

Overall, these contributions provide a window not just into early modern English Jesuit activities, but more specifically how they interacted with their host nation, in this case Spain, and navigated the unpredictabilities of exile. It is a welcome line of investigation and one that deserves to be followed further, this book giving glimpses of future research routes.

James E. Kelly

Department of Theology and Religion, Durham University, Durham, UK

James.kelly3@durham.ac.uk

DOI:10.1163/22141332-08040011-02

Michael John Gorman

The Scientific Counter-Revolution: The Jesuits and the Invention of Modern Science. Bloomsbury Studies in the Aristotelian Tradition, 7. London: Bloomsbury Academic, 2020. Pp. xviii + 271. Hb, £ 76.50, eBook £ 61.20.

Habent sua fata libelli. In its earliest origins, this one belongs to the research climate of the late 1990s: as a doctoral dissertation it was defended at the European University Institute in 1999, the year when the similarly titled, monumental *La Contre-Réforme mathématique* (Rome: École française de Rome, 1999) was published by Antonella Romano (who became the first holder of the chair in the history of science at the same institution a few years later). Since then, the author has established himself as an innovative science museum specialist (recently as founding director of the fascinating BIOTOPIA Museum for Natural History in Munich). Scholars in Jesuit studies and the history of science should welcome his decision to return to his first project: though several sections have been published as journal articles or chapters in edited volumes, the revised monograph is a fresh contribution to the field.

A vast range of scholarship during the past generation has already released the Catholic Church and the Society of Jesus from the role of the villains of the Scientific Revolution. Nor is the preoccupation with practices and institutions that present the context for interpreting processes, agents, and achievements of scientific knowledge production particularly innovative today. Yet, Gorman exploits the “tension between specific local contexts of natural investigation and a centralised global bureaucratic structure allowing the mobility of trained people and letters on natural subjects between distant sites that is uniquely characteristic” (3) of the early modern Jesuit order to bring important results. His focus of attention is the Collegio Romano both as the “flagship didactic establishment” of the Society and as a “clearing

house for people, letters, natural curiosities and instruments.” Gorman starts by examining the rise of the college to this status, thanks especially to the combination of the training of mathematical practitioners and distributing them (along with the tools of their profession) across the Jesuit provinces with advanced mathematical research and correspondence both within and outside the order—a legacy of the Jesuit model mathematician Christoph Clavius and his successor Christoph Grienberger. As Gorman further develops the argument of previous scholarship, the Jesuits of the Collegio Romano thus participated substantially in an overall transformation of the very status of the mathematical disciplines during the late sixteenth and early seventeenth centuries. As discussed in Chapter 1, for Clavius this meant asserting Jesuit expertise in the debate about the 1582 calendar reform, and a quest for patronage for the Jesuit ministry among an elegant elite imbued by curiosity about mathematical subjects. Grienberger’s efforts to promote mathematics in the context of the bureaucratic structure of the Society and practices such as expert book censorship are analyzed in Chapter 2 as a complementary counterpart of Galileo’s simultaneous work in the Medici court. The ethos of modesty and self-effacement governing Grienberger’s activity was well attuned to embracing Copernicanism as a hypothesis, within an overall framework of Thomist *duplex veritas*. However, as shown in Chapter 3, the bitterness of the Galileo debate led to the cancellation of such ambiguity during the following generation, when the disciplinary structures of the order came into discussion and strict adherence to Aristotle in matters of natural philosophy was again urged. The subject of Chapter 4 is a similar engagement, occasioned by the experiments of Evangelista Torricelli and Otto von Guericke aiming to demonstrate the existence of the vacuum. The Jesuit response to these endeavors is claimed to have been marked by a collectivist approach to the validation of experimentally based scientific propositions, and to have reinforced insistence on Aristotelian plenism. In Chapter 5, highlighting the role of networks (and re-emphasizing the virtue of modesty exercised by the members) in the scientific output of the Society, the correspondence of Athanasius Kircher—apparently a still not fully exhausted resource for scholars in the field—is used this time as the basis of a case study on the measurements of magnetic variation around the globe (in the hope of finding a solution for the problem of longitude at sea—but also a part of Kircher’s larger ambition of bringing about a general reform of geography as a sequel to the calendar reform two generations earlier). Kircher is also the central figure of Chapter 6, which looks at Jesuit mechanical marvels (natural, as against demonic magic), crucial for the courtly functions of Jesuit experimentalism within a baroque culture of “special effects.” In

this period of Aristotelian and Thomist retrenchment within Jesuit thought, such experimentation in this cultural environment could be asserted to belong to art, rather than the realm of *physica*, where it would be dismissed as the product of deviant natural philosophy. The theatricality associated with Jesuit experimentation—including its preoccupation with monstrosities and curiosities, ascribed by Gorman to constraints imposed by institutional factors—nevertheless generally tended to undermine the credibility of Jesuit experiment reports and, by implication, Clavius's grand purposes in promoting Jesuit mathematical celebrity, by the 1670s. Thus, the central proposition of the closing Chapter 7 is that the results and interpretations of Jesuit natural philosophy became discredited even while Jesuit networks of information gathering were emulated among the early scientific societies.

This is a finely researched and richly documented book—in some of the chapters, the volume of the endnotes is in excess of the main text—which is at the same time highly readable (in spite of a few repetitions that at places retain the sense of a collection of separate studies), with illustrations that serve the argument well. Two critical observations may be ventured. First, although the Introduction is entitled “What Scientific Counter-Revolution?,” an explicit answer is never offered: it is rather allowed to unfold in the chapters. Second, while the marginalization of Jesuit science inaugurated by the “counter-revolution” lasted several decades, an epilogue considering its re-invigoration well before the formal removal of works defending the motion of the Earth from the Index (1757) would have enhanced the contextualization. Yet, *The Scientific Counter-Revolution* is a highly valuable addition to the recent corpus of literature that has served the abandonment of “a conflictual approach to the relationship between early modern science and Catholicism” without replacing conflict “with an equally inappropriate image of harmony” (258).

László Kontler

Department of History, Central European University, Vienna, Austria
and Budapest, Hungary

kontlerl@ceu.edu

DOI:10.1163/22141332-08040011-03

Matthew Coneys Wainwright and Emily Michelson, eds.

A Companion to Early Modern Rome. Brill's Companions to the Christian Tradition, 95. Leiden: Brill, 2021. Pp. xi + 429. Hb, \$275.00.