device of the Accademia della Crusca. Diagrams in text. "Lettera ... alla granduchessa di Toscana," with separate title page. In contemporary vellum over boards. Red leather title label on spine. References: Gamba 476 ("È da pregiarsi questa ristampa..."); Riccardi I, 512; cf. *Printing and the Mind of Man* 128 (1623 edition).

When Galileo first published his *Dialogue concerning the two chief world systems* in 1632, it caused immediate furor. It was sequestered, placed on the Church's List of Prohibited Books, and Galileo himself, then aged 69 years, was arrested, and forced to recant under threat of torture and worse. (Even having recanted, he spent the rest of his life

under house arrest, forced to recite penitential psalms on a regular basis.) The volume offered here is only the second printing in Italy of the forbidden book, published under a false imprint and cryptically coded names (the editor, who financed the publication, hid his name in an anagram). The text includes Galileo's celebrated letter to Christine de Lorraine, grand duchess of Florence, in which he tries to reconcile observational science with biblical texts. It also publishes (for the first time in the context of a book) the sentence handed down from Galileo's trial, the "abjuration" or denial of the book that Galileo was forced to sign; the second printing of the letter contrasting the Copernican and Pythagorean systems by Paolo Antonio Foscarini that was also censured by the Inquisition when it was published in 1615; and a short work on planetary orbits in Latin by Johannes Kepler, none of which was included in the grand Padua edition of Galileo's Works. (1744). \$12,000

2.

### A MANIFESTO FOR THE SCIENTIFIC METHOD

Galilei, Galileo. **Il saggiaiore nel quale con bilancia esquisita e giusta si ponderano le cose contenute nella Libra astronomica e filosofica di Lotario Sarsi Sigensano scritto in forma di lettera....** Rome: Giacomo Mascardi, 1623.

First edition. Quarto (22 cm); [4], 236 pages. Lacks portrait and four preliminary leaves of gratulatory verses, which are frequently missing from surviving copies. 16 lines of errata on the last text page, indicating an early if not a first pressing of the edition (Galileo himself was late to the printing, so later issues have extra errata correcting the mistakes that he caught when he arrived on the scene). Engraved title within architectural border by Francesco Villamena, and 18 engraved figures in text, including the first ever illustration of the rings of Saturn and of the phases of Venus, as seen through Galileo's telescope. The engraved figure on page 120 is inverted, without the corrective paste-over applied to some copies. Typographic headpiece ornament, woodcut initials and tail-pieces. In contemporary limp vellum, spine lettered in manuscript. Top inner margins waterstained, just extending into the text. Some light foxing and browning.

Provenance: Unidentified contemporary ownership stamp on dedication page. Gilt morocco ex libris of British poet, novelist, and



playwright Charles W. Williams (1886-1945). Acquired from the estate of Dr. Stanley H. Levy, purchased by him from Heritage Book Shop in 1986 (Heritage catalogue description present). References: *Dictionary of Scientific Biography* V, p. 243; Cinti, 73; Gamba 474; Riccardi I, 511; Libreria Vinciana 1554; Norman 857.

First issue of “one of the most celebrated polemics in science” (*Dictionary of Scientific Biography*). *Il Saggiatore* (usually called *The Assayer* in English) was a response to a 1618 treatise on comets by the Jesuit Orazio Grassi. Galileo, forbidden from openly defending the Copernican concept of planetary motion, managed to avoid direct proofs based on physics. Instead, he wrote a manifesto promoting a scientific approach to the investigation of observable phenomena. It proposes that mathematics is the language of nature, and therefore nature requires mathematics to be properly understood. Apart from that, *Il Saggiatore* is a literary masterpiece, displaying Galileo’s graceful and subtle wit. It supposedly kept Pope Urban VII laughing as he read it. \$20,000

3.

COMPENDIUM OF THREE IMPORTANT WORKS IN ONE VOLUME

Galilei, Galileo. 1. **Systema cosmicum, in quo quatuor dialogis, de duobus maximis mundi systematibus, Ptolemaico & Copernicano, utriusque rationibus philosophicis ac naturalibus indefinite propositis disseritur;** 2. **Nov-antiqua sanctissimorum**

**patrum, & probatorum theologorum doctrina, de sacræ Scripturæ testimoniis, in conclusionibus mere naturalibus, quæ sensatâ experientiâ, & necessariis demonstrationibus evinci possunt, temere non usurpandis...;** 3. **Tractatus de proportionum instrumento, quod merito compendium vniuersæ geometriæ dixeris....** Strasbourg: Daniel Elzevir and David Hautt, 1635-1636.



Three works in one volume. 4to (22 cm); *Systema cosmicum*: [16], 495, [24] pages, including engraved title page, portrait and illustrations, Augustæ Trebec[orum] [i.e., Strasbourg] : impensis Elzeviriorum, typis Davidis Hautti, 1635; *Nov-antiqua*: [8], 60 [4] pages, Latin and Italian in parallel columns, Strasbourg, Elzevir, typis Davidis Huatti, 1636; *Tractatus*: [8], 104 pages [lacks plate], Argentorati, typis Davidis Hautti, 1635.

In early 19th-century scarlet-dyed sheep uniquely embossed across the grain with rows of a toothed pattern, with gilt scroll border composed of interlocking fleurons and spine decorated and titled direct in gilt. Preserved in red cloth chemise and red cloth slipcase with 1/4 polished leather titled in gilt. Bookplate of Joannis De Bizzaro, and a manuscript note in Italian on first blank, “edizione rarissima...” that records the purchase at the Libreria Pisani sale in Venice (1810) and the price paid, 80 lire. (The volume was not yet bound at the time of the note.) The *Systema cosmicum* is slightly browned, with occasional marginal notes in a contemporary hand; the other two works are quite browned, as usual. Partially unopened. Red gilt morocco bookplate of Robert Honeyman IV.

References: Honeyman IV, 1409 (this copy); *Systema cosmicum*: Cinti, 96; Riccardi I, 52; Willems 426 (noting poor quality of paper stock). *Nov-Antiqua*: Cinti, 98; Riccardi, I, 515; Willems, 441 (“Pièce rare”). *Tractatus*: Riccardi, I, 507.

First Latin edition of Galileo’s epochal (and powerfully suppressed) *Dialogue concerning the two chief world systems*. Even as the book was being banned in Rome (in 1633), Galileo’s friends were planning an international edition in Latin, the lingua franca of the scientific community. A copy was effectively smuggled out of Italy to Strasbourg, home of the translator Matthias Bernegger. The mighty firm of Daniel Elzevir underwrote the publication, which was printed in Strasbourg by David Hautt. There was a rush to get it out, and the pressing began while the translator was still finishing up with the text. 600 copies were printed, a relatively large press run for the time. A new frontispiece was designed, based on the Italian edition but changed to show Copernicus as a young man, representing a young science in contrast to the two ancients, Aristotle and Ptolemy.

The *Systema Cosmicum* is Galileo’s Summa, involving his entire body of research. It is a stunning defense of the (outlawed) heliocentric cosmology described by Copernicus, and a biting invective against the acceptance of received scientific authority without further observation or experimentation.

The next title in the collection, the *Nov-antiqua sanctissimorum patrum...*, appears here in its first edition. It is the famous letter Galileo sent to the Grand Duchess of Tuscany, Christine de Lorraine, in 1615, discussing the boundaries between science and religion, and trying to reconcile the Copernican system with Christian scripture. (Arthur Koestler called it “a superb manifesto of the freedom of thought,” and quoted it extensively in his *Sleepwalkers*.) Like the *Systema cosmicum*, it could only be published outside the hegemony of the Church. The edition was tiny and it was suppressed in Catholic countries. Only a few copies are supposed to have escaped destruction.

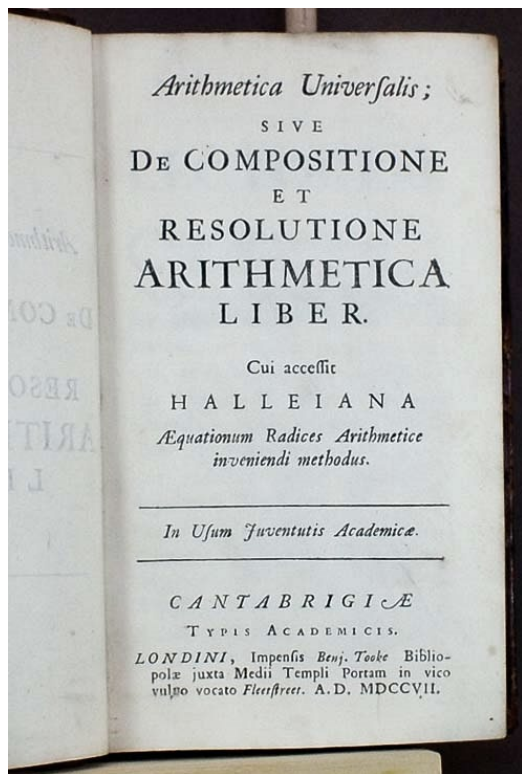
The *Tractatus de proportionum instrumento* is the second Latin edition of describing Galileo’s “proportion compass,” the first important device to perform arithmetical calculations by mechanical means. First published in Italian in 1606, Galileo’s compass was a great improvement over earlier German models.

The “Appendix gemina” comprises: *Perioche ex Introductione in Martem Johannis Kepleri*, p. 459-464, and with special title page: *Epistola ... Pauli Antonii Foscarini ... circa pythagoricorum, & Copernici opinionem de mobilitate terrae, et stabilitate solis: et de novo systemate seu constitutione mundi: in qua Sacrae Scripturae auctoritates, & theologiae propositiones, communiter adversus hanc opinionem adductae conciliantur ...*, p. 465-495. \$100,000

4.

HE DISOWNED IT, BUT THEN THOUGHT BETTER OF IT

[Newton, Isaac; William Whiston; Edmond Halley]. **Arithmetica universalis, sive de compositione et resolutione arithmetica liber. Cui accessit Halleiana aequationum radices arithmeticae inveniendi methodus...** Cambridge: Typis Academicis; and London: Benj. Tooke, 1707



Octavo (19cm); [8], 343, [1] pages (the last page blank) . Figure and diagrams in text. Running-title: Algebrae elementa. Editor’s preface signed: G.W. [i.e. William Whiston]. In contemporary paneled calf, rebaked with new burgundy morocco spine label. Edges of boards rubbed. Early ink ownership inscriptions on blank endleaves (the contemporary autograph of Edward Harington, and the 19th-century mathematician William Fleetwood Sheppard). Half-title present. References: Babson Newton Collection; 199; ESTC; T018645; Bowes and Bowes, 277.

William Whiston (the successor to Newton’s chair at Cambridge) “extracted from Newton a somewhat reluctant permission to print” this remarkable “schoolbook” based on Newton’s lecture notes (Babson Catalogue). So reluctant, in fact, that Newton kept his name out of it, and supposedly considered purchasing the press run in order to

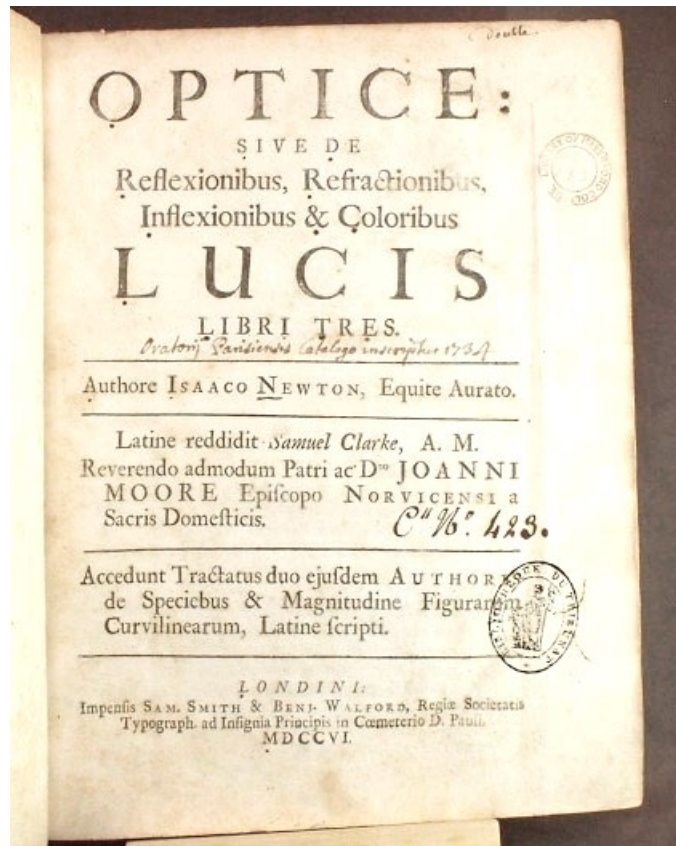
destroy it! (He later republished it himself.) Several new theorems are laid out, including a formula to determine the number of imaginary roots of any equation. The rule is complicated and is offered without proof. Yet, 180 years later, it was proven. The text also includes Halley’s “Aequationum radices arithmeticae inveniendi methodus.” \$24,000

5.

THE BOOK THAT LIT UP EUROPE

Newton, Isaac; Samuel Clarke (trans.). **Optice sive De reflexionibus, refractionibus, inflexionibus & coloribus lucis libri tres.** London: Samuel Smith & Benjamin Walford,, 1706.

First Latin edition. Quarto (26 cm); [14], 348, [2], 24, [2], 24, 21-43, [1] pages, 19 folded leaves of engraved plates, with errata, corrigenda and addenda. Ss1 a cancel. In original calf with blind-ruled border, rebacked, with corners built up. Spine with gilding and leather title label. Speckled edges. Old library stamps on title page, along with early ownership inscriptions. References: Bowes and Bowes, #179; Babson Collection, 137; Norman, 1589.



The Latin edition of Newton's 1704 *Opticks*, was intended for the broader pan-European "Republic of Letters," and it was the first printing to carry Newton's name on the title. This is the edition that inspired Emelie du Chatelet and Voltaire, and through them the whole of Europe. It is a compendium of Newton's main discoveries concerning light and color, including the spectrum of sunlight, the color circle, the reflecting telescope, and interference effects (that is, the so-called 'Newton's rings'). In expansion of the 1704 English text, the Latin edition presents seven added "Quaestiones" which are partly devoted to Newton's support for the "corpuscular" or particle theory of light. The collation of this copy corresponds to the copy in the Babson Collection catalogue, with "Pp" consisting of a single leaf, and with pages 21-24 repeated in the Tractatus.

\$7,000.

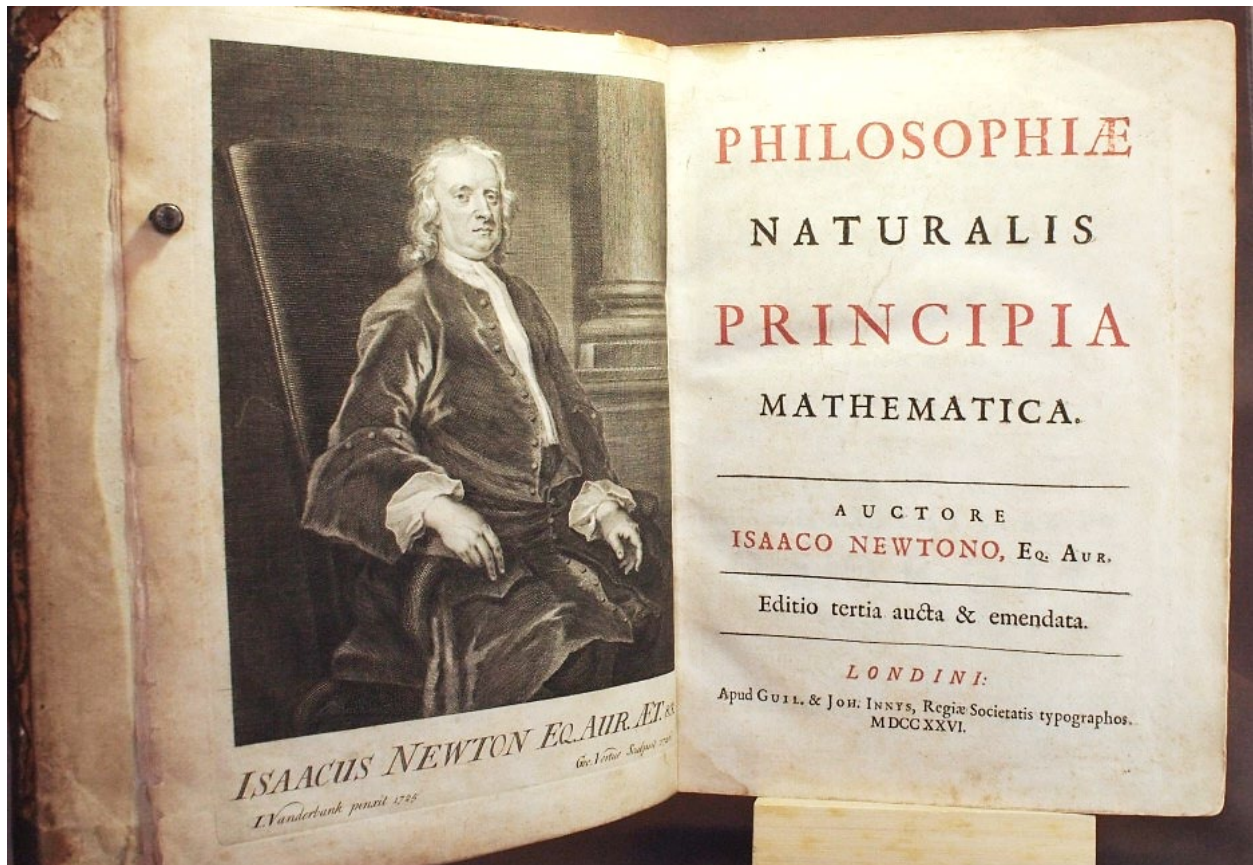
6.

"THE GREATEST WORK IN THE HISTORY OF SCIENCE."

Newton, Isaac; Henry Pemberton. **Philosophiae naturalis principia mathematica... editio tertia aucta et emendata.** London: William & John Innys, 1726.

Third edition. 4to (25 cm); [34], 530, [8] pages, including the initial privilege leaf and half-title. Title printed in red and black (a distinct feature compared to earlier

editions). Engraved frontispiece portrait of Newton by George Vertue after Vanderbank; text diagrams throughout. Engraved diagram on p.506, and final leaf of publisher's advertisements present. In contemporary calf over sturdy boards, somewhat worn, rebaked, corners built up. Upper joint scuffed. Contemporary ownership inscription of Cambridge mathematician William Ransom. References: Bowes and Bowes, #9; Babson, 13 ("the basis of all subsequent editions"); PMM 61 (1686 ed; "the greatest work in the history of science").



The third and last edition of Newton's *Principia* published during his lifetime. In this work, Newton published his formulations on the three laws of motion and the principal of universal gravitation. "The *Principia* provided the great synthesis of the cosmos.... The same laws of gravitation and motion rule everywhere; for the first time a single mathematical law could explain the motion of objects on earth as well as the phenomena of the heavens. The whole cosmos is composed of inter-connecting parts influencing each other according to these laws. It was this grand conception that produced a general revolution in human thought" (PMM). This third edition includes a new preface by Newton mentioning Halley's comet as well as many alterations and augmentations to the text, the most important, according to the compilers of the Babson catalogue, being the scholium on fluxions, in which Leibnitz had been mentioned by name in the two prior editions in association with

the discovery of the calculus but was significantly omitted in this edition. This copy has the portrait intact, often missing from surviving copies. \$25,000.00