NOTES AND RECORDS

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SHAPING A SCIENTIFIC PERSONA IN VERSE: RUGGIERO BOSCOVICH AND JESUIT LATIN DIDACTIC POETRY

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This article examines Ruggiero Boscovich's didactic poetry as a means for reassessing his intellectual development. While rooted in the Jesuit tradition of Latin didacticism, Boscovich's poetic work underwent significant transformations as he moved across different scientific and cultural environments. By tracing the evolution of his poem on solar and lunar eclipses—from its early formulation within Jesuit pedagogical models to its later reconfigurations in the Newtonian milieu of England and the Lucretian literary climate of France—the article argues that these changes reflect Boscovich's strategic ability to adapt the presentation of his ideas to new contexts. His poetic production thus illuminates, among the many dimensions of his work, the negotiation and public shaping of his scientific identity.

Keywords: Boscovich; Latin didactic poetry; eighteenth-century scientific poetry; Jesuit didactic poetry; anti-Copernicanism

INTRODUCTION

> If we expect simplicity in history we find anomalies that surprise us. Roger Boscovich is one of these: a Southern Slav whose work found its keenest response in Britain, a Jesuit who believed in making his ideas simple and explicit, a geometer of physics in the salons of the Rococo, a twentieth-century mind in the eighteenth century, and finally the creator of an idea—the point particle—so necessary that many scientists now find it unnecessary to think about it, allowing it to do its work unconsciously.[1]

With these words, Lancelot Law Whyte opened the 1961 collection of essays devoted to Boscovich on the 250th anniversary of his birth—thereby inaugurating a new and flourishing phase in Boscovich studies.

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1 Lancelot Law Whyte, 'Editorial note', in *Roger Joseph Boscovich, S.J., F.R.S., 1711–1787: studies of his life and work on the 250th anniversary of his birth* (ed. Lancelot Law White), p. 13 (Allen & Unwin, London, 1961).

To a certain extent, Whyte helped consolidate what remains a popular image of Boscovich: that of a precursor of the field conception and of 'a programme of atomic physics suggesting a way in which a unified theory might one day be reached'.[2] Yet the volume itself also conveyed a rather different portrait—one that situated Boscovich firmly within the intellectual landscape of the eighteenth century. He emerges there not as an anachronistic visionary, but as a polymath thoroughly at home in the disciplinary order of his time, as well as in the many places where he carried out his multifarious scientific activity.

Born in 1711 in the independent Republic of Ragusa (now Dubrovnik, Croatia), he received his early education at the Jesuit college of his native city before being sent to Rome at the age of fourteen to study at the Roman College. After completing the Jesuit cursus prescribed by the *Ratio Studiorum*, he was appointed professor of mathematics there in 1740–41, a position he held until 1763–64. During the two decades of his Roman teaching he frequently undertook journeys across Italy and abroad. In the early 1750s he travelled throughout the Papal States with his confrère Christopher Maire in preparation for a new geographical map commissioned by Pope Benedict XIV. Other travels—connected with scientific investigations or diplomatic tasks—took him to Vienna (1757–58), England and continental Europe (1760–61), and Constantinople (1761–62). On these occasions courts and governments often sought his advice on technical matters. After returning to Italy, the Senate of Habsburg Milan appointed him professor of mathematics at the University of Pavia, where he began lecturing in 1764, while also contributing to the establishment of the Astronomical Observatory of Milan at Palazzo Brera, then the Jesuit residence in the city.

This came to an end in 1772, when, after a prolonged dispute with his Jesuit colleagues at Brera, he was removed from his astronomical duties and soon resigned his professorship at Pavia. The suppression of the Society of Jesus in 1773 further altered his prospects, and he moved to France, where he accepted a newly created post as Director of Naval Optics for the French Navy. In the mid-1780s he returned to Italy to oversee the publication of his works on astronomy and optics (*Opera pertinentia ad opticam et astronomiam*, Remondini, Bassano del Grappa, 1785) and to explore the possibility of renewed collaboration with the Brera Observatory. His health, however, soon declined, and he died in Milan on 13 February 1787.

Many of the disciplines mastered by Boscovich were part of mathematics, but in the eighteenth century, this was an ample category. It encompassed 'pure mathematics'—geometry, algebra, and the emerging analysis—as well as 'mixed mathematics', which included optics, mechanics, astronomy, gnomonics, statics, hydraulics, and related subfields. Beyond these areas, he also engaged—if only episodically—with archaeological remains, and he authored a travel journal recounting his return journey to Rome from Constantinople, where he had attempted to observe the transit of Venus in 1761, through Eastern Europe. Finally, Boscovich also composed a substantial body of verse and was a member of the renowned Accademia dell'Arcadia, the influential literary academy founded in Rome in 1690 by Giovan Mario Crescimbeni and Gianvincenzo Gravina.

At the time Whyte's collection appeared, much of Boscovich's work outside physics remained little known. One of the merits of that volume was to initiate a genuine rediscovery. Of course, Whyte was aware that documentation was still fragmentary,[3] and in the

2 Lancelot Law Whyte, 'Boscovich's atomism', in *ibid*., p. 105. Italics in original.

3 'This is not a definitive study. Material lies in Yugoslavia, in Rome, in London, and probably in Paris, awaiting examination by polyglot and poly-disciplinary scholars … A comprehensive analysis of Boscovich's work has still to be

decades that followed several studies helped to fill important gaps. The Boscovich that has emerged is significantly different from the precursor of later theories who had captured Whyte's interest and was still present in his edited book. The picture of an eighteenth-century polymath has remained, but the context in which he operated has been studied in detail even with respect to the Religious Order to which Boscovich belonged, namely the Jesuits. As for his scientific contributions to what we would now call fundamental physics, his *Theory of Natural Philosophy Reduced to a Single Law of the Forces Existing in Nature* (1758, 1763)—long regarded as an anticipation of later conceptions, even as an early example of a unified theory of forces—has been reassessed in light both of the Newtonian science of his time and of his Jesuit education.[4]

Meanwhile, a large portion of Boscovich's writings and correspondence has surfaced and is being published by the Italian *Edizione Nazionale delle Opere e della Corrispondenza di Ruggiero Giuseppe Boscovich*. At the same time, significant unpublished materials—mostly preserved at the Bancroft Library in Berkeley—still await thorough scholarly investigation.[5]

Recent research has also turned attention to Boscovich's poetic production, especially—but not exclusively—his didactic epics.[6] Notwithstanding valuable, though often limited,

made … The aim here has been to provide a sketch of his life and to display the originality, many-sidedness and influence of a figure … The present collective effort suggests, but does not exhaust, Boscovich's fertility. He was mathematician, physicist, astronomer, geodesist, engineer and architect, as well as Jesuit, poet, diplomatist, social figure and much-travelled personality of eighteenth-century Europe (his life coinciding closely with those of Franklin, Hume, Euler, Diderot and d'Alembert)'. Whyte, *op. cit.* (note 1), p. 13.

4 The image of Boscovich as a precursor of a 'theory of everything' in modern sense still persists, particularly beyond the specialized literature in the history of science. Its locus classicus is the cosmologist John Barrow's widely read book *Theories of everything* (1992); see the revised edition *New theories of everything*, pp. 19–21 (Oxford University Press, 2007). The following is a selective bibliography of studies published since the late 1980s. It is intended to illustrate the thematic breadth of the renewed scholarship on Boscovich rather than to provide an exhaustive survey: Edoardo Proverbio, 'R.G. Boscovich's determination of instrumental errors in observation', *Arch. Hist. Exact Sci.* **38**, 135–152 (1988); Ivića Martinović, 'Theories and inter-theory relations in Bošković', *Int. Stud. Phil. Sci.* **4** (3), 247–262 (1990); Ugo Baldini, 'Boscovich e la tradizione gesuitica in filosofia naturale: continuità e cambiamento', *Nuncius* **7** (2), 3–68 (1992); Piers Bursill-Hall (ed.), *R.J. Boscovich. Vita e attività scientifica—his life and scientific work* (Istituto della Enciclopedia Italiana, Roma, 1993); Josip Talanga, 'Einleitung', in Rogerius Iosephus Boscovich, *De continuitatis lege. Über das Gesetz der Kontinuität*, übersetz und herausgegeben von Josip Talanga (Universitätsverlag Winter, Heidelberg, 2001); Edoardo Proverbio, 'Gli interessi scientifici di Ruggiero G. Boscovich per i fenomeni elettrici e i suoi incontri con Benjamin Franklin ed altri elettricisti inglesi e francesi', *Quaderni di Storia della Fisica* **11**, 3–48 (2003); Ugo Baldini, 'The reception of a theory: a provisional syllabus of Boscovich Literature, 1746–1800', in *The Jesuits II. Cultures, sciences, and the arts, 1540–1773* (ed. John W. O'Malley, Gauvin A. Bailey, Steven J. Harris, and T. Frank Kennedy), pp. 405–450 (University of Toronto Press, 2006); Luigi Pepe, 'Introduzione', in Ruggiero Giuseppe Boscovich, *Viaggio astronomico e geografico nello Stato della Chiesa (1750–1752)* (Edizioni della Normale, Pisa, 2011); John L. Heilbron, 'Boscovich in Britain', in *Relocating the history of science* (ed. Theodore Arabatzis, Jürgen Renn and Ana Simões), pp. 99–116 (Springer, Cham, 2015); Boris Kožnjak, 'Who let the demon out? Laplace and Boscovich on determinism', *Stud. Hist. Phil. Sci., Part A* **51**(C), 42–52 (2015); Andrea Del Centina and Alessandra Fiocca, 'Boscovich's geometrical principle of continuity, and the 'mysteries of the infinity'', *Hist. Math.* **45** (2), 131–175; Luca Guzzardi, *Ruggiero Boscovich's theory of natural philosophy: points, distances, determinations* (Springer, Cham, 2020); Edoardo Proverbio, *Il contesto in cui Ruggiero Giuseppe Boscovich maturò la decisione di trasferirsi in Francia nel 1773* (Accademia Nazionale delle Scienze detta dei XL, Roma, 2021); Boris Kožnjak, 'Roger Boscovich on mind–body interaction and the conservation of momentum', *Eur. Leg.* **31** (1), 20–37 (2026).

5 The works and correspondence of Boscovich have been published since 2008 by the Edizione Nazionale delle Opere e della Corrispondenza di Ruggiero Giuseppe Boscovich (Rome). They are freely accessible at http://www.brera.inaf.it/edizionenazionaleboscovich/ (accessed April 2026). Unpublished materials by, or related to, Boscovich are preserved in the collection *Ruggero Giuseppe Boscovich papers*, BANC MSS 72/238 cz, The Bancroft Library, University of California, Berkeley. A valuable resource for the history of this collection is Roger Hahn, 'The Boscovich Archives at Berkeley', *Isis* **56** (1), 70–78 (1965).

6 Ivica Martinović, 'Žanrovi hrvatske filozofske Baštine od 15. do 18. Stoljeća', in *Otvorena pitanja povijesti hrvatske filozofije* (ed. Pavo Barišić), pp. 69–151 (Institut za Filozofiju, Zagreb, 1999); Žarko Dadić, 'Introduzione', in Ruggiero G. Boscovich, *De Solis ac Lunae defectibus* (ed. Žarko Dadić), Edizione Nazionale delle Opere e della Corrispondenza di

analyses focusing on themes, style, and the Jesuit milieu in which this poetry flourished, this dimension of Boscovich's work has largely been treated in isolation: as an uninformative, if not merely ornamental, appendix to his scientific contributions. By contrast, the following pages argue that Boscovich's didactic poetry offers a key to his intellectual development—a privileged medium through which he shaped and reshaped his scientific persona. To make this case, I first discuss Boscovich's poetic activity within the broader tradition of Jesuit Latin didactic poetry. I then turn to the early version of what was, at the time, a relatively short carmen on eclipses, *De Solis ac Lunae defectibus* (1735), and to the scientific and literary models that informed it, before examining the substantial reconfiguration of the poem in the London edition of 1760 and in the French version *Les Éclipses* (1779). By tracing the transformations in both style and doctrine of *De Solis ac Lunae defectibus*, I suggest that its successive reconfigurations reflect not conceptual instability but a strategic adaptation to changing intellectual and institutional contexts.

Jesuits' didactic poetry on the background

Early modern Latin didactic poetry appears, at first sight, as a distinct tradition within the wider landscape of early modern didactic verse—a genre that, overall, witnessed a boom since the Renaissance until the late eighteenth century. Yet this field is notoriously difficult to delimit. Even if one brackets the plurality of vernacular traditions and limits the inquiry to neo-Latin production, the contours of the genre remain indistinct, owing to the heterogeneous character of the surviving corpus. To what extent, for example, should a poem devoted to scientific subject matter be classified as 'didactic' in the Horatian sense of mingling 'the useful with the sweet, delighting and instructing' the reader (*Ars poetica*, 343–344)? And what degree of generic specificity can be ascribed to works that adopt the didactic mode across such widely divergent domains—from astronomy to anatomy and pathology, from meteorology to seismology, from botany to artillery?[7] As noted by Victoria Moul, even 'the use of "didactic poetry" as a specific generic term is … contentious: there is very little acknowledgement in either ancient or early modern criticism of didactic as a genre of its own, rather than a form of epic'.[8]

In this respect, the eighteenth-century Latin didactic poetry offers a double—if not triple—advantage. First, the corpus is more manageable, consisting of a comparatively small

Ruggiero Giuseppe Boscovich, Opere, vol. XIII/1, pp. 11–21 (Ed. Naz. Boscovich, Rome, 2012); Luca Guzzardi, 'Introduzione', in Ruggiero G. Boscovich, *Les Eclipses: Poëme en six chants* (ed. Luca Guzzardi), Edizione Nazionale delle Opere e della Corrispondenza di Ruggiero Giuseppe Boscovich, Opere, vol. XIII/2, pp. 11–33 (ed. Naz. Boscovich, Rome, 2012); Tatjana Krizman Malev, 'Introduzione', in Ruggiero G. Boscovich, *Carmina, poesie, ecloghe, epigrammi* (ed. Tatjana Krizman Malev), Edizione Nazionale delle Opere e della Corrispondenza di Ruggiero Giuseppe Boscovich, Opere, vol. XIV, pp. 1–15 (Ed. Naz. Boscovich, Rome, 2012); Nada Savkovic, 'Occasional poetry by Roger Boscovich', *Almagest* **6** (1), 32–47 (2015); Thomas Haye, 'Das Gedicht De Solis et Lunae defectibus des Roger Boscovich (1711–1787): wissensvermittelnde Poesie in antiker und nachantiker Tradition', in *Die Poesie der Dinge. Ziele und Strategien der Wissensvermittlung im lateinischen Lehrgedicht der frühen Neuzeit* (ed. Ramunė Markevičiūtė and Bernd Roling), pp. 219–238 (De Gruyter, Berlin and Boston, 2021).

7 See Claudia Schindler, 'Didactic poetry as elitist poetry: Christopher Stay's *De poesi didascalica dialogus* in the context of classical and neo-Latin didactic discourse', in *Neo-Latin and the vernaculars; bilingual interactions in the early modern period* (ed. Florian Schaffenrath and Alexander Winkler), pp. 232–250 (Brill, Leiden, 2018), at pp. 232–233; Martin Korenjak, *Latin Scientific Literature, 1450–1850*, pp. 383–389 (Oxford University Press, 2023).

8 Victoria Moul, 'Didactic poetry', in *A guide to neo-Latin literature* (ed. Victoria Moul), pp. 180–199 (Cambridge University Press, 2017), at p. 181.

number of works written exclusively in Latin. Second, its authors were predominantly Jesuits, or writers closely associated with Jesuit circles, who addressed their works primarily to fellow Jesuits. Third, and as we shall see, virtually all poetry with scientific content may fall within a conventionally 'didactic' genre, one that nonetheless exhibits distinctive features of its own.

Throughout the seventeenth and the eighteenth century the Jesuits composed and published hundreds of didactic Latin poems. Haskell counts more than 250 works, though this corpus is focused on a small group of works mostly published in France and Italy, with a production peak in the 1760s and 1770s.[9] This number leaves out of consideration works published in the Iberian Peninsula as well as in South America and the Far East, where the influence of the Society of Jesus was powerful, but, as far as can be ascertained at the present, this production was comparatively less important. Perhaps more significant for the fate of Latin didactic poetry could have been the suppression of the Jesuit order that followed the papal brief *Dominus ac Redemptor* (1773). In fact, Jesuits' engagement with Latin didactic poetry did not collapse together with the Society. Yasmin Haskell has recently argued that it persisted in scattered, 'remnant' communities: former Jesuits continued to publish or edit scientific poems and often used the Latin verse as a means of maintaining a kind of intellectual identity and solidarity.[10]

Most Jesuit didactic poets taught at various levels in the Society's colleges, but—with the remarkable exception of Ruggiero Boscovich and few others—the objects they chose for their poems usually were not part of the subjects they taught in classes, nor did they reflect their expertise or the main field of their scientific activity. A typical case was Orazio Borgondio, Boscovich's mentor and predecessor on the chair of mathematics from 1712 until 1740, who wrote short didactic poems on the circulation of blood, respiration, navigation, lightning, etc.

From this and other examples, Haskell concludes that the Jesuits' investment in Latin didactic poetry did not serve immediate pedagogical aims, such as instructing young pupils or disseminating scientific results to a broader learned readership. After all, a long and convoluted poem, say, in hexameter could hardly teach something to students who were able to easily find the requested information in clearer prose works, maybe endowed with diagrams. While, on the one hand, it can be observed that 'the roots of Jesuit didactic (philosophical) poetry go back to the earliest years of the Society and indeed to Renaissance humanism',[11] on the other hand its reasons should be viewed in the context of the pedagogical, aesthetical, philosophical, and literary theories of the Society.

As obvious as it may seem, it should be kept in mind that didactic poetry is, most of all, *poetry*, i.e. literary work. A theme as typical as amusement, or the distraction from the troubles and burdens of everyday life, can easily be found in Jesuits' didactic works. Two of Boscovich's teachers at the Roman College who also authored Latin didactic poems—the abovementioned Borgondio, and Carlo Noceti, who had taught natural philosophy at the Roman College—wrote that they did poetry when they were free from teaching,[12] mediating with this a peculiar *topos* of Latin philosophy and poetry—namely the dichotomy

9 Yasmin Haskell, *Loyola's Bees. Ideology and industry in Jesuit Latin didactic poetry* (Oxford University Press, 2003).

10 Yasmin Haskell, 'Latin scientific poetry under the shadow of the Jesuit suppression', in Markevičiūtė and Roling (eds), *op. cit.* (note 6), pp. 239–256.

11 *Ibid.*, p. 240.

12 Haskell, *op. cit.* (note 9), pp. 6, 192, 205–206.

otium/negotium.[13] Boscovich himself, at the end of the Preface to his didactic 'Newtonian' epic *De Solis ac Lunae defectibus*, admits that poetry is for him 'a sort of pastime', not a professional activity ('*ob animi oblectamentum … non ex officio*').[14]

Here, however, Boscovich seems to deviate from the most conventional pattern. When, in 1747, Noceti published his two epics (collected in a single volume) *De iride* and *De aurora boreali*, Boscovich added a substantial apparatus of notes, more extensive than the verses themselves. As Benedict Stay, a Ragusa-born, Jesuit-educated didactic poet and close friend of Boscovich, issued the first two volumes of his poem on Newton's natural philosophy, *Philosophiae recentioris … versibus traditae libri X* (1755; 1760), Boscovich added notes and supplements (a third volume, published in 1792, would feature only his annotations). Finally, Boscovich provided notes to *De Solis ac Lunae defectibus* as well. Thus, even if the didactic intention is not fully realized within the poems themselves, it may well have been transferred to their rich explanatory apparatuses.

In conclusion, the eighteenth-century Jesuit didactic poetry, although seemingly constituting a compact corpus of works, is more nuanced than it might initially appear. The three examples just mentioned—the notes to Noceti's *carmina*, the notes and supplements to Stay's poem, and the notes to Boscovich's own *De Solis ac Lunae defectibus*—differ in several respects and would merit a dedicated comparative study. In the present context, I limit myself to highlighting a common feature. In all these cases, the notes and addenda are not intended to provide basic instruction for the general reader—a characteristic Boscovich will explicitly emphasize in the French edition of *De Solis ac Lunae defectibus*. Rather, they are aimed to present in detail particular theories, to comment on specific issues, and to scrutinize special contexts while seizing the occasion offered by the poem. In many instances, Boscovich does not refrain from employing mathematical language; for example, Noceti's volume includes two tables of geometric diagrams to which Boscovich's notes refer. At other times, especially in the supplements to Stay's 'Newtonian poem' but also, to some extent, in *De Solis ac Lunae defectibus* (1760), Boscovich does not confine himself to presenting Newton's theory but advances aspects of his own.

An anonymous review of Noceti's work may further illuminate the perceived function of Latin didactic poetry, along with the multiple connotations it could bear. Published in the 1748 issue of the *Giornale de' letterati*—a journal founded in 1742 in Rome originally under the title *Notizie letterarie oltramontane per uso de' letterati d'Italia*—the review opens with a discussion of the relation between poetry and science. In the light of Aristotle's dismissal (in *Poetics*, ch. I) of natural science as a subject suitable for poetry and his opinion that Empedocles was a natural scientist (*physiologon* in the Greek text) rather than a poet, the anonymous author replies opposing Cicero, 'who in *de Oratore* did not find it difficult to call the work Empedocles wrote in verse "*egregium Poema*"'.[15] He does not deny the

13 On the complex relationship between *otium* and *negotium* in Latin poetry and culture see: Jean-Marie André, *Recherches sur l'otium romain* (Les Belles Lettres, Paris, 1962); Jean-Marie André, *L'otium dans la vie moral et intellectuelle romaine des origines à l'époque augustéenne* (Presses Universitaires de France, Paris, 1966); Erich Burck, 'Vom Sinn des otium im Alten Rom', in *Das Staatsdenken der Römer* (ed. Richard Klein), pp. 231–254 (Wissenschaftliche Buchgesellschaft, Darmstadt, 1966); Fritz Schalk, 'Otium im Romanischen', in *Arbeit, Musse, Meditation. Studies in the vita activa and vita contemplativa* (ed. Brian Vickers), pp. 225–256 (Verlag der Fachvereine, Zürich, 1991). On the concept of *otium* in early modern culture, see Brian Vickers 'Leisure and idleness in the Renaissance: the ambivalence of otium', *Renaiss. Stud.* **4** (2), 107–154 (1990).

14 Boscovich, *De Solis ac Lunae defectibus*, *op. cit.* (note 6), p. XXXVII.

15 The allusion is to Cicero, *De Orat.*, I.50.217: 'Eademque ratione dicantur ei quos physicos Graeci nominant idem poetae, quoniam Empedocles physicus egregium poema fecerit'.

'extreme difficulty one encounters in understanding the physical things in terms of numbers, presenting them in poetic language, and adding to them the charms and elegance of the Muses'. Yet, he argues, this 'does not mean that physical matters are incapable of receiving the sweet and graceful manners of Poetry. Such incapacity stems from the inability to find the appropriate embellishments with which to adorn physical subjects, not from their nature'. Hence, for the reviewer of Noceti's epic, the didactic poets deserve more respect and praise as they treat matters that are both difficult and far from everyday experience:

> If there are men of outstanding talent who, even without the stimulus of personal interest in the subject to kindle their imagination, nevertheless nourish within their minds such ardor as to clothe in poetic dress, among natural things, those that do not belong to the human sphere, we believe that such a man should be raised to the heavens with the highest praise. For they open a path that until now was closed, or obstructed by a thousand difficulties.[16]

To a certain extent, this praise of the didactic verse anticipates the radicalism of Christopher Stay's *Dialogue on didactic poetry*, which, appended to the third volume of the celebrated didactic epic on Newtonian natural philosophy of his brother Benedict, sees in didacticism the highest of all poetic forms.[17] The anonymous reviewer of Noceti's epic seems to defend a similar rhetorical model of poetic excellence based on 'linguistic effects and reader affects':[18] poetry demands features such as '*vezzi*' (charms), '*leggiadria*' (elegance), '*venustà*' (grace), '*ornamenti*' (embellishments, ornaments). These are the building blocks that bridge science and poetry, legitimizing the scientific didactic poem as a literary genre in its own right: they are capable of transforming difficult material into enjoyable representations and of integrating cognitive content with aesthetic pleasure.

Yet this aesthetic ideal could bear multiple meanings for Jesuit authors. Poetry could function as a higher form of *otium* placed at the service of *negotium*, a rhetorical device to attract and guide attention to several purposes. Scientific didactic poems in Latin were also exercises in the skills and techniques cultivated over years of training in classical studies combined with excellence in most fields of natural and mathematical science. In this sense, they were expressions of the ideals and pedagogical methods of the Society. Finally, they were typically recited on special occasions—such as the inauguration of buildings and institutions, the opening of academic courses at the Collegium Romanum, major religious ceremonies and feasts, and the meetings of the Arcadian Academy, to which many Jesuit didactic authors belonged.[19] This development might have reflected a broader cultural

16 [Anonymous], 'Caroli Noceti e Soc. Jesu de Iride & Aurora Boreali, Carmina … cum Notis Rogerii Jos. Boscovich … Articolo IV', in *Giornale de' letterati per l'anno 1748*, pp. 27–39 (Pagliarini, Rome, 1748), at pp. 28–30.

17 Christopher Stay, 'De poesi didascalica dialogus', in Benedict Stay, *Philosophiae recentioris … versibus traditae libri decem. Tomus tertius*, pp. I–XXX (Pagliarini, Rome, 1792). For a discussion of the dialogue in the context of the eighteenth-century didactic poetry, see Haskell, *op. cit.* (note 9), pp. 180–188; C. Schindler, *op. cit.* (note 7).

18 Haskell, *op. cit.* (note 9), p. 186.

19 *Ibid*., pp. 6–10, 312–313. Examples of poem recitations are diffusely mentioned throughout Haskell's book. They include, among others, the Jesuits Niccolò Partenio Giannattasio, Carlo Noceti, Orazio Borgondio, Girolamo Lagomarsini, Giuseppe Maria Mazzolari, and Boscovich himself. As Haskell notes, recitations, which were performed both by professors (e.g. in opening their courses) and by students, served many educational purposes. Some of the recited poems remained unpublished, and we know about them only as far as reported by attendants. As Boscovich reports in his notes to Noceti's poems, the latter had been reciting (preliminary versions of) *De Iride* since 1729 at the opening of his courses. See Ruggiero G. Boscovich, 'Notae in Iridem', in Carlo Noceti, *De iride et aurora boreali carmina*, pp. 19–48 (Pagliarini, Rome, 1747), at p. 19, note 1. According to Boscovich, Noceti recited the poems again—probably in their final form—

vogue, but it was one sustained by a deeper conviction: that didactic poetry represented Jesuit pedagogy at its most refined. The celebratory mechanism thus operated on multiple levels: celebration of the occasion, celebration of the author's virtuosity, celebration of the didactic effectiveness of the Society itself. After all, didactic poems are meant to *teach* something; even if, as noted above, instruction was not always their primary aim, this function carried undeniable rhetorical weight. What was ultimately celebrated, therefore, was a distinctive virtue: the dignity of intellectual labour and a steadfast dedication to Ignatian educational ideals.

This ethos is also evident in the principal poetic model the Jesuits adopted. Rather than turning to the philosophical–cosmological epic of Lucretius' *De rerum natura*, they looked to Virgil's *Georgics*, which exalt labour as a fundamental dimension of human life. Yet the labour celebrated here was not the Virgilian *labor improbus* of the fields, but intellectual exertion articulated through three intertwined forms of difficulty integral to Jesuit didactic poetry: the sustained burden to teaching, the intrinsic complexity of the subject matter treated in verse, and the technical challenge of versification itself ('how difficult it is to pursue such matters in Latin, especially in Virgilian style', writes Boscovich commenting on a passage of Noceti's poem *De aurora borealis*).[20] They can be viewed as a translation on a literary level of the Jesuits' daily vocation to science for the greater glory of God, in accordance with the ideal of Ignatius of Loyola: a toil involving mind, body, discipline, and moral effort.

Of course, in certain respects, Lucretius did remain an important point of reference for Jesuit poets. Although the atomist ontology as well as the Epicurean ethics of *De rerum natura* were unacceptable to most of them, Lucretius nevertheless provided a rich repertory of formulae, stock phrases, and expressions that had become canonical and were widely adopted, though now charged with meanings consonant with Jesuit ideology.[21] Particularly persistent was the demystification stance that is integral to Lucretius and appears, for example, in Noceti's *Aurora borealis* discussed above, where it takes the form of the familiar *topos* that true knowledge of the causes of natural phenomena dispels false beliefs. Yet, whereas for Lucretius such knowledge aims to liberate humans from superstition—especially from supernatural explanations that generate anxiety and the fear of death—Noceti directs his polemic, first of all, against accounts of phenomena that can be shown to be mistaken when

early in 1746 during weekly meetings of the Arcadian Academy. On that occasion, following Noceti's performance, two Arcadians recited Boscovich's own *Dialogi sull'aurora boreale*, viz. *Dialogues on the northern lights*, issued in 1748 in the *Giornale de' letterati*. See Ruggiero to Natale Boscovich, 22 March 1746, in Ruggiero G. Boscovich, *Carteggio con Bartolomeo Boscovich* (ed. Edoardo Proverbio and Mario Rigutti), Edizione Nazionale delle Opere e della Corrispondenza di Ruggiero Giuseppe Boscovich, Corrispondenza, vol. II (Ed. Naz. Boscovich, Rome, 2010), p. 111. About Noceti's *De Iride* and its scientific background, see Irina Tautschnig, 'The weaver of light: divine origin of nature and natural science in Carlo Noceti's Iris', in *Acta Conventus Neo-Latini Albasitensis* (ed. Florian Schaffenrath and María Teresa Santamaría Hernández), pp. 586–597 (Brill, Leiden, 2020).

20 Ruggiero G. Boscovich, 'Notae in Auroram Borealem', in Carlo Noceti, *op. cit.* (note 19), pp. 89–127, at p. 99. Finally, on the value of the feature of 'difficulty' in Jesuit education, see Haskell, *op. cit.* (note 9), pp. 7–12.

21 On the presence of Lucretius in Jesuit didactic poetry see Haskell, *op. cit.* (note 9), pp. 223–228. A remarkable case here is the hymn to the 'alma / naturae genetrix' that opens Benedict Stay's 'Cartesian poem', *Philosophiae vesribus traditae libri VI*. While it clearly echoes the '*Aeneadum genetrix, hominum divomque voluptas*' of *De rerum natura*, Stay's mother of nature is not Lucretius's *alma Venus* but the wisdom of God. See Ildebrando Tacconi, 'I poemi filosofici latini di Benedetto Stay, il Lucrezio ragusino', in *Per la Dalmazia con amore e con angoscia. Tutti gli scritti editi ed inediti di Ildebrando Tacconi* (ed. Vanni Tacconi), pp. 333–374 (Del Bianco, Udine, 1994), at pp. 365–368.

examined in the light of a more advanced theoretical framework.[22] As we shall see, this same *topos*, accompanied by a closely related argument, occurs in Boscovich as well.

Boscovich's first attempt as didactic poet and his models

Many of Boscovich's poems are typical examples of occasional poetry, including epithalamia (wedding compositions), paeans, victory odes, and poems celebrating healing or recovery. The celebratory scheme described above applies here as well. The person honoured, the mode of celebration (Latin verse), and the specific occasion were tightly linked. To celebrate someone through poetry meant publicly recognizing his or her role in the occasion. Poetry, regarded as the highest form of classical culture, provided the medium for this acknowledgement. In return, the poet could expect access to the dedicatee and potential patronage, which was the case for Boscovich's epic *Poema versibus heroicis* in honour of King Stanislaus of Poland (1753) and *Pro Benedicto XIV Pontefice Maximo Soteria* (1757). He occasionally hoped for financial support as well, as in the dedicatory epistle to Louis XVI in *Les Éclipses*—a hope that proved misplaced, as we shall see.

Didactic epics and short didactic poems make up a substantial part of Boscovich's poetic output. Leaving aside the unpublished works, these include *De Solis ac Lunae defectibus* and three Latin epigrams published in the poetic collection *Arcadum carmina: In planetarum dispositione*, *De Solis maculis*, and *In Graecam Fabulam Saturni a Iove in regno pulsi*, printed in Rome in 1756. Astronomy also features prominently in the epithalamium for the marriage of the Venetian patrician Giovanni Correr and Adriana Pesaro.[23] Overall, didactic verses account for more than half of Boscovich's surviving poetic works.

The origins of Boscovich's didactic poetry can be traced to his activity as a teacher in the lower classes at the Jesuit College of Fermo on the Adriatic coast. In a letter to his brother Natale from 3 December 1733, he wrote that 'the school tires me less than in Rome … Usually I am free in the evening and I can do what I want, which is a great advantage, both because I am not bound, as in Rome, to a material and annoying effort, and because I can study for myself'.[24] Among the manuscripts from this period (late 1733

22 'At prius ignotos quam carmine pandimus ortus / Lucis hyperboreae; quo se ordine in aetheris axem / Illa ferat; quaeque incautis inducere fraudem / Possunt; et vera procul a ratione recedunt, / Discutere, et multae mihi sit praevertere curae. / Scilicet is demum veras cognoscere causas / Aptus erit, qui secum animo legesque, modosque / Ante notet rerum, observans; penitusque releget / credulus a teneris temere quae combibit annis'. ('But before we unfold in verse the unknown origins of the northern lights—by what order it directs itself toward the axis of heaven—and before we examine those things which can mislead the unwary and depart far from true reason, it is appropriate for me to dispel and anticipate many concerns. For indeed only he will be capable of discerning the true causes who first, reflecting within himself, marks out the laws and modes of things, observing them, and thoroughly re-examines what, too credulous, he has rashly imbibed from his earliest years'.) C. Noceti, 'Aurora Borealis', in C. Noceti, *op. cit.* (note 19), pp. 49–87, at p. 50, vv. 33–41. Notably, while no explicit reference to Lucretius is made, Virgil is mentioned twice in Boscovich's notes (pp. 99 and 100). Even more significant is that Virgil also appears in the *Approbationes*—that is, in the formal statement certifying that the work complies with Catholic orthodoxy—printed on the Imprimatur page: 'Everywhere the character of Virgilian poetry is faithfully reproduced'. Finally, the use of the *topos* against mistaken explanations was not peculiar to Noceti. Another example may be found in Étienne Souciet's poem *Cometae*, published in Caen in 1710: see Haskell, *op. cit.* (note 9), p. 165. It is reasonable to suppose that this represented a broader and fairly widespread tendency.

23 Ruggiero G. Boscovich, *In nuptiis Joannis Corarii et Andrianae Pisauriae e nobilissimis Venetae reipublicae senatoriis familiis carmen* (Pagliarini, Rome, 1758).

24 Ruggiero to Natale Boscovich, Fermo, 3 dicembre 1733, in Ruggiero G. Boscovich, *Carteggio con Natale Boscovich* (ed. Edoardo Proverbio), Edizione Nazionale delle Opere e della Corrispondenza di Ruggiero Giuseppe Boscovich, Corrispondenza, vol. III (Ed. Naz. Boscovich, Rome, 2012), at tome 1, p. 14. Let us recall that, upon completing the course in

to early 1735) is the earliest version of *De Solis ac Lunae defectibus*, consisting of roughly 360 verses—the first nucleus of a poem that would only be completed and published in London in 1760. The composition of that early version, instead, belongs to Boscovich's stay in Fermo, shortly before his return to Rome to teach in the lower classes of the Collegium Romanum (beginning of 1735).

The manuscript title reads *De Solis ac Lunae defectibus Carmen*, with *Carmen* indicating a medium-length poetic composition. It comprises a prose preamble and a first part in verse, while the second part, though announced in the preamble, was never completed in that form. According to a handwritten Italian heading in Boscovich's own hand, which precedes the *carmen* itself, this was recited at Boscovich's inaugural lesson.[25]

The preamble explains the poem's occasion and motivation:

> The eclipse of the Moon on the 2nd of October, which appeared to me while, observing the sky, I was pondering over the subject of this inaugural lecture, troubled and hesitant, captured my attention; so I think I hardly could do something more appreciable to the most learned men than by dealing, in a heroic *carmen*, with 'the sun's many eclipses, the moon's many labors', which Virgil himself, the prince of poets, considers fitting for the 2nd book for the *Georgics*.[26]

The remark provides a literary pretext, since the composition of the *carmen* predates the mentioned eclipse. It remains uncertain whether Boscovich was prompted chiefly by Virgil, by studies about the astronomical phenomenon itself, or by the guidance of his former mentors Noceti and Borgondio, who shaped his education in poetry as well as in natural philosophy and mathematics. Furthermore, the same reference to Virgil's *Georgics* appears in Riccioli's *Almagestum novum*—a work widely used in Jesuit astronomical instruction and frequently cited in the marginalia of the *carmen* manuscript.[27]

philosophy, mathematics, and physics, Boscovich—like all Jesuit novices at this stage—was required to teach the *studia inferiora* in Jesuit schools for at least five years, guiding the same cohort from the lowest to the highest level. He fulfilled part of this obligation in Fermo (1733–1735), where he had been sent to recover from ill health.

25 'Poema degli Eclissi, come fu composto da principio in Fermo da Ruggiero Gius. Boscovich per recitarsi in Roma come fece nella prefazione al cominciar a insegnar la prima [classe] in Coll[egi]o Romano nel Nov.[embre] 1735, e che poi è divenuto di 5 libri stampato in Londra e in Venezia, indi di 6 libri ristampato in Parigi colla traduzione francese'. ('Poem of the Eclipses, as it was first composed in Fermo by Ruggiero Gius. Boscovich, to be recited in Rome, as he did in the inaugural lecture of the first class in November 1735 at the Collegium Romanum—which subsequently became a poem in five books printed in London and Venice, and later in six books reprinted in Paris with a French translation'.) Ruggiero Giuseppe Boscovich, *De Solis ac Lunae defectibus Carmen*, in *Ruggero Giuseppe Boscovich papers*, BANC MSS 72/238 cz, The Bancroft Library, University of California, Berkeley, 1/1, f. 1r. I have not been able to find sources documenting Boscovich's teaching assignments at the Roman College prior to his appointment as professor of mathematics in 1741. From that point onward, and apart from brief periods of leave in which he was replaced by other *confrères*, he taught mathematics continuously until his appointment to the chair of mathematics at the University of Pavia in 1763. See Ricardo García Villoslada, *Storia del Collegio Romano dal suo inizio (1551) alla soppressione della Compagnia di Gesù (1773)*, p. 335 (apud aedes Universitatis Gregorianae, Rome, 1954). The preface to *De Solis ac Lunae defectibus* (1760) indirectly confirms that the second part of the 1735 *carmen* has never been written, stating that it was 'roughly 300 verses long in total'. Boscovich, *De Solis ac Lunae defectibus*, *op. cit.* (note 6), p. XXXII.

26 'Lunae defectus, quem mihi 2 a Octobris nocte intueri licuit, iam diu de huiusce prolusionis argumento sollicitum, incertumque in eam adduxit mentem; ut nihil sapientissimis uiris me gratius facturum esse arbitrarer, quam si, quos ipse poetarum Princeps Virgilius Georgicorum 2o carmini censet aptissimos, *defectus Solis varios, Lunaque Labores*, heroico carmine pertractandos susciperem'. Ruggiero Giuseppe Boscovich *De Solis ac Lunae defectibus Carmen*, *op. cit.* (note 25), f. 2r, emphasis added. The (partial) lunar eclipse referred to by Boscovich actually took place in the night between 1 and 2 October 1735.

27 Giovanni Battista Riccioli, *Almagestum novum astronomiam veterem novamque complectens …*, 2 vols (ex Typographia haeredis Victorij Benatij, Bononiae, 1651), at vol. I, p. 286.

Boscovich employed a variant of that Virgilian passage on at least four different occasions, making it a distinctive element of his poetics: in the text of the 1735 *carmen* (v. 358), in the *Ecloga. Recitata in publico Arcadum consessu Anno 1753*, in the 1760 version of *De Solis ac Lunae defectibus*, and at the very beginning of the dedicatory epistle of *Les Eclipses*, the French version of the poem, addressed to Louis XVI.[28]

The original text from the *Georgics* may itself be illuminating regarding the reasons for this stylema:

> But as for me—first may the Muses, sweet beyond compare, whose holy emblems, under the spell of mighty love, I bear, take me to themselves, and show me heaven's pathways, the stars, *the sun's many eclipses, the moon's many labours*; whence come tremblings of the earth, the force to make deep seas swell and burst their barriers, then sink back upon themselves; why winter suns hasten so fast to dip in Ocean, or what delays clog the laggard nights.[29]

Here Virgil suggests that poetry, under the Muses' guidance, can disclose the workings of natural phenomena to its 'officiants', namely the poets themselves—a point reinforced by the expression *sacra ferre* ('to bear the sacred emblems'), which also connotes 'celebrating the rites' and thus underscores the poet's role as mediator of knowledge. A few lines later, Virgil adds: 'Blessed is he who has succeeded in learning the causes of things' (Felix, qui potuit rerum cognoscere causas, *Georgics* II, 490). Again, this verse is clearly echoed in Boscovich's 1735 *carmen*: 'Happy years! Happy centuries! to those to whom it may be granted to know the causes of such important things'. As noted above, the *topos* ultimately goes back to Lucretius (to whom Virgil's verse in fact alludes). Yet, as in Noceti's case, here Boscovich does not deploy it against superstitious or supernatural explanations. Rather, the target is a set of accounts that are themselves naturalistic but can nevertheless be shown to be false.[30] What emerges, then, is not science conceived primarily as liberation from

28 See, respectively, Boscovich, *Ecloga. Recitata in publico Arcadum consessu Anno 1753*, in *Arcadum Carmina*, Pars altera, pp. 201–204 (de Rubeis, Rome, 1756), at p. 201 (now in Boscovich, *Carmina, poesie, ecloghe, epigrammi*, *op. cit.* (note 6), pp. 21–29, at p. 21); Boscovich, *De Solis ac Lunae defectibus*, *op. cit.* (note 6), p. 4, Chant I, v. 59; Boscovich, *Les Eclipses*, *op. cit.* (note 6), p. II.

29 'Me vero primum dulces ante omnia Musae, / Quarum sacra fero ingenti percussus amore, / Accipiant, caelique visa et sidera monstrent, / Defectus solis varios, lunaeque labores, unde tremor terris, qua vi maria alta tumescant / Obicibus ruptis, rursusque in se ipsa residant, quid tantum Oceano properent se tinguere soles / Hiberni, vel quae tardis mora noctibus obstet'. Virgil, *Eclogues. Georgics. Aeneid 1–6*, with an English translation by H. Rushton Fairclough, revised by G.P. Goold (Harvard University Press, Cambridge, 1999), p. 171, II, vv. 475–482; italics added: emphasis corresponds to Boscovich's quotation).

30 'Felices anni! Felicia secula! Causas / Tantarum queis posse datum cognoscere rerum. / Ast olim haud vulgis tantum, plebemque, sed ipsos / Saepe etiam latuere sophos. Nec defuit, aut qui / Parte cavum Phoebi, et sine Lumine, diceret, orbem / Hanc olim frontem Terris obvertere, seu qui / Diceret immensum quondam dimittere lumen / Cum loca praeteriis flammis infesta per auras / Quae faciunt ignes interstingui, atque perire'. (Happy years! Happy ages for those to whom it has been granted to know the causes of such great phenomena—which once lay hidden not only from the common people and the masses, but often even from the learned themselves. Nor was there lacking someone who would claim that the sphere of Phoebus was partly hollow and devoid of light, and that once it had turned this face toward the Earth; or one who would claim that it at times emits an immense light, after it has passed through regions of the air hostile to its flames, making the fires to be extinguished and to perish.) Boscovich, *De Solis ac Lunae defectibus Carmen*, *op. cit.* (note 25), ff. 7r–8v. The first two verses in the quotation remain unvaried in the later versions of the poem: see Boscovich, *De Solis ac Lunae defectibus*, *op. cit.* (note 6), p. 145, Chant II, vv. 1362–1363; Boscovich, *Les Eclipses*, *op. cit.* (note 6), p. 231. Notably, the couple of verses '*Cum loca … atque perire*' is a direct quotation from *De rerum natura*, V, 760–761. Thus, as also indicated in the margin of the manuscript (although with reference to 'Lucr: L. 4'), Lucretius *is* cited in Boscovich's

existential anxiety, but as a disciplined commitment capable of refuting error and thereby clearing the path towards truth.

In conclusion, all the essential elements of Jesuit didactic poetry are present in Boscovich's *carmen*. Yet, the reference to the *Georgics*, fully in line with the Jesuit tradition of didactic poetry, not only reveals his stylistic and conceptual model but also marks his commitment to the study of nature, beginning with astronomy. For a Jesuit poet and novice scientist, invoking Virgil affirmed that scientific investigation merited poetic expression, since it belonged fully within the classical cultural framework. At the same time, the appeal to the Muses as guides into the sciences provided a rationale for studying—and teaching—the disciplines that enable one to grasp the causes of natural phenomena.

One title, two poems. Or, the story of a disappearance and an appearance

In the previous section, I argued that the Virgilian references in the 1735 *carmen* illuminate not only Boscovich's poetic model but also his commitment to scientific inquiry. In the present section, I turn from literary affiliation to scientific positioning. I suggest that the *carmen* offers significant clues to the early stages of Boscovich's scientific trajectory and, more importantly, reveals how he adapted his scientific self-presentation to shifting contexts—first by explicitly praising his mentor, and later by effectively erasing him from the poem as his own place within the scientific field changed.

The first part of the 1735 *carmen* deals with the causes and phenomenology of eclipses, illustrates related phenomena (such as the reddish coloration that appears in the final phase of a lunar eclipse), and surveys several explanatory theories. The basic mechanisms of eclipses had been known for centuries, and their observation was significant for various reasons. For instance, a method based on lunar eclipses for determining the distances of the Sun and the Moon was first developed by Aristarchus and was refined and repeatedly employed until the seventeenth century. Moreover, the prediction of lunar eclipses was of practical importance, since it provided a means of determining longitude and, in this respect, later came to serve as a model for studying the transits of Mercury and Venus across the Sun, as well as occultation phenomena in the systems of Jupiter and Saturn. However, none of these topics, of which he may have been aware, seem to attract Boscovich's attention. However, he announced in the preamble that the (as we have seen, never in fact written) second part of the *carmen* would describe the motions of the Sun and the Moon in order 'to explain how the eclipses themselves can be predicted and, on that occasion, to refute the Copernican motion of the Earth'.[31]

verses—in fact, as one of those who advanced mistaken theories about the eclipses. Notably, even the Lucretian quotation is preserved in the later versions of the poem.

31 'In alteram vero partem Solis ac Lunae motus reieci, quorum Legibus cognitis, quo pacto praenunciari possint ipsi defectus explicandum, dataque occasione Copernicanus ille telluris motus refutandus esset'. Boscovich, *De Solis ac Lunae defectibus Carmen*, cit. (note 25), ff. 2r–2v. On the use of eclipses to determine the lunar and solar distances, see Albert Van Helden, *Measuring the universe: cosmic dimensions from Aristarchus to Halley* (University of Chicago Press, 1986). On eclipses as means of determining longitude, see María M. Portuondo, 'Lunar eclipses, longitude and the New World', in *J. Hist. Astron.* **40** (3), 249–276 (2009). In the absence of Boscovich's own words, it remains highly conjectural which authorities he intended to mobilize in his anti-Copernican argument. Eclipses were indeed included in Riccioli's *argumenta* against the motion of the Earth. Yet Riccioli himself seems to dismiss them as deceptive: see Riccioli, *op. cit.* (note 27), vol. II, pp. 434, 449–450.

It is difficult to determine how Boscovich planned to conduct this refutation in the second part of the 1735 *carmen*, a project he later abandoned and that cannot be recognized in the 1760 version of the poem. Yet the motives behind it,[32] viewed in light of the Jesuit scientific tradition, are revealed by a reference to his mentor Orazio Borgondio, cited in the opening verses of the poem under his Arcadian 'pastoral name', *Achemenides Megalopolitanus*:[33]

> Before the father of Pindus and the learned sisters [of Urania, i.e. the Muses], my prayers first seek you and my verses call upon you, shepherd Achemenides of Arcadia, three times the greatest glory of the woods, since it pleases you to investigate the sacred laws of nature and to adorn them with a Muse that is not rustic. For you explain by what force and by what rule the blood's fluid passes through all the veins and in constant circulation moistens the body; and by what power human beings … support themselves on their feet and are carried along in their movement; by what skill winged creatures, light of body, fly upheld through the air; by what means the scaly race swims afloat in the waves. Likewise you are so vigilant in examining the courses of the stars and the motions of the heavens, and, skilled in reason, in setting them forth before others.[34]

While some words in the manuscript are entirely illegible and difficult even to conjecture, the overall meaning of the passage remains clear. It is a praise of Borgondio's dual excellence as poet and teacher: on the one hand, his poetic skill, which—in the spirit of Jesuit didactic poetry—seeks to ennoble science;[35] on the other, his inspiring authority as a master of astronomy and mathematics.

32 It has often been argued that late defences of stationary-Earth models—untenable in a world that had already become Copernican, while Newtonianism was exuberantly entering the field—were, in fact, a calculated ploy to teach a disguised version of Copernicanism or, more generally, to introduce elements of officially forbidden doctrines to new generations of Jesuit scholars. See, for example, Paolo Casini, *Newton e la coscienza europea*, pp. 143–155 (il Mulino, Bologna, 1983); Franco Motta, 'I criptocopernicani. Una lettura del rapporto fra censura e coscienza intellettuale nell'Italia della Controriforma', in *Largo campo di filosofare. Eurosymposium Galileo 2001* (ed. J. Montesinos and C. Solís), pp. 693–718 (Fundación Canaria Orotava de Historia de la Ciencia, La Orotava, 2001); Alfredo Dinis, 'Was Riccioli a secret Copernican?' in *Giambattista Riccioli e il merito scientifico dei Gesuiti nell'Età Barocca* (ed. Maria Teresa Borgato), pp. 49–77 (Olschki, Florence, 2002); Franco Motta, 'Il caso Galileo nell'Italia del Seicento', in *Il caso Galileo. Una rilettura storica, filosofica, teologica* (Massimo Bucciantini, Michele Camerota, Franco Giudice), pp. 259–275 (Olschki, Florence, 2011), at p. 270. While some forms of crypto-Copernicanism may indeed have played a role in particular contexts, the generalized use of this notion as a quasi-historiographical category is problematic and tends toward a whiggish reading of the past, with all its attendant risks. In any case, the crypto-Copernican interpretation does not apply to Borgondio's and Boscovich's anti- or non-Copernican dissertations: neither author offered a systematic presentation of the Copernican system, nor did they discuss specific aspects of heliocentrism.

33 Upon election to the Accademia dell'Arcadia, each new member—called 'shepherd' or 'shepherdess'—assumed a pastoral name, followed by a toponym designating the *campagna d'Arcadia*, that is, the imagined countryside of ancient Arcadia with which he or she was symbolically associated. For the multiple layers of meaning embedded in this naming practice, rooted in the very foundation of the Academy, see ''Per l'avanzamento del nostro Commune'. Diritto e filosofia alle origini dell'Arcadia', in *Canoni d'Arcadia. Il custodiato di Crescimbeni* (ed. M. Campanelli, P. Petteruti Pellegrino, P. Procaccioli, E. Russo and C. Viola), pp. 11–31 (Edizioni di Storia e letteratura, Rome, 2019), at pp. 26–28; Katrina Grant, 'A place both real and imagined: play, performance and narrative in the gardens of the Arcadian Academy in Rome', in *Gardens and academies in early modern Italy and beyond*, pp. 402–425 (Brill, Leiden, 2024).

34 'Ante tamen Pindique patrem, doctasque [Uraniae] sorores / Te primum mea vota petunt, te in carmina poscunt / Pastor Achemenide Arcadiae, ter maxima sylvae / Gloria, dum sacras naturae inquirere leges / Et non agresti iuvat exornare camena. / Quippe canis, qua vi venas qua lege et omnes / Permeat assiduaque irroret corpora giro / Sanguineus liquor aut qua vi … hominesque / Sustineant pedibus sese, incessuque ferantur: / Qua tenues pennata cohors suspensa per auras / Arte volet, qua squammigerum genus innatet undis. / Astrorum cursus idem, caelique meatus / Scrutari vigil, et ratio describere doctus / Ante alios'. Boscovich, *De Solis ac Lunae defectibus Carmen*, *op. cit.* (note 25), ff. 3r–3v.

35 The praise summarizes Borgondio's poetic work by alluding to four of his compositions included in the *Arcadum carmina*, specified in a marginal note of the manuscript as *On the motion of the blood*, *on walking*, *on flight*, and *on swimming*: 'Father Orazio Borgondio of the Society of Jesus, whose four poems stand out among the memories of the Arcadians: *De*

Professor matheseos at the Roman College from 1712 to 1740, Orazio Borgondio also served as curator of the Kircherian Museum. He distinguished himself as a competent astronomer, improving the museum's instruments and earning repute for his observations. His activity, however, was not confined to observational work alone. Within the Jesuit tradition of 'physico-mathesis', he stood out as one of the most determined defenders of the stationary-earth theory, inheriting the mixed anti-Copernican strategy of his predecessors, who sought to refute heliocentrism while retaining much of Copernicus's mathematical apparatus within a Tychonic framework.

Among the dissertations attributed to him, three treatises either opposed the theory of a moving Earth or proposed a modified Tychonic system in which the planets described elliptical orbits. Borgondio's approach in these works was characteristically physico-mathematical: hypotheses were tested through geometrical reasoning, diagrams, and comparison with observational data. His dissertation *De telluris motu in orbe annuo ex novis observationibus impugnato* (1714) particularly exemplifies this method. Taking as his starting point the search for stellar parallax—which was frequently invoked as one of the decisive tests for or against a moving Earth—Borgondio reconstructed the Copernican model geometrically, deduced what changes in stellar inclination would follow if the Earth revolved around the Sun, and then compared these deductions with recorded observations. Drawing on the measurements of John Flamsteed, which he claimed did not agree with the values expected from a moving Earth, he concluded that the Earth must remain at rest.

Borgondio's argument rested on outdated evidence: Flamsteed's data were flawed, as Gian Domenico Cassini and Ole Rømer had already shown by the turn of the century—apparently without Borgondio's awareness. Nonetheless, his reasoning was geometrically consistent and was probably well received at the Roman College, whose pedagogical aim was, at that point, to train students in a disciplined method of physico-mathematical inquiry and to provide a coherent alternative to heliocentrism. Such an approach, however, would have been regarded as suspect only a couple of generations earlier. As Ugo Baldini has noted, the application of mathematical reasoning to physics was far from self-evident among the Jesuits. Although mathematicians commanded the technical procedures of a Galilean-style mathematical science of nature, 'this was not the case for the *physici*, who believed that the diversity of methods and language in the two disciplines was the consequence of a fundamental (ontological) difference between their objects … Nevertheless, the fact that *physico-mathesis* extended to traditionally 'physical' areas implied that these areas that had been the realm of the philosophers were progressively taken over by the mathematicians'.[36] By the time Boscovich succeeded Borgondio as professor of mathematics at the Roman College in 1741, this physico-mathematical style was firmly established. It is therefore

motu sanguinis, *De incessu*, *De volatu*, *De natatu*'. ('P. Horatius Burgundius Soc: Iesu, cuius extant inter Arcadum monumenta poemata 4 de motu sanguinis de incessu, de volatu, de natatu'.) Boscovich, *De Solis ac Lunae defectibus Carmen*, *op. cit.* (note 25), f. 3r. On the contents and context of Borgondio's poetical works included in the *Arcadum carmina*, see Elisabetta Appetecchi, ''*Ad templa Mathesis*'. La poesia di argomento scientifico negli *Arcadum Carmina*', in *Scienza e poesia scientifica in Arcadia (1690–1870)* (ed. Maurizio Campanelli, Alessandro Ottaviani and Pietro Petteruti Pellegrino), pp. 109–123 (Accademia dell'Arcadia, Rome, 2022), at pp. 110–112; E. Appetecchi, *Observationes in versi. La poesia scientifica in Arcadia* (Accademia dell'Arcadia, Rome, 2023), pp. 72–100. Appetecchi discerns Newtonian motifs in Borgondio's poems; it seems to me that such an identification rests on interpretative assumptions that are not convincingly supported by the texts themselves.

36 Ugo Baldini, 'The development of Jesuit 'physics' in Italy, 1550–1700: a structural approach', in *Philosophy in the sixteenth and seventeenth centuries: conversations with Aristotle* (ed. Constance Blackwell and Sachiko Kusukawa), pp. 248–279 (Routledge, London, 1999), p. 259.

not surprising that Boscovich adopted similar counterfactual and geometrical strategies in defending a non-Copernican, stationary-earth view.

It is not my aim here to discuss Boscovich's early non-Copernican views. For the purposes of this study, it is enough to note that his adherence to the stationary-earth model —expressed in both his published works and correspondence—owed much to Borgondio's teaching and lasted until around 1742.[37] Yet praise and acknowledgement have their prices and limits, especially when times change. In the mature version of *De Solis ac Lunae defectibus* (1760), every reference to Borgondio was erased: consciously, deliberately, cautiously expunged. In the Preface, Boscovich recalls having recited the poem 'already in 1735' and acknowledges Carlo Noceti and Benedict Stay for rekindling in him a 'love for the Muses';[38] but there is not a single word about Borgondio, the master to which in 1735 was 'owed every praise'. And yet, this silence in print did not reflect a broader reluctance to acknowledge Borgondio. In the 1750s—well after his turn to Newtonianism—Boscovich still mentioned him on at least one public occasion.[39]

Notably, the verses that originally introduced Borgondio's praise remained even in the 1760 poem, but the addressee had changed: they now referred to the President of the Royal Society, the astronomer George Parker, Earl of Macclesfield. As Boscovich explains in the Preface and further clarifies in a footnote to line 25, the tribute serves as a dedicatory epistle, and the dedication extends to the entire Royal Society.[40] The most distinguished of its fellows had, of course, been Newton; accordingly, in the Preface Boscovich announces that he will celebrate him in 'a kind of poetic apotheosis', a promise fulfilled in Book V, where Newton is portrayed as the 'great glory of the English race, and honor of all humankind … a divinity greater still'.[41]

The appearance of the Royal Society—represented by its President as dedicatee—and of Newton as its supreme figure is partly accounted for by Boscovich himself in the Preface. He recalls that the *carmen* he originally composed in 1735 was continuously expanded over the years, though publication was repeatedly delayed by other commitments. During his stay in England, he seized the opportunity to resume and complete the enlarged poem, which he intended to 'dedicate to the Society … as a lasting testimony of [his] devoted service'.[42] As a result, the 1760 poem became far more ambitious—in both scope and length—than the 1735 *carmen*. Book I offers a synoptic survey of astronomy and describes the structure of the observable celestial sphere. Book II explains the mechanics of solar and lunar eclipses and compares them with other occultation phenomena, especially the transits of Mercury and

37 On Borgondio's work within the Jesuit physico-mathematical tradition and its effects on Boscovich's early own works, see Guzzardi, *op. cit.* (note 4), pp. 14–36.

38 Boscovich, *De Solis ac Lunae defectibus*, *op. cit.* (note 6), p. XXXII.

39 In particular, in the *Ecloga. Recitata in publico Arcadum consessu Anno 1753*, Borgondio is remembered as the one who 'dragged [Boscovich] into the temples of holy mathematics'. See Boscovich, *Carmina, poesie, ecloghe, epigrammi*, *op. cit.* (note 6), p. 28.

40 'Ante tamen Pindique patrem, doctasque [Uraniae] sorores / Te primum mea vota vocant, te in carmina poscunt, / Nobile Parkeridum germen, meritissime docti / Angligenum coetus praeses; te namque superba, / Te duce lecta cohors Naturae arcana latentis. / Regalem ad Thamesis ripam scrutatur, & omnes / Telluris vastae comperta effundit in oras'. ('Yet before the father of Pindus and the learned sisters of Urania, my prayers first seek you and my verses call upon you, noble descendant of the Parker family, most worthy president of the learned Society of the English. For under your guidance a chosen band boldly investigates the secrets of hidden Nature on the royal bank of the Thames, and spreads its discoveries to every shore of the vast Earth'.) Boscovich, *De Solis ac Lunae defectibus*, *op. cit.* (note 6), p. 2, Chant I, vv. 19–25 and footnote 4; see also the Preface, at pp. XXXV–XXXVI.

41 *Ibid.*, p. XXXVI. For Newton's 'apotheosis', see p. 269, Chant V, vv. 5–13.

42 *Ibid.*, p. XXXV.

Venus. Books III and IV present the phenomena observed during solar and lunar eclipses, in particular halos, umbrae, and penumbrae. Finally, Book V not only opens with the aforementioned *elogium* of Newton; it is also wholly devoted to his two chief conceptions: universal gravitation and—more pertinent to the poem's concerns—the theory of light and colours, the key to understanding the chromatic phenomena displayed during eclipses. In the end, the phenomenon of the eclipses, that in 1735 was integrated in a motionless-earth cosmology to the extent that it should offer the occasion 'to refute the Copernican motion of the Earth', is now turned into a pretext for giving a comprehensive presentation of both Newton's gravitational and optical theories.

Against this Newtonian background, the sudden disappearance of Borgondio becomes intelligible. Borgondio's praise in the 1735 *carmen* was more than a tribute to a mentor; it allowed Boscovich to situate himself within the Jesuit tradition of both didactic poetry and mathematics. When, in the 1760 version, Newton came to replace Borgondio, the substitution was certainly also a gesture of homage following Boscovich's election as a Fellow of the Royal Society (as recorded in the Archives of the Royal Society, 'being desirous of election into this Royal Society', he was proposed as such on 12 June 1760 and elected on 15 January 1761).[43] Yet, the tribute did more than acknowledge personal indebtedness: it also enabled Boscovich to align himself with the Newtonian camp.

On the other hand, the Newtonian context of the Royal Society offered the opportunity to manifest a turn that was already accomplished as he arrived in England. In short, the Boscovich of 1760—the eminent professor of mathematics at the prestigious Roman College—was very far from being the anti-Copernican young teacher of 1735. The turn took place during the 1740s, with Boscovich increasingly engaging with Newton's natural philosophy.[44] First he attempted to reconcile Newton's theory with the traditional Jesuit view of the stationary Earth. His early writings still retained the Tychonic framework, arguing that Kepler's laws and observed planetary motions could be mathematically reformulated to fit a stationary Earth—an attempt that had sometimes been pursued in different ways at the Roman College before and after Borgondio. Yet as he deepened his study of Newton, particularly while working on geodesic and gravitational problems, Boscovich recognized that Newton's law of universal gravitation fundamentally undermined this compromise. Once gravitation was accepted as a universal, inverse-square relation between all masses, a fixed Earth became physically incoherent. From then on, his compatibilist strategy could survive only as rhetoric. In his effort to remain loyal to Jesuit orthodoxy, Boscovich reinterpreted Newtonianism as a relative framework rather than as an absolute cosmology—a mathematical language for describing phenomena, not a declaration of metaphysical truth.

Such reorientation culminated in his theory of the 'sidereal space', first shortly described in a dissertation on comets, then exposed in detail in a dissertation on the sea tides. This

43 Archives of the Royal Society, Certificate of elections 1760, EC/1760/16. It is not entirely clear whether Boscovich's proposal resulted from the initiative of others or whether he himself actively sought to secure the election. In a letter to his brother Bartolomeo (London, 12 June 1760), he reports that he had been reassured that 'once certain formalities are solved, I will be admitted in the Academy [i.e. the Royal Society], and if this happens, I will dedicate the work to the Society itself'. In a subsequent letter (London, 27 June 1760), he recounts that he personally delivered to George Parker 'the dedication of my poem to him and the Society, produced in Latin verse in the invocation instead of the invocation I did to Father Borgondio'. See Ruggiero to Bartolomeo Boscovich, 12 June 1760, in Boscovich, *Carteggio con Bartolomeo Boscovich*, *op. cit.* (note 19), p. 298; Ruggiero to Bartolomeo Boscovich, 27 of June 1760, *ibid.*, p. 309.

44 For a detailed reconstruction, see Guzzardi, *op. cit.* (note 4), pp. 32–41.

was a sophisticated attempt to preserve the letter of geocentrism while embracing the spirit of Newtonian mechanics.[45] In this conception, the entire celestial sphere—planets, stars, and comets—moves with motions equal and contrary to those that Newton attributed to the Earth. All physical phenomena would then occur identically to those in the Newtonian system, rendering rest and motion empirically indistinguishable. Boscovich thus transformed the debate into an epistemological one: the choice between a moving or stationary Earth no longer belonged to physics but to metaphysics and faith. In the mathematical realm, both systems were equivalent, and the mathematician could remain neutral.

The 1760 poem retains traces of Boscovich's earlier views, likely reflecting its long and gradual composition. In Book I he states that the observed motions of the heavenly bodies may arise either because 'the immense and boundless mass of heaven itself, resting upon twin poles above the unmoving Earth, turns around and carries the enclosed stars along with it', or because 'the Earth, poised beneath the surrounding air, revolves on its own axis, propelling itself ever toward the eastern horizon while the sky stands still'.[46] As clarified in a footnote to these verses, this passage treats 'the common daily motion … and expresses it both according to the Tychonic view of a stationary Earth and according to the Copernican view of a moving Earth. In either view, the same idea must be produced in the mind'.[47]

This reveals Boscovich's epistemological point: the two systems are phenomenologically indistinguishable, and therefore equivalent for the 'summary of astronomy' that Book I intends to provide. Yet the 1760 *De Solis ac Lunae defectibus* is, in substance, a fully Newtonian epos. As noted above, Books I and V provide a detailed—within the limits of poetry and of the non-technical language of the notes—account of Newton's theory: celestial mechanics in general, the behaviour of comets, lunar motion, planetary inequalities, and finally the theory of light and colours.

Through this synthesis Boscovich domesticated Newtonianism within Jesuit thought, yet he went far beyond the traditional Jesuit strategy. His predecessors were ontologically bound to a geostatic universe; Boscovich was not. For this reason, any reference to a Jesuit astronomer still committed to the stationary-Earth doctrine would have jarred against a poem that exalts, as its central hero, one whose theory set (almost) everything in motion. As Boscovich himself observed in a note, for Newton 'even the Sun moves—not only with an absolute motion of rotation about its own axis, but also with a translational motion around the common center of gravity; in this, his theory differs from that of Copernicus, Galileo, and all the others who, before him, by setting the Earth in motion, had placed the Sun at the immovable center'.[48]

New edition, old strategy

After his return to Italy in 1761, Boscovich prepared a new, updated edition of the poem —the *editio veneta* published in Venice that same year. This was, as he remarked in the

45 R. G. Boscovich, *De cometis dissertatio* (Komarek, Romae, 1746); Boscovich, *Dissertatio de maris aestu* (Komarek, Romae, 1747).

46 'Sive quod immensi moles vastissima Coeli / Ipsa super gemino sese, Tellure quieta / Cardine circumagat, conclusaque transferat astra; / Sive quod affuso librata sub aere Tellus / axe suo se verset agens, Coeloque quieto, / Eoas contra semper nitatur in oras' Boscovich, *De Solis ac Lunae defectibus*, *op. cit.* (note 6), p. 18, Chant I, vv. 294–299.

47 *Ibid.*, p. 17, Chant I, footnote 19 to verse 287.

48 *Ibid.*, p. 270, Chant V, footnote 3.

Preface *To the Reader*, 'entirely necessary, since very few books printed in London reach us, and they cost far too much'.[49] The edition included several minor additions, such as the aforementioned Preface, a catalogue of Boscovich's works (*Catalogus Operum*), an outline of the poem's contents (*Argumenta*), and a short poem addressed to Francesco Maria Ageno, the ambassador of the Republic of Genoa who had hosted Boscovich during his stay in London. Apart from slight corrections, however, the poem itself shows no substantive differences between the London and Venetian editions.[50] Far more significant were the changes introduced in the French bilingual edition printed in Paris in 1779.

As early as 1760, shortly before the poem's publication in London, Boscovich hoped to secure a translator for a French edition. In a letter to his brother Bartolomeo, he wrote that 'M. de Watelet [Claude-Henri Watelet], an outstanding poet and a very good friend of mine … says he will try to translate my poem on the eclipses into French'. Watelet—with whom Boscovich enjoyed a warm friendship—had just published the didactic poem *L'Art de peindre* and was elected to the Académie française on 29 November 1760. From Boscovich's correspondence we know that Watelet received *De Solis ac Lunae defectibus* (apparently with great enthusiasm, according to Boscovich) at the beginning of 1761, shortly after its first appearance in England.[51] Yet he seems to have never produced the promised translation, and Boscovich soon abandoned the idea. Nearly twenty years would pass before he found a faithful translator: the former French Jesuit Augustin Barruel (1741–1820).

A native of the Ardèche, Barruel entered the Society of Jesus in 1756. After completing his *cursus studiorum*, he taught for a time at the Jesuit college in Toulouse, until the mounting hostility towards the Order in France forced him to relocate to Bohemia and Moravia. He returned to France in 1774 as tutor to the sons of Franz Xaver of Saxony. A former co-regent of Saxony (together with Maria Antonia of Bavaria), Franz Xaver had resigned in 1768 when the underage Elector Frederick Augustus III reached his eighteenth birthday, and the following year he settled in Pont-sur-Seine.

At this time, Boscovich was in France as Director of Naval Optics for the French Navy, having left Milan after prolonged conflict with his Jesuit colleague Louis La Grange, director of the Brera Observatory.[52] In France he encountered several former Jesuits, among them Barruel. Boscovich also became a close friend of Prince Franz Xaver and was often his guest in Pont-sur-Seine. Because Boscovich's correspondence with Barruel is missing, it is difficult to determine whether Boscovich, as a former fellow Jesuit, introduced Barruel into the prince's circle, or whether the two first met at Franz Xaver's residence.[53] In any case,

49 *Ibid*., p. V.

50 For a synopsis of the variants see Guzzardi, *op. cit*. (note 6), pp. 22–23.

51 Boscovich seems to refer to such circumstance in a letter to Bartolomeo dated 18 January 1761: 'My work has arrived in Paris, and it [enchants]' ('*La mia opera è arrivata a Parigi e [incanta]*'. See Boscovich, *Carteggio con Bartolomeo Boscovich*, *op. cit*. (note 19), p. 436. The editor of the correspondence reads *incontra* (i.e. 'it meets with the public's favour'), rather than *incanta*. The difference in meaning is slight, though the nuance shifts from the work's *charm* to its *reception*. I have preferred the former reading, based on a comparison of the edited text with the original manuscript preserved in the *Ruggero Giuseppe Boscovich papers*, BANC MSS 72/238 cz, The Bancroft Library, University of California, Berkeley, 3/79 (folder too disordered to allow for a coherent foliation).

52 Elizabeth Hill, 'Biographical Essay', in *Roger Joseph Boscovich*, *op. cit*. (note 1), pp. 17–101, at pp. 85–91; Edoardo Proverbio, 'Historic and critical comment on the Risposta of R.J. Boscovich to a paragraph in a letter by prince Kaunitz', *Nuncius* **2** (2), 171–227 (1987).

53 On Barruel's life and literary activity see Michel Riquet, 'Un jésuite franc-maçon, historien du jacobinisme: le père Augustin Barruel 1741–1820', *Archivum Historicum Societatis Jesu* **43**, 157–175 (1974). On Franz Xaver of Saxony and his friendship with Boscovich see Boscovich, *Carteggio con Natale Boscovich*, *op. cit*. (note 24), at tome 1, p. 248, footnote 7. See also

Boscovich's letters from 1778 contain numerous references to Barruel's efforts to translate the poem.

By the end of July 1779, Barruel completed the translation under Boscovich's close supervision. His contribution consisted of a 'Translator's Preface' and a French rendering of the poem in poetic prose, while the footnotes were translated into a more plain, didactic style, as he writes in a 1779 letter to Francesco Gambarana, a former Jesuit who at that time was instructor of physics at the Royal Gymnasium of Brera in Milan.[54] In his preface, Barruel also explains the most significant difference between the original London and Venetian editions and the new Paris version. He notes that Boscovich added a digressive episode (i.e. an *epyllion*) to the second book, which was already the longest, with its 1426 verses and 89 notes. For this reason, Barruel decided to divide the book into two parts, so that the poem now comprised six books instead of five.[55]

However, Barruel's justification for redistributing the poem into six books (or *chants* in the French translation) is not entirely convincing. It is certainly true that the second book was by far the longest; yet Boscovich added only 45 verses, and in the new arrangement the second and third books—devoted to the causes of solar and lunar eclipses, respectively—became by far the most concise. (For reference, the length of each chant is as follows: Book I: 985+78 vv.; Book II: 690 vv.; Book III: 787 vv.; Book IV: 1034 vv.; Book V: 960 vv.; Book VI: 1021 vv.) One might argue that the revised structure allowed Boscovich to treat solar (the new Book II) and lunar (the new Book III) eclipses separately, whereas in the 1760 version of the poem both were covered within the single former Book II. Yet the 45-verse *epyllion* added to Book II does not in fact concern solar eclipses directly. Rather, as Boscovich remarks in an added French footnote, it describes the occultations 'which Jupiter undergoes through its four satellites, and Saturn through its five satellites and ring'.[56]

An alternative explanation for the new structure may be inferred from Barruel's preface. After opening with the customary reference to Virgil—Boscovich's poem, he writes, is nothing less than 'Newton's work put in the mouth of Virgil, that is, physics itself embellished with all the attractiveness of poetry'—he cites a review of the poem published in 1761 in the *Acta Eruditorum*: 'Just as the ancients had their Lucretius and Manilius, so the moderns have theirs; among them we count Father Boscovich'.[57] In its original context, the comparison with two of antiquity's foremost didactic Latin poets (Manilius being the author of the *Astronomica*, *ca* 10 CE) is not, in itself, surprising. But Barruel adds a noteworthy

Bernhard von Poten, 'Xaver: Franz Xaver', in *Allgemeine Deutsche Biographie*, 56 vols (Duncker & Humblot, Leipzig, 1875–1912), at vol. 44 (1898), pp. 578–580.

54 'Prosa poetica' and 'prosa corrente istruttiva' are the terms used by Boscovich to qualify Barruel's translation in Ruggiero G. Boscovich to Francesco Gambarana, Boynes, 10 July 1779, as published in Franjo Rački, 'Dopisi Boškovićevi', *Rad Jugoslavenske akademije znanosti i umjetnosti*, **87–88–90**, pp. 322–326 (1888), at. p. 322.

55 The third book, which was the second part of the second book in the London edition, was provided with a new group of verses which served as an *incipit*. There are other important differences: the poem was now dedicated to King Louis XVI, with a long 'épitre dédicatoire' in verses describing Boscovich's career in France and his debts with the king; some notes were reduced, some other added; finally, at the end of the book Boscovich gave a summary of the works quoted in the dedicatory epistle. See the synopsis of the variants in Guzzardi, 'Introduzione', *op. cit.* (note 6).

56 'Après les éclipses du soleil produit par la lune, je prends ici pour épisode celle que Jupiter souffre de la part de ses quatre satellites, Saturn de ses cinq & de son anneau'. Boscovich, *Les Eclipses*, *op. cit.* (note 6), p. 155, footnote 33.

57 Augustin Barruel, 'Préface du Traducteur', in Boscovich, *Les Eclipses*, *op. cit.* (note 6), pp. XXIX–XXXII, at p. XXX; see also [Anonymous] '*De Solis ac Lunae defectibus Libri V*. P. Rogerii Iosephi Boscowich', *Nova acta Eruditorum Anno MDCCLXI* [**30**], pp. 168–174 (1761), at p. 170.

comment of his own: 'To translate Virgil, one must be Voltaire or Delisle at the very least; the translation of the *modern Lucretius* probably requires something more'.[58]

A few years earlier, the label 'modern Lucretius' had been applied to Benedict Stay, whose two didactic poems (*Philosophiae … versibus traditae libri VI*, Rome 1747; *Philosophiae recentioris … versibus traditae libri X*, Rome 1755–1792) were widely regarded by contemporaries as explicitly Lucretian (although, as I have argued in note 21, this was less accurate than it might appear). In this light, assigning the same title to Boscovich was a novelty. Yet the association with Lucretius was not merely Barruel's personal opinion. It likely originated with Boscovich himself. He was well acquainted with the review of the *Acta Eruditorum*, as he mentioned it in a letter to his close friend Giovan Stefano Conti on 3 January 1763.[59] Given the close collaboration between the two Jesuits, it is plausible that, fifteen years later, Boscovich conveyed this information to Barruel.

Against this Lucretian backdrop, the division of the Paris edition into six books might also signal a preference for Lucretius: both the *De rerum natura* and Stay's earlier—and more distinctly Lucretian—poem were likewise composed in six cantos. But was this truly a Lucretian conversion? When other clues are taken into account, it seems more likely that he was engaging in a strategic, even opportunistic, nod to the Lucretian tradition that enjoyed particular prestige in France.[60] By 1779, the typical readership of a didactic poem had changed considerably: it no longer consisted primarily of Jesuit colleagues or the select circle of the Arcadian Academy. Boscovich was aware that this transformation came at a high cost. In a letter to his brother Natale dated 21 December 1779, he lamented that knowledge of Latin and the ability to appreciate Latin verse were 'now very rare, and soon, after the suppression of the Jesuits, Latin will become like Greek, and only among the elderly will one find someone who takes pleasure in it'. At the same time, however, he recognized that his potential readership had become much broader, extending to educated French-speaking audiences. The same letter reveals his expectations in this regard: 'The work will be sold at 41 liras each, but I bought eight copies for 8 liras [each] … However, we are very confident in the sale; it has already been selling even though it has not yet been announced in the journals. Before the end of February I shall recover that considerable expense. My translator [i.e. Barruel] has secured the support of almost all the journalists …

58 *Ibid*., p. XXIX; emphasis added.

59 Boscovich to Conti, 3 January 1763, in Ruggiero G. Boscovich, *Carteggio con Giovan Stefano Conti* (ed. Edoardo Proverbio), Edizione Nazionale delle Opere e della Corrispondenza di Ruggiero Giuseppe Boscovich, Corrispondenza, vol. V/1 (Ed. Naz. Boscovich, Rome, 2008), at p. 92.

60 Lucretian and Virgilian models in Neo-Latin poetry often proceed in tandem. Isabelle Pantin situates as early as the mid-sixteenth century the moment when 'Lucretius, although still disparaged because of his doctrine, became the predominant model of cosmological poetry' in France. Its reception reached a peak in the middle of the following century through Pierre Gassendi's work and his 'rehabilitation' of the Lucretian atomism. However, Yasmin Haskell has argued that most of all French Jesuit poets inclined to plant 'ornamental natural philosophy in Virgilian soil'. See I. Pantin, 'Res contenta doceri? Renaissance cosmological poetry, classical models and the poetics of didascalia', in *Poets and teachers: Latin didactic poetry and the didactic authority of the Latin poet from the Renaissance to the present* (ed. Yasmin Haskell and Philip Hardie), pp. 22–34 (Levante, Bari, 1999), at p. 34; Haskell, *op. cit*. (note 9), p. 177 (but see the entire ch. 3, 'Cultivating science: French 'meteorological' georgic', pp. 118–177). On Lucretius's reception in France see Philip Ford, 'Lucretius in early modern France', in *The Cambridge companion to Lucretius* (ed. Stuart Gillespie and Philip Hardie), pp. 227–241 (Cambridge University Press, 2007); Marco Beretta, 'Gli scienziati e l'edizione del *De Rerum Natura*', in *Lucrezio, la natura e la scienza* (ed. Marco Beretta and Francesco Citti), pp. 177–224 (Olschki, Florence, 2006). See also Yasmin Haskell, 'Religion and enlightenment in the neo-Latin reception of Lucretius', in Gillespie and Hardie (eds), *op. cit*. (note 60), pp. 185–201, at pp. 196–198.

I know that many of them will praise it highly, and they have divided the excerpts among themselves so as not to review the same passages'.[61]

In this context, Boscovich emphasized the poem's popularizing purpose. In a memorandum addressed to Charles Gravier, comte de Vergennes—one of his most influential contacts at court and then Minister of Foreign Affairs—he stressed that the subject matter had been rendered in prose in order to make it 'accessible to everyone without recourse to geometry'.[62] Boscovich was well acquainted with this rhetoric of dissemination, which he had invoked in writing to Gambarana and his brother Natale as well.[63] In this respect, his stance reflects the emerging culture of science popularization in the eighteenth century, itself rooted in developments of the late seventeenth and early eighteenth centuries. Between roughly 1690 and 1740, scholars increasingly addressed broader publics in order to secure support in scientific controversies, debating questions of legitimacy and authority in journals and pamphlets designed to shape learned opinion. Popular scientific instruction gradually came to be perceived as a need both by governments and by men of science. Boscovich himself had suggested that the Brera Observatory, which he helped to establish in the early 1760s, should also serve purposes of public instruction. Moreover, 'popular' science assumed multiple forms: public demonstrations, open courses, lectures, theatrical performances, games, and visual art, as well as pamphlets, periodicals, books—and, of course, printed poems.[64]

Thus Boscovich's expectations regarding the reception of *Les Éclipses* may have appeared reasonable. However, another factor must be considered: in France, far more than in Italy, the principal model for didactic poetry was Lucretius rather than Virgil. This held true even within Jesuit didacticism: from the seventeenth century onward, French Jesuit georgic poems frequently incorporated Lucretian themes and stylistic features, and Lucretius continued to exert a major influence on the genre. In this context, a reference to Lucretius would signal an alignment with that established tradition. Boscovich, it seems, was simply taking advantage of an opportunity to position his work within a familiar and esteemed French literary lineage.

The French context, on the other hand, was far from monolithic. In 1747, the posthumous work of Melchior de Polignac, *Anti-Lucretius, sive Deo et Natura*, had been published in Paris. This nine-book didactic epic adopts a Lucretian style in order to defend Cartesian natural philosophy, opposing both the ethics grounded in Lucretian–Epicurean physics and the Newtonian doctrine of action at a distance. Although first issued in 1747,

61 Ruggiero G. Boscovich to Natale Boscovich, 21 December, 177[9], in Boscovich, *Carteggio con Natale Boscovich*, *op. cit.* (note 24), pp. 53–54.

62 See the 'Memoire à M. de Vergennes sur la dedicace des ouvrages de Boscovich et leur impression, Paris, 31 Janvier 1779', as quoted in Rački, *op. cit.* (note 54), pp. 312–313: 'Touts ces objets [i.e. the issues addressed in the poem] y son aussi traittés [sic] en prose sans les ornements de la poésie, qui peuvent servir pour une espèce de traité mis à la portée de tout le monde sans l'usage de la géométrie … Il a choisi pour celui-ci la version de son grand poëme avec le texte latin, parce que … il est a portée de tout le monde'.

63 The popularization-argument is also present in the 'Précis des ouvrages mentionnés et compris dans l'Epître Dédicatoire', in Boscovich, *Les eclipses*, *op. cit.* (note 6), pp. 532–540, at p. 533, paragraph 5.

64 On the emergence of popular science in France, see Michael Lynn, *Popular science and public opinion in eighteenth-century France* (Manchester University Press, Manchester and New York, 2006). See also Geoffrey V. Sutton, *Science for a polite society: gender, culture, and the demonstration of enlightenment* (Routledge, London, 1995); Larry Stewart, *The rise of public science: rhetoric, technology, and natural philosophy in Newtonian Britain, 1660–1750* (Cambridge University Press, 1992); Jan Golinski, *Science as public culture: chemistry and enlightenment in Britain, 1760–1820* (Cambridge University Press, 1992). On Boscovich's plans regarding Brera Observatory in Milan, including his consideration for a larger, popular audience, see Proverbio, *op. cit.* (note 52), esp. § 33, pp. 201–202.

Polignac's poem enjoyed wide readership throughout the eighteenth century, as attested by new editions, prose adaptations in the vernacular, and translations. The Paris edition was followed by two London reprints (1748, 1751), and it was reissued in Paris in 1754 and again in London in 1768. A French prose version appeared in Paris in 1749, was reprinted in Brussels in 1755, and subsequently in Paris in 1760, 1765, and 1767; a French verse translation was published in Paris in 1786.[65] There is no textual evidence that with *Les Éclipses* Boscovich intended to respond to the *Anti-Lucretius*. Nevertheless, his potential audience might well have perceived in the French version of his didactic epic on the eclipses a kind of anti-*Anti-Lucretius*.

In the end, rather than signalling a genuine poetic or philosophical conversion, Boscovich's Lucretian turn appears to have been a calculated strategy of adaptation—much the same strategy he had already employed in England. There, he tailored the poem to English expectations: Newton was indeed his scientific hero, yet, as we have seen, even the removal of Borgondio's name was dictated by considerations of prudence and opportunity. In France, the Newtonian content required no adjustment, but the cultural horizon had changed. Boscovich now reshaped the poem to meet a new public and its sensibilities, aligning it with the prestigious Lucretian tradition that resonated most strongly with French readers. In both cases, he adapted form and framing—not doctrine—to suit the expectations of his audience.

Concluding remarks

Despite Boscovich's confidence in the popularizing potential of the translated poem, the work remained largely unsold—a circumstance that posed serious financial difficulties, given that the King declined the hoped-for funding and Boscovich had to bear the costs himself.[66] The golden age of Latin didactic poetry was over, as Boscovich recognized a few years later when he complained that 'the taste of the century has changed: too few people are interested in Latin poetry, few in geometry, and very few in a work that applies the former to objects related to the latter'.[67] Yet in that lingering twilight of the tradition, *Les Éclipses*—together with its Latin matrix, *De Solis ac Lunae defectibus*—stood as one of the richest, most complex scientific–poetic architectures of the period.

Independent of any assessment of Boscovich's poem as literature, the path that began with his early didactic attempt of 1735 and culminated in the large epos of 1779 is revealing

65 See Wolfgang Bernhard Fleischmann, 'Zum Anti-Lucretius des Kardinals de Polignac', *Romanische Forschungen* **77** (1/2), 42–63 (1965), at p. 42. On the *Anti-Lucretius* and its context see also Philippe Chométy, 'Prolongation poétique des idées cartésiennes, des Principes de philosophie de Genest à l'Anti-Lucrèce de Polignac', in *Les Lumières en mouvement* (ed. Isabelle Moreau), pp. 127–155 (ENS Éditions, Paris, 2009); Reinhold Glei, '*Tertius motus*: Die Erklärung der Präzession im *Anti-Lucretius* des Melchior de Polignac', in *Die Poesie der Dinge*, *op. cit.* (note 6), pp. 205–218.

66 See the quoted letter to Natale Boscovich (note 61). Later in 1779 or 1780 Boscovich must have realized that his hope to recover his expenses were ill-posed, as it transpires from a letter by Giovan Stefano Conti on 3 July 1780: 'I am not surprised that Your book on the eclipses is not sold there'. Conti to Boscovich, Lucca, July 3, 1780, in Boscovich, *Carteggio con Giovan Stefano Conti*, *op. cit.* (note 59), p. 490.

67 'Il gusto del secolo si è mutato: troppo pochi si curano della poesia latina, pochi della Geometria, e pochissimi di un'Opera, che applica la prima ad oggetti correlativi alla seconda'. Boscovich to Johann Joseph M. von Wilczek (plenipotentiary of Milan), 9 August 1786; the letter is preserved in the *Ruggero Giuseppe Boscovich papers*, BANC MSS 72/238 cz, The Bancroft Library, University of California, Berkeley, 5/29 /W7, f. 1r. Ironically, Boscovich was referring to a new edition of Stay's *Philosophiae recentioris Versibus traditae Libri X*, the print of which was initiated and then suspended because of the lack of request. Stay had to wait until 1792 to see the complete edition of his second, 'Newtonian' poem.

of—and, to some extent, epitomizes—his intellectual trajectory. On the one hand, his poetic practice remained attached to the traditional *stylemata* of the Society of Jesus; on the other, he consistently used didactic poetry as a medium through which to negotiate his position within shifting scientific, institutional, and cultural landscapes. In the 1735 *carmen*, the Virgilian model and the praise of Borgondio mirrored a Jesuit environment still anchored in geostatic cosmology and the pedagogical ethos of the Order. By 1760, the context had radically changed—and so had Boscovich's views. The poem, enlarged and reshaped in London, became a Newtonian epos in which Borgondio was discreetly erased and Newton celebrated in a poetic 'apotheosis'. This strategic disappearance of the former master and the confident exaltation of the new one illuminate the decisive decade in which Boscovich moved from Jesuit *physico-mathesis* to an idiosyncratic yet deeply internalized Newtonianism.

The Paris edition of 1779 further clarifies the nature of this transformation. On the surface, the invocation of Lucretius and the reorganization of the poem into six books might appear to signal a new poetic allegiance. Yet closer examination shows that this 'Lucretian turn' was less a shift of conviction than an astute adaptation to the literary codes and expectations of the French Republic of Letters. Just as in England he had reshaped the poem to meet Newtonian sensibilities and the social politics of the Royal Society, in France he aligned it with the prestigious Lucretian tradition that dominated French didacticism. This dual strategy—Newtonian in England, Lucretian in France—reveals that Boscovich was guided not by doctrinal vacillation but by a certain awareness of his audience, which enabled him to adjust the framing of his ideas without altering their substance.

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This article has no additional data.

Declaration of AI use

AI-assisted technologies were used to improve readability and language.