

# *Founding a Scientific Academy:*

## GENDER, PATRONAGE AND KNOWLEDGE IN EARLY EIGHTEENTH-CENTURY MILAN\*

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IN 1722 SIR THOMAS DEREHAM (ca. 1678–1739), a member of the Royal Society since 1720, wrote a series of letters to the Royal Society secretary James Jurin about the state of Italian science. At the beginning of the year Sir Isaac Newton, in his capacity as President of the Royal Society, authorized Jurin to accept Dereham's offer to act as a conduit of information between England and Italy, "that Learned & Inquisitive Nation, with which you reside." Recalling the distinguished tradition of Italian science, Jurin reported Newton's opinion:

The Royal Society has so just a regard & Veneration for y<sup>e</sup> memory of y<sup>e</sup> Galilei, the Borelli, Malpighi, and Bellini, y<sup>t</sup> she can never be incurious of what is doing in a Country, y<sup>t</sup> produced those Great & Excellent Genii.<sup>1</sup>

Dereham responded with great pleasure at the thought that he would be "opening a Philosophical Communication between two nations, among both which have been, & are so many gener-

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<sup>1</sup> James Jurin to Thomas Dereham, London, 19 March 1722, in *The Correspondence of James Jurin (1684–1750)*, ed. Andrea Rusnock (Amsterdam: Rodopi, 1996), 91.



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ous spirits, as you say, united in the same noble design, for the common benefit, & information of mankind."<sup>2</sup> In the ensuing months Dereham supplied them with news culled largely from the Italian community of physicians, natural philosophers, and mathematicians who were already foreign members of the Royal Society, particularly those residing in the university towns of Pisa, Padua, and Bologna.

A keen observer of Italian science, with numerous contacts in virtually every major city and a fluency with language that allowed him to build his reputation as a translator of English philosophical and theological texts into Italian, Dereham was an unusually amphibious creature in the eighteenth-century republic of letters. He had many reasons to be interested in Italy. Heir to his father's cousin, an earlier Sir Thomas Dereham who had been the English Envoy to the Grand Duchy of Tuscany at the end of the seventeenth century, he arrived in Florence in 1718. But his Catholicism ultimately drew him to Rome where he installed himself as a fixture of the English resident community, acting as an intermediary between the Old Pretender James III, Clement XII, and those English who shared his desire to restore the throne to the Stuarts. Upon his death, Dereham bequeathed a considerable endowment to the Congregation for the Propagation of the Faith to support the training of English missionaries.<sup>3</sup>

To the Protestant English, Dereham was a demi-Italian, a papist residing in Italy who nonetheless spoke their language and shared their philosophical persuasions. To the Italian scholarly community, he was an Englishman who appreciated their culture and participated in their faith but who also sought to promote greater knowledge of British intellectual life in Italy. His influential series of Italian publications in the early decades of the eighteenth century not only publicized the activities of the Royal Society but specifically advertised important elements of Newtonian science and natural theology, allowing learned Italians, few of whom read English, relatively unmediated access to these ideas.<sup>4</sup> It is no exaggeration to say that Dereham played a singular role in opening up new channels of communication between England and Italy in the early eighteenth century.

In 1722 Dereham was eager to display his knowledge of Italian science to the English while also promoting himself as the individual best able to facilitate communication between Italy and the Royal Society. His goal was not only to identify those Italian scholars whose intellectual merits and interests warranted more regular communication with the Royal Society but also to describe the exciting new institutional developments that had occurred in Italy during the past decade. One of those institutions—the focal point of this article—was the enigmatic Clelian Academy (*Accademia Clelia de' Vigilanti*) founded by Clelia Grillo Borromeo in Milan in the year in which Dereham composed his report. He considered its appearance to be indicative of a new vitality to Italian science and found its activities sufficiently interesting to consider what sort

<sup>2</sup> Thomas Dereham to James Jurin, Bologna, 22 June 1722, in *Early Letters*, Royal Society in London, D.2.12.

<sup>3</sup> The fact that Dereham has not even merited an entry in the *Dictionary of National Biography* suggests the dearth of information on him, though the website of the Archive of the Royal Society provides many of the basic details, s.v. "Dereham, Thomas." See also Father Goldie, S. J., "The Last of the Norfolk Derehams of West Dereham," *Norfolk Archeology* 18 (1914): 1–22; and Vernon Hyde Minor, *Passive Tranquility: The Sculpture of Filippo Della Valle* (Philadelphia: American Philosophical Society, 1997), 13:53–56, 171–76.

<sup>4</sup> On Dereham's scientific contributions, see Vincenzo Ferrone, *The Intellectual Origins of the Italian Enlightenment*, trans. Sue Brotherton (Atlantic Highlands, NJ: Humanities Press, 1995), 40, 79–81; Andrea Rusnock, "Correspondence Networks and the Royal Society, 1700–1750," *British Journal for the History of Science* 32 (1999): 159–65; Marta Cavazza, "The Institute of Science of Bologna and the Royal Society," *Notes and Records of the Royal Society of London* 56 (2002): 10–11; and Alan Cook, "Rome and the Royal Society," *Notes and Records of the Royal Society of London* 58 (2004): 4.

of relationship the Royal Society might have with this academy in the making. Through such information Dereham encouraged representatives of England's premier English scientific institution to be in greater contact with the scientific community in Italy.

In order to assess Dereham's comments about Italian scientific academies in the early eighteenth century, we briefly need to consider the larger context in which they arose. While academies of various kinds had been in existence since the Renaissance, the scientific academy first came into its own in the seventeenth century. The inauguration of the Royal Society in London in 1660 and its receipt of a royal charter in 1662 played a fundamental role in the promotion of experimental philosophy and the creation of a new kind of scientific community in England. The subsequent foundation of the Paris Academy of Sciences in 1666, as a royal institution offering enticing stipends and the promise of research facilities to attract Europe's best scientific minds to France, provided an alternative model to its London counterpart. Under the patronage of the French minister Colbert, the Paris Academy of Sciences made the idea of a scientific society a more overtly political project, making state sponsorship of science an integral part of the emerging image of France as a nation that rewarded talent, cultivated expertise, and considered the advancement and control of knowledge to be a measure of national prosperity.<sup>5</sup>

In subsequent decades the transformation of the Academy for the Curious of Nature (1652–93), from a physicians' club which moved from one German town to another into an academy with an imperial charter in 1671 and Leibniz's realization of the Berlin Academy of Sciences in 1700 under Frederick I reflected the expanding role of academies in the promotion of scientific research and communication. Numerous provincial cities supported private and occasionally state-sponsored initiatives such as the Collegium Curiosorum (1710–11) in Uppsala, which became the Royal Society of Sciences in 1728. As far away as St. Petersburg, the idea of an academy that could play a fundamental role in the modernizing projects of Peter the Great was also in the works though it would not receive its official charter until 1724.<sup>6</sup>

Drawing inspiration from the writings of such figures as Bacon, Descartes, Galileo and Leibniz, early modern scientific societies advocated the reformation and progress of knowledge as a project of great benefit to society. Harnessing the best features of the republic of letters, they sought to make scholarly networks deliberately productive associations based on membership rather than voluntary association. Academies brought scholars together, concentrating talent, pooling resources, and promoting new forms of collaboration that often culminated in novel publications such as the learned journal or academy-sponsored books. They institutionalized

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<sup>5</sup> Michael Hunter, *Establishing the New Science: The Experience of the Early Royal Society* (Woodbridge, UK: Boydell, 1989); Hunter, *The Royal Society and Its Fellows, 1660–1700: The Morphology of an Early Scientific Institution*, 2nd ed. (Oxford: British Society for the History of Science, 1994); Marie Boas Hall, *Promoting Experimental Learning: Experiment and the Royal Society, 1660–1727* (Cambridge: Cambridge University Press, 1991); Roger Hahn, *The Anatomy of a Scientific Institution: The Paris Academy of Sciences, 1666–1803* (Berkeley: University of California Press, 1971); and Alice Stroup, *A Company of Scientists: Botany, Patronage, and Community at the Seventeenth-Century Parisian Royal Academy of Sciences* (Berkeley: University of California Press, 1990).

<sup>6</sup> Frances Mason Barnett, *Medical Authority and Princely Patronage: The Academia Naturae Curiosorum, 1652–1693* (PhD diss., University of North Carolina, Chapel Hill, 1995); Hans-Stephan Brather, ed., *Leibniz und seine Akademie: ausgewählte Quellen zur Geschichte der Berliner Sozietät der Wissenschaften, 1697–1716* (Berlin: Akademie Verlag, 1993); and Michael Gordin, "The Importance of Being Earnest: The Early St. Petersburg Academy of Sciences," *Isis* 91 (2000): 1–21. The most general study of seventeenth-century academies is Martha Ornstein, *The Role of Scientific Societies in the Seventeenth Century* (New York, 1913; Chicago: University of Chicago Press, 1928); for the eighteenth century, see James E. McClellan III, *Science Reorganized: Scientific Societies in the Eighteenth Century* (New York: Columbia University Press, 1985); see also Roger L. Emerson, "The Organisation of Science and Its Pursuit in Early Modern Europe," in *Companion to the History of Science*, ed. R. C. Olby et al. (London: Routledge, 1990), 960–79.

practices that had already been under development in the preceding century while also being self-conscious about their goal of supporting further innovations that would contribute to the modernization of knowledge. The scientific academy became simultaneously a repository of information, instruments, and specimens—a space in which to conduct and present one’s research, a deliberative body whose collective expertise might potentially resolve intellectual differences through commonly agreed upon procedures, and an organ of publicity through its correspondence networks and publications. Fundamentally, the scientific academy represented the new prestige of natural knowledge and mathematics as a matter of public interest. These were the ingredients that made the learned society the institutional embodiment of the promise of the new science, and they were ideals forged in the republic of letters.<sup>7</sup>

The proliferation of academies by the eighteenth century led the most famous academician of this age, the Paris Academy’s perpetual secretary Bernard le Bovier de Fontenelle, to declare it an “age of academies.”<sup>8</sup> Academies were not only engines of knowledge in the late seventeenth and eighteenth centuries—communities of scholars collecting, assessing, and creating knowledge, just as Bacon had prophesied—but they were also a subject of great discussion within of the republic of letters. Creating an academy added something tangible to a rapidly evolving institutional landscape whose participants sought to change not only what kind of knowledge mattered but how knowledge itself was produced. The growing number of learned academies by the eighteenth century made the project of reforming knowledge more than just an informal conversation among scholars. It was increasingly supported by an infrastructure which presented the learned academy as the culmination of a new understanding of the value of knowledge.

What, then, were Italy’s contributions to these exciting new developments? In the seventeenth century Italy created more scientific academies than any other part of Europe—indeed more academies of any kind—and yet virtually none of them remained active by 1700. All the scientific academies founded in the early to mid-seventeenth century—most notably the Accademia dei Lincei (1603–30) and Accademia Fisico-Matematica (1677–98) in Rome, the Accademia del Cimento (1657–67) in Florence, and the Accademia degli Investiganti (1663–70) in Naples, and the Accademia della Traccia (1666– ca.1678) in Bologna—had vanished. With the noteworthy exceptions of the Accademia degli Inquieti (1690–1714) in Bologna, the Accademia degli Argonauti (1684–1718) in Venice, and the Accademia dei Fisiocritici (1691– ) in Siena, few vestiges of Italy’s glorious tradition of creating scientific academies survived into the next century.<sup>9</sup> This was of course old news by the time Dereham summed up the state of Italian sci-

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<sup>7</sup> A good starting point on this subject is Maarten Ultee, “The Republic of Letters: Learned Correspondence, 1680–1720,” *The Seventeenth Century* 2 (1987): 95–112; and Lorraine Daston, “The Ideal and Reality of the Republic of Letters in the Enlightenment,” *Science in Context* 4 (1991): 367–86. More comprehensive discussions of the republic of letters include Dena Goodman, *The Republic of Letters: A Cultural History of the Enlightenment* (Ithaca, NY: Cornell University Press, 1994); Anne Goldgar, *Impolite Learning: Conduct and Community in the Republic of Letters, 1680–1750* (New Haven, CT: Yale University Press, 1995); Hans Bot and Françoise Waquet, eds., *Commercium litterarium, 1600–1750: la communication dans la République des lettres* (Amsterdam: APA - Holland University Press, 1994); and Bot and Waquet, *La République des lettres* (Paris: Belin, 1997), to cite only some of the classic literature.

<sup>8</sup> Roger Hahn, “The Age of Academies,” in *Solomon’s House Revisited*, ed. Töre Frangsmyr (Canton, MA: Science History Publications, 1990), 3–12; and McClellan, *Science Reorganized*.

<sup>9</sup> The standard overview of Italian academies remains Michele Maylender, *Storia delle accademie in Italia* (Bologna: Forni, 1926–30), 5 vols.. On Italian scientific academies, see the special issue on “Accademie scientifiche del ‘600,” *Quaderni storici* 16 (1981); also Max H. Fisch, “The Academy of the Investigators,” in *Science, Medicine and History*, ed. E. Ashworth Underwood (Oxford: Oxford University Press; 1953), 1:521–63; W. E. K. Middleton, “Science in Rome, 1675–1700, and the Accademia Fisicomatematica of Giovanni Giustino Ciampini,” *British Journal for the*

ence in the 1720s and the Royal Society had been well-informed by travelers and correspondents about the activities of many of these fleeting initiatives. The question in 1722 was not what the Italian academies looked like in the past but what future developments might bring. Would any of the Italian states and their leading citizens ever find the means of creating a more enduring scientific institution?

On this count, Dereham had some interesting things to report. He enthusiastically described the development of the Academy of the Institute of Sciences and the Arts, founded in Bologna by Luigi Ferdinando Marsigli in 1714 and superseding the now defunct Inquieti. Dereham characterized it as “like our R[oyal] S[ociety] butt of a more vast Idea” since it was to be housed in a brand-new building, “a most magnificent Pallace with an observatory over it,” whose construction was underway during his visit to the city in June 1722.<sup>10</sup> Talking with Bologna’s leading scientists, he recognized that there were elements of this new Italian academy—its function as a teaching and research institution, its connection to one of Italy’s most venerable universities, and its desire to encompass both the sciences and the arts in a facility designed especially to meet the material needs of these disciplines—that surpassed even the ambitions of the Royal Society. Dereham promised to send a more complete account of this scientific institution since he knew that its activities would be of great interest to his correspondents in London. The Bologna Academy of Sciences, the most long-lived and influential of any of Italy’s scientific societies, did indeed continue to intrigue the English throughout the eighteenth century. It was described by contemporaries as both a realization of Bacon’s utopian vision of Salomon’s House and an Italian version of the Parisian model of an academy as an institution with a nucleus of paid researchers—an image that its founder Marsigli, himself a Royal Society and Paris Academy member, self-consciously cultivated.<sup>11</sup>

In December 1722 Dereham informed Jurin that a second Italian scientific academy was under development. As an added curiosity, he noted that this academy was the idea of a learned and aristocratic woman. Dereham was so intrigued that he wrote the founder on behalf of the Royal Society, seeking further information. “Having understood that a sort of an Accademy was setting up at Milan, & that Countess Borromeo, a Lady that is a good scholar, was a great promoter of it, I wrote to her to have some notice of these lucubrations, & she answer’d me thus.” The lady in question, Clelia Grillo Borromeo (1684–1777) demonstrated her cosmopolitan flair by responding to Dereham in French. She did not directly answer his question but referred him instead to the distinguished medical professor and naturalist Antonio Vallisneri (1661–1730):

I addressed your proposition regarding the commission that you have just received from the Royal Society to the celebrated Monsieur Vallisneri because this scholar, having some plan regarding the formation of a certain Academy, or scientific meeting (*conference de Sciences*)

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*History of Science* 8 (1975): 138–54; Mario Biagioli, “Knowledge, Freedom, and Brotherly Love: Homosexuality and the Accademia dei Lincei,” *Configurations* 3 (1995): 139–66; and David Freedberg, *The Eye of a Lynx: Galileo, His Friends, and the Beginnings of Modern Natural History* (Chicago: University of Chicago Press, 2002); for the Argonauti, Maria Gioia Tavoni, ed., *Un intellettuale e il suo universo: Vincenzo Coronelli (1650–1718)* (Bologna: Costa Editore, 1999); and Mario Lisi et al., *I Fisiocritici di Siena: storia di una accademia scientifica* (Siena: Accademia delle scienze di Siena detta dei Fisiocritici, 2004). The literature on the Cimento is discussed in note 17.

<sup>10</sup> Thomas Dereham to James Jurin, Bologna, 22 June 1722, in *Early Letters*, D.2.12.

<sup>11</sup> On the Bologna Academy of Sciences, see especially *I materiali dell’Istituto delle Scienze* (Bologna: CLUEB, 1979); Walter Tega, ed., *Anatomie accademiche* (Bologna: Il Mulino, 1987), 2 vols.; Marta Cavazza, *Settecento inquieto. Alle origini dell’Istituto delle Scienze di Bologna* (Bologna: Il Mulino, 1990); and A. Angelini, ed., *Anatomie accademiche*, vol. 3 (Bologna: Il Mulino, 1993). Less satisfactory but nonetheless informative to English readers is Richard Rosen, *The Academy of Sciences of the Institute of Bologna, 1690–1804* (PhD diss., Case Western Reserve University, 1971).

here in Milan, will be able to put you on the path that you must take to fulfill it. In addressing you to him, I am pleased to contribute to the establishment of a relationship between two people, both of whom are reciprocally worthy of mutual esteem.

Dereham concluded his report of Italy's newest scientific academy by anticipating a letter "in obedience unto the Ladys commands" from Vallisneri.<sup>12</sup>

Whatever Vallisneri told him seems to have further increased Dereham's fascination with Grillo Borromeo's project to found a scientific academy—the Clelian Academy of the Vigilant—in Milan. During the next few years he continued to monitor its progress and his admiration for its patron grew. From Padua and during his occasional trips to Milan Vallisneri plied him with news. In the winter of 1727 Dereham at last found himself in the presence of this philosophical countess, providing his fellow Royal Society members with a first-hand account of the activities of her academicians. He was especially excited about their experiments concerning animal generation. On 25 February 1727 he forwarded a report from Milan "of a she mule that has actually in this Town gott a colt which has been reckond hitherto fabulous in history, & y<sup>e</sup> G[rand] Duke Ferdinand of Tuscany that sett up the *Accademia del cemento* had above 100 she mules tried without success." Lest Jurin remain skeptical of the veracity of this report, Dereham added: "I can answer for this Phenomena being an eye witness of having seen milk drawn out of her by a groom into my own hands, whilst the Colt stood by her, that is very pretty and mighty unlucky to answer the Italian proverb, *che il figlio di una mula ammazza il Padrone*."<sup>13</sup> By providing a verifiable instance of a fertile mule that had given birth—an extremely rare phenomenon that is still an object of great curiosity even today<sup>14</sup>—the Clelian Academy had made a major discovery. The mule and her offspring became a subject of discussion up and down the Italian peninsula. Reports of this latest anomaly of nature were sent not only to the Royal Society in London but also to the imperial physicians at the court of Vienna.

The report of the Milanese physician Carlo Mazzucchelli which Dereham forwarded to the Royal Society was not simply another curious account of the unresolved mysteries of generation but a talisman of an effort to create a relationship between a nascent scientific community and a more well-established institution. The postscript to his letter from Milan specified this element of his communication:

P.S. the annex'd anatomical observation of a learned Phisitian of this Town that has subscribed himself is directed to Countess Clelia Grillo Borromeo a very learned Lady that keepeth a sort of *Accademia del Cimento* in her house, & is a great Patron of all the learned of Italy.<sup>15</sup>

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<sup>12</sup> Dereham to Jurin, Florence, 18 December 1722, in *Early Letters*, D.2.14.

<sup>13</sup> *Early Letters*, D.2.27 (Milan, 25 February 1727). Translated, the proverb tells us "that the son of a mule will kill its owner." While most mules are sterile, in rare instances they have given birth, so this was indeed an extraordinary event of great interest to researchers trying to understand animal reproduction. This episode was much discussed by Vallisneri in his correspondence with Dereham; see Antonio Vallisneri, *Epistolario 1714–1729*, ed. Dario Generali (Florence: Olschki, 2005), 1363 (Padua, 2 August 1726), 1406 (Padua, 17 November 1726), 1421 (Padua, 26 December 1726), 1439 (Padua, 16 January 1727), 1459 (Padua, 1 March 1727).

<sup>14</sup> Horses have 64 chromosomes and donkeys have 62, while the offspring of their interbreeding—a mule—has 63. The odd number of chromosomes makes all males and most females sterile, but the rare occurrence of a fertile mule led to the Roman saying, *cum mula peperit* (when a mule foals) as a way of indicating a very rare occurrence. See Ann Chandler and Cyril A. Clarke, "Cum mula peperit," *Journal of the Royal Society of Medicine* 78 (1985): 800–801.

<sup>15</sup> Clelia Grillo Borromeo to Vallisneri, Milan, 25 February 1727, in *Early Letters*.

There was a reason, in other words, that the birth of a mule from a mule recalled the experiments of the Cimento. Redoing these seventeenth-century experiments was one of the many ways in which Countess Borromeo and her scientists presented themselves as heirs to the proud tradition of Galilean science that had flourished in Tuscany in the mid-seventeenth century.

### REVIVING THE CIMENTO

The experimental academy that Clelia Grillo Borromeo attempted to found in her apartment in Palazzo Borromeo in Milan in the 1720s was indeed a project built upon the successes and disappointments of the preceding century of Italian science. Grillo Borromeo envisioned the Accademia Clelia dei Vigilanti as serving not just Milan but all of Italy. She aspired to make her academy part of the international network of academies then in formation while also presenting it as a tangible reminder than Italy had and continued to make major contributions to the progress of science. Writing to the academy president Vallisneri about a year after Dereham's visit, she confirmed their mutual understanding of its goals. Her plan, she reminded Vallisneri, was to create "an Academy shortly like that of the Cimento."<sup>16</sup>

In order to understand what it meant to reinvent the Accademia del Cimento, an academy that eventually inspired the foundation of the Nuova Accademia del Cimento in Florence in 1801, we need to understand why it was such an important point of reference for discussions of a new academy in Milan. An experimental academy founded by Prince Leopoldo de' Medici in 1657, the Cimento was a group of physicians, philosophers and mathematicians closely associated with the Tuscan court which met primarily in Leopoldo's quarters in Palazzo Pitti whenever the prince was in town. Members included the mathematician Vincenzo Viviani, Galileo's disciple and self-proclaimed heir to his intellectual legacy; the brilliant and cantankerous mathematician, astronomer and mechanical philosopher Giovanni Alfonso Borelli; the controversial advocate of southern Italian naturalism Antonio Uliva; the physicist and experimenter Paolo del Buono and his priestly brother Candido; the neoscholastic philosophers Carlo Rinaldini and Alessandro Marsili; and a number of virtuosi closely associated with the Medici court such as the academy's first secretary Alessandro Segni, his successor Lorenzo Magalotti, and quite possibly Carlo Dati. Less officially, the court physician and naturalist Francesco Redi also seems to have guided aspects of the Cimento's experimental work on animals and insects while also developing his own personal experimental program that famously critiqued the Aristotelian idea that insects generated spontaneously.<sup>17</sup>

The Cimento, in short, was a princely initiative that existed because of Leopoldo's personal interest in science, and to a lesser degree that of his brother, Grand Duke Ferdinando II. A diary recorded its experimental activities but the academy never became a formal institution with rules, regulations, and criteria for membership. It did not even finalize its name until 1666, well

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<sup>16</sup> Clelia Grillo Borromeo to Vallisneri, Milan, n.d. [1727], BACR, Conc. 338/50, no. 29. For the broader intellectual context in which it developed, see Gabriel Maugain, *Étude sur l'évolution intellectuel de l'Italie de 1657 à 1750 environ* (Paris: Librairie Hachette, 1909). The Accademia Clelia dei Vigilanti is mentioned on 75.

<sup>17</sup> The most comprehensive studies of this academy are W. E. K. Middleton, *The Experimenters: A Study of the Accademia del Cimento* (Baltimore: Johns Hopkins University Press, 1971); Paolo Galluzzi, ed., *Scienziati a Corte. L'arte della sperimentazione nell'Accademia Galileiana del Cimento (1657–1667)* (Livorno: Sillabe, 2001); and Luciano Boschiero, *Experimental and Natural Philosophy in Seventeenth-Century Tuscany: The History of the Accademia del Cimento* (Dordrecht: Springer, 2007).

beyond the most active phase of its existence.<sup>18</sup> Leopoldo provided the impetus for much of the research undertaken by the group. His goals were to some degree personal and intellectual—the pleasure of convening leading scientists in Florence and exploring some of the most pressing scientific questions of the day, save for the thorny issues of Copernican astronomy rendered controversial by Galileo’s trial and condemnation in 1633. Leopoldo submitted questions for their consideration, monitored discussion, underwrote the costs of the expensive and beautiful instruments that they used, and personally corresponded with scientists physically removed from Florence who took an interest in the Cimento’s activities.

Elements of the Cimento’s activities fostered its reputation as a Galilean academy exploring questions of mechanics and physics. However, its decision to avoid public controversy while also investing its energies in new kinds of experimental observation reflected the climate in which it was created. Much to the consternation of individual members, the Cimento did not explicitly support the potentially revolutionary implications of the air-pump experiments of Galileo’s disciple Evangelista Torricelli, leaving in doubt the question of the existence of a vacuum in nature. Observing the philosophical disagreements among his academicians in their private discussions, Leopoldo explored the possibilities for creating a realm of public consensus that would facilitate new directions in scientific thinking.<sup>19</sup>

At the same time, Leopoldo also envisioned the Cimento as a carefully crafted demonstration of the Medici’s continued investment in the new science, an academy that would cement his family’s reputation as great patrons of science. Leopoldo minimized the group’s intellectual divisions by insisting on a publication that would present the experiments themselves as the results without drawing any overt conclusions that might provoke further controversy. The goal of the Cimento, at least as it was presented in public, was never to have an opinion which could only be the product of the “private sentiment of the academicians, never that of the Academy, whose only task is to make experiments, and to tell about them.”<sup>20</sup> While hinting that the academicians indeed had different interpretations of their findings, the Academy nonetheless presented them not as individual interpreters of nature but as collective witnesses whose agreement on the written description of 268 experiments constituted the nucleus of their collaboration.

The Cimento’s only publication not only displayed this cautious neutrality but was also a book created by committee. Edited and reedited for five years by a group of core academicians as well as consultants invited to comment on the quality of its literary presentation, the *Essays on Natural Experiences* (1667) bore no marks of individual authorship. Even Lorenzo Magalotti’s florid dedication to Grand Duke Ferdinando II was signed by *Il Saggiato segretario*, the unnamed secretary whose penname “The Assayed” evoked the title of Galileo’s famous work of scientific methodology, *The Assayer* (1623), which also questioned traditional explanations of how nature was perceived by the senses. The *Essays* presented the Cimento as an academy committed to the importance of experimental knowledge “under the protection of the Most Serene Prince Leopoldo of Tuscany.”<sup>21</sup>

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<sup>18</sup> Paolo Galluzzi, “L’Accademia del Cimento: ‘gusti’ del Principe, filosofia e ideologia dell’esperienza,” *Quaderni storici* 48 (1987): 788–844, esp. 790–91, 793.

<sup>19</sup> On this issue, see especially Boschiero, *Experimental and Natural Philosophy*.

<sup>20</sup> Middleton, *The Experimenters*, 92.

<sup>21</sup> *Saggi di naturali esperienze fatte nell’Accademia del cimento sotto la protezione del serenissimo principe Leopoldo di Toscana e descritte dal segretario di essa academia* (Florence, 1667). Middleton’s translation of Magalotti’s penname seems to miss the obvious allusion to Galileo’s *Saggiatore*; Middleton, *The Experimenters*, 88.



Personally delivered by Magalotti to King Charles II, the Royal Society, and leading natural philosophers such as Robert Boyle during the Medici embassy to London in winter 1668, the *Essays* became a great artifact of scientific diplomacy.<sup>22</sup> As the *Essays* began to circulate among scholars throughout Europe, albeit in a highly limited fashion since the book was not for sale, scientists attempted to write to Florence for news of further activities. But by then the academy no longer existed. With Leopoldo's appointment as cardinal and the simultaneous departure of Borelli, Uliva, and Rinaldini from Tuscany in 1667, the ingredients to maintain the prince's academy were no longer there.

In the end, the Accademia del Cimento was not a community like the Royal Society, a group formed by scholars who wished to conduct research together of their own volition and sought funding and sponsorship to make this possible, or a ministerial prerogative such as the Paris Academy that saw science as an investment in the best scientists money could buy. An entity that did not even have a name until it was on the verge of disbanding, the Cimento was itself an experiment in scientific conversation, observation, collaboration, and experimentation. It was a curious point of departure for an academy that hoped to succeed.

Looking more closely, however, there were ingredients in this failed academy that suggest why creating something like it was an important topic of conversation in the 1720s. Given the Royal Society's own enthusiastic program of experimentation, the Cimento's single official publication had appeared redundant to its members by the time it reached them. But in its own way it was nonetheless a success. Translated into English and Latin and well-discussed by the French scientific community, the *Essays* did indeed generate some discussion about post-Galilean science in other parts of Europe. The appearance of a second Italian edition in 1691 made its contents more commercially available.

For those who knew the history of the Cimento and its members, however, the academy's intellectual output was far more than one book. Careful readers of the publications of Borelli and Redi, the most prolific scientists associated with the academy (save for Rinaldini, whose more scholastic natural philosophy excited far less interest by the eighteenth century or even in his own time), understood their impressive body of work to have been also facilitated by Medici support for science in the mid-seventeenth century. Even more than the *Essays*, their publications were enduring contributions to some of the important fields of scientific research in the late seventeenth and early eighteenth century.

In the case of Borelli, he significantly advanced scientific discussions of the concept of force, the nature of mechanics, the idea of the animal-machine, and furthered the development of a mathematics that could capture the nuances of a new physics while also having important applications to such fields as medicine and microscopic anatomy; at the same time, Borelli also demonstrated his ability to combine his theoretical and methodological preoccupations with detailed observation analysis of phenomena such as the satellites of Jupiter and the eruption of Mount Etna.<sup>23</sup> His work had the additional virtue of belonging to no single discipline, indeed repeatedly

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<sup>22</sup> W. E. K. Middleton, "Some Italian Visitors to the Early Royal Society," *Notes and Records of the Royal Society of London* 33 (1979): 157, 159–65.

<sup>23</sup> On Borelli, a good starting point is Ugo Baldini, "Gli studi su Giovanni Alfonso Borelli," in *La scuola galileiana. Prospettive di ricerca*, G. Arrighi et al. (Florence: La Nuova Italia, 1979), 111–35; Paolo Galluzzi, "G. A. Borelli dal Cimento agli Investiganti," in *Galileo e Napoli*, ed. Fabrizio Lomonaco and Maurizio Torrini (Naples: Guida, 1987), 339–55; Domenico Bertoloni Meli, "The Neoterics and Political Power in Spanish Italy: Giovanni Alfonso Borelli and His Circle," *History of Science* 34 (1996): 57–89; and Giovanni Alfonso Borelli, *Storia e meteorologia dell'eruzione dell'Etna del 1669*, ed. Nicoletta Morello (Florence: Giunti, 2001).

crossing the boundaries between astronomy, mathematics, philosophy, and medicine in his quest to understand fully the implications of the new mechanics. While Viviani may have been the official torchbearer of Galileo's legacy, Borelli demonstrated repeatedly what the next steps might be in developing a new approach to science inspired by a close reading of Galileo's work.

By contrast, Redi presented successive generations with a vast empirical program of medicine and natural history. By employing naked-eye observation, the instrumental powers of the microscope, and sophisticated experimental practices, he repeatedly demolished many time-honored preconceptions about the natural world and the human body. He also did so with great style and verve that offered a different kind of homage to Galileo as a scientist committed to the idea of writing about science not only for experts but for anyone who could read. Redi's liquid Tuscan prose, much like Galileo's famously witty books that had gotten him in so much trouble, made him one of the most well-read scientists of his generation. He delighted readers with his accounts of his discoveries: the nature and source of venom in vipers, the generation of insects, the improbability of the miraculous powers of the snakestone, and the nauseating details of the presence of parasites of the human body.<sup>24</sup> More than any Italian scientist of the seventeenth century, Redi embodied the kind of style that Leopoldo and his secretary Magalotti wished to impart in constructing an account of the Cimento's experiments. In short, discerning readers of those seventeenth-century works of science lining the shelves of eighteenth-century libraries knew that the Cimento had indeed left its imprint on Italian science and been important to European-wide discussions of science in general. It was indeed worthy of a revival.

By the eighteenth century the Cimento was as a symbolic point of departure for the idea of founding an academy that would restore Italy's greatness through the pursuit of modern knowledge. It evoked nostalgia for an earlier age when the Italian peninsula had been more politically powerful and culturally dynamic, and its academies the envy of other European states. Instead, as the great librarian, historian, and guardian of Italy's intellectual heritage Ludovico Antonio Muratori (1672–1750) noted with disgust in 1704, in his day virtually every Italian city had “an academy, indeed two, three or sometimes even more”—but to what end? In his famous account of the Italian republic of letters, *First Sketches of the Republic of Letters of Italy*, written under the pseudonym of Lamindio Pritanio, Muratori described the decline of Italy's academies since the era of the Cimento. In a withering attack on the nature of Italian society, Muratori accused his contemporaries of having trivialized the idea of the academy. He acridly observed that most Italian academicians had no understanding of the value of knowledge. Instead they were besotted with poetry—“verses and more verses”—and invested all their energies in witty speeches about frivolous subjects which were, Muratori opined, “perhaps delightful but certainly of little utility to the public.”<sup>25</sup>

In this influential publication which sought to redefine the Italian republic of letters as a project transcending the political boundaries separating the many Italian states, Muratori called for a wholesale reformation of the idea of the academy that was obviously inspired by the emergence of national academies in other countries. He encouraged Italian scholars to think of the

<sup>24</sup> The most comprehensive introduction to the work of Redi is Walter Bernardi and Luigi Guerrini, eds., *Francesco Redi: un protagonista della scienza moderna: documenti, esperimenti, immagini* (Florence: Olschki, 1999).

<sup>25</sup> Lamindio Pritanio [Ludovico Antonio Muratori], *Primi disegni della Repubblica letteraria d'Italia esposti al pubblico* (Naples, 1703 [actually Venice, 1704]), in *Opere*, by Muratori, ed. Giorgio Falco and Fiorenzo Forti (Milan: Ricciardi, 1964), 178, 179. For the broader context of Muratori's project to create an Italian republic of letters, see Dario Generali, “Repubblica delle lettere fra censura e libero pensiero. La comunicazione epistolare filosofica-scientifica nell'Italia fra Sei e Settecento,” *Intersezioni* 6 (1983): 73–94.

academy not as a literary club in which to pass one's leisure hours but as an engine for productive knowledge. His vision of the academy was a worthy accompaniment to his understanding of the function of a library as a center for scholarly research. A society blessed with so many great libraries—not only the great libraries of religious institutions such as the Vatican and the Ambrosiana but the numerous princely and private libraries for which Italy was famous—should produce institutionalized conversation worthy of their contents. Praising those few academies which had already embraced this mission, he encouraged the inauguration of “a most noble competition among the Italian academies, whose end would be the growth of the sciences and the arts, and the glory of the nation.”<sup>26</sup>

Without explicitly invoking the Cimento, Muratori nonetheless praised everything that it stood for. The Cimento was an academy that had presented its findings in its own language, Tuscan rather than Latin. It embodied the virtues of the new natural philosophy based on “observations, experiences, and inventions” and it fulfilled Muratori's vision of a modern science that neither blindly accepted nor completely discarded the virtues of traditional Aristotelian philosophy. Finally, it was an initiative that had attracted international attention. “Let us then entrust our greatest hopes for our glory in the philosophy that we call experimental,” wrote Muratori. Specifying the value of “experiments (*cimenti*) by which we mean the new experiments,” he self-consciously evoked the legacy of the Cimento in a way that would have resonated with many Italians of his generation.<sup>27</sup> Such sentiments reverberated across the Alps, finding their way into foreign journals that monitored news of the Italian republic of letters.<sup>28</sup>

Clelia Grillo Borromeo and Antonio Vallisneri were both avid consumers of crucial elements of Muratori's program. Their personal ties to Muratori already predisposed them to be favorable to his vision of Italian intellectual life. Grillo Borromeo had married into the Milanese family which supported Muratori in the first major position of his career, as prefect of the Ambrosian Library (1695–1700). Even after he returned to his native city of Modena to become librarian and advisor the d'Este family, Muratori maintained his ties with the Borromeo.<sup>29</sup> Vallisneri was a close friend and intimate correspondent who shared Muratori's goal of improving Italy's standing in the republic of letters. He played an important role in publicizing Muratori's *First Sketches* by reviewing it at length in the first volume of the *Giornale de' letterati d'Italia* (1710–40), the journal he helped to found in Venice to give this imagined literary republic a voice and a venue.<sup>30</sup> While Vallisneri harbored doubts about the moral dimensions of Muratori's

<sup>26</sup> Muratori, *Primi disegni*, 180.

<sup>27</sup> *Ibid.*, 191, 188.

<sup>28</sup> Walter Kurmann, *Presenze italiane nei giornali elvetici del primo Settecento* (Berne: Herbert Lang, 1976), 83.

<sup>29</sup> Clelia Grillo Borromeo has been virtually unstudied until quite recently. Fortunately, a good biography now exists that also reproduces many key letters in her correspondence: Anna M. Serralunga Bardazza, *Clelia Grillo Borromeo Arese. Vicende private e pubbliche virtù di una celebre nobildonna nell'Italia del Settecento* (Biella: Eventi & Progetti Editore, 2005). See also Alessandro Giulini, “Contributi alla biografia della contessa Clelia Borromeo del Grillo,” *Archivio storico Lombardo* 5, no. 46 (1919): 583–92; Bruno Brunelli, *Figurine e costume nella corrispondenza di un medico del '700 (Antonio Vallisneri)* (Milan: Mondadori, 1938), 37–44; and Giuliana Parabiago, “Clelia Borromeo del Grillo,” *Correnti* 1 (1998): 36–60; and *Dizionario biografico degli italiani* (Rome: Istituto della Enciclopedia Italiana, 1960–) (hereafter DBI), s.v. “Grillo Borromeo, Clelia,” 59:450–54. The forthcoming proceedings of a 2007 conference on Grillo Borromeo, edited by Dario Generali, will significantly augment our understanding of her activities.

<sup>30</sup> *Giornale de' letterati d'Italia* 1 (1710): 267–83; Aldo Andreoli, *Nel mondo di Lodovico Antonio Muratori* (Bologna: Il Mulino, 1972), 159–64; and Brendan Dooley, *Science, Politics, and Society in Eighteenth-Century Italy: The Giornale de' Letterati and Its World* (New York: Garland, 1991).

program of Catholic enlightenment, he strongly supported its intellectual underpinnings: a new edifice of learning whose core ingredients were experimental science and historical erudition, and a new conversation about knowledge reinvigorated by the creation of new kinds of academies and scholarly journals. The inauguration of the *Giornale de' letterati* was but the first step in Vallisneri's efforts to respond to Muratori's challenge to create an Italian republic of letters.

Yet Muratori's subtle invocation of the salutatory effect of the activities of Leopoldo's academy was not the only reason why both the founder and president of the Accademia Clelia de' Vigilanti saw themselves as heirs to the Cimento. In the case of Grillo Borromeo, she envisioned herself as fulfilling Muratori's call for a new kind of patron who understood the value of scholarship as well as the necessity for bold intellectual initiatives in the age of Enlightenment. As the founder of a new academy in the final years of the Medici's lengthy reign in Tuscany, when they had ceased to be a viable political power or to offer significant cultural leadership, she considered the creation of an academy to be a gesture of political significance. Contemporaries actively cultivated this image of Grillo Borromeo, praising her for "bringing about a rebirth of the Century of Patrons with her rare ability."<sup>31</sup> Scholars dedicated many books to her, asked her advice on their projects, and generally sought to win her favor. She became famous for her philosophical correspondence.<sup>32</sup> Dereham's description of her to the Royal Society, in other words, was quite accurate; she was an unusually learned and engaged patron who aspired, as she told Vallisneri in 1725, to create "a new Cimento."<sup>33</sup>

At the same time, Grillo Borromeo also saw herself as filling a void created by the death of the most important female patron of the preceding century, Queen Christina of Sweden (1626–89), whose cult as a Catholic icon of learning and faith reached its climax with the installation of her funerary monument in St. Peter's in 1702. During her lengthy stay in Rome following her conversion and abdication of her throne, Queen Christina was frequently praised for her support of Italian learning and culture. The founder of at least one Roman academy, which included among its members two of the most distinguished participants in the Cimento—Borelli and Redi—Christina's activities also inspired the foundation of Ciampini's Accademia Fisico-matematica in 1677. She was widely regarded as a great patron of science. Yet these activities had been eclipsed by the creation of the Accademia degli Arcadi, a literary academy founded in Rome in 1690 which claimed Queen Christina as its posthumous patron and rapidly established colonies throughout the Italian peninsula.<sup>34</sup>

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<sup>31</sup> Giuseppe Antonio Sassi to Vallisneri, Milan, 12 January 1724, Biblioteca dell'Accademia dei Concordi, Rovigo (hereafter BACR), Conc. 355/U. While I have not yet been able to confirm this by looking in the Florentine archives, there is some indication in her correspondence with Vallisneri that she considered herself a rival to Violante Beatrice of Bavaria (1673–1731), the widow of Prince Ferdinando III de' Medici and sister-in-law of Gian Gastone, who became the last Grand Duke of Tuscany in 1723 and appointed her governor of Siena.

<sup>32</sup> Angelo Durini, *Angeli Cardinalis Durini in obitum Cloeliae Grillo Borromeae matronae clarissimae ac doctissimae Obsequium funebre* (Milan, 1778), viii–ix.

<sup>33</sup> Grillo Borromeo to Vallisneri, Milan, 8 August 1725, Archivio di Stato, Reggio Emilia (hereafter ASRE), *Archivio Vallisneri*, 4/1, fasc. 2, c. 1502.

<sup>34</sup> For an introduction to Queen Christina's activities in Rome, see Wilma DiPalma et al., *Cristina di Svezia. Scienze ed alchemia nella Roma barocca* (Bari: Dedalo, 1990); Susanna Åkerman, *Queen Christina of Sweden and Her Circle: The Transformation of a Seventeenth-Century Philosophical Libertine* (Leiden: Brill, 1991); and Börje Magnusson, *Cristina di Svezia a Roma* (Stockholm: Swedish Institute in Rome, 1999).

In the decade prior to the founding of the Clelian Academy, Arcadia had almost 1400 members.<sup>35</sup> The success of Arcadia at the expense of other kinds of scholarly initiatives at the dawn of the eighteenth century was the focal point of Muratori's condemnation of the current state of the Italian academies and his call for the emergence of a new kind of patron. Grillo Borromeo's decision to create an academy in Palazzo Borromeo was an attempt to redress this imbalance while also highlighting the prominent role that learned women might play in this new vision of the republic of letters.<sup>36</sup> Her academy, more than any other scientific project of the 1720s, embodied the idea of the learned noblewoman as a patron of science who could intelligently direct conversations of male philosophers for the greater good of society. In this respect, she was as much a reader of Baldassare Castiglione's *Book of the Courtier* as Muratori's plan for an Italian republic of letters.

As for Vallisneri, he was in every respect one of the most overtly Galilean scientists of his generation—prolific in his publications, broadminded in his interests, and free with his opinions about virtually every controversial subject in the fields of medicine and natural history including the refutation of Leeuwenhoek's understanding of sperm and the numerous accounts of the geological and paleontological record which attributed these transforms to the Flood. A disciple of the great Bolognese anatomist Malpighi, he understood the ways in which the methodological issues which Galileo had raised about the evidence of the senses and the uses of instruments could render an entirely new account of the human body and the natural world. A talented anatomist, passionate collector of specimens, and strong advocate of the ability of the microscope to resolve thornier issues of observation, he was also an avid reader of every learned journal and foreign publication he could get his hands on.<sup>37</sup> For Vallisneri, science as he knew it began with Galileo and his heirs at the same time that it also played itself out on a far larger European stage which made him one of the few Italian scholars, like Marsigli in Bologna, to be invited to join leading scientific societies. Vallisneri's self-consciousness about the relationship between Italian science and approaches to nature developed elsewhere was quite acute. Passionately critical of the French, he was begrudgingly admiring of their contributions to science and far more generous in his assessments of the English, quoting the writings of Bacon at every opportunity.

While cultivating a cosmopolitan view of learning, Vallisneri strongly believed in the value of communicating one's ideas in the vernacular. In the end, as Michael Cunningham aptly observes, he was a small-town physician who became a professor of international reputation by patiently developing a research program that played itself out in his intense and voluminous

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<sup>35</sup> Dooley, *Science, Politics, and Society*, 16. On the place of Arcadia in Roman academy life, see Isidore Carini, *L'Arcadia dal 1690 al 1890* (Rome: Tipografia della Pace, 1891); and Maria Pia Donato, *Accademia romane. Una storia sociale (1671–1824)* (Napoli: ESI, 2000), 58–76. For the role of women in Arcadia, see Elisabetta Graziosi, "Arcadia femminile: presenze e modelli," *Filologia e critica* 17 (1992): 321–58.

<sup>36</sup> Like most learned women of her generation, Grillo Borromeo was herself an Arcadian under the name *Aspasia Tentidia*; see DBI, s.v. "Grillo Borromeo, Clelia," 59:451.

<sup>37</sup> For an introduction to Vallisneri's life and work, see especially Rhoda Rappaport, "Italy and Europe: The Case of Antonio Vallisneri (1661–1730)," *History of Science* 29 (1991): 73–98; Dario Generali, *Antonio Vallisneri: gli anni della formazione e le prime ricerche* (Florence: Olschki, 1997); Ivano Lombardi, *Un nome del Settecento: Antonio Vallisneri* (Lucca: Titania, 1998); Sandra Casellato and Luciana Sitran Rea, eds., *Professori e scienziati a Padova nel Settecento* (Treviso: Edizioni Antilia, 2002), 533–40; and Michael Doucette Cunningham, *Seashells on the Mountains: Antonio Vallisneri, Fossils, and the Republic of Letters* (PhD diss., University of Connecticut, 2005). On Malpighi's Galileanism, see Domenico Bertoloni Meli, "Mechanistic Pathology and Therapy in the Medical Assayer of Marcello Malpighi," *Medical History* 51 (2007): 165–80.

correspondence, his participation in the new world of scholarly journals, and his perseverance in the publication of his books.<sup>38</sup> Vallisneri believed that the language of science, and learning in general, must be Italian. His understanding of this issue offers further insight into why the *Cimento* was an important point of reference for his participation in a new academy. In his 1722 manifesto entitled “That Every Italian Ought to Write in Polished Italian or Tuscan Language,” Vallisneri criticized those who insisted on the value of writing in Latin by poking fun at their obsession with communicating in an ancient language. “In what age and among what people are we?” he joked. “Among the Latins or the Italians?” In Vallisneri’s mind, Italy could not be defended and renewed without taking greater pride in its own language. Citing previous authors who shared this belief, he not only invoked Muratori’s *First Sketches* but repeatedly referred to “my favorite Redi” as his principal source of inspiration.<sup>39</sup> For him, Redi was the pinnacle of the kind of scientific writing he hoped to emulate and improve upon—a probing naturalist whose findings were so important that foreigners read and translated him but also a brilliant prose stylist and poet who understood how to use language to make science accessible and pleasurable to a broadly literate audience who knew Italian. Both the style and the substance of Vallisneri’s science sought to revive the approach of the *Cimento* as it was embodied in the work of Redi. But he also understood the *Essays* to be an equally important product of this Galilean tradition of vernacular science that he worked to keep alive, unlike his mentor Malpighi who published in Latin to reach an international audience.

For all these reasons, the Clelian Academy was indeed an attempt to capitalize upon a certain degree of nostalgia for the moment that the *Cimento* represented without limiting itself to the format, let alone the intellectual program of Leopoldo’s academy. If anything, Vallisneri constantly reminded readers of his popular works of medicine and natural history that he had moved beyond Redi’s conclusions, indeed improved upon his account of spontaneous generation through fresh observations that demolished the weaker parts of Redi’s own argument. The *Cimento*, for him and his aristocratic Milanese patron, was simply a point of departure for an even greater and, in their minds, more enduring project: an academy that would create an information network uniting the multiple scholarly communities clustered in different Italian cities, and connecting the Italian scientific community with the rest of the world. This was a project forged by the mutual ambitions of Italy’s most distinguished senior naturalist of the early eighteenth century and the peninsula’s most learned and wealthy woman. Inspired by the past and invigorated by the present, around 1722 they began to construct their academy.

### AN ACADEMY ON PAPER

The idea of the Clelian Academy emerged as a result of Grillo Borromeo’s avid curiosity about science. Wife of Gian Benedetto Borromeo, great-nephew of Innocent XI and son of Carlo Borromeo Arese (1657–1734), one of the wealthiest and powerful men in Italy, she came from an equally noble Genoese family that paid the princely sum of 30,000 ducats for her dowry when

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<sup>38</sup> I am paraphrasing Cunningham, *Seashells on the Mountains*, 16.

<sup>39</sup> [Antonio Vallisneri], “Che ogni italiano debba scrivere in Lingua purgata Italiana, o Toscana, per debito, per giustizia, e per decoro della nostra Italia,” *Supplemento al Giornale de’ Letterati d’Italia* 1 (1722): 270, 288–89. While published anonymously as a “Lettera del Sig. N.N.\*\*\*” Vallisneri made his authorship of this article widely known. For further discussion of his relationship with Redi, see Antonio Vallisneri, *Miglioramenti e correzioni d’alcune sperienze ed osservazioni del Signor Redi*, ed. Ivano dal Prete with Andrea Castellani (Florence: Olschki, 2005), esp. 5–14.

they married in 1707.<sup>40</sup> Her family educated her well beyond the norm in the convent of the Misericordia; she reputedly knew five languages at a tender age and was nicknamed the “Oracle” by the time she was twenty because of her quick intelligence.<sup>41</sup> By every measure, Grillo Borromeo was an avid consumer of books, journals, and newspapers in all of the major European languages. Visitors to her house were struck by the depth and breadth of her library.<sup>42</sup> Much to her father-in-law’s consternation, she hosted conversations in Palazzo Borromeo which reflected her cosmopolitan taste and curiosity about the world beyond Milan.

In June 1718 Grillo Borromeo’s program of self-education inspired her to travel all the way to Padua to meet one of her favorite scientific authors, Antonio Vallisneri. As Vallisneri wrote with great amazement to Giuseppe Antonio Sassi, who succeeded Muratori as the prefect of the Ambrosian Library in Milan: “This great lady, entering before my servant with a candle, looked me over and said: ‘I want nothing else than to know Vallisneri by sight since I already know him from his books, all of which I’ve read.’” The next day Vallisneri visited the countess at the *osteria* where she was staying; he reported to Muratori that they talked well into the evening about “letters and scholars” (*lettere e letterati*).<sup>43</sup>

For the next few years, Vallisneri engaged in an intense correspondence with Grillo Borromeo about anatomical curiosities and other matters of scientific interest. The culmination of this first stage in their relationship was Vallisneri’s fulsome dedication to the “heroic and masculine ability” of his new patron in his important treatise on fossils, *On Marine Bodies Found on Mountains* (1721)—on Muratori’s advice he did not dedicate the far racier *History of Human and Animal Generation* which appeared in the same year with a dedication to the Habsburg emperor.<sup>44</sup> Grillo Borromeo, however, aspired to more than just a long-distance meeting of minds. Following the appearance of Vallisneri’s book, which she praised for associating her far more modest talents with his considerable reputation in “the entire learned world,” she persuaded the busy medical professor on several occasions to leave his patients and students behind in order visit her in Milan during his

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<sup>40</sup> Parabiago, “Clelia Borromeo del Grillo,” 37–39.

<sup>41</sup> Giuseppe de’ Necchi Aquila, *Orazione funebre nella morte di sua eccellenza la signora Contessa Donna Clelia Borromeo* (Milan, 1777), 8; Giulini, “Contributi,” 584. On the Genoese context in which she was raised, see Calogero Farinella, “La ‘nobile servitù.’ Donne e cicisbei nel salotto Genovese del Settecento,” in *Salotti e ruolo femminile in Italia tra fine Seicento e primo Novecento*, ed. Maria Luisa Betri and Elena Brambilla (Venice: Marsilio Editore, 2004), esp. 97–98, 113–14, 122.

<sup>42</sup> Serralunga Bardazza, *Clelia Grillo Borromeo*, 78.

<sup>43</sup> Vallisneri to Sassi, Padua, 2 January 1719, Biblioteca Ambrosiana, Milan (hereafter Ambr.), MS Z sup. 208. See also Vallisneri to Muratori, Padua, 25 June 1718, in *Edizione nazionale del Carteggio di Ludovico Antonio Muratori*, by Ludovico Antonio Muratori (Florence: Olschki, 1975–), 44:213; and Muratori to Vallisneri, San Felice, 19 August 1718, in *Epistolario di Lodovico Antonio Muratori*, by Ludovico Antonio Muratori, ed. Matteo Càmpori (Modena: Società Tipografica Modenese, 1903), 5:1949.

<sup>44</sup> An earlier letter outlining many elements of the printed dedication and proposing the idea to her exists in the Biblioteca Comunale dell’Archiginnasio, Bologna (hereafter BCAB), Coll. Autogr. CXIII 24740, no.3, Vallisneri to Grillo Borromeo, Camposanpiero, 8 June 1719, attached to the printed version (Padua, 18 April 1721); Coll. Autogr. CXIII 24740, n. 15a. See Vallisneri, *De’ corpi marini che su’ monti si trovano; della loro origine e dello stato del mondo avanti il Diluvio, nel Diluvio e dopo il Diluvio* (Venice, 1721). For his discussion with Muratori, see Muratori, *Edizione Nazionale del Carteggio*, 44:231–32, 240. See also Vallisneri to Bourguet, Padua, 29 January 1721, Bibliothèque Publique et Universitaire, Neuchâtel (hereafter BPUN), *Fonds Bourguet* MS 1282, c. 243.

summer holidays. Friends such as the mathematician Jacopo Riccati joked about these pilgrimages “to bow before your patroness Madame Borromeo.”<sup>45</sup>

Vallisneri participated in Grillo Borromeo’s salon, and spent his days reading, conversing, and writing in her library. He conducted experiments in her well-stocked physics and natural history cabinet, and enjoyed further conversation of the kind that inspired Grillo Borromeo and her physician Carlo Mazzucchelli to send him an account of a monster to insert in his work on generation.<sup>46</sup> Describing his experience of *Casa Borromea* Vallisneri told one friend: “Here there is a continual academy of scholars, so to speak, because Signora Donna Clelia is so talented and generous. I would have never believed that I could find as much depth in all the sciences and arts as I find in this great Lady.”<sup>47</sup> Vallisneri accompanied the countess on several occasions to Lake Como in order to study the peculiar geology and hydrology of the region, while marveling at her “heroic curiosity.” He described the pleasure of their “philosophical observations” together and graciously accepted her defense of his theory that mountains springs were fed by rain and snow (and not by the waters of the sea reaching up into the highest points of land, as his opponents argued).<sup>48</sup>

Towards the end of his initial visit, Vallisneri completed his *Critical Reflections* on the Anglican cleric and Royal Society member William Derham’s rational proof of the existence of God “in blissful leisure in the house of his great patron” in September 1722.<sup>49</sup> Though this essay remained unpublished until after his death, it was nonetheless a talisman of the increasing active role Grillo Borromeo envisioned for herself as a facilitator of the work of a great scientist. The steady stream of books appeared from Vallisneri’s pen during this final decade of his long and productive life, and letters that he sent to correspondents, testify to the mutual importance of their relationship. Vallisneri would recall with some pride that he had been the first to recognize Grillo Borromeo’s importance as a great and knowledgeable patron.<sup>50</sup>

Being a patron and pupil of a distinguished scientist was not, however, Grillo Borromeo’s ultimate ambition. By the end of the first year of their relationship, if not before, she had begun to contemplate the possibility of transforming the conversations in her palace into a more formal academy. During the summer of 1722, just before Derham wrote his report to the Royal Society, Vallisneri accepted Grillo Borromeo’s invitation to become president of the Clelian Acad-

<sup>45</sup> Grillo Borromeo to Vallisneri, Milan, 3 May 1721, Archivio di Stato, Reggio Emilia, *Archivio Vallisneri*, 4/I, 1, c. 204; see Serralunga Bardazza, *Clelia Grillo Borromeo Arese*, 157; Jacopo Riccati and Antonio Vallisneri, *Carteggio (1719–1729)*, ed. Maria Laura Soppelsa (Florence: Olschki, 1985), 151 (Castelfranco, 14 August 1725).

<sup>46</sup> Antonio Vallisneri to Clelia del Grillo Borromeo, 9 July 1719, BCAB, Coll. Autogr. CXIII 24750, no. 396615. Thanks to Dario Generali and Michael Cunningham for providing me with a copy of this manuscript. See Vallisneri, *Istoria della generazione dell’uomo, e degli animali* (Venice, 1721), 439–46, for the published version.

<sup>47</sup> Vallisneri to Girolamo Lioni, Milan, 28 August 1722, in *Epistolario 1714–1729*, 841.

<sup>48</sup> Antonio Vallisneri, *Opere fisico-mediche* (Venice, 1734), 1:307; Antonio Vallisneri, 28 August 1727, in *Scritti filosofici*, by Antonio Conti, ed. Nicola Badaloni (Naples: Casa Editrice Fulvio Rossi, 1972), 42. In 1725 Niccolò Gualtieri debated the origins of mountain streams point by publishing a critical response to Vallisneri’s *Lezione Accademica intorno all’origine delle Fontane* (Padua, 1715), leading Vallisneri to issue a new edition in 1726. This episode is discussed briefly in Parabiago, “Clelia,” 45–46.

<sup>49</sup> Vallisneri, “Riflessioni Critiche sopra alcuni Capitoli, e Annotazioni del Libro ottavo dell’Opera dottissima di Mr. Derham Inglese, intitolata dimostrazione della Essenza, ed Attributi d’Iddio ec. tradotta dall’Inglese, e stampata in Firenze l’an. 1719 fatta dal Sig. N. N. e cavate dalle Osservazioni del nostro Autore,” in *Opere fisico-mediche*, 3:326–30. This treatise responded to William Derham’s *Physico-Theology* (1713) and *Astro-Theology* (1714), the latter of which was translated into Italian by the (unrelated) Thomas Derham in 1728.

<sup>50</sup> Vallisneri to Sassi, Padua, 13 April 1726, Ambr., cod. Z 210 sup., lett. 82.



emy. They envisioned the Clelian Academy not as an institution with walls but as a center coordinating the activities and information exchange of a community that was largely but not exclusively Italian, and dedicated to the preservation of Italy's distinguished scientific heritage.

Vallisneri's reasons for embracing this opportunity had a great deal to do with his own understanding of the importance of academies to the pursuit of science. In the early years of his relationship with his new patron, Vallisneri told one of his Bolognese correspondents how much he envied the resources that Marsigli had brought to this city by founding an academy of which he became a corresponding member.<sup>51</sup> Marsigli created the Bologna Academy of Sciences partly as a solution to his concerns about the stagnation of the Italian university curriculum. Vallisneri was sufficiently curious about its evolution to make multiple trips to Bologna in the 1720s to observe firsthand the miraculous emergence of this Italian version of Salomon's House and tour its natural history collection. He personally witnessed Marsigli's return from the Netherlands, laden with boxes groaning with fresh specimens and heretofore unseen curiosities, and wrote that he considered him "one of the first lights of Italy."<sup>52</sup> In short, there was a great deal of competition between Italy's two leading naturalists, both of whom had great ambitions for the restoration of Italian science.

Marsigli's ability to garner papal support for his academy encouraged Vallisneri to consider how Grillo Borromeo's admiration for his work might provide him with an opportunity to create an institution of his own making. He hoped that the Clelian Academy would compete with the Bologna Academy to claim the terrain that the failure of the Cimento had left vacant. Vallisneri had already shaped the scientific culture of early eighteenth-century Italy through a publication program which he had pursued for many decades with great success. He now dreamed of an academy that would galvanize support for science and garner international attention, proving once and for all that the Italians were indeed full-fledged participants in the scientific republic of letters.

In contrast to a number of other Italian cities, Milan was conspicuously devoid of strong initiatives to create a flourishing scientific culture. Key figures behind the Clelian Academy openly "commiserated that in this city of ours in which there is no stimulus to the arts, philosophy not only goes about naked and wounded but so does every other kind of science, since there is an absence of those who make them look good."<sup>53</sup> Despite its distinguished tradition of producing noteworthy physicians, mathematicians, and engineers that predated even the arrival of Leonardo, there had been virtually no effort to create a visible scientific community in this city.

With the exception of Count Carlo Archinto's Accademia dei Cavalieri (1702–06), an academy that brought together nobles, clerics, physicians, and scholars for a few years in the count's palace, there seem to have been no other efforts to create and sustain scientific conversation and experimentation. Part of the problem had to do with the distance of Lombardy's principal university which lay further east in Pavia. At the same time, the flourishing college system established by religious orders such as the Jesuits, Piarists, Somascans, and Theatines populated the city with well-educated professors of natural philosophy and mathematics; but it did not fa-

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<sup>51</sup> Biblioteca Universitaria, Bologna, MS 2086 (Carteggio Vogli); Vallisneri to Giovanni Giacinto Vogli, Padua, 19 May 1720, in *Epistolario 1714–1729*, 528–29.

<sup>52</sup> Vallisneri to unknown, Padua, 16 March 1726, Biblioteca Universitaria, Bologna, MS 2013, cartone 5, no.14; Vallisneri to Muratori, Padua, 20 June 1727, in *Epistolario 1714–1729*, 1486. On Vallisneri's rivalry with Marsigli and their repeated visits to each other's natural history museums, see Generali, *Antonio Vallisneri*, 351, 356–61.

<sup>53</sup> Sassi to Vallisneri, Milan, 12 January 1724, ASRE, *Fondo Brunelli V B 168*, no. 10.

cilitate a self-conscious community of experimenters eager to debate the legacy of Galilean science and exciting new developments in the academies of London and Paris whose accomplishments were lauded by the increasing number of Grand Tourists passing through the city.<sup>54</sup> Grillo Borromeo participated in a community frustrated by Milan's secondary intellectual status. In an age of great ideas, how could a city with a library to rival the Vatican's be so marginal to enlightened conversation? She saw her academy as an opportunity to integrate her city into the networks shaping and reshaping the republic of letters.

One of the questions on Vallisneri's mind in the summer of 1722 was where to begin. What, he asked himself, were the first steps in inaugurating an academy? His answer contained many of the standard ingredients of the Renaissance tradition of Italian academies. Taking the cricket (*grillo*) as its emblem, in an evident pun on the patron's name, the academy's motto—"by night and by day" (*noctuque diuque*)—suggested the virtues of continuous inquiry that confirmed the appropriateness of designating the academicians "Vigilanti." Moving beyond the rhetorical trappings of academy life, Vallisneri began to sketch a portrait of the academy's membership and activities. By the time he returned to Padua in fall to resume his professorial duties, he had left behind an apostolic number of laws—twelve principles which became "the rules for an Experimental Academy."<sup>55</sup>

Examining this sketch of the academy, which exists on paper primarily in Giuseppe Antonio Sassi's posthumous description of the Clelian Academy that appeared in 1729, we can see the many ways in which the Clelian Academy sought to realize the outline for a new kind of knowledge sketched by Muratori at the beginning of the century. The first law defined the criteria for admission, emphasizing that the core community of Vigilanti would be composed of virtuous scholars of uncommon ingenuity who proposed new things and who wrote in the vernacular. They would hold some public and mostly private meetings and avoid verbal excess in their presentations, aiming instead for a sober accounting of their conclusions. Conversations could range across "every Science and liberal Art," but the founders expressed a clear preference for discussions of scientific novelties in such fields as mathematics, mechanics, physics, botany, medicine, anatomy, and chemistry. Considering the nature of academy communications, the rules permitted conversation in the classical languages of learning—Latin and to a lesser degree Greek—but expressed a strong preference for Italian as a spoken as well as written language, reflecting Vallisneri's longstanding agenda to make it a language of scientific communication. At the same time Vallisneri and Grillo Borromeo highlighted the cosmopolitanism of their academy by referring to the ability of the Vigilanti to converse in French, English, and German as well as Arabic.<sup>56</sup> Not surprisingly, all the languages mentioned were ones in which Grillo Borromeo claimed some degree of competency.

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<sup>54</sup> Ugo Baldini, "L'attività scientifica nelle accademie lombarde del Settecento," in *Economia, istituzioni, cultura in Lombardia nell'età di Maria Teresa* (Bologna: Il Mulino, 1982), 2:505–12; and Domenico Sella and Carlo Capra, *Il Ducato di Milano dal 1535 al 1796* (Turin: UTET, 1984), 197. The scientific culture of Milan has been most recently discussed in Massimo Mazzotti, *The World of Maria Gaetana Agnesi, Mathematician of God* (Baltimore: Johns Hopkins University Press, 2008), including a few pages on Grillo Borromeo, 79–81.

<sup>55</sup> Filippo Argelati, *Bibliotheca scriptorum Mediolanensium*, vol. 1 (Milan, 1745), col. LXXII; and Antonio Vallisneri, Pieve di Sacco, 10 November 1722, BPUN, *Fonds Bourguet*, MS 1282, c. 257. See also Vallisneri, *Epistolario 1714–1729*, 860–61. The academy rules are also discussed in Serralunga Bardazza, *Clelia Grillo Borromeo Arese*, 57–59.

<sup>56</sup> Argelati, *Bibliotheca scriptorum Mediolanensium*, vol. 1, col. LXIX. See also Maylender, *Storia delle accademie d'Italia*, 2:21–23; and the posthumous description of the academy in Francesco Saverio Quadrio, *Storia e ragione d'ogni poesia* (Milan, 1752), 7:15. On Italian as the preferred scientific language, see Vallisneri, *Opere fisico-mediche*, 3:254–68.

Strongly inspired by Muratori's program for reinvigorating the Italian academies, the academy founders also created an intellectual agenda for the academy that was tightly circumscribed. Describing the academy's mission as the "advancement of the Sciences and Noble Arts"—a phrase that brought to mind the important work of Francis Bacon of the previous century—rule five prohibited the Vigilanti from discussing poetry and rhetoric. The Clelian Academy, in other words, was an anti-Arcadia that sought to define the terrain which Arcadia had vacated. It strongly supported the pursuit of the historical sciences, which it described in light of the best practices of antiquarian scholarship of the past century such as the reading of inscriptions and coins, and whose goals were closely intertwined with natural history.<sup>57</sup> In this passage, we see the further influence of Muratori who, to my knowledge, was never officially a member of the Clelian Academy but well informed of its activities which coincided with the period in which his monumental collection of medieval Italian sources, *Rerum Italicarum Scriptores* (1723–51), began to appear. In some very tangible sense, he was its intellectual patron.<sup>58</sup>

At the same time, Vallisneri had his own agenda to pursue. Rule six proclaimed the largely secular goals of the Clelian Academy by indicating its desire to separate the pursuit of knowledge from the understanding of faith. It prohibited the Vigilanti from delving into any aspect of theology, especially the vexed arena of biblical commentary. Such sentiments not only reflected Vallisneri's agreement with Bacon's pronouncements on this subject but underscored Vallisneri's often-repeated statement that Galileo had been right to envision science as a complementary rather than subordinate truth in its relationship to faith.<sup>59</sup>

Debating this very point with his Swiss Protestant colleague Louis Bourguet (1678–1742) the year before the outline for the academy emerged, Vallisneri strongly critiqued the English naturalist John Woodward for trying to read nature through the lens of scripture: "Holy Scripture speaks in many different ways that one can and one must interpret (or otherwise say an infinite number of things that are contrary to the evidence of the senses), but nature speaks always in the same way, without metaphor, allegory, or hyperbole, and without dubious, obscure, and mysterious meanings."<sup>60</sup> Vallisneri's academy was a modern scientific community in its goals if not in its organization. Exhibiting marked differences from Marsigli's vision of the Bologna Academy of Sciences—created in the shadow of an ancient university with the full backing of the pope, publicly proclaiming its obedience to the papal decree against heliocentrism, and insisting on Latin as the international language of scholarship—the Clelian Academy was a more overtly political as well as an intellectual project. Its goal was to create a new kind of institution that encouraged a vision of science which could no longer be contained within the Roman Catholic Church's formulation of the proper relationship between knowledge and faith, as it

<sup>57</sup> Rossi, *The Dark Abyss of Time: The History of the Earth and the History of Nations from Hooke to Vico*, trans. Lydia G. Cochrane (Chicago: University of Chicago Press, 1984); and Rhoda Rappaport, *When Geologists Were Historians, 1665–1750* (Ithaca, NY: Cornell University Press, 1997).

<sup>58</sup> Argelati, *Bibliotheca scriptorum Mediolanensium*, vol. 1, col. LXIX. On Muratori's knowledge of the Accademia Clelia, see Muratori, *Epistolario*, 5:1949; 6:2287–88, 2364–66; 7:2770. For a general understanding of Italian historical scholarship in this era, see Eric Cochrane, "The Settecento Medievalists," *Journal of the History of Ideas* 19 (1958): 35–61; and Cochrane, "Muratori: The Vocation of a Historian," *Catholic Historical Review* 51 (1965): 158–72.

<sup>59</sup> Francesco Saverio Tucci, "Il parlare della S. Scrittura e l'operare della natura: gli interrogative della geologia storica nella riflessione di Antonio Vallisneri," *Contributi* 7 (1983): 5–37; Rappaport, *When Geologists Were Historians*, 167–68, 188–89, 195, 219–20.

<sup>60</sup> Vallisneri to Bourguet, Padua, 30 August 1721, BPUN, *Fonds Bourguet* MS 1282, c. 249. Also see Vallisneri, *Epistolario 1714–1729*, 667.

emerged in the wake of its deliberations about heliocentrism, culminating in the 1633 trial and condemnation of Galileo. In the end, Vallisneri did not hide his admiration for the Galileo who had been condemned. The institution which he sought to create with his patron reflected his own understanding of science as an autonomous pursuit of experts who should answer only to each other in the interpretation of their findings.

In the early days of its development, when anything seemed possible, the founders of the Clelian Academy ambitiously announced their desire to make their initiative into a global center of knowledge. They would initiate “literary commerce” by corresponding with scholars with a European-wide reputation as well as other academies—something that Vallisneri had already accomplished on an individual basis with his voluminous correspondence.<sup>61</sup> They would solicit members from every continent. The fruits of their inquiry would not remain local but would circulate in the printed acts of the academy. An avid reader and editor of scientific journals, Vallisneri particularly celebrated the process by which, as he put it, noble curiosity engendered better publications and ultimately reinforced the “true method of Philosophy.”

While proclaiming a broad interest in science, in its specificity the proposed activities of the Clelian Academy reinforced the primacy of natural history as a model of scientific inquiry. Academicians were encouraged to make detailed natural historical observations by dissecting rare animals and inspecting both exotic and familiar plants. Vallisneri underscored the importance of ordinary nature to the academy’s investigations by encouraging further research on insects, one of his own areas of specialization, as an example of the more neglected features of the natural world: “Nothing therefore, however lowly or domestic, is neglected that may be suitable in illuminating the triple kingdom of nature.”<sup>62</sup> In such statements, we can see the way in which the natural historical program of the Clelian Academy owed a considerable debt to the combined legacy of Redi and Malpighi channeled through the writings of Vallisneri.

To complement the observations and dissections that took place in Palazzo Borromeo, the foundational documents of the Clelian Academy envisioned an ambitious program of research and travel which drew inspiration from another dimension of Vallisneri’s own intellectual program: his considerable contributions to the history of the earth. The Vigilanti would scrutinize the mountains to pursue a wide range of hydrological, geological, and paleontological questions. They would make observations, collect specimens, and ultimately test their conclusions experimentally, demolishing earlier theories about the very subjects which Vallisneri had discussed in such publications as his *Academic Lecture on the Origin of Springs* (1715) and *On Marine Bodies Found on Mountains* (1721).<sup>63</sup> Their ultimate goal would be a “universal natural history of this most noble region,” the first complete natural history of Lombardy.<sup>64</sup> Vallisneri’s field trips with Grillo Borromeo inaugurated this otherwise unfinished project.

While actively seeking out knowledge, the Vigilanti also envisioned themselves as the recipients of an endless stream of information. In imitation of the Jesuits, they explicitly stated their desire to acquire information on a global scale and envisioned this acquisition as being “communicated to the Academy by Letters.” At the same time, they did not neglect the idea of sponsoring travel themselves well beyond the Alps. Echoing Bacon’s classic description of the

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<sup>61</sup> Vallisneri’s correspondence (ca. 1600 letters by him and ca. 12,000 letters to him) has become a serious object of study thanks to the work of Dario Generali and his collaborators on the Edizione Nazionale.

<sup>62</sup> Argelati, *Bibliotheca scriptorum Mediolanensium*, vol. 1, col. LXX.

<sup>63</sup> Rappaport, *When Geologists Were Historians*, 11, 166–68, 188–89, 195, 219–20. See also Rossi, *Dark Abyss of Time*.

<sup>64</sup> Argelati, *Bibliotheca scriptorum Mediolanensium*, vol. 1, col. LXX.

Merchants of Light who trafficked in knowledge by traveling the world, rule ten of the Clelian Academy encouraged “some Academician ... to go to see not only the most celebrated Cities of Europe but also those of Asia, Africa, and beyond if it pleases to bring even [reports] of America.” Every aspect of natural history, astronomy, geography, law, custom, and invention was to be studied and reported back to the Vigilanti. Such a project would not only benefit the academy but the state. In all respects, the founders of the Clelian Academy presented it as an academy devoted to the idea of “public utility.”<sup>65</sup>

The rules of the Clelian Academy concluded by reiterating the five most important disciplines it encompassed—history, anatomy, mechanics, geometry, and astronomy—and by emphasizing the value of collective intellectual labor which surpassed the efforts and even the mortality of any individual scholar. Finally, the twelfth rule returned to the question of publication. Undecided about whether the acts would be published “every month or year,” the Vigilanti also considered the status of individually authored books published by academicians. Lamenting the many unworthy publications in print, they encouraged members to seek counsel from their fellow Vigilanti to ensure that each publication would be novel and distinguished, earning the “worthy applause of the Republic of Letters” and adding to the “fame of the Academy.”<sup>66</sup> Such comments add further weight to the idea that they had discussed the criteria for publication in the Society of Jesus, which also placed great emphasis on internal censorship as a form of quality control.<sup>67</sup>

Writing to Vallisneri in February 1723 about the possibility of becoming a member of the Clelian Academy, the Swiss naturalist Bourguet asked to see the laws. Initially Vallisneri informed him that the academy did not yet exist except on paper. “The laws that I wrote are quite extensive, and I left them there, thinking that I had brought with me the draft, but I’m not finding it.” When Bourguet pressed the issue further, Vallisneri responded in June that the laws remained in the hands of Countess Borromeo. He offered a further detail that gave the academy some tangible reality by informing Bourguet that he had recommended Giovanni Bianchi (1693–1775), a promising young physician-naturalist from Rimini, for the position of academy secretary.<sup>68</sup> Vallisneri had also promised Bianchi a copy of the laws through their mutual friend Sassi, writing early in 1723 about their final revision. “Tell him that I am awaiting the rules of the experimental Academy, since Her Excellency, Signora Donna Clelia, wrote me that she had completed them.” Sassi responded warmly that he planned to visit their mutual patron to “give her a final push for the opening of this new experimental academy.”<sup>69</sup> In such exchanges we can see how the idea of an academy emerged as a conversation in letters which established the network of possible participants in the actual project.

At the same time, Vallisneri confessed that things were not moving forward as rapidly as he would have liked. In the very period in which he congratulated Matteo Bazzani and Francesco

<sup>65</sup> Ibid.

<sup>66</sup> Ibid., col. LXXI.

<sup>67</sup> Thanks to Daniel Stolzenberg for reminding me of this parallel. See his “Utility, Edification, and Superstition: Jesuit Censorship and Athanasius Kircher’s *Oedipus Aegyptiacus*,” in *The Jesuits II: Cultures, Sciences, and the Arts*, ed. John O’Malley, Gauvin Alexander Bailey, Johann Bernhard Staudt, and Steven J. Harris (Toronto: University of Toronto Press, 2006), 336–54.

<sup>68</sup> Vallisneri to Bourguet, 28 June 1723, BPUN, *Fonds Bourguet*, MS1282, c. 258 (20 February 1723), fol. 262. See also Vallisneri, *Epistolario 1714–1729*, 905, 935; and Sassi to Vallisneri, Milan, 23 December 1722, Biblioteca Nazionale Braidense, Milan, Aut. B XXXI/58/8.

<sup>69</sup> Vallisneri to Sassi, Padua, 29 January 1723, Ambr. cod. Z 209 sup., lett. 136; see also Vallisneri, *Epistolario 1714–1729*, 899; Sassi to Vallisneri, Milan, 3 February 1723, Archivio di Stato, Reggio Emilia, *Fondo Brunelli V B 167*, no. 9.

Maria Zanotti on assuming respectively the offices of president and secretary of the Bologna Academy of Sciences, he found it difficult to get his own idea off the ground.<sup>70</sup> He used his presidency of another academy, the Accademia dei Ricovrati in Padua, to flatter his patron by honoring her with an entire debate on the question of women's education.<sup>71</sup> Bourguet also attempted to encourage Grillo Borromeo to realize her plans by writing directly to her about the possibility of becoming a Vigilante. The countess was sufficiently pleased by his overtures, responding warmly that his membership would enhance the "honor of the academy that is about to form."<sup>72</sup> Nonetheless, a year after Dereham reported the rumor of this academy to the Royal Society it still existed only on paper.

The trappings of an academy, however, continued to emerge piecemeal. At Grillo Borromeo's request, Vallisneri's official academy portrait was being prepared with enormous care by artists in Milan, working from a miniature of Vallisneri in full professorial garb.<sup>73</sup> Bianchi never did officially become the secretary of the Clelian Academy but Vallisneri certainly was its president. By 1723 Grillo Borromeo hung his portrait in the room in her palace in which the academy would meet. Vallisneri agreed to return at least once a year to give an annual presidential lecture on natural history, inaugurating these meetings with a lecture on viper's venom.<sup>74</sup> For roughly a period of five years, in other words, from the initial discussions of the academy in the summer of 1722 until his final trip to Milan in September 1727, Vallisneri seems to have been the president of this chimerical academy. Even in the final years of his life he still hoped that it would eventually become an institution rather than an idea.

### CREATING A PHILOSOPHICAL FAMILY

What, then, was the Clelian Academy beyond its patron and president? Working together, Grillo Borromeo and Vallisneri created what she would later describe as a "philosophical family."<sup>75</sup> This fundamental concept defined their understanding of the nature of an academy as a set of affective relations between patrons and scholars that were deeply personal as well as intellectual. In part, the idea of an academy gave a name to the community which already gathered in Palazzo Borromeo for regular conversations.<sup>76</sup> The Ambrosian librarian Sassi and her physician Mazzucchelli were loyal members of this inner circle. They were indeed full-fledged participants in the Borromeo household beyond their role in the academy.

At the same time, Vallisneri's presence in Milan helped encourage other scholars to participate more actively in her projects. While it is hard to know which ones had participated in the

<sup>70</sup> Regarding Vallisneri's awareness of the latest developments in Bologna, see Vallisneri to Matteo Bazzani, Padua, 17 March 1723, in *Epistolario 1714–1729*, 915; Vallisneri to Francesco Maria Zanotti, Padua, 4 July 1723, *ibid.*, 940.

<sup>71</sup> Vallisneri to Father Lazzarelli, Padua, 22 June 1723, in *Epistolario 1714–1729*, 930: "io portai in trionfo il gran nome della mia eroina, la sudetta S.<sup>ra</sup> Donna Clelia, ec." For an account of the Ricovrati debate, see especially Rebecca Messbarger, *The Century of Women: Representations of Women in Eighteenth-Century Italian Public Discourse* (Toronto: University of Toronto Press, 2002), 20–48.

<sup>72</sup> Grillo Borromeo to Bourguet, Milan, 23 June 1723, BPUN, *Fonds Bourguet*, MS 1272; see also Parabiago, "Clelia Borromeo del Grillo," 49.

<sup>73</sup> Vallisneri to Father Lazzarelli, Padua, 3 July 1723, in *Epistolario 1714–1729*, 938.

<sup>74</sup> Vallisneri's lecture on vipers may not have occurred until fall 1725, when he mentioned re-doing Francesco Redi's experiments in Milan. Vallisneri to Bourguet, October 1725, BPUN, *Fonds Bourguet*, MS 1282, c. 275.

<sup>75</sup> Grillo Borromeo to Vallisneri, Milan, 5 March 1727, BACR, Conc. 338/50, no. 9.

<sup>76</sup> For an illumination discussion of the phenomenon of *conversazione* in Milan, see Mazzotti, *The World of Maria Gaetana Agnesi*, 3, 20, 56–57, 60–61, 79, 125–26, 136, 141.

Borromeo *conversazione* prior to 1722, the number of prominent mathematicians, philosophers, and physicians who joined her conversations seems to have grown. Core members included the Jesuit Tommaso Ceva (1648–1737), whose *Philosophia novo-antiqua*, a philosophical poem first published in 1704 and frequently reissued throughout the early decades of the eighteenth century, was an interesting if highly criticized attempt to modernize traditional natural philosophy by an author who had explored Newton's theory of universal gravitation. Ceva's student Giovanni Girolamo Saccheri (1667–1733), who occupied the chair in mathematics at the University of Pavia, also seems to have been a participant. Gradually the salon—for this in essence was what a *conversazione* was when it brought together male scholars and aristocrats in the home of a wealthy woman<sup>77</sup>—became something more focused and seemingly engaged with the project of the academy.

The Somaschan Giovanni Francesco Crivelli (1691–1743)—who completed his textbook on algebra (1728) around the time of the Clelian Academy's demise and shortly thereafter published his influential *Elements of Physics* (1731)—was another key member.<sup>78</sup> His laudatory goal of creating a vernacular physics textbook which would introduce readers to all the important developments in physics since the age of Galileo, while treading lightly on the most controversial issues, was a fitting demonstration of the principles of scientific communication and publication inscribed in the rules of the academy. When Sassi composed his history of the academy in 1729, he especially singled out the contributions of Ceva, Saccheri, and Crivelli as a supplement to the work of Vallisneri.<sup>79</sup>

The creation of an indigenous community of academicians who, to differing degrees, shared Grillo Borromeo's and Vallisneri's vision of an academy was but the first step in the realization of its larger goals. When Sassi compared the Clelian Academy to those in Paris, London, Berlin, and Bologna, he outlined its ambition to become a major scientific academy of international significance.<sup>80</sup> Vallisneri's prominence, as one of the few Italians admitted to the Royal Society, among his many other honors, in conjunction with Grillo Borromeo's growing reputation, helped them to recruit potential members outside of the city whose affiliation with the academy would give it a kind of instant visibility.

Through his voluminous correspondence, Vallisneri identified an influential community of possible participants, or at the very least friends of this venture. He not only encouraged scholars

<sup>77</sup> On this subject, see especially Carolyn Lougee, *Le Paradis des femmes: Women, Salons, and Social Stratification in Seventeenth-Century France* (Princeton: Princeton University Press, 1976); Dena Goodman, *The Republic of Letters: A Cultural History of the French Enlightenment* (Ithaca: Cornell University Press, 1994); and Antoine Lilti, *Le monde des salons: sociabilité et mondanité à Paris au XVIIIème siècle* (Paris: Fayard, 2005).

<sup>78</sup> DBI, s.v. "Ceva, Tommaso," 24:325–28; s.v. "Crivelli, Giovanni Francesco," 31:138–39. See also John Heilbron, *The Sun in the Church: Cathedrals as Solar Observatories* (Cambridge, MA: Harvard University Press, 1999), 213–14.

<sup>79</sup> Argelati, *Bibliotheca scriptorum Mediolanensium*, vol. 1, col. LXVIII. This text reprints Giuseppe Antonio Sassi, *De studiis litterariis Mediolanensium antiquis & novis Prodromus ad Historiam Litterario-Typographicam Mediolanensem* (Milan, 1729). Historians have suggested other possible members including the Pliny scholar Count Anton Gioseffo Della Torre di Rezzonico; the Jesuit philosopher Giulio Cesare Brusati, who would eventually succeed Saccheri at Pavia; the Carmelite poet and philosopher Teobaldo Ceva; the physician Confalonieri; and Francesco Sommarugo. See DBI, 59:451; Brunelli, *Figurine e costume nella corrispondenza di un medico del '700 (Antonio Vallisneri)* (Milan: Mondadori, 1938), 38, 40–42; Parabiago, "Clelia Borromeo," 45, 49, 51; Pietro Nurra, "Una Milanese del secolo scorso," *Natura ed arte* 8, no.4 (1899): 284; Giulini, "Contributi," 6. Another possibility might also be the physician Pietro Giuseppe Alberizzi who dedicated his *Critologia medica, in cui si stabiliscono, esclusi i Vermicciuoli, altre cagioni della Peste* (Milan, 1721), to Grillo Borromeo. Grillo Borromeo's aristocratic associates such as Marchese Diego de Araciel also merit closer study to understand their involvement in her academy and *conversazione*.

<sup>80</sup> Argelati, *Bibliotheca scriptorum Mediolanensium*, vol. 1, col. LXVIII.

in Lombardy to take Grillo Borromeo's initiative more seriously but also began to envision the Clelian Academy as a mirror of his own image of the Italian republic of letters. The network he drew upon disproportionately involved Italian scholars who were, like himself, Royal Society members.<sup>81</sup> A noteworthy exception was Marsigli, who was in England and Holland during the early period of the academy's formation, nursing his grievances about how ill-treated he had been in Bologna by its senators and scientists, and enjoying the pleasure of meeting luminaries such as Newton.<sup>82</sup> In general, the Bolognese were conspicuously absent from lists of potential participants in the academy, nor did Vallisneri involve every important scientific figure in the Venetian Republic or reach out to the communities of scientific practitioners in such cities as Florence and Rome (save for the Englishman Dereham). With one noteworthy exception that we will discuss shortly, Naples was also absent.<sup>83</sup> Vallisneri's republic of letters was, on the one hand, well-connected outside of Italy to major centers of learning and publication initiatives, and on the other hand, highly local, reaching as far as Modena but not quite arriving in Bologna. The political boundaries which carved up the map of Italy like a jigsaw puzzle were indeed quite tangible and limiting in their effect on intellectual ambitions.

In addition to keeping Muratori well informed about the academy's evolution, Vallisneri also communicated news of the academy to the most influential Italian colleagues residing abroad in the capital cities of Europe. In January 1723, for example, it was rumored that Vallisneri's collaborator on the *Giornale de' letterati* Apostolo Zeno (1668–1750), who left Venice for Vienna in 1718 for the prestigious position of imperial poet, might stay with the countess during a trip to Milan.<sup>84</sup> The Paduan philosopher and abbé Antonio Conti (1677–1749), a fellow Royal Society member who had famously intervened in 1715 in the debate between Leibniz and Newton on their priority in the invention of the calculus and mostly lived in Paris between 1713 and 1726, was another obvious candidate for membership. In regular contact with Vallisneri, Conti became increasingly intrigued about the possibility of meeting *la donna Clelia*. In the period in which the idea of the Clelian Academy emerged, Conti was composing his *Philosophical Dialogues* in which he reaffirmed the importance of Italian science to the origins of experimental philosophy and the role of the Accademia del Cimento as a model for subsequent academies.<sup>85</sup> Similarly, Vallisneri's other collaborator on the *Giornale de' letterati*, the Veronese antiquarian Scipione Maffei (1675–1755) eventually became part of Grillo Borromeo's network of correspondents.<sup>86</sup> They all considered the Milanese countess a patron of great learning who deserved

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<sup>81</sup> Luigi Ferdinando Marsigli became a Fellow of the Royal Society in 1692, Vallisneri in 1703, Guido Grandi in 1709, Antonio Conti in 1715, Ludovico Antonio Muratori in 1717, and Scipione Maffei in 1737. Boas, "The Royal Society and Italy."

<sup>82</sup> Stowe, *Marsigli's Europe*, xii, 289–94, 303–4.

<sup>83</sup> Vallisneri remarked on his minimal contact with Naples and his reservations about Rome in his correspondence with Antonio Conti; see Vallisneri to Conti, Padua, 18 March 1728, in *Scritti filosofici*, 432. We should note the absence of the distinguished physicist and fellow professor at the University of Padua, Giovanni Poleni, as well as the great Veronese astronomer Francesco Bianchini, who played a critical role in the Roman scientific community, both of them Royal Society members.

<sup>84</sup> Vallisneri to Father Mauro Alessandro Lazzarelli, Padua, 3 January 1723, in *Epistolario 1714–1729*, 892.

<sup>85</sup> Conti, *Scritti filosofici*, 314. See also Nicola Badaloni, *Antonio Conti. Un abate libero pensatore tra Newton e Voltaire* (Milan: Feltrinelli, 1968).

<sup>86</sup> Maffei to Vallisneri, Verona, 29 March and 27 August 1726, in *Epistolario (1700–1755)*, by Scipione Maffei, ed. Celestino Garibotto (Milan: A. Giuffrè, 1955), 1:514, 526.



their praise and who might potentially be useful in the realization of various projects. Yet none of these influential figures formally became members, despite their friendship with Vallisneri.

The only person who seems to have been asked in writing to join the academy—as far as the surviving documentation permits us to know with any certainty<sup>87</sup>—was Vallisneri’s close friend in Geneva, Bourguet. He was certainly the first foreign member and eager to be involved in the planning of this new initiative. After inviting Bourguet to join the nascent academy, Vallisneri informed his friend that he could write to their patron “in French, English, Latin, or German” since she was perfecting all of these languages.<sup>88</sup> Bourguet’s relationship with Grillo Borromeo not only revolved around the promise of the academy and his own scientific projects, including an unrealized edition of Leibniz’s correspondence that he planned to dedicate to her, but eventually concerned his role as a founding editor of the Swiss journal *Bibliothèque italique*. The idea for this journal took shape in 1725 and its first issue appeared in 1728. In discussions with the other editors in Geneva about the content of the journal in reporting news of Italy, Bourguet invoked the “judgment of Madame Borromeo” regarding what to insert.<sup>89</sup> While the Geneva journal was not by any means an academy publication, it nonetheless relied heavily on information from scholars in Milan and the Veneto whose relationships shaped the nature of the Clelian Academy.

While working to create a network of potential academicians, Vallisneri also sought other forms of publicity for this new venture. One of his most assiduous southern Italian correspondents was the abbé Giacinto Gimma (1668–1735), who spent the majority of his life between Naples and his native city of Bari pursuing eclectic encyclopedic projects of history, philosophy, and natural history. He had also reinvented a Neapolitan academy—the Spensierati of Rossano, of which Vallisneri was a member as of 1705<sup>90</sup>—in 1695, writing a set of laws that provided some of the inspiration for the Clelian Academy’s own document. In 1722 Gimma was completing his *Sketch for the History of Learned Italy* (1723), a controversial work that presented the Italian peninsula as the region of Europe in which modern knowledge first emerged. He informed Vallisneri that he intended to dedicate it to Grillo Borromeo and told him, “I’ll see if I can add to my work the sketch of the Experimental Academy in Signora Borromeo’s home.”<sup>91</sup>

In July 1723 Gimma composed the dedication of the first volume, comparing *la donna Clelia* to Cesare Ripa’s sixteenth-century allegory of Italy as a beautiful woman atop a globe, scepter in one hand and a cornucopia in the other. “You are the most beautiful and noble ornament of Italy in our age.” Describing Grillo Borromeo’s accomplishments, Gimma wrote: “She is

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<sup>87</sup> As a result of Grillo Borromeo’s flight from Milan in 1746 after Empress Maria Theresa condemned her for her pro-Spanish sympathies, which emerged during the failed efforts to restore Lombardy to Spain, a great number of her papers were lost or destroyed, including the letters in her possession that would allow us to know with greater precision her range of contacts in the republic of letters and their relationship to this initiative. The events of the Second World War added to the loss of materials, since very little archival materials relating to her life remain in the Archivio Borromeo, Isola Bella today.

<sup>88</sup> Vallisneri to Bourguet, Venice, 20 February 1723, BPUN, *Fonds Bourguet*, MS 1282, c. 259.

<sup>89</sup> Bourguet to Jacques Du Lignon, n.d. [ca. 1729], BPUN, *Fonds Bourguet* MS 1260, in *La “Bibliothèque italique”. Cultura “italianisante” e giornalismo letterario*, by Francesca Bianca Crucitti Ulrich (Milan: Ricciardi, 1974), 107. See also Parabiago, “Clelia Borromeo del Grillo,” 58–59.

<sup>90</sup> Cunningham, *Seashells on the Mountains*, 73. On the academy, see Raffaele Girardi, “Letteratura e scienza fra Sei e Settecento. Giacinto Gimma e il progetto degli Spensierati,” *Lavoro critico* 11–12 (1988): 1–40.

<sup>91</sup> Gimma to Vallisneri, Bari, 24 October 1722, BACR, Conc. 337/6. On their correspondence, see Antonio Iurilli, “Lettere di Giacinto Gimma ad Antonio Vallisneri (1705–1722),” in *L’enigma, la confessione, il volo. “Lettere” sommerse fra Sei e Novecento*, ed. Giorgio Baroni (Azzate, Varese: Edizioni Otto-Novecento, 1992), 109–13.

so especially learned in natural and experimental philosophy that she has founded a new Academy in her own home.”<sup>92</sup> He optimistically predicted that it would ultimately make her more famous than any learned woman—ancient, medieval, or modern.

Towards the end of the second volume of his history of Italian learning, Gimma allotted further space to the Clelian Academy. He described Vallisneri’s portrait over the entryway to the academy and the president’s obligation to present an annual natural history lecture. Finally, he celebrated Grillo Borromeo’s style of interaction with her academicians, “her profound and lively discussions with learned men, of whom she is the generous and liberal protector.”<sup>93</sup> Even before the laws had been finalized, the academy now existed in print in a book that was widely read, discussed, and critiqued throughout Italy and even reviewed in foreign journals. Grillo Borromeo was so pleased with Gimma’s book that she incessantly reminded Vallisneri—a far less appreciative reader of a publication he considered to be uneven and insufficiently critical in its content—to review it in the *Giornale de’ letterati d’Italia*.<sup>94</sup>

By all outward appearances, the Clelian Academy was on the verge of success, making the transition from idea to institution. The increasing publicity that the academy and its patron received only solidified the idea that Milan was truly a city ready to invest in the creation of a strong scientific community. For various reasons, this did not occur. The history of the Clelian Academy is primarily the history of an idea that excited a good deal of interest for about a decade and then vanished. Understanding why it did not succeed, after receiving so much initial publicity, suggests the real obstacles at work in transforming an idea into a community, and that community into a well-funded institution.

The primary opposition to the Clelian Academy lay close to home. Her father-in-law Count Carlo, who had served as viceroy of the Kingdom of Naples (1710–13) and subsequently became *commissario imperiale plenipotenziario* for Charles VI in 1715, openly detested his daughter-in-law’s fascination with the kind of modern knowledge that experimental philosophy represented. A staunch representative of first the Spanish and then Austrian rulers of Lombardy, he was one of Milan’s premier civil servants.<sup>95</sup> He was openly suspicious of the foreigners who frequented her conversations, of the intellectual pretensions of his daughter-in-law, and of her allegiances to the Spanish faction in the city.<sup>96</sup> By refusing to offer the academy his support, Carlo

<sup>92</sup> Giacinto Gimma, *Idea della storia dell’Italia letterata*, vol. 1 (Naples, 1723), sig. a3r, b2v. On Gimma’s project, see D. Giorgio, “L’abate Gimma e l’*Idea della storia dell’Italia letterata*,” *Critica letteraria* 14 (1986): 371–84; and Franco Arato, *La storiografia letteraria nel Settecento italiano* (Pisa: Edizione ETS, 2002), 143, 148–50.

<sup>93</sup> Gimma, *Idea della storia dell’Italia letterata*, 2:486. The term *ragionamenti* Gimma used to characterize these encounters captures both the idea of dialogue and spirited debate.

<sup>94</sup> Kurmann, *Presenze italiane*, 158 (review in *Neue Zeitungen aus der Gelenhrten Welt* 51 (1724–1725): XVII, 259–61); Crucitti Ulrich, *La ‘Bibliothèque italique’*, 85, 147; and Dario Generali, ed., *Bibliografia delle opera di Antonio Vallisneri* (Florence: Olschki, 2004), 28–29 (notice in *Giornale de’ letterati d’Italia* 34 (1723): art. XII, §2, 423–25). On Vallisneri’s criticisms of this book, see Vallisneri to Muratori, Padua, 24 March 1724, in *Epistolario 1714–1729*, 1037.

<sup>95</sup> Cinzia Cremonini, “Carlo Borromeo Arese, un aristocratico lombardo nel ‘nuovo ordine’ di Carlo VI,” *Cheiron* 11, no. 21 (1994): 85–160. Lombardi, *Un nume del Settecento*, 63–64, suggests that Carlo Borromeo may have actively impeded the publication of Vallisneri’s response to William Derham’s rational theology, though I have found no clear evidence in his papers to support this point. For the large political landscape of this era, see Guido Quazza, *Il problema italiano e l’equilibrio europeo 1720–1738* (Turin: Deputazione Subalpina di Storia Patria, 1965), including a discussion of Carlo Borromeo Arese’s role in Charles VI’s occupation of Parma and Piacenza in 1731, at 159.

<sup>96</sup> An undated document in the Archivio Borromeo, Isola Bella, has Carlo Borromeo condemning the “conversazione nel suo quarto, alla quale admette forestieri non conosciuti, ministri sospetti, e altri difidenti dell’Augustissima Casa d’Austria.” DBI, 59:450.

Borromeo played an instrumental role in ensuring that it would never be much more than a paper fantasy.

The obstacles to success were already apparent, at least to an inner circle of potential participants, at the time when Gimma publicized the emergence of this new academy. In June 1723 rumors circulated that “someone in the house” did not want the academy to thrive. By December Vallisneri knew exactly what the problem was. “The Experimental Academy has never been established in the home of the Great Donna Clelia ...,” he told Bourguet:

her husband’s father still lives and is the patron of everything. From what they tell me, he loves politics and arms but not letters. Hence of necessity the most learned lady does that which she can but not always that which she wants.<sup>97</sup>

*La donna Clelia* may have been the most intellectually versatile and prominent woman in early eighteenth-century Italy, but she could not overrule the wishes of a powerful patriarch who distrusted the nature of the philosophical modernity that she and her friends championed, and whose support of the Austrian government of Milan conflicted with her own politics. The power dynamic within the Borromeo household was indeed a limiting factor in the realization of this project.

The other obstacle Vallisneri acknowledged was Grillo Borromeo’s approach to knowledge. She was not a professional scholar, as he was, but a highly intelligent patron of learning for whom learning was yet another form of pleasure. “Her beautiful mind is distracted by a thousand things,” he declared with some exasperation, repeating this criticism several times in the course of their relationship. Grillo Borromeo herself confessed to possessing “a certain natural impatience for seeing quickly the conclusion” of any discussion. “And if it takes a bit longer to get there, I quickly tire and give it up.” She observed, “I attribute the fact that I have not perfected myself in any subject to this quickness and instability no less than my small talent.”<sup>98</sup> Her desire to be a patron of all knowledge made it difficult for her to sustain a conversation with her academicians on any single subject, compelling her to go in many different directions. As a result, her intellectual goals did not exactly coincide with his own which were far more focused on specific outcomes. He also had begun to realize how much she enjoyed her new role as the most visible female patron in early eighteenth-century Italy. Vallisneri observed that she was a “great lady with a most wonderful mind but [she is] too liberal with everyone.”<sup>99</sup> Grillo Borromeo’s aristocratic munificence, in other words, was at times counterproductive for the goals of the academy.

By the beginning of 1724 the possibilities for getting the academy off the ground were quickly evaporating. Sassi and Grillo Borromeo commiserated over the lack of support for such intellectual initiatives in their city. As Sassi told Vallisneri bluntly, the ship had run aground. While Vallisneri’s arrival in the city had excited a certain interest and increased the flow of participants into the Borromeo *conversazione*, there was simply not a critical community in Milan to sustain this idea in his absence. “To this end, she has still brought to a standstill her noble sketch of the Clelian Academy,” wrote Sassi in January 1724, “because, however much her spirit is

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<sup>97</sup> Vallisneri to Bourguet, Padua, 28 June 1723, BPUN, *Fonds Bourguet*, MS 1282, c.262; fol. 264 (Padua, 3 December 1723).

<sup>98</sup> Vallisneri to Bourguet, Padua, 3 December 1723, BPUN, *Fonds Bourguet*, MS 1282, c. 264; and Grillo Borromeo to Bourguet, Milan, 9 October 1723, BPUN, *Fonds Bourguet*, MS 1272, c. 5v.

<sup>99</sup> Vallisneri to Bourguet, Venice, 17 January 1729, BPUN, *Fonds Bourguet*, MS 1282, c. 306r.

great, the number of those who wish to manfully second it by bringing to fruition the still languid taste for difficult studies is sparse.”<sup>100</sup> It was around this time that Vallisneri encouraged Bourguet to think of dedicating an edition of Leibniz’s correspondence to the countess in imitation of Gimma’s book.<sup>101</sup>

For a period, discussions of the academy simply vanished from the conversations of its putative members. It was a stark reminder that the presence of scientists in a conversation did not necessarily make it scientific. What mattered most to Grillo Borromeo was her ability to maintain a certain standing in the republic of letters that she had achieved through Vallisneri’s public praise of her and because of the excitement generated by the idea of the academy. She continued to facilitate “learned correspondence” between some of the so-called Vigilanti.<sup>102</sup>

During this period Vallisneri concentrated on his patients and lessons in Padua while also obsessing at great length about the engraving and presentation of a portrait *la donna Clelia* had given him that he wished to publish as part of a new dedication. He had not forgotten his patron by any means nor did she neglect her favorite naturalist. In July 1724 he was hard at work on a new edition of *On Marine Bodies* and worrying with friends in Venice about the poor typesetting of the revised dedication he had written to Grillo Borromeo. At the same time, he put off her requests that he return to Milan, telling her that his duties kept him at home but that he would make the trip the following year. Finally, in 1725 he told the Trevisan mathematician Jacopo Riccati that he was headed to Milan to be reunited with his “philosophical family.”<sup>103</sup>

For several weeks, Vallisneri found himself once again at the center of a whirlwind of activity. An endless round of social obligations among the Milanese patriciate, which often blurred into impromptu patient consultations for which he was famous throughout northern Italy, occupied his days. Grillo Borromeo assisted Vallisneri in pursuing his idea of writing the natural history of Lombardy by inviting the naturalist to accompany her to Lake Como to observe the mountains and waters north of the city with other academicians such as Ceva. She encouraged Vallisneri to revivify the experimental culture of her erstwhile academy with his lectures, dissections, and air-pump experiments on vipers in honor of his great hero Redi, and a wide range of “other experiments and observations” which he funneled into his next round of publications. The range of activity and conversation he experienced that fall led Vallisneri to describe Ca’ Borromeo as “a continuous academy.”<sup>104</sup> But what exactly did he mean by this phrase when it seems so hard to distinguish the salon from the academy? With little fanfare, the Clelian Academy, or rather the *conversazione* that had been re-baptized under this name, reemerged.

While in Milan, Vallisneri also heard about the latest publishing project on the horizon that might add further luster to their ghost of an academy: Thomas Dereham’s Italian translation of

<sup>100</sup> Sassi to Vallisneri, Milan, 12 January 1724, BACR, Conc. 355/U, no. 2.

<sup>101</sup> Vallisneri to Bourguet, Padua, 20 January 1724, BPUN, *Fonds Bourguet*, MS 1282, cc. 266–67; Vallisneri, *Epistolario 1714–1729*, 1027.

<sup>102</sup> Grillo Borromeo to Bourguet, Milan, 29 July 1724, BPUN, *Fond Bourguet* MS 1272, c. 21r. In this letter she wrote of Sassi’s desire for a “corrispondenza letteraria” with Bourguet and the likelihood that others with whom she was in communication would make this request once she informed them of his scientific work. On the complementary function of correspondence and conversation, see Goodman, *Republic of Letters*, 139–40, 143. I have also benefited from Lilti’s remarks about the role of scientists in salons in *Le Monde des salons*, 260–72.

<sup>103</sup> Vallisneri to Marches Umberto Landi, Padua, 24 June 172, in *Epistolario 1714–1729*, 1056; Vallisneri to Pier Caterino Zeno, Padua, 1 July 1724, *ibid.*, 1062; Vallisneri to Riccati, Padua, 30 July 1725, *ibid.*, 1213.

<sup>104</sup> Vallisneri to Gaston Giuseppe Giorgi, Milan, n.d. [but between 1 and 9 October 1725] and 9 October 1725, in *Epistolario 1714–1729*, 1238, 1241; Vallisneri to Bourguet, Padua, 1 January 1726, *ibid.*, 1264.

the *Philosophical Transactions of the Royal Society*, whose first volume did not appear until 1729. In the midst of an unexpectedly lengthy trip home due to weather, Vallisneri wrote Dereham that this project was “most useful and worthy of eternal praise” because so few Italians could read the original articles in English.<sup>105</sup> He also may have encouraged Dereham to dedicate this project to Grillo Borromeo in the hope that a steady stream of publications drawing attention to her merits might put further pressure on those who resisted the creation of a new scientific academy under her patronage.

Yet as the fame of *la donna Clelia* increased, Vallisneri found himself in the frustrating position of competing for her attention. Polishing the new dedication to his book and contemplating the best presentation of her portrait so that he might perfectly capture his patron in words and image, he fretted over the “great silence of our Donna Clelia who no longer responds to my letters.” Sassi patiently informed him:

The reason for her silence is the excessive quantity of letters, and even more of people who never leave her in peace. New obligations arise from every sector. Just a little while ago, she told me that there were about twelve scholars who want to dedicate their books to her. You have shed light on her for everyone, and for this, too, she is greatly obliged.<sup>106</sup>

The success of Vallisneri’s strategy placed Grillo Borromeo firmly at the center of the republic of letters. In just a few years, she had become Italy’s most important female patron since Queen Christina of Sweden. Vallisneri recognized that he bore some responsibility for being “the first to set so many pens in motion.”<sup>107</sup> In September 1726 he played the same role for Bourguet as Sassi had done for him, consoling his friend in Geneva when she did not write: “The abovementioned Signora is so full of things to do and has so enlarged her literary commerce that she cannot satisfy everyone often or even well, as still often happens to me, so don’t be surprised if she delays writing or responding ...”<sup>108</sup> *La donna Clelia*, as Gimma brilliantly suggested, was now the female icon of Italian learning. But it was not yet clear that her literary apotheosis would ever make the Clelian Academy into the kind of institution they had dreamed of in 1722. If anything, it seemed to make its reality even more remote.

By the time Vallisneri completed the second edition of *On Marine Bodies*, after endless delays awaiting Grillo Borromeo’s portrait from the Milanese engraver, he was deeply pessimistic about the prospects for the academy. In June 1726 he expressed his utter exasperation at the problems of dealing with such a patron in conversation with Antonio Conti:

Here is another letter regarding the foundation of my heroine’s academy. You have touched the tooth that aches, hence she hasn’t mentioned it any more, perhaps not knowing what

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<sup>105</sup> *Early Letters*, vol. 55. See also Vallisneri to Dereham, Verona, 8 November 1725, in *Epistolario 1714–1729*, 1247. John Lawthrop’s *Saggio delle transazioni filosofiche della Società Regia*, trans. Thomas Dereham (Naples, 1729–34), 5 vols., included not only translations of articles but letters between Dereham and Italian scientific figures, including his correspondence with Vallisneri.

<sup>106</sup> Vallisneri to Sassi, Padua, 23 March 1726, Ambr., cod. Z 210 sup., lett. 80; see also Vallisneri, *Epistolario 1714–1729*, 1306; Sassi to Vallisneri, Milan, 3 April 1726, Biblioteca Nazionale Braidense, Milan, Aut. B. XXXI/58/14.

<sup>107</sup> Vallisneri to Sassi, Padua, 13 April 1726, Ambr., cod. Z 210 sup., lett. 82; see also Vallisneri, *Epistolario 1714–1729*, 1319.

<sup>108</sup> Vallisneri to Bourguet, Padua, 1 September 1726, BPUN, *Fonds Bourguet*, MS 1282, c. 281; see also Vallisneri, *Epistolario 1714–1729*, 1374.

may be the pastimes of Venice and of a true philosopher like yourself. If you were embarrassed, do your best not to be with a woman who justly has glory in mind.<sup>109</sup>

As Vallisneri had come to realize, for the countess the academy primarily was a conversation piece to be reactivated in some fashion every time he or any other interesting mind came to Milan. His own image of an academy—shaped by his participation in many of Europe’s leading scientific societies and academies—existed in tension with her far more fluid understanding of the enterprise that they had undertaken together.

Vallisneri continued to praise his patron, crafting her image as the female glory of Italy. Yet by the time he wrote the dedication of *On Marine Bodies* in October 1726, he openly spoke of the academy in the past tense. This new version of the publication in which he had first brought Grillo Borromeo to the attention of the republic of letters became an opportunity to memorialize their much lamented project. Vallisneri fondly recalled her enthusiasm for the idea during the summer of 1722 when he delayed his departure from Milan to writing the laws for her palace academy. “If certain just reasons didn’t prohibit it, you would have set a rare example by establishing an experimental Academy, of which the laws were already brought into existence by me at your gentle and revered command,” Vallisneri wrote. He recalled how she had posted Vallisneri’s sketch of the academy in her palace and added “so many other rules full of the greatest wisdom” that only a blind man would have been unable to see “how useful to the Sciences, and how glorious to Italy all of it would be if it had been accomplished.” Vallisneri enumerated all the ingredients that should have made it a success including the plan to reform natural history, Grillo Borromeo’s vast “literary commerce,” and her boundless generosity. “But fortune, that adverse enemy within and without ... robbed us of our sweet hopes and cut short such vast and generous plans.”<sup>110</sup>

Continuing a project he had initiated with Gimma’s *Sketch for a History of Learned Italy*, Vallisneri filled out the printed history of the academy in greater detail. If the Clelian Academy could not exist in actuality, it needed to survive on paper. Nonetheless, Vallisneri continued to harbor some hope that he might revive his patron’s interest in the project by discussing its uneven progress in print. He reserved his most important praise for Grillo Borromeo when he wrote: “in the absence of an Academy of many, for now you alone are an entire illustrious Academy, your home an Asylum for Scholars ...” He asked her to accept “this new attestation by the Republic of Letters of your merit, your zeal, your ability, and your love for the progress of the Arts and Sciences.”<sup>111</sup> Through such praise of Grillo Borromeo’s singular merits, Vallisneri encouraged her to rethink her flagging commitment to the realization of a very timely and innovative idea.

## THE FRAGILITY OF INSTITUTIONS

It took almost a year and a half before Vallisneri’s carefully crafted image of the end of the Clelian Academy was in the hands of his readers—due in no small part to the considerable ex-

<sup>109</sup> Vallisneri to Conti, 5 June 1726, in *Scritti filosofici*, 407.

<sup>110</sup> Vallisneri, *Opere fisico-mediche*, 1:308 (Padua, 12 October 1726).

<sup>111</sup> *Ibid.*, 308–9. The term *Vostra Casa* combines the idea of location with lineage, so it is also praise of the Borromeo family. Serralunga Bardazza rightfully considers Vallisneri’s 1726 history of the academy as marking an end point in the most intense period of their friendship. At the same time, surviving documentation suggests that Vallisneri did not exactly abandon either his patron or the academy in the next three years but continued to explore the possibilities for a successful outcome of this project; Serralunga Bardazza, *Clelia Grillo Borromeo*, 39, 58–59.

pense of her portrait and the endless conversations surrounding its presentation.<sup>112</sup> The countess agreed with Vallisneri that Milan so far had proven to be most unfertile terrain for the creation of a scientific institution. Washing her hands of the entire matter, she confessed that she was “surrounded by fools.”<sup>113</sup> Such comments serve to remind us that an academy, as even Marsigli discovered in his difficult negotiations with Bologna’s citizens and professors, could never exist at the whim of an individual but only survived to the degree to which it inspired regular acts of patronage and created an intellectual community. The ink had hardly dried on the page before an occasion arose to revisit the beleaguered idea of an academy.

In 1727 Grillo Borromeo made one last effort to get the academy off the ground. With the first volumes of Bourguet’s *Bibliothèque italique* and the Italian translation of the *Philosophical Transactions* about to appear, she could indeed claim to be an important participant in scientific communications between Italy, England, and Northern Europe. Renewed attention to her status as a great patron of learning seems to have reinvigorated her desire to put her stamp on an institution. Around this time the librarian Sassi described their efforts to make a “final push for the opening of this new experimental academy.”<sup>114</sup>

The latest opportunity came not from Milan or Padua but directly from the imperial court of Charles VI. By the mid-1720s discussions were underway about the idea of creating some sort of imperial academy in Austrian Italy. “I see the letter from Vienna,” Grillo Borromeo wrote eagerly to Vallisneri on 30 November 1726:

If we knew how to seize the opportunity, how many benefits would we derive from it for our scholarly and glorious desires! Why can’t that Academy of literature and diverse sciences that they want to establish be converted into an Academy of physical and mechanical experiments? This would satisfy the desire for knowledge. Then wouldn’t the ambition for glory be sufficiently satisfied if the Emperor, in the act of wanting to establish and allocate funding for this project, made me the arbiter and director of it?

The countess provided Vallisneri with a number of reasons to encourage the emperor to consider Milan as an ideal location for his academy. Among them, she cited the advantages of her station. She had no need of a subsidy to perform this role, “hence any assistance I might offer in this business would be a dignity and a position of disinterest with me.”<sup>115</sup> She urged him to convey these sentiments to influential friends at court such as the imperial historian and poet Apostolo Zeno and the imperial physician and librarian Pio Nicolò Garelli (1670–1739), promising them her favor if they succeeded in having her appointed the academy president and assigned an annuity. Apologizing to Vallisneri for her audacity, she nonetheless presented her credentials for the job to which she had long aspired.

In all likelihood, earlier discussions between Vallisneri and Zeno regarding “the business of Signora Donna Clelia” prompted the letter from Vienna.<sup>116</sup> Appointed to the position of imperial physician as of 1722, Vallisneri had close friends and relatives who were well situated in Vi-

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<sup>112</sup> In March 1728 Vallisneri had copies of *De’ corpi marini* to send to Milan; Vallisneri to Sassi, Padua, 19 March 1728, Ambr., cod. Z 210 sup., lett. 295. He sent copies to the Royal Society via Dereham in May. Vallisneri to Dereham, Padua, 25 January 1728, in *Epistolario 1714–1729*, 1542; Vallisneri to William Rutty, Padua, 20 May 1728, *ibid.*, 1570.

<sup>113</sup> Grillo Borromeo to Vallisneri, Milan, 5 November 1727, BACR, Conc. 338/50, no. 13.

<sup>114</sup> Giuseppe Antonio Sassi, Milan, n.d., BACR, Conc. 355/U, no. 9.

<sup>115</sup> Grillo Borromeo to Vallisneri, Milan, 30 November 1726, BACR, Conc. 338/50, no. 2.

<sup>116</sup> Zeno to Vallisneri, Vienna, 24 March and 5 May 1725, in *Lettere di Apostolo Zeno cittadino veneziano storico e poeta cesareo*, 2nd ed., by Apostolo Zeno (Venice, 1785), 4:26, 35.

enna. He decided to explore the possibilities discreetly within the imperial court, recognizing how delicate this negotiation would have to be, given Carlo Borromeo Arese's staunch opposition to his daughter-in-law's intellectual activities and political inclinations. In an undated letter, Grillo Borromeo cautiously encouraged Vallisneri to continue his conversation with "that mediator"—in all likelihood Zeno. But she hypothesized that if they maintained and even expanded the current academy, "others will involve themselves in our idea and they will prevent it from happening here." She encouraged Vallisneri to write vaguely of their plans "because the reliability of the mail gets worse ever day if it has perhaps not been destroyed."<sup>117</sup> Such exchanges suggest the degree to which Grillo Borromeo feared for the future of her academy not only from her critics in Milan but from others in Vienna who might appropriate their proposal for other purposes. Despite the erratic nature of her commitment to the Clelian Academy up until this point, when enticed by the prospect of winning imperial recognition for her unique position in Milan as a patron of science Grillo Borromeo felt that her role in this academy was central to any argument she might make for support from Vienna.

In December 1726 Zeno wrote that he was still trying to resolve the business of *donna Clelia*. He had indeed made some progress. Summing up the passing of another year on New Year's Day 1727, Grillo Borromeo wrote of her pleasure at this news. But she wondered to what degree such plans would involve her at all. She cautioned Vallisneri that they might eventually arrive at the point at which "we will find bread without having any teeth." Increasingly, skeptical of Zeno's commitment to making their case before the emperor, Grillo Borromeo informed Vallisneri that, if it seemed prudent, she approved of his plan to "remove Apostolo as our preacher and enlist another."<sup>118</sup> They were taking no chances.

At the same time, Vallisneri's increasing skepticism regarding her ability to be the kind of patron he had imagined manifested itself quite clearly in his conversations with Dereham. There is no question that he was disillusioned and frustrated at every turn—not just by Grillo Borromeo but by every would-be supporter of science in Italy. Vallisneri openly lamented the fact that Italian scientists had been virtually abandoned by patrons, mentioning only the Violante Beatrice of Bavaria, widow of Prince Ferdinando III de' Medici and now governor of Siena, by name.<sup>119</sup> Throughout January, Grillo Borromeo continued to encourage Vallisneri to find more direct channels than Zeno for a conversation with the emperor. The significance of this new opportunity is apparent in the frequency and tone of her letters inquiring about further news from Vienna. She suggested that under the guise of reporting on "some physical novelty, which would be the mule and the woman who doesn't eat" Vallisneri could simply mention "my desire for this academy."<sup>120</sup> Should the emperor still be concerned about the impropriety of her role, she provided him with examples of exceptional women who had performed similar public functions in other Italian cities. Ultimately, she wanted to know whether Charles VI was personally inter-

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<sup>117</sup> Grillo Borromeo to Vallisneri, Milan, 14 December [1726?], ASRE, *Archivio Vallisneri*, 4/III, 3, no. 115.

<sup>118</sup> Zeno to Vallisneri, Vienna, 28 December 1726, in *Lettere di Apostolo Zeno*, 4:163; Grillo Borromeo to Vallisneri, Milan, 1 January 1727, BACR, Conc. 338/50, no. 3. The other party may have been the librarian Garelli, but it could equally have been Vallisneri's relative Ippolito Bertolani. Grillo Borromeo also alluded to her reservations about Zeno in earlier correspondence; Grillo Borromeo to Vallisneri, Milan, 31 [January] 1725, BACR, Conc. 338/50, no. 22.

<sup>119</sup> Vallisneri to Dereham, Padua, 30 December 1726, in *Early Letters*, vol. 57; also Vallisneri, *Epistolario 1714–1729*, 1425.

<sup>120</sup> Grillo Borromeo to Vallisneri, Milan, 8 [January] 1727, BACR, Conc. 338/50, no. 4. On her dealings with Vienna, see also Serralunga Bardazza, *Clelia Grillo Borromeo Arese*, 56–57.



ested in their proposal, boldly forwarding a letter for Vallisneri to send to the emperor in Vienna.<sup>121</sup>

An undated letter written at the time provides us with further insight into Grillo Borromeo's understanding of the possibilities for her project. She outlined the benefits and risks of a Milanese academy of sciences under her direction while also providing Vallisneri with ready-made answers to the emperor's objections:

My idea would be that the emperor, persuaded of the utility that comes to states from the propagation of the sciences and arts, moved by his desire for his own applause, and firmly convinced that I have enough ability, superior to anyone else in this city, would bring this enterprise to a conclusion. That he would make up his mind to found an Academy shortly like that of the Cimento. To help him make such a determination, it needs to find shelter from the obstacles that can impede it. I only see two of them. One is paying for it in such mean times, the other is giving the task to a woman. Regarding the first, there is no lack of responses.

One can tell him that Princes find money when they want, that the amount will not be very considerable, and that as the occasion for publications, arts, and instruments arises from this institution, money will return with this success. In the end, the project will be able to support itself and grow on its own.

Throughout their prolonged negotiations with Vienna, Grillo Borromeo encouraged the idea that the Clelian Academy would cost the Austrian government very little in relation to the benefit it would return.

Responding to the second objection, Grillo Borromeo sought to minimize any concerns about the unusual nature of her position as a patron of science. She did not want the emperor to see the Clelian Academy as a strictly female endeavor, recognizing that this indeed was an obstacle to its realization. Instead, she encouraged their friends at the imperial court to present the proposal more broadly, as a Milanese or perhaps even Italian project rather than a personal initiative. She did her best to anticipate and counter any hesitation about the role she would play, making it a matter of personal ability and virtue—princely recognition of a distinguished and learned subject—rather than an artifact of her unusual standing as a woman learned in the sciences:

He need not be informed of the second difficulty and certainly my mediators won't put it into his head. But if he were to hear of it, there is no lack of reasons to negate it. This is not a military command, nor that of provincial governor, over which the custom of conferral is already established. It is an appointment freely made by the Prince with which he gratifies one of his distinguished subjects, reaffirming the person's scholarly ability in order to encourage others here.<sup>122</sup>

In such statements, we finally see Grillo Borromeo's full recognition of the nature of her predicament. She was quite certain—probably rightfully—that she was the most qualified person in the city to head the new imperial academy. At the same time, she was well aware that the more formal the endeavor, the more problematic her role in it would be come. How to overcome this obstacle? Her own argument not only underscored her intellectual credentials but reaffirmed her role in inspiring others—certainly male, possibly female—to pursue science. Grillo

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<sup>121</sup> Grillo Borromeo to Vallisneri, Milan, 22 January 1727, BACR, Conc. 338/50, no. 6.

<sup>122</sup> Grillo Borromeo to Vallisneri, n.d. [1727], BACR, Conc. 338/50, no. 29.

Borromeo urged Vallisneri to find the best avenue for securing her role “because not only do we risk that nothing happens but also that in doing it the command is given to others. We will have done the work while others grab the prize.”<sup>123</sup>

In the midst of these intense negotiations, the Englishman Dereham arrived in Milan at the beginning of winter 1727. He witnessed the surprising birth of a mule from a mule and reported back to the Royal Society about the Clelian Academy. It is little wonder that he was excited about what he heard in the Borromeo *conversazione* about the possibility of an imperial academy under her direction. On this occasion, he must have finalized his plans to dedicate the Italian translation of the *Philosophical Transactions* to her. Vallisneri apologized to Dereham for being unable to join him and the countess. They both agreed that they would publicize the strange reproductive powers of a seemingly sterile animal.<sup>124</sup> Reports of this mule traveled from Milan to such cities as Padua, Rome, Neuchâtel, Vienna, and London, further demonstrating the function of novelties in activating correspondence while also providing the Clelian Academy with fleeting visibility.

Ever conscious of the importance of maintaining her network of correspondents, Grillo Borromeo continued to cultivate her relationship with Bourguet in Geneva. In March 1727, for example, she informed Bourguet that she had been sharing his treatise on “organic mechanism” with many scholars besides their mutual friend Vallisneri.<sup>125</sup> Towards the end of winter Conti arrived for a lengthy stay with the countess, offering sage advice about the obstacles which his two friends faced in gaining imperial patronage and inspiring them with his ambitious project of writing the history of knowledge since 1665. He advertised this project as yet another opportunity to celebrate the glory of Italian science after Galileo.<sup>126</sup>

Things were not going well in Vienna. By spring Grillo Borromeo grimly compared their situation to the military predicament of the Spanish in attempting to recapture Gibraltar from the British. Unable to find any breach in the walls, they simply could not enter.<sup>127</sup> There was nothing much to do or say except to lament the demise of a good idea. “I don’t want us to lose sight of that chimerical academy, and who knows?” the countess had written quixotically to her naturalist at an earlier stage in their discussions.<sup>128</sup> She continued to mull over the possibilities before them with her houseguest Conti and longed for the return of the academy’s president.

Vallisneri’s final trip to Milan in September 1727, at the repeated urging of his patron, allowed the Clelian Academy to exist for one last time. He stayed with the countess, presumably read his natural history lecture in the room which held his portrait and the academy rules, and participated in her *conversazione*. He retrieved his friend Bourguet’s papers that had disappeared for months in the confusion of her study. Yet Vallisneri increasingly felt that he was participating in a ritual without a point. Grillo Borromeo’s reckless behavior further compounded his concerns. Shortly after

<sup>123</sup> Ibid.

<sup>124</sup> Vallisneri to Dereham, Padua, 16 January and 1 March 1727, in *Early Letters*, vol. 57a; see also Vallisneri, *Epistolario 1714–1729*, 1439, 1459.

<sup>125</sup> Grillo Borromeo to Bourguet, Milan, 29 March 1727, BPUN, *Fonds Bourguet* MS 1272, c. 41v.

<sup>126</sup> On Conti’s project, see Vallisneri to Landi, Reggio, 12 July 1727, in *Epistolario 1714–1729*, 1490.

<sup>127</sup> Grillo Borromeo to Vallisneri, Milan, 8 April 1727, BACR, Conc. 338/50, no. 10. Gibraltar was captured by the British in 1704 and officially ceded to them in 1713, which did not prevent the Spanish from repeatedly trying to recapture it throughout the eighteenth century. With close family members in the Spanish military, Grillo Borromeo understood these events well.

<sup>128</sup> Grillo Borromeo to Vallisneri, n.p., 14 December [n.d.], ASRE, *Archivio Vallisneri*, 4/III, 3, no. 115. While the year is omitted, it seems likely that this letter was written in 1726 or possibly 1727.

his arrival, Vallisneri earned her undying gratitude when he used all of his medical skills to save her from an almost fatal bout of food poisoning brought on by her habit of eating mushrooms every night while drinking copious quantities of chocolate during the day and ingesting a steady supply of opium to calm her nerves.<sup>129</sup> The following year she lost considerable sums of money playing cards and was unable to provide the academy with much of a subsidy. Once again, the Clelian Academy seemed on the verge of slipping away.

Vallisneri aptly described his patron as “full of noble fantasies” in a letter to Conti in June 1728. “She wants others to pay for it,” he wrote, “but I fear that she will not find it in Italy.” The following month he offered the same assessment in a letter to Bourguet, writing that Grillo Borromeo’s desire to found an academy “is very difficult if not impossible in these times in Italy.”<sup>130</sup> Earlier that year he caustically remarked that he hoped his good friend Father Crivelli had received a proper reward for his own efforts with *la donna Clelia* but feared that his friend’s investment had been similarly ill advised.<sup>131</sup> Nonetheless, Grillo Borromeo continued to seek out opportunities to increase her contacts with the Italian scientific community. In 1728 she began to correspond with another distinguished Italian scientist, the Camaldolese priest Guido Grandi (1671–1742) who was professor of mathematics at the University of Pisa. Taking his cue from Vallisneri, Grandi prepared a major publication dedicated to Grillo Borromeo: his whimsical treatise on curves entitled *Geometric Flowers* (1728). Noting that few men cultivated the “sublime sciences ... but in the female sex it is even rarer,” Grandi named a curve—*la cloelia*—in her honor.<sup>132</sup>

Vallisneri wrote to congratulate Grandi on his ingenious method of honoring *la donna Clelia* with her own mathematical form, including a copy of the second edition of *On Marine Bodies*. From Lucca, Tommaso Narducci became so enamored with Grandi’s new curve that he translated the book into Italian and sent it to the woman after which it was named.<sup>133</sup> Grillo Borromeo was pleased to have played such a singular role in a work by one of Italy’s leading mathematicians whom she praised “for the honor that he gives our Italy.” She delighted in discussing and distributing Grandi’s work to the English visitors who passed through Milan, some of whom may have seen an earlier article dealing with his “geometric flowers” published in the *Philosophical Transactions* in 1722–23. In light of Grandi’s membership in the Royal Society, Grillo Borromeo openly lamented the lowly status of scientists in Italy, contrasting their fate to the situation of the English.<sup>134</sup> As she knew well from English travelers to Milan and printed journals

<sup>129</sup> Vallisneri to Conti, [Milan], 10 September 1727, in *Scritti filosofici*, 421; Vallisneri to Landi, 23 September 1727, in *Epistolario 1714–1729*, 1510; see also Lombardi, *Un nume del Settecento*, 69. Not coincidentally, Vallisneri’s bestselling *Dell’uso e dell’abuso delle bevande e bagnature calde, o fredde* (Naples, 1727), appeared that year. It was in its fourth edition by 1734.

<sup>130</sup> Vallisneri to Conti, Padua, 15 June 1728, in *Scritti filosofici*, 437; Vallisneri to Bourguet, Padua, 7 July 1728, BPUN, *Fonds Bourguet* MS 1282, c. 298. See also Vallisneri, *Epistolario 1714–1729*, 1581, 1597.

<sup>131</sup> Vallisneri to unknown recipient, Padua, 6 January 1728, in *Epistolario 1714–1729*, 1535.

<sup>132</sup> Guido Grandi, *Flores Geometricae ex Rhodonearum, et Cloeliarum curvarum* (Florence, 1728), 225.

<sup>133</sup> Narducci to Grandi, Lucca, 20 October 1728, 22 June, 6 January, 6 December 1729, Biblioteca Universitaria, Pisa, *Mss. Guido Grandi*, MS 98, cc. 309r, 312v, 321r, 323; Narducci to Grandi, Lucca, 30 December 1729, *ibid.*, c. 324r; Grillo Borromeo to Narducci, Milan, 9 November 1729, *ibid.*, c. 325r.

<sup>134</sup> Luigi Tenca, “Cinque lettere di Clelia Borromeo del Grillo al matematico Grandi,” *Archivio storico Lombardo* 8, no. 3 (1951): 223–30, esp. 226, Vallisneri to Grandi, Padua, 10 March 1729, and 226–27, Grillo Borromeo to Grandi, Milan, 30 March 1728. See Grandi, “*Florum Geometricum Manipulus Regiae Societati Exhibitus a D. Guidone Grandi Abbate Camaldulensi, Pisani Lycae Mathematicus, R. S. S.*,” *Philosophical Transactions of the Royal Society of London* 32 (1722–23): 355–71.

to which she subscribed, the recently deceased Newton had been buried with great pomp and ceremony in Westminster Abbey. It pleased her immensely to see Grandi as a corresponding member of the Clelian Academy.

In the fall of 1728 Montesquieu finally made his own pilgrimage to Italy. He was well fêted by Conti in Venice and, while disappointed to find Vallisneri still on holiday from the university, saw his cabinet of curiosities in Padua. On September 24, he arrived in Milan bearing “letters from abbé Conti for countess Borromeo, who is very learned and who knows French, English, German, and Latin besides her natural language, and who even has Arabic, mathematics, natural philosophy, and algebra. She has made a very great number of natural observations and experiments.”<sup>135</sup> During his three week stay Montesquieu enjoyed a guided tour of the Biblioteca Ambrosiana by Sassi and made time for a visit to the Borromeo islands, undoubtedly at the urging of *la donna Clelia*, before arriving Florence. Traversing the route between Venice and Milan, Montesquieu did indeed visit an academy that never quite existed, bearing letters between its members which no longer survive. He subsequently described her as “the most admirable woman in the universe.”<sup>136</sup>

The following year one of the German members of the Royal Society, Johann Georg Keyssler, visited Milan. In the midst of his description of the portraits of learned women hanging in the Ambrosiana, he found himself wondering why Clelia Grillo Borromeo and her learned sisters Teresa and Ginevra were not yet among those depicted. Describing Grillo Borromeo’s vast erudition, he wrote of the Clelian Academy:

Her liberality is so great that she has set up, in her palace at Milan, an academy for natural philosophy and the mathematics, of which, though it not be fully completed, the celebrated Antonio Valisneri, professor at Padua, is to be president, who has long since drawn up a system of its institutes and regulations. It is to be stiled Academia Clelia Vigilantium, and the members, in their exercises and disputations, are not to touch upon divinity, poetry, or eloquence.<sup>137</sup>

By the time Keyssler published his 1729 observations of the academy, he noted regretfully that Vallisneri was no longer alive. He did not excise this passage, however, which was surely based on his reading of Sassi’s recent description of the academy and its rules as well as his own observations.

Vallisneri tried valiantly to save the project for one more year. But in June 1729 he politely informed his patron of the utter impossibility of their academy. With the return of Zeno to Vienna, he invoked the words of his 1726 dedication, but this time with much greater finality. Vallisneri gallantly observed that the academy “is reduced to you and me, but Your Excellency is enough for me who by herself alone forms an entire Academy.”<sup>138</sup> The truthfulness of this state-

<sup>135</sup> Baron de Montesquieu, *Voyage de Montesquieu*, ed. Albert de Montesquieu (Paris: Alphonse Picard & Fils, 1894), 1:64, 79–81, 92 (quote on Grillo Borromeo), 102. The phrase *très grand nombre d’expériences de physique* ambiguously includes both natural historical observations and physical experiments just as *physique* (translated above for simplicity as natural philosophy) can include both natural history and natural philosophy.

<sup>136</sup> As quoted in Serrallunga Bardazza, *Clelia Grillo Borromeo*, 42 (14 October 1728).

<sup>137</sup> Johann Georg Keyssler [also John George Keysler], *Travels through Germany, Bohemia, Hungary, Switzerland, Italy, and Lorrain*, English trans. (London, 1760), vol.1, 399. First published in German in 1740 and in English in 1756–57, this frequently reprinted guidebook was well read in both languages, keeping alive the memory of this academy for several decades.

<sup>138</sup> Vallisneri to Grillo Borromeo, Guastella, 8 June 1729, BCAR, Conc. 360/32. Compare the language with Vallisneri, *Opere fisico-mediche*, 1:308.

ment seems to be born out by the cessation of her correspondence with other key members. Grillo Borromeo wrote her last letter to Bourguet in October 1728; she never did persuade him either to visit her academy in person or to move to Milan.<sup>139</sup> She tirelessly encouraged Vallisneri to explore possible avenues of negotiation with his friends at the imperial court. And she corresponded with Grandi until February 1731, entreating him to “return to Lombardy” as Vallisneri had done. When he did not, she consoled herself with the receipt of his portrait.<sup>140</sup>

Vallisneri died on 18 January 1730, effectively ending any hope that remained for a new opportunity to reconsider the idea of the Clelian Academy. At the height of discussions about the Clelian Academy, Grillo Borromeo vividly described the problem of pursuing a project with “many hidden enemies,” comparing them to “fleas which lie hidden between flesh and skin and invisibly kill.”<sup>141</sup> Ultimately, Grillo Borromeo recognized that she had neither the political capital nor the personal resources to make her academy a lasting institution. Vallisneri eloquently summed up the gravity of this problem and his dissatisfaction at the results of his own efforts to improve the situation when he told Dereham: “in Italy we are unhappy due to the lack of patrons and protectors.”<sup>142</sup>

Grillo Borromeo continued to have some interest in science, though not with the same intensity that she manifested in the 1720s. Her academy floundered but the salon from which it had emerged continued. Friends later recalled observing her in the room in which she held her *conversazione*, “sketching mathematical figures or writing letters.”<sup>143</sup> Despite her learning, wealth and nobility, there was no permanent place for *la donna Clelia* within this sector of the republic of letters because they did not continue to seek her with any regularity out after Vallisneri’s death, nor she them.<sup>144</sup> Instead, they memorialized her failed academy. Sassi published his description of the academy and its laws in his history of scholarship in Milan, first published in 1729 and dedicated to Grillo Borromeo; by fleshing out the details in his lengthy description of the academy as the culmination of Milan’s institutions of learning, he gave its paper existence a concreteness that it had lacked in the earlier accounts by Gimma and Vallisneri. Sassi very much wanted it to exist, so that Milan might indeed take its place among the Italian cities that had experimented with the idea of the scientific academy across the seventeenth and early eighteenth centuries.

Briefly, the Clelian Academy was news, and then it ceased to be much of anything at all. Unlike the Cimento, which left behind glorious traces of intellectual activity and a singularly interesting collective publication of the group’s experiments, the Clelian Academy primarily left behind a record of its remarkable founder and a sketch of what a scientific academy ought to be. In the review of Sassi’s book in the *Journal des Sçavans*, the Clelian Academy was still presented as a work in progress. The French reviewer not only found Grillo Borromeo’s learning noteworthy but also summarized the academy rules. “History, natural philosophy, and mathematics

<sup>139</sup> Grillo Borromeo to Bourguet, Milan, 12 October 1728, BPUN, *Fonds Bourguet* MS 1272, c. 42r.

<sup>140</sup> For her final correspondence with Vallisneri, see Grillo Borromeo to Vallisneri, Milan, 10 and 24 August 1729, and Sedriano, 30 October 1729, BACR, Conc. 338/50, nos. 26, 32, 19. On her correspondence with Grandi, see Grillo Borromeo to Grandi, n.d., in Tenca, “Cinque lettere,” 228. She acknowledged receipt of Grandi’s portrait on June 1, 1729 (Biblioteca Universitaria, Pisa, *Mss. Guido Grandi*, MS 85, c. 160); see also Tenca, “Cinque lettere,” 228.

<sup>141</sup> Grillo Borromeo to Vallisneri, Milan, 31 [January] 1725, BACR, Conc. 338/50, no. 22.

<sup>142</sup> Vallisneri to Dereham, Padua, 22 December 1728, in *Epistolario 1714–1729*, 1643.

<sup>143</sup> The 1746 testimony of the Marchese Diego de Araciel is quoted in Serralunga Bardazza, *Clelia Grillo Borromeo*, 78.

<sup>144</sup> So far I have found only two works dedicated to Grillo Borromeo after the early 1730s: Giovanni Crivelli, *Elementi di aritmetica numerale, e letterale*, as republished in his *Elementi di fisica*, 2nd ed. (Venice, 1744); and Tommaso Guerrino, *Euclide in Campagna, o sia Geometria ridotta all’atto pratico* (Milan, 1763).

should be the object of study by the academicians and the subject of their meetings. Anything regarding poetry, eloquence or purely theological matters is banished from it. “This Academy should be called Clelian, from the name of its founder, and the academicians will be called *Vigilans*.”<sup>145</sup> When Filippo Argelati (1685–1755) republished Sassi’s treatise in his ambitious library of Milanese writers in 1745, he further solidified Sassi’s presentation of the academy as its official history, though by this point it was a chapter in Milan’s intellectual life that had definitely closed.

The chimerical academy enjoyed several afterlives in a dispersed series of publications across several decades. Dereham’s 1729 dedication of the Italian translation of the *Philosophical Transactions* under the name of “Giovanni Panserpichi” further publicized the fame of Grillo Borromeo’s *conversazione* in its description of the lively cosmopolitan atmosphere of her home: “how many learned men from different parts of Europe have had the chance to listen to the philosophical debates of Your Excellency, expressed in the various languages that you happily possess?”<sup>146</sup> In many respects, his comments echoed a letter in that same year from Ruggero Arese who, recently arrived in Rome to take religious orders, lamented the fact that he found no woman or man in the Eternal City with the insatiable curiosity and intellectual talent displayed by the countess in Milan.<sup>147</sup> While effusively praising Grillo Borromeo’s learning and reproducing in the fifth volume of 1734 much of his correspondence with Vallisneri including the discussion of the curious birth of the mule, Dereham conspicuously chose to omit any reference to the academy. Perhaps he understood all too well that it was never going to be like the Royal Society. Instead he chose to memorialize the figure of Clelia Grillo Borromeo—and his friend Vallisneri who had inaugurated the tradition of dedicating books to her.

The posthumous publication of Vallisneri’s collected works by his son, Antonio Vallisneri, Jr. (1708–77), in 1734 further aggrandized the image of *la donna Clelia* as a great patron at the expense of the equally interesting history of her academy. In the biography written by Count Giovanni Artico di Porcia, the existence of the academy was reduced to a single line. Artico reminded his readers that at the end of Vallisneri’s first trip to Milan “Clelia became so infatuated with experimental philosophy that she did not want him to leave until he had dictated the laws for an academy to be founded to this end in her palace.”<sup>148</sup> Antonio Jr., who had accompanied his father to Milan during one of his summer trips, of course knew that there was much more to be said but he remained silent. When the president of the Dijon *parlement* Charles de Brosses visited the countess in the summer of 1739, he described her as a walking encyclopedia—“she not only knows all the sciences and languages of Europe but speaks Arabic like the Qu’ran”<sup>149</sup>—but did not associate this vast erudition with any academy.

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<sup>145</sup> Sassi, *De studiis litterariis Mediolanensium antiquis & novis*. See his discussion of this project with Vallisneri, Biblioteca Comunale “A. Saffi,” Forlì, *Autografi Piancastelli*, Autografi sec. XII–XVIII (Sassi to Vallisneri, Milan, 16 November 1729); and the review in *Journal des Sçavans* (September 1731): 543.

<sup>146</sup> John Lawthrop, *Saggio delle transazioni filosofiche della Società Regia*, vol. 2, trans. [Thomas Dereham] (Naples, 1729–34), sig. a2v.

<sup>147</sup> Arese to Vallisneri, Rome, 15 October 1729, Biblioteca Labronica, Livorno, *Autografoteca Bastogli*, Cass. 5 ins. 796, no. 7.

<sup>148</sup> Giovanni Artico di Porcia, “Notizie della vita, e degli studi del Kavalier Antonio Vallisneri,” in Vallisneri, *Opere fisico-mediche*, 1:67. See the modern edition of Porcia, edited by Dario Generali (Bologna: Patron Editore, 1986), 154. Readers should compare this biography of Vallisneri with the *éloge* Bourguet inserted in the *Bibliothèque italique*, vol. 5 (Geneva, 1728–34), art. 3.

<sup>149</sup> Charles de Brosses, *Lettres familières sur l’Italie* (Paris: Firmin-Didot, 1931), 1:117–19.

The idea of an eighteenth-century institution which restored the glory of Italy's influential role in shaping the very idea of a scientific academy in the preceding century did not completely vanish with the demise of the Clelian Academy. In 1732 a group of Neapolitan scholars under the leadership of Celestino Galiani, Bartolomeo Intieri and Nicola Cirillo founded a Neapolitan Academy of Sciences while the Kingdom was still under Habsburg rule. They considered their short-lived academy, which ended in 1740 under the rule of the Bourbons, to be a revival of the Neapolitan experimental academy of the previous century, the *Accademia degli Investiganti*.<sup>150</sup> In 1745 the physician-naturalist Giovanni Bianchi, whom Vallisneri had proposed as secretary of the Clelian Academy, revived the *Accademia dei Lincei* in Rimini, based on his experience as a core member of Cardinal Giovanni Antonio Davia's (1660–1740) scientific academy, which flourished in Rimini during the most active period of Davia's archbishopric in the 1710s and 20s.<sup>151</sup> How did Bianchi envision his own recapitulation of Italy's scientific past? The early seventeenth-century Roman scientific academy that famously included Galileo among its members had left behind a series of important natural history publications. Bianchi inaugurated his academy with a new critical edition of the Neapolitan Lincean Fabio Colonna's landmark botanical publication, *Phytobasanos sive plantarum aliquot historia* (1592) to which he appended a biography of Colonna and history of the Lincean Academy.<sup>152</sup> He shared Vallisneri's and Grillo Borromeo's perception that Italian scholars needed to publicize Italy's intellectual and institutional contributions to the foundations of modern science so that they would not be forgotten. Much like the Clelian Academy, the new Lincean Academy of Rimini lasted only a few years and its activities were received with far less fanfare. Its failure served as an additional reminder that reinventing the past was not sufficient grounds for the creation of new institutions.

In the next decade another protégé of Grillo Borromeo, the ex-Jesuit Francesco Saverio Quadrio (1695–1756), presented a definitive encomium of the Clelian Academy. After scandalously leaving the Society of Jesus in 1748, Saverio spent several years completing his vast and unruly history of Italian literature. In the seventh volume, which appeared in 1752, he devoted a page to his patron's long defunct academy. Saverio Quadrio not only praised her critical view of frivolous Arcadian poetry, citing the fifth law quite favorably, but also celebrated his friendship with Vallisneri and the recent death of Sassi whose description of the academy formed the basis of his own account. He specifically praised Grillo Borromeo for being “the only Lady who was the author of a similar institution, for which Italy envied neither Paris, nor London, nor Petersburg their more solemn academies ...”<sup>153</sup> This obscure note in the midst of a vast literary encyclopedia—in many respects the replacement for Gimma's earlier history of Italian learning—fleetingly revived the memory of the Clelian Academy for the younger generation of Milanese

<sup>150</sup> The Academy of Sciences in Naples (1732–40), created toward the end of Habsburg rule of the Kingdom of Naples and continuing briefly under the Bourbons, was explicitly modeled on the Royal Society of London and Paris Academy of Sciences; see Riccardo De Sanctis, *La nuova scienza a Napoli tra '700 e '800* (Rome: Laterza, 1986), 12.

<sup>151</sup> Cardinal Davia's academy is discussed in Carlo Tonnini, *La coltura letteraria e scientifica in Rimini dal secolo XIV ai primordi del XIX*, ed. Paola Delbianco (1884; Rimini: Luisé, 1988), 214–16, 233–34; and in Paula Findlen, “Women on the Verge of Science: Aristocratic Women and Knowledge in Early Eighteenth-Century Italy,” in *Women, Equality and Enlightenment*, ed. Sarah Knott and Barbara Taylor (London: Palgrave Press, 2005), 265–87.

<sup>152</sup> Fabio Colonna, *Phytobasanos cui accessit vita Fabi et lynceorum notitia adnoationeque in phytobasanon Iano Planco Ariminensi auctore et in Senensi academia anatomes publico professore* (Florence, 1744). On Bianchi's activities, see DBI, s.v. “Bianchi, Giovanni,” 10:104–12; and Stefano De Carolis and Angelo Turchini, *Giovanni Bianchi: medici primario di Rimini ed archiatra pontificio* (Verucchio: Pazzini, 1999).

<sup>153</sup> Francesco Saverio Quadrio, *Della storia e della ragione d'ogni poesia* (Milan, 1752), 7:15.

who created the Accademia dei Trasformati, a literary academy founded in 1743 which carried forward a number of the ideals of the Clelian Academy and with which *la donna Clelia* seems to have been affiliated, the far more contentious Accademia dei Pugni (1761–66), and its journal *Il Caffé* (1764–66), arguably Milan’s greatest contribution to the Enlightenment.<sup>154</sup>

By the time Saverio Quadrio published his belated tribute to his friends, they had dispersed for political reasons as well as the inevitable passing of the generations. In 1746, two years after her husband’s death, Grillo Borromeo finally gave her family the scandal that they had feared would result from her flirtation with science. She fled Milan, accused of openly harboring pro-Spanish sympathies during the period in which Spain briefly reoccupied Lombardy. The Empress Maria Theresa confiscated all of her property and attempted to prosecute her for the next few years. During her period of exile Grillo Borromeo returned to Padua in 1747 to revisit the town of Vallisneri. By the time the Empress finally pardoned her in 1749, she was impoverished but still defiant.<sup>155</sup> She returned to Milan, created a theater in her palace, and retreated into a world populated by her pets and physicians. Ferdinando Galiani fondly recalled her penchant for inhaling copious quantities of snuff and musk to calm her nerves for the last fifty of her remarkable ninety-three years.<sup>156</sup>

### KILLING TIME

Grillo Borromeo’s idea of creating a scientific academy that might directly challenge the goals of Arcadia while also competing with Europe’s leading scientific societies was a bold venture designed to support a vibrant community of scholars who believed that Italy’s scientific traditions needed to be revived at home and better publicized abroad. She and Vallisneri felt that this could be accomplished through careful study of the works of the leading natural philosophers of the past century, learned correspondence, conversation with northern European scholars, and translation projects. Their attempt to secure support for the Clelian Academy, and reinvent it as an imperial academy of sciences—a project that succeeded in Florence as a result of the reorganization of scientific and cultural institutions following the end of Medici rule and the arrival of the Habsburg-Lorraine in Tuscany in 1737<sup>157</sup>—allows us to see with greater clarity than most projects how ambition might fail in the wrong political climate. It also sheds light on the constraints of patronage, the very real problems of creating and maintaining an intellectual community, and ongoing concerns about appropriate roles for women in the creation of a new scientific culture. No single factor impeded the development of the Clelian Academy but, taken together, they virtually ensured its failure.

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<sup>154</sup> Arato, *La storiografia letteraria*, 153, 156, 166. On Grillo Borromeo’s relationship to the Trasformati, see Mazzotti, *The World of Maria Gaetana Agnesi*, 81–86.

<sup>155</sup> This period of Grillo Borromeo’s life has been dealt with most extensively in Serralunga Bardazza, *Clelia Grillo Borromeo Arese*, 77–99. See also Sella and Capra, *Il Ducato di Milano*, 276–79, regarding the Spanish occupation on 16 December 1744 and the return of the Austrian Habsburgs in August 1746.

<sup>156</sup> Galiani to d’Épinay, Naples, 22 November 1777, in *Epistolario 1769–1772*, by Louise d’Épinay and Ferdinando Galiani, ed. Stefano Rapisarda and Giuseppe Giarrizzo (Palermo: Sellerio, 1996), 2:987.

<sup>157</sup> On Tuscan scientific societies under the Habsburg-Lorraine, see Eric Cochrane, *Tradition and Enlightenment in the Tuscan Academies 1690–1800* (Chicago: University of Chicago Press, 1961); Giulio Barsanti, Vieri Becagli, and Renato Pasta, eds., *La politica della scienza. Toscana e stati italiani nel tardo Settecento* (Florence: Olschki, 1996); and Simone Contardi, *La casa di Salomone a Firenze: l’Imperiale e Reale Museo di Fisico e Storia Naturale (1755–1801)* (Florence: Olschki, 2002).



Despite Marsigli's deteriorating relationship with the scientists and citizens of Bologna, his idea of an academy succeeded, eventually taking on a life of its own to become Italy's premier scientific institution. In 1732 the Bologna Academy of Sciences proudly advertised its first woman academician—the professor, physicist, and experimenter Laura Bassi (1711–78)—and in 1748 it would admit a renowned woman mathematician from Milan, Maria Gaetana Agnesi (1718–99) whose first publication appeared in a volume on women's education created by Vallisneri with Grillo Borromeo's encouragement.<sup>158</sup> Virtually all of the women natural philosophers of the next generation would commence their education in modern physics by using the textbooks which the Venetian Giovanni Crivelli had composed while he was a member of the Clelian Academy.<sup>159</sup> Clelia Grillo Borromeo lived long enough to observe these developments, even as her own academy faded from memory.

By the mid-eighteenth century, to the extent that anyone in Milan remembered the Clelian Academy it was in the spirit of Voltaire: an object of humor that recalled the follies of a former age. Grillo Borromeo's *conversazione* continued to exist in some fashion since, as late as 1758, visitors described her home “as the meeting place of all the important people of Milan.”<sup>160</sup> But science was no longer the primary object of conversation, even if the countess continued to display some tincture of her scientific learning. What remained instead was a kind of curious memory of Grillo Borromeo as a founder of academies—a subject that led to a silly printed joke that turned the entire idea of the Clelian Academy upon its head. In 1762 an anonymous pamphlet entitled *Love Conquered by Reason* appeared in the city. Written by “Abbé N. N.,” it is the penultimate work that I have found with a dedication to *la donna Clelia*.<sup>161</sup> It contained a satirical description of a “New Academy erected under a French banner.” The academy had fifteen rules and allowed only poets and “versifiers” to be members. It made “no distinction of sex,” though it somewhat preferred women in order to promote their society. The subjects of academy conversation were determined by hairdressers and cooks, by the leisure of the *casino* and the obsession with family genealogies. Members would sleep until an hour before midday. They were then encouraged to spend the remainder of the day at their dressing tables, looking obsessively at them-

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<sup>158</sup> On the role of women in the Bologna Academy of Sciences, see Cavazza, “Les femmes à l'académie: le cas de Bologne,” in *Académies et sociétés savantes en Europe (1650–1800)*, ed. Daniel-Odon Hurel and Gérard Laudin (Paris: Honoré Champion, 2000), 161–76. While the literature on Bassi has become quite large, a good starting point is Paula Findlen, “Science as a Career in Enlightenment Italy. The Strategies of Laura Bassi,” *Isis* 84 (1993): 441–69; Gabriella Berti Logan, “The Desire to Contribute: An Eighteenth Century Italian Woman of Science,” *American Historical Review* 99 (1994): 785–812; Beate Ceranski, “Und sie fürchtet sich vor niemanden.” *Über die Physikerin Laura Bassi (1711–1778)* (Frankfurt-New York: Campus, 1996); and Cavazza, “Between Modesty and Spectacle: Women and Science in Eighteenth-Century Italy,” in *Italy's Eighteenth Century: Gender and Culture in the Age of the Grand Tour*, ed. Paula Findlen, Wendy Wassyng Roworth, and Catherine Sama (Stanford: Stanford University Press, 2009), 275–302. On Agnesi, see especially Mazzotti, *Maria Gaetana Agnesi*. For the Accademia dei Ricovrati's 1723 debate and the subsequent publication of Agnesi's oration on women's education in 1729, see Luciano Guerri, *La discussione sulla donna nell'Italia del Settecento: aspetti e problemi* (Turin: Tirrenia, 1987); Messbarger, *The Century of Women*, 12–13, 21–48; and Messbarger and Findlen, eds. and trans., *The Contest for Knowledge: Debates over Women's Learning in Eighteenth-Century Italy* (Chicago: University of Chicago Press, 2005), 67–140.

<sup>159</sup> For an interesting discussion of the case of Agnesi, see Mazzotti, *The World of Maria Gaetana Agnesi*, 63–64. I am referring to Crivelli's *Elementi d'aritmetica numerale e letterale* (Venice, 1728) and especially his *Elementi di fisica*, 2 vols. (Venice, 1731–32). The first book was dedicated to Grillo Borromeo and both were reprinted in 1744. Laura Bassi knew Crivelli's work well and discussed it in her correspondence.

<sup>160</sup> The Englishman J. Grosley's account of his visit in July 1758 is quoted in Serralunga Bardazza, *Clelia Grillo Borromeo*, 105: “La maison de la Comtesse Borromée est le rendez-vous de tout le grand monde de Milan.”

<sup>161</sup> The final work is Guerrino, *Euclide in Campagna*, a year later.

selves in the mirror. They promised to recite an endless enumeration of clothes, servants, and pets.<sup>162</sup> Every rule concluded with the triumphant proclamation that the goal of the academy was to kill time (*pour tuer les temps*).

One Bolognese reader of this silly pamphlet was so outraged at its frivolity that he wrote on the flyleaf: “This book is utterly stupid and ridiculous. It seems impossible that it was considered worth printing. Whoever acquired it, rightfully stole its binding. To the fire, to the fire, is the best end for it.”<sup>163</sup> What such a reader did not appreciate, however, was the way in which it brilliantly captured the futility of the Clelian Academy which, in its own way, was an exercise in killing time for an earlier generation. When Clelia Grillo Borromeo died on 23 August 1777, one eulogist praised her demonstration of her learning “in the Academy of Experimental Philosophy open at the beginning of this century in her own house.”<sup>164</sup> Others recalled her vast correspondence and “adventurous spirit.”<sup>165</sup> But mostly the learned world remained silent since she had long ceased to be an active participant in the republic of letters.

Even in the city of Milan, few people recalled the role she had played at the beginning of the century. The great arbiter of the Milanese Enlightenment Pietro Verri (1728–97) wrote his brother that almost no one of their generation knew her. He charitably added, “However, she was generous, charitable, and bore a love of study in a time in which it was truly unusual for a lady to have a book in hand. She knew various languages and they say that she wrote very gracefully.”<sup>166</sup> This co-founder of Milan’s most exciting academy and its most contentious journal, the *Accademia dei Pugni* and *Il Caffé*, knew nothing of *la donna Clelia*, her letters, and her far earlier attempt to place Milan upon the map of the republic of letters. He would surely have laughed long and hard at Giuseppe Baretti’s eulogy of Clelia Grillo Borromeo for his English readers in 1757 in which he described her as “the most learned lady that ever Italy produced, and looked upon with little less reverence there, than Newton was in England.”<sup>167</sup> *La donna Clelia*, however, surely enjoyed this comparison and we can only hope that Baretti’s book found its way into her library. A

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<sup>162</sup> [Abate N. N.], *L'Amore vinto dalla ragione col'aggiunta di alcuni fogli galanti* (Milan, 1762), CXXI–CXXXIII (quotes on CXXX).

<sup>163</sup> See the copy in Bologna; BCAB 10. V. IV. 15

<sup>164</sup> *Nuove di diverse Corti e Paesi* no. 25 (1 September 1777), 280 (Milan, 30 August 1777), in Giulini, “Contributi alla biografia della contessa Clelia Borromeo del Grillo,” *Archivio storico Lombardo*, ser. 5, 46 (1919): 11.

<sup>165</sup> Giuseppe d’Necchi Aquila, *Orazione funebre nella morte di sua eccellenza la signora Contessa Donna Clelia Borromeo* (Milan, 1777), 16–17.

<sup>166</sup> Pietro Verri to Alessandro Verri, Milan, 27 August 1777, in *Carteggio di Pietro e Alessandro Verri*, ed. Giovanni Seregini (Milan: F. Cogliati; [then] A. Milesi; [then] A. Giuffrè, 1910–42), 9:116. We should not take literally Verri’s claim to know nothing of Grillo Borromeo since she was a well-known if increasingly reclusive figure in mid-eighteenth-century Milan and someone with whom he intersected briefly in the era of the *Accademia dei Trasformati*. Still, the fact remains that he did not consider the Clelian Academy an interesting part of her biography when she died.

<sup>167</sup> Giuseppe Baretti, *The Italian Library: Containing an Account of the Lives and Works of the Most Valuable Authors of Italy* (London, 1757), 9.

## ***Appendix I: The Rules of the Accademia Clelia de' Vigilanti\****

- I. *Admittendi conspicui erunt aut scriptis jam vulgatis aut novis inventis ingeniique raritate, cureturque praestantia non numerus sociorum.*
- II. *Congressus litterarii bifariam dividuntur, in publicos et privatos. Hi postremi frequentiores, rarius primi.*
- III. *Argumenta pertractanda ex omni scientia et arte liberali peti poterunt, dummodo quod proponitur alieno labore exhaustum non sit et luci publicae non donatum.*
- IV. *Liberum erit uti Latina vel italica lingua et, si placebit, etiam araba, graeca, aliisque ceterarum nationum, quarum stadium Academicis prorsus ignotus non fuerit. In votis tamen foret ut italica praeferretur.*
- V. *Cum scopus Academiae sit augmentum scientiarum, artiumque nobilium, exilio arcebitur Poesis omnis italica seu Latina, admissis unico studio Inscriptionum, Lapidum, Nummorum, Iconum, etc.*
- VI. *Quae ad Religionem spectant, vetitum sit in periculosae criticae examen producere, sed intacta Theologiae relinquuntur.*
- VII. *A secretis curam gerit litterarii commercii cum exteris Academiis, comparabit Ephemerides litteratorum.*
- VIII. *Animalium rariorum diligentissima educatio instituat, et cum obierint eorum anatome fiat. Plantarum etiam exoticarum experimenta non desint, ut triplex regnum naturae illustretur.*
- IX. *Plurimum conferet alicuius sodalis per nostros montes peregrinatio, ad perscrutandum eorum naturam, terrarum colores, fontium erumpentium origines, metallorum fodinas, thermas aquas, herbas, pisces inter strata.*
- X. *Praestantius foret si Academicus aliquis celeberrimas Europae urbes non solum, sed Asiae, Africae et Americae inviserit.*
- XI. *Cuique sodali peculiaris provincia designabitur.*
- XII. *Quae singula prodibunt ex calamo cuiusque sodalis, Academiae typis vulgentur.*

\*This short version of the twelve rules appears in Michele Maylender, *Storia delle Accademie d'Italia* (Bologna: Arnaldo Forni Editore, 1926), 2:22. It is based on the complete original in Giuseppe Antonio Sassi, *De studiis litterariis Mediolanensium antiquis & novis Prodromus ad Historiam Litterario-Typographicam Mediolanensem* (Milan, 1729), reprinted in Filippo Argelati, *Bibliotheca scriptorum Mediolanensium* (Milan, 1745), 1, col. LXIX–LXXI.