

An aerial architectural rendering of Villa Mairea, a modernist villa designed by Alvaro Siza. The image shows a large, multi-story building with a prominent red-tiled roof and classical architectural details like arched windows and columns. The building is surrounded by a meticulously landscaped garden with various trees, paths, and a central fountain. A white text box is overlaid on the upper right portion of the image.

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*Memoirs of the
American Academy
in Rome*
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Editorial Preface
Sinclair W. Bell

Articles

Titurius Sabinus, Mithridates,
Sulla, and Vergil: Tarpeia in
the Context of 88 BCE
Jaclyn Neel
1

The Theatre of Pompey:
Staging the Self through
Roman Architecture
Mario Erasmo
43

Αὐτοκράτωρ πολλάκις ἐπωνομάσθη
παρὰ τὰ πάτρια: deviazione dalla
prassi in età giulio-claudia o
reinterpretazione del modello
augusteo?
(Αὐτοκράτωρ πολλάκις ἐπωνομάσθη
παρὰ τὰ πάτρια: Deviation from Julio-
Claudian Practice or Reinterpretation
of the Augustan Model?)
Patrizia Arena
70

Riflessi imperiali: uno specchio
monetale romano in bronzo da
Verona e gli esemplari correlati
(Imperial Reflections: A Roman Coin
Box Mirror from Verona and Related
Examples)
Margherita Bolla
91

Is Beauty Divine? A Reassessment of
the Portraiture of Sabina
Eve D'Ambra
132

Fig Leaves, Photogrammetry,
and a Third-Century Masterpiece
Rediscovered at Hearst Castle
Robert Cohon and R. Bruce North
172

The Energetics of Lost Cargoes: A
New Perspective on the Late Antique
Marzamemi 2 Wreck
Ben Russell and Justin Leidwanger
194

Re-Defining Aristocratic Distinction:
Christian Verse Invective, Classical
Culture,
and the Cult of Mater Magna
in Late Antique Rome
Jacob Latham
261

The Montalcino Bible's Steep
Mountain of Mysteries
Herbert Kessler
307

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AR

ARCANIS NODIS: The Emblematic
Thesis Prints of the Roman College
Louise Rice

372

Edward W. Said, Renaissance
Orientalism, and Imaginative
Geographies of a Classical
Mediterranean

Robert Clines

481

Notes and Discussion

An Etruscan Votive Inscription
on Attic Ceramic

Rex Wallace

534

Augury and Observation:
Speculations on the Nature
of an Ancient Italic Ritual Practice

Anthony Tuck

540

For the Love of the Codices: Paul
Oskar Kristeller and the *Iter Italicum*

John M. McManamon

558

Reports from the American Academy in Rome

Research in the Humanities at
the American Academy in Rome
(2019–2020)

572

Necrology

Brian Curran (1953–2017)

Eleanor Winsor Leach (1937–2018)

586

ARCANIS NODIS: The Emblematic Thesis Prints of the Roman College

Louise Rice, New York University

Abstract

In 1593, as the science of magnetism was undergoing important advances, the aristocratic students at the Jesuits' flagship school, the Roman College, adopted as their academic emblem a lodestone—a naturally occurring magnetic rock—that attracts a string of iron rings by means of its own mysterious force, along with the motto *ARCANIS NODIS* (by hidden links). This clever device provides the interpretive handle for understanding a series of engravings with rare and often unique subject matter, commissioned by the young men of the college to embellish their thesis broadsheets. These enigmatic images riff on the poetic meanings of magnetism: attraction, direction, force, connectivity, and community. The paper explicates a selection of the prints and positions them in the context of the Jesuits' educational agenda, with its humanist commingling of rhetoric and science. A catalog of all known thesis prints featuring the emblem is included in an appendix.



Figure 1
 Antonio Pomarancio (attrib.)
 and Johann Friedrich Greuter,
Arcanis nodis: Cybele and
Neptune (App. 12). Paris.

A print commissioned around 1625 by a student at the Collegio Romano, or Roman College, the Jesuits' flagship school, shows a scene never before represented in literature or art (fig. 1).¹ Engraved by Johann Friedrich Greuter (1590–1662), a professional printmaker based in Rome, after a design attributable to the painter Antonio Pomarancio (1570–1630), it pictures Cybele, goddess of the earth, presenting Neptune, god of the sea, with the trident that is his usual and most recognizable attribute. In the background, ships at sea are tempest-tossed and driven helplessly toward the rocky shore. The raging storm, the ships in distress, and Neptune gesturing imperiously in their direction recall the famous passage in the opening book of Virgil's *Aeneid*, in which Neptune disperses the winds and calms the waters, thereby rescuing Aeneas's fleet from destruction.² That scene, known as the *Quos ego*, was a favorite of

¹ Appendix, no. 12.

² *Aen.* 1.124–56.

Renaissance and Baroque artists, who were drawn both to its inherent drama and to its salvational subtext. Our print taps into the familiar imagery of the *Quos ego* but represents something entirely different. Cybele's presence, her custody of the trident, and the conversation between the two deities play no part in Virgil's description. The initial sense of familiarity turns out to be illusory. The image confounds expectation by subtly subverting conventional subject matter and sidestepping the usual frame of reference. We are dealing here with a visual conundrum, one that deploys novel and enigmatic iconography to tease and tantalize, compelling us actively to engage with it if we wish to discover its meaning.

What is the modern viewer to do, confronted with an image like this, given that its subject matter is *sui generis* and has no source in classical or post-classical literature? Prints issuing from the erudite world of the Jesuit colleges can be dauntingly difficult to interpret. But although they are learned inventions and sometimes even excessively ingenious, they are never meant to confound absolutely and the curious viewer willing to look closely and pay attention to details usually discovers in the images themselves the clues that he needs to make sense of them. In the case under discussion, the key to unlocking the print's meaning is in plain sight. At the far left of the composition, below Cybele's lion-drawn chariot, a quartet of putti act out a visual footnote to the primary narrative. While two of them hold up a rough chunk of lodestone, the other two observe and test its occult power to attract iron. The lodestone and iron rings, together with the motto *ARCANIS NODIS* inscribed on the ribbon, form an emblem, and this emblem turns out to be the password that gives access to the print's cryptic iconography.

The Magnetic Emblem of the Parthenian Academy

The emblem is that of the Parthenian Academy, an aristocratic society of students at the Roman College who met outside of regularly scheduled class time to study, engage in academic exercises and disputations, and stage theatrical productions. The Academy came into existence in the 1560s. Initially, it fell under the purview of the Congregation of the Annunciation, the student sodality founded in 1563 to promote and structure the devotional life of the young men studying at the Roman College; and since the Academy, like the Congregation, was dedicated to the Virgin Mary, it took the name Parthenia, from the Greek *παρθένος*, meaning virgin. In 1593, the Congregation and

the Academy officially separated from one another, but even after that, all students invited to join the Academy were expected to be members in good standing of the Congregation.³

As for the emblem of the Academy, it was devised around the time that the Academy established itself as a separate and independent entity from the Congregation. In early January 1594, the student rector of the Academy, Panfilo Landi, published a pamphlet introducing and explicating the emblem. In his dedicatory address to Baron Franz von Dietrichstein (1570–1636), private chamberlain to Pope Clement VIII and a member of the Academy, Landi states that the emblem was given its first public viewing during Dietrichstein’s philosophy defense, which had taken place at the Roman College shortly before:

In the philosophy conclusions that Your Most Illustrious Lordship defended, with much praise for your intellect and knowledge, here in the College of the Company of Jesus (where our Parthenian Academy has been established under the patronage of those brilliant and cultured Fathers), you unveiled and displayed to Rome the emblem of that Academy, which received the great honor of being viewed for the first time in the presence and eyes of twenty-two cardinals, almost the whole of that noblest Consistory.⁴

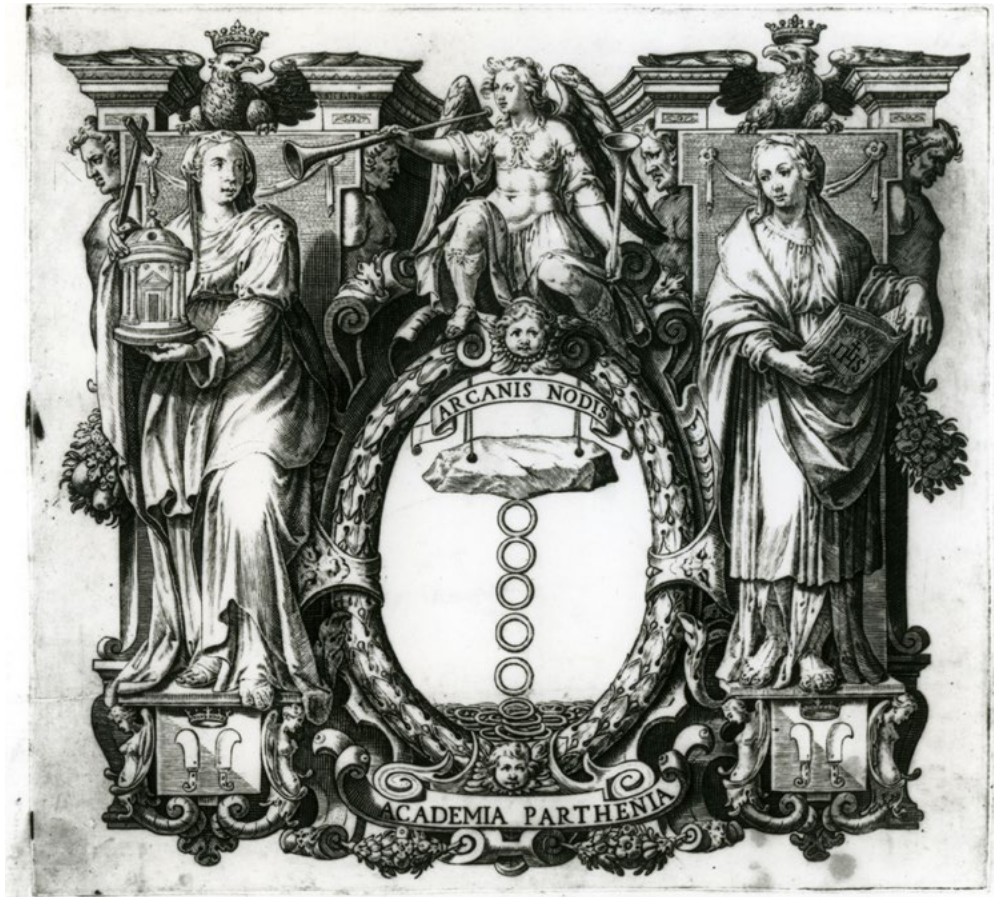
In fact, there exists a thesis engraving, presumably the very image referred to by Landi, featuring the Parthenian emblem at the center, in an oval frame of laurel, topped by a figure of Fame and flanked by statues of Faith and Religion, with Dietrichstein’s heraldry prominently displayed on the statue bases ([fig. 2](#)). This may well be the first appearance in print of the Parthenian emblem, coupled with a simpler variant of the same on the title page to Landi’s pamphlet.⁵

3 The Roman College was not the only Jesuit school to have a religious congregation dedicated to the Virgin and an associated Parthenian Academy of letters; in fact, these became standard features of Jesuit colleges everywhere (see *Ratio Studiorum* 2005, 125, 153, 202–13). But the Roman College always enjoyed a certain precedence and in 1584, by papal decree, its congregation was proclaimed “Prima Primaria,” after which all similar associations were aggregated to it and derived their indulgences and privileges from it. On the history of the Prima Primaria and its affiliated Academy, see *Notizie istoriche* 1865, 5–8, 16; Mullan 1912, 167–70; Mullan 1917, 19–57, 316–23; Villaret 1947, 429–34.

4 Landi [Negroni] 1594, 3–4.

5 Appendix, no. 1. The little engraving of the emblem that decorates Landi’s pamphlet is stylistically identical to Dietrichstein’s thesis print and it, too, features Dietrichstein’s coat of arms, confirming that Dietrichstein’s defense and the publication of the pamphlet were closely coordinated events.

Figure 2
 Anonymous, *Arcanis nodis*: The
 Parthenian emblem with the
 arms of Franz von Dietrichstein
 (App. 1). Windsor.



The fact that Dietrichstein was accorded the privilege of unveiling the emblem to the public does not mean, of course, that he invented it. The task of crafting an appropriate *impresa* for the Academy was undoubtedly entrusted to one of the Jesuit fathers. The copy of Landi's pamphlet formerly in the library of the Roman College (and today in the Biblioteca Nazionale in Rome) bears on its title page a handwritten attribution to the Genoese Jesuit Giulio Negroni (1553–1625); and although this tells us only that Negroni was the anonymous author of the pamphlet, it may also imply that it was he who devised the emblem.⁶ After all, who better to explicate it than the literato who came up with it in the first place? In his dedicatory epistle, Landi mentions the inventor's express desire to remain anonymous;⁷ and Negroni, too, in the body

6 "Verus Auctor est P. Julius Nigronus S. J."

7 Landi [Negroni] 1594, 4: "Et perche l'Inventore dell'Impresa non si è curato in questa attione, che pure a lui toccava, farsi per adesso conoscere al mondo, i Signori Accademici hanno imposto a me come a Rettore

of the text, refers to the author of the *impresa* in the third person and never by name, describing him as someone who has studied lodestones firsthand and engaged in magnetic experiments, but also, more tellingly, as someone deeply versed in the esoteric science of emblematology.⁸ It is worth noting that Negroni himself was well known for his skills as an emblemist. Only a year after the publication of Landi's pamphlet, he was involved in the preparations for the ceremonial entry into Milan of the newly appointed archbishop, Cardinal Federico Borromeo, for which event the city was adorned "with an indescribable abundance and variety of paintings, statues, emblems, devices, inscriptions, and mottoes, for the most part devised by the very subtle mind of Padre Giulio Negroni, Jesuit."⁹ Negroni spent most of his life assigned to various Jesuit colleges in Northern Italy, but he is documented in Rome in the spring of 1594, a circumstance that bolsters the likelihood that he played a part in the emblem's creation.¹⁰ We can be sure, in any case, that if it was not Negroni who conceived of the device, it was one of his Jesuit confrères, perhaps Bernardino Stefonio (1562–1620) or Andreas Schott (1552–1629), both of whom were professors of rhetoric at the Roman College in the early 1590s and accomplished neo-Latin poets in their own right.

In its pure state, without the embellishment of narrative, the Parthenian emblem combines an image derived from Plato with a motto drawn from a poem by Claudian, both having to do with magnetism.¹¹ It represents a lodestone—a naturally occurring magnetic rock—that attracts to itself the iron rings of a chain linked only by the invisible and mysterious force of magnetism, accompanied by the motto *ARCANIS NODIS*, "by secret links" or "by hidden connections." Plato described the marvel of the lodestone-and-links thus:

dell'Accademia il carico di mettere insieme tal dichiarazione, & darla in luce."

8 Landi [Negroni] 1594, 7, 13, and 22.

9 Rivola 1656, 184–85: "Potrammi perciò bastar' il dire succintamente ch'elle tutte con una indicibile copia, e varietà di pitture, di statue, di emblemi, d'impresse, e d'inscrizioni, e motti inventati per la maggior parte dal sottilissimo ingegno del Padre Giulio Negroni Giesuita venivano sì vagamente ornate, e fregiate, che si rendevano agli occhi de' riguardanti, ed al fino giudizio degl'intendenti soprammodo maravigliose."

10 Negroni delivered an oration in praise of the newly canonized Dominican saint Hyacinth in S. Maria sopra Minerva on 24 April 1594 (Negroni 1594).

11 Pl., *Ion* 533D–E; Claudian, "The magnet," XXIX (XLVIII).37.

[The magnet] not only attracts iron rings, but also imparts to them a power whereby they in turn are able to do the very same thing as the stone, and attract other rings; so that sometimes there is formed quite a long chain of bits of iron and rings, suspended one from another; and they all depend for this power on that one stone.

Over the centuries, countless others expressed their wonder at this same phenomenon, including Lucretius,¹² Pliny,¹³ Philo,¹⁴ Galen,¹⁵ Ambrose,¹⁶ and Augustine, who by his own admission was left “utterly aghast” by what he witnessed:

For I actually saw an iron ring drawn up by a stone and held suspended; then, as if the stone had communicated its own power to the iron first caught up, this ring was brought near to another and held it up—as the first ring clung to the stone, so the second clung to the first. In the same way a third ring was added, then a fourth. Thus a chain, as it were, had been formed of rings, not linked each with the next, but clinging by their outer surface. Who would not be astonished at the power of this stone, a power which was not only present in the stone, but which passed through so many suspended objects and bound them with invisible chains [*invisibilibus ... vinculis*]?¹⁷

Some of these authors were interested in the phenomenon of the lodestone-and-links for its own sake, wondering about the nature of matter and whether the cause of attraction was mechanistic or animistic. Others used it as a metaphor for something else. Plato developed it to illustrate the concept of divine inspiration. He argued that, just as the stone exerts its pull through the successive links, “in the same manner, also the Muse inspires men herself, and then by means of these inspired persons the inspiration spreads to others, and holds them in a connected chain. For all good epic poets utter all those fine poems not from art, but as inspired and possessed.” Later philosophers saw in it an allegory of the cosmos; the *virtus occulta*, or mystical force, that binds heaven and Earth; Homer’s golden chain; or the metaphysical “Great Chain of

12 Lucr. VI.910–16; Wallace 1996, 178–87. On magnetism in antiquity, see Radl 1988.

13 Plin., *HN* XXXIV.42.

14 Philo, *On the creation* 141.

15 Galen, *On the natural faculties* I.14. The magnetic chain described by Galen is made of iron writing styluses rather than rings.

16 Ambrose, *Letters* XLV.14.

17 August., *De civ. D* XXI.4.

Being” that descends from the hand of God down through the whole hierarchy of his creation. The poet Claudian, on the other hand, took the lodestone’s magnetic pull as the pseudo-scientific starting point for a voluptuous idyll on the power of love.

For the members of the Parthenian Academy, the lodestone-and-links was a perfectly calculated device that brought with it many of these meanings and added one other. Since the Academy, as we have seen, was dedicated to the Virgin, its emblem was imbued with Marian significance. Negroni described it this way:

The Magnet represents the Most Blessed Virgin Mary; the rings signify the young men of our Congregation and Academy; the chain expresses union and concord; and the occult force of the magnet’s attraction stands for the favor of the said Virgin. The magnet, I say, represents the Blessed Virgin, Patron and Protector of the Parthenian Academy...because just as the magnet with its occult force derived from heaven pulls to itself the iron rings and enchains them, so this Queen of Heaven with her favors and her graces, not without divine aid, draws the souls of the Parthenians to her cult and devotion.¹⁸

Thus, like all good emblems, the lodestone-and-links embodies a number of different meanings on a number of different levels, all of which reinforce and enrich one another. In its most literal sense, it depicts a wonder of nature: a stone that attracts metal, as if it were animate; metaphorically, it alludes to the Platonic concept of the transmission of divine inspiration and, more generally, to the cosmic interconnectedness of heaven and Earth; and allegorically, it evokes the holy magnetism of the Virgin Mary, whose mystical power of attraction draws to her the noble youth of the Roman College, linked together in a chain of love.¹⁹

The Parthenians’ choice of the lodestone as their emblematic device was further motivated by a growing fascination with magnetic phenomena both within the Jesuit community and without. Dramatic advances in the study of magnetism already underway in the 16th century became the focus of intense

18 Landi [Negroni] 1594, 14–15. For additional descriptions of the Parthenian emblem, see Pietrasanta 1634, 399–401; Piazza 1698, trattato XII (“Delle Accademie romane”), xxvii–xxviii.

19 Emblems of colleges and academies often allude to the collective nature of the group. In the case of the Parthenian Academy, multiple links form a single chain. Similarly, the emblem of the Jesuit-administered Roman Seminary consists of multiple saplings growing in the protected enclosure of a single nursery (*seminarium*); the emblem of the Accademia degli Arisofi at the Collegio di Brera in Milan consists of multiple buckets attached to a single waterwheel lifting water from a well; and so forth.

scientific interest in the 17th.²⁰ Navigators using compasses in distant latitudes gathered data that challenged old beliefs about the sources and forces of magnetic pull. The publication in London in 1600 of William Gilbert's *De magnete* put the science of magnetism on a new footing. Gilbert (1544–1603) argued that Earth itself is a giant magnet, its core made of lodestone, and developed a primitive field theory of magnetism, which he thought might explain Earth's axial rotation. As one historian of science has put it, "Gilbert elevated magnetism into an immaterial, cosmic, law-bound, and measurable force."²¹ Johannes Kepler (1571–1630) extended Gilbert's theories to the solar system as a whole and used them to support a Copernican understanding of the cosmos, proposing a system of magnetic fibers emanating from the planets and powering their motion around the sun. The Jesuits, too, were deeply interested in magnetism.²² Their global networks of missionaries were instructed to take accurate measurements of magnetic dip and declination at every point on their voyages abroad and to send these back to the Roman College, where Jesuit scholars collated and studied the results, combining them with their own observations and experiments with lodestones. Leonardo Garzoni (1543–1592), Niccolò Cabeo (1586–1650), Jacques Grandami (1588–1672), and Athanasius Kircher (1602–1680) were just some of the Jesuits who authored treatises on magnetism.²³ Kircher wrote the last two of his three treatises on the subject after moving to Rome and joining the faculty of the Roman College, and for the purposes of this article it is worth noting that the Parthenians' emblematic chain and motto are prominently featured in the frontispieces to both publications (figs. 3, 4). Kircher's inclusion of the motif gives us a glimpse into the intellectual culture of the Roman College, where serious, experimentally based and data-driven scientific inquiry was conducted in the context of a Christian Humanist curriculum that strongly emphasized rhetoric. The young men of the Parthenian Academy learned about and debated the latest developments in magnetical science in the classroom, but in the prints they commissioned to decorate their thesis broadsheets it was the metaphorical

20 Pumfrey 1989; Jonkers 2003, 28–102; Sander 2018; Sander 2020, with additional bibliography.

21 Pumfrey 2000, 385.

22 Vregille 1905; Baldwin, 1985; Jonkers 2003, 71–74; Udías 2007; Waddell 2015, 59–80, 121–34 and passim.

23 Garzoni 2005; Cabeo 1629; Kircher 1631; Kircher 1641; Grandami 1645; and Kircher 1667. There is a large secondary literature on the magnetic studies of these scientists, but see in particular Baldwin 1985; Hine 1988; Baldwin 2001; Gorman 2004; Saussy 2004; Ugaglia 2006; Waddell 2015; Udías 2020.



Figure 3 (left)
G. B. Rinalducci and G. B. Cavazza, Frontispiece to Athanasius Kircher, *Magnetica opus tripartitum*, Rome: L. Grignani, 1641.

Figure 4 (right)
Anonymous, Frontispiece to Athanasius Kircher, *Magneticum naturae regnum*, Rome: I. de' Lazari, 1667.



and allegorical rather than the purely physical aspects of magnetism that they tended to dwell on.

So with this in mind, let us return to the seashore where Cybele and Neptune face each other across the boundary dividing their realms of land and sea (fig. 1). Now that the significance of the emblem has been clarified, we can see how it informs every aspect of the narrative. Cybele is not passing the trident to Neptune. Rather, she is demonstrating its new properties, for she has magnetized its iron prongs by rubbing them with the lump of lodestone that she holds in her right hand. She lifts up the trident by a ribbon not out of daintiness but in order that it may swing freely, following its newly acquired inclination to point north. She has, in other words, turned Neptune's trident into a compass. This is earth's gift to the sea, that the mariners risking shipwreck on a dark and stormy night may steer clear of the rocks and be

saved.²⁴ And just as Cybele instructs Neptune in the magnetical arts, so her infant followers repeat the lesson to the *tritonini* who crowd around Neptune's chariot. The putto in the foreground tells a triton to take his trident and rub it against the giant boulder of lodestone against which Cybele is seated. Two other tritons have already followed his instructions and are busily rubbing away, while a fourth, having completed the operation, is testing his newly magnetized trident by pivoting it on his fingertip.

If Cybele has done her job well, Neptune's trident should point north. Sure enough, if we follow it in the direction in which it points, it leads our eye past Neptune to a distant constellation in a corner of the sky. This is Ursa Minor, the little bear. For navigators, Ursa Minor is the most important constellation in the sky, because it contains, at the tip of the bear's tail, the star known to astronomers as Polaris, and to the rest of us as the North Star, or Pole Star, or Lode star. That the trident points in the direction of Ursa Minor is proof of the occult virtue it has derived from its contact with Cybele's stone. This is so not only because Ursa Minor lies in the north. Philosophers had for centuries debated whether the source of the magnetic attraction that caused the compass to point north was celestial or terrestrial; in other words, whether it was the North Star itself or a magnetic region here on Earth that drew the compass needle.²⁵ By the time our print was made, astronomers and navigators had for the most part debunked the idea that the North Star exerts magnetic influence over the compass. But our print, being a work of poetry rather than of science, still reflects that older tradition.²⁶

Because the North Star is the closest star to Earth's axis, hovering almost directly over the North Pole, it alone of all the stars in the night sky appears fixed while the others seem to spin slowly around it. This constancy, this stead-

24 Cybele is prominently featured in at least two other Parthenian prints (Appendix, nos. 21 and 40). Her association with lodestones stems not only from her generic identification with the earth and by extension with its mineral deposits. Her cult originated in the region of Mount Ida in Anatolia, where, according to Pliny (*HN* XXXVI.25), magnetic rock was first discovered by the shepherd Magnes. (For an alternate interpretation of the passage in Pliny, see note 46 below.)

25 Jonkers 2003, 43.

26 Even if they no longer considered the Pole Star a source of magnetic attraction, many 17th-century scientists did still believe that the northernmost region of the sky is imbued with magnetic virtue. In fact, most Jesuit astronomers held that the celestial poles—the points where the sky is intersected by Earth's axis—are magnetically charged and linked by mutual attraction to the terrestrial poles, thus playing a crucial role in maintaining Earth's axial tilt. The magnetic astronomy of Cabeo, Kircher, and others is discussed in greater detail below.

fastness, made the North Star a perfect metaphor for the beloved, and there was hardly a poet who had not touched on the theme in one form or another. Dante, hearing Beatrice's voice, turned "like the needle to the star" to seek her out.²⁷ Boccaccio addressed his beloved, "you are the North Star, which guides me to the port."²⁸ Love, for Shakespeare, "is the star to every wandering bark, / Whose worth's unknown, although his height be taken."²⁹ 16th- and 17th-century love emblems abound with similar references. "I will be the Ship of Love having you as my star," says Cupid to the beloved, while on the table beside him a compass points to the North Star.³⁰ Another shows a compass pointing starward with the motto "It looks to one star."³¹

There is, of course, another woman, another beloved, who is regularly associated with the Pole Star. The star that guides sailors at sea, the *stella maris*, is among the most common symbols of the Virgin Mary and is often depicted on her veil or robe. Tradition held that Mary's name derived from the Hebrew phrase meaning "star of the sea," and although this is not in fact the case, the connection stuck. In the ninth century, Paschasius Radbertus (785–865) advised following her as a guide, "lest we capsize amid the storm-tossed waves of the sea."³² Bernard of Clairvaux (1090–1153) particularly championed the cult, and so popular was his hymn to the *stella maris* that it entered into the regular liturgy.

O you who find yourself tossed about by the storms of life, turn not your eyes from the brightness of this Star, if you would not be overwhelmed by its boisterous waves. If the winds of temptations rise, if you fall among the rocks of tribulations,

27 *Paradiso* XII.28–30.

28 Giovanni Boccaccio, *Il Filostrato* I.2: "... tu se' la tramontane stella / La qual' io seguo per venire al porto."

29 *Sonnets*, CXVI.7–8. In a less romantic vein, Shakespeare's Julius Caesar uses the image of the North Star to define what he sees as his own unique ability and justification to rule:

But I am constant as the northern star,
Of whose true-fix'd and resting quality
There is no fellow in the firmament.
The skies are painted with unnumber'd sparks;
They are all fire and every one doth shine;
But there's but one in all doth hold his place. (*Julius Caesar*, III.i.65–70).

30 Veen 1608, 38–39 (<http://hdl.handle.net/10111/EmblemRegistry:E026725>).

31 Giovio 1574, 90–1; Hooft 1611, 16–17 (<http://diglib.hab.de/drucke/31-geom-3s/start.htm?image=00017>). Jesuit emblematists used the same compass and star, with the motto "Haec Cynosura mihi" (This is my Pole Star), to symbolize the Society's missionary work in foreign lands; see *Imago primi saeculi* 1640, 323.

32 "Expositio in Evangelium Matthaei, Liber 1," *PL*, CXX, col. 94B–C.

look up at the Star, call on Mary. If anger, covetousness, or other passions beat on the vessel of your soul, look up to Mary. If you begin to sink in the gulf of melancholy and despair, think on Mary. In dangers, in distress, in perplexities, think on Mary, call on Mary. ... Following her, you will never go astray; ... if she be your propitious Star, you will arrive safely in the port.³³

It is easy to see how all this relates to the print under discussion. The emblem of the Parthenian Academy is both magnetical and Marian: Neptune's trident points to Ursa because it is there that the *stella maris* emits her bright beam. Even though there is not a single overtly Christian reference anywhere in the engraving, the subject is ultimately Christian and salvational. The image blends poetry with natural philosophy, pagan mythology with Marian devotion, and the magnetic properties of the compass with a mystical attraction of an altogether higher kind.

The iconography is undeniably dense, one might even say arcane, and requires a committed viewer, willing to crack it open, like a nut, to find the kernel of meaning within. Such complexity is perhaps inevitable given that the print illustrates an emblem inside an emblematic narrative, a conceit within a conceit. Even on its own, the Parthenian emblem exasperated the poet Ercole Tasso (1540–1613), who considered it too convoluted and difficult to understand: “This *impresa* of his [he is here referring to Landi's pamphlet] is all allegory, and indeed very nearly an Enigma, nor will it ever be understood without an interpreter.”³⁴ He took issue with the emblem's layers of metaphor and objected, in particular, to the incongruence of the signifiers (the lodestone and links) to the things signified (the Virgin Mary, the academicians, etc.).³⁵ What Tasso disliked about the emblem, however, was probably what most appealed to the Parthenians. After all, as is made clear in Landi's pamphlet, an effective emblem must be “neither so obvious that the conceit is understandable even to the common man, which would be a serious failing, nor so obscure as to be impenetrable to men of learning and solid understanding.” An emblem is meant “to signify obscurely to others some particular

33 “Tractatus ad laudem Gloriosae Virginis Mariae,” *PL*, CLXXXIII, col. 1142D–1143B. The anonymous translation is taken from *Sermons of St. Bernard on Advent & Christmas* 1909, 47.

34 Tasso 1612, 404: “Questa sua Impresa sì, che è tutta allegoria, & ancho assai s'avvicina ad Enigma, ne sarà ella mai senza interprete intesa.” For the whole discourse, see 402–9. Tasso composed it in response to Landi's pamphlet, which was reissued along with two other essays on the emblems of the Parthenian Academies of Naples and Milan in a volume published in Milan in 1603 (Piccaglia 1603).

35 Tasso 1612, 405: “... la Calamita principale corpo di questa Impresa, di nulla con gli Autori, che gli Academici sono; poco con la Vergine, & di men che nulla con se stessa, & con questo Scrittore [Landi] conveniene.”

and important concept of the individual who invents it. If it is to signify, then it cannot be too obscure; if it is to signify obscurely, then it cannot be too obvious.”³⁶

The Parthenian Prints: Theme and Variations

The print we have been discussing was designed specifically to decorate the thesis broadsheet of a student undergoing a public academic defense at the Roman College. It served the same purpose as Dietrichstein’s engraving, which according to Landi adorned his philosophy theses. The Baroque defense was an academic spectacle punctuated with speeches, musical fanfares, and choral song, during which a student presented a series of theses (also referred to as propositions or conclusions), which he elaborated in response to questions and counter-arguments posed by his examiners. The theses could be logical, philosophical, theological, legal, or medical, depending on the institution and on the defendant’s course of study. Students who had the financial means to do so were encouraged to publish their theses, sometimes in the form of a booklet but more often in the form of a broadsheet, which was distributed to the members of the audience at the outset of the defense and which served both as a kind of program, enabling those present to follow the progress of the disputation, and as a memento of the event once it was over.³⁷ Broadsheets of any sort have a lamentably poor survival rate, and thesis broadsheets are no exception. Their awkward size made them difficult to store, and print collectors, prizing the engravings that decorated them more than the texts, tended to save the one while discarding the other.

36 Landi [Negroni] 1594, 22–23: “... cioè non è, ne tanto chiara che il concetto da ciascun del volgo sia inteso, il che sarebbe gran vitio, ne tanto oscura, che da dotti & mediocrementi intendenti non possa esser penetrato, essendo che nella definitione dell’Impresa si dice, che è fatta per oscuramente significare altrui qualche particolare, & importante concetto, di chi la leva. Se deve significare, non deve essere oscurissima; se oscuramente significare, non deve esser chiarissima.” Negroni is here echoing earlier emblematisers such as Paolo Giovio, who stated that “l’invenzione ò vero impresa, s’ella debbe havere del buono, bisogna [...] ch’ella non sia oscura, di sorte, c’habbia mistero della Sibilla per interprete a volerla intendere; ne tanto chiara, ch’ogni plebeo l’intenda” (Giovio 1574, 12). Tasso’s acerbic retort: “Anzi è sì fattamente oscura, che ne prontezza d’ingegno, ne sublimità d’intelletto non basta di penetrarla; & se m’è lecito dirlo, Impresa non è, poi che manca della forma, ma più tosto un miscuglio di Simbolo naturale, e Tropico, che in natura d’Enigma, come dicea dianzi, trapassa” (Tasso 1612, 409). On the *impresa* as a coded art form, teetering between obviousness and obscurity, see also Melion 2020, 57–58, 74.

37 On Roman thesis prints and the festive academic defense at the Roman College and at other Jesuit-run institutions in Rome, see Rice 1998, 1999, 2004, 2007, and 2012.

The Cybele and Neptune print exists today only as a loose image; not a single copy of the broadsheet to which it once belonged is known. We can visualize what it would have looked like by comparing it to the few Parthenian broadsheets that have come down to us in one piece, such as the one issued in 1644 by Agostino de' Conti di Marsciano, which features an engraving by Pietro da Cortona (1596–1669) and Cornelis Bloemaert (1603–92) in the upper half and thirty theses drawn from Aristotle's logical works, arranged in four neat columns, in the lower half (fig. 5).³⁸ But without its accompanying text, and in particular the personal information that would have been provided at the foot of the broadsheet, we may never know the identity of the student who commissioned it or the precise date of his defense.³⁹

Public defenses at the Roman College fell into two distinct categories, the *atto grande* (grand act) and the *atto piccolo* (small act). The former was for students who had completed the whole of the three-year course in philosophy and/or the four-year course in theology. The latter was for younger, less advanced students who had completed only the first year of the philosophy course. Since the first year was devoted to Aristotle's writings on logic, the small act was often referred to as the *atto di logica*. (Less frequently, a student might undertake a small act after the second year of the philosophy course, in which case it was called an *atto di fisica* and covered topics in Aristotelian physics.) Different conventions governed the broadsheets issued for the senior and junior defenses. Those designed for the grand act tended to be larger and more elaborate than those for the small. Moreover, since senior students were encouraged to dedicate their conclusions to an influential individual such as a cardinal or a prince, their thesis prints took the form of visual encomia, aimed at exalting the honoree by incorporating his heraldry or other personal referents. Students undergoing the *atto di logica*, on the other hand, were discouraged from dedicating their theses and very few of the prints they commissioned make any reference to a patron. The small act was conducted, instead, under the auspices of the Parthenian Academy and all of the engravings issued for the occasion showcase the Academy's emblem. Marsciano's

38 Appendix, no. 38.

39 Even when a thesis print survives without its accompanying text, one can usually figure out at least the family name of the student who commissioned it, as long as his coat of arms appears somewhere in it. In the case of the Cybele and Neptune print, however, although the student's shield is clearly visible, lying on the ground near the emblem, it has so far resisted all efforts at identification (see note 132 below).

Figure 5
 Thesis broadsheet of Agostino de' Conti di Marsciano, 1644, featuring a post-original state of the print by Pietro da Cortona and Cornelius Bloemaert described and discussed in App. 38 (cf. figs. 43–44).
 Edinburgh.



broadsheet, manifestly made for an *atto di logica*, is typical in this respect: the central image picks up on the Marian theme of the *stella maris*, while in the cartouche above, a putto maneuvers a magnetic chain linking the star to Earth, with the Parthenian motto prominently displayed on a banderole. The student's coat of arms is there, tucked discreetly into the lower right corner of the landscape, but no one else's.

The Cybele and Neptune engraving is one of over forty extant thesis prints featuring the Parthenian emblem, all of them listed and described in the appendix to this article. With the exception of the earliest (which, as we know from Landi's pamphlet, was made for Dietrichstein's philosophy defense), all were issued for the small act at the Roman College. Not every member of the Academy underwent a public defense. This was a privilege accorded to only a few students each year, who combined exceptional academic ability with respectable birth and the financial means to put on a good show. The boys belonged to some of the leading aristocratic families of Italy. Of the surviving Parthenian prints, at least eight feature the heraldry of students who were either the brothers or nephews of cardinals, while another half-dozen or so were commissioned by students who went on to become cardinals themselves. Collectively, they form a corpus of images noteworthy for the sheer ingenuity and virtuosity of their subject matter. Only the series of emblematic thesis prints made for the *atto di logica* at the Roman Seminary, which I have written about elsewhere, is in any way comparable.⁴⁰ Although the engravings span nearly a hundred years, from 1593 to c. 1675, almost all of them date from the first half of the 17th century, and especially the three decades from around 1610 to around 1640. The series petered out after that, mainly because of new restrictions that put a damper on what had come to be seen as the excessive ostentatiousness of academic defenses, but also because of financial and disciplinary difficulties facing Jesuit schools around that time.⁴¹ After 1640, students continued to undergo the small act but they either made do without

40 Rice 2007. The Roman Seminary was under the authority of the pope in his role as bishop of Rome but was administered by the Jesuits and the students enrolled there took many of their courses at the Roman College. It is hardly surprising, therefore, that the thesis prints commissioned by the *logici*—the students of logic—at the two institutions have a good deal in common.

41 Restrictions introduced in 1639 limited to one the number of cardinals who could attend any given thesis defense. This put an end, at least for a time, to the kind of very grandiose spectacles like Dietrichstein's defense, for which almost the entire college of cardinals turned out (see note 4 above). On this and related issues, see Rice 2007, 224–26; Rice 2010, 241–43.

ornamental broadsheets or they re-used existing ARCANIS prints, the impressions of which became noticeably coarser and paler over time as the copper plates got more and more worn down. The last example of a newly minted Parthenian print that I have come across was made sometime in the last third of the century by Giacinto Calandrucci (1646–1707) and Benoît Thiboust (fl. 1664–1701), but it is a disappointingly generic image designed for use by multiple students. The iconography is derivative and bland, and at the bottom of the page is a blank cartouche where the conclusions were meant to be written in by hand.⁴²

The Academy's emblem was the common denominator in all of the Parthenian prints. But if the lodestone-and-links was the invariable starting point, it was also the springboard for invention. Learned variety was the goal of this particular game. The Jesuit professors who provided the subject matter for their students' thesis prints went to extraordinary lengths to come up with cunningly relevant narrative settings for the magnetic chain, making sure never to repeat an invention or duplicate a storyline. They understood that, for audiences at academic defenses, the distribution of the broadsheet was the highpoint of the event. Attendees eagerly anticipated their first glimpse of the engraving and took pleasure in sophisticated images displaying novel and witty conceits. The Jesuits who came up with the iconographic ideas for these prints employed a rich and flexible mythopoetic language to compose their variations on a theme. Sometimes, as in the Cybele and Neptune print, they used established mythological characters to tell newly concocted stories; sometimes they took familiar tall tales from classical literature and inverted their meaning in clever ways; sometimes they turned to contemporary debates about the nature and workings of magnetism but couched them in images of the ancient philosophers; and sometimes—indeed, almost always—they treated magnetism as a metaphysical as much as a physical phenomenon and waxed transcendental. Focusing on a single image, as we have done up to this point, teaches us how to read a Parthenian print. But to appreciate the range and variety of the themes they treat, we must broaden our investigation to consider other examples.

42 Appendix, no. 46 and [fig. 53](#).

The Mariner's Compass

Just as the plumb level (*archipendolo*) commonly appears as an attribute of Ethics because it signifies rectitude and alludes to the golden mean, so the mariner's compass, which points to the straight and true path, can be construed as a symbol of the virtuous life and of Christian morality.⁴³ This wondrous instrument, whose origin myth is the theme of the Cybele and Neptune print, plays a significant role in several other Parthenian engravings, including one designed by Pietro da Cortona and engraved by Charles Audran (1594–1674) around 1629–1630 (fig. 6).⁴⁴ The student who commissioned it was probably Bonaventura Rondinini; his coat of arms appears on the architectural block in the lower right corner. Rondinini was a contemporary and friend of the nephews of Pope Urban VIII and he dedicated his *atto di logica* to the youngest of them, Cardinal Antonio Barberini (1607–1671). The subject of the print is partly derived from Virgil and partly made up *ex novo*. On a wedge of land overlooking the sea, five figures are gathered around a map which they study with the aid of a compass. Jupiter hovers overhead with his eagle and thunderbolt, while offshore men scramble into a boat and prepare to set sail. A swarm of bees emerges from a beehive, attracted by the scent emanating from a wreath of flowers, and converges to form the honoree's coat of arms.⁴⁵ Cortona has intentionally positioned the disparate elements of the composition so as to suggest a web of metaphorical relationships. Thus the magnetic stone and chain are placed on the same horizontal level as the wreath of flowers and bees. Their parallel placement underscores their parallel significance: in both cases, an invisible power of attraction is at work, binding the iron links to the stone, the bees to the flowers. Below, the theme is reiterated in less abstract terms: the compass, positioned precisely underneath the lodestone, directs the mariners by that same magnetic force that draws the links to the stone, while three bees converge on the piece of honeycomb held by the female figure on the right.

43 Pietrasanta 1634, 61; Kreutz 1973, 369.

44 Appendix, no. 23. The analysis that follows is drawn in part from my earlier article, Rice 1998, 192–94.

45 As mentioned earlier, students undergoing the *atto piccolo* rarely dedicated their theses and this is one of the few Parthenian prints that includes the arms of a sponsor in addition to those of the student himself. For another example, see Appendix, no. 25.



Figure 6
 Pietro da Cortona and Charles
 Audran, *Arcanis nodis: Aeneas*
on Crete (App. 23). London.

Once again magnetism—occult powers of attraction that draw bees to flowers, iron to magnets—is at the heart of the narrative. The two women—one wreathed in flowers and holding a piece of honeycomb which she has taken from the beehive behind her, the other accompanied by a she-goat who lies demurely on the ground beside her—are Melissa and Amalthea, variously identified as naiads or as the daughters of the king of Crete, who raised the infant Jupiter on the slopes of Mount Ida, feeding him on honey and goat’s milk.⁴⁶ The foster-mothers are included here in part to introduce the heral-

⁴⁶ Cartari 1626, 135. The association of Melissa and Amalthea with Mount Ida is intriguing, given that, according to Pliny, the phenomenon of magnetism was first discovered by the shepherd Magnes when he noticed the iron nails in his shoes sticking to the ground as he pastured his flock on Mount Ida (*HN* 36.25). There were two Mounts Ida in antiquity, one in Anatolia (now Kazdaği) and one on Crete (now Psiloritis), and Pliny did not specify which one he had in mind. The Jesuit professors who devised the iconography of the Parthenian prints may have taken advantage of this ambiguity, attributing magnetic properties to both mountains,

dic bees of the Barberini honoree, but also to identify the location where the scene takes place. Melissa and Amalthea lived on Crete, and it was on Crete that Jupiter was born and raised; indeed, Virgil calls Crete “the island of great Jove.”⁴⁷ The presence of Melissa and Amalthea locates the scene, and once it is understood where the scene is set, the rest falls into place. In Book III of Virgil’s epic, Aeneas brings his followers to settle in Crete, mistakenly believing that this is where he is meant to found his new city. But the Penates appear to him in a vision and order him to continue his journey, for he has not yet reached his divinely ordained destination. The passage ends with the phrase “Dictaea negat tibi Juppiter arva” (Jupiter denies you the fields of Crete).⁴⁸ In Cortona’s print, Aeneas kneeling on the ground, his father Anchises who places a protective arm on his shoulder, and his faithful companion Achates consult the navigational chart with the aid of a compass. As the needle is directed by the arcane and invisible power of magnetism, so too Aeneas is drawn by the force of destiny to found a new home and the city of Rome. The rest of the fleet has already taken sail and is visible on the horizon speeding in the direction that the compass points. Melissa and Amalthea, embodiments of Crete, stand in for the Penates, and Jupiter, patron of the island, points commandingly toward the waiting boat. This enchanting invention weaves together mythological, heraldic, and emblematic threads, having to do with the foundation of Rome, the destiny of the Barberini, and the mystical powers of attraction that draw Aeneas to Italy, the bees to the flowers, the links to the lodestone, and the boys of the Parthenian Academy to the loving embrace of the Virgin Mary.

The device at the center of the composition is, of course, an anachronism. Virgil may have been an authority on bees, but about compasses he knew nothing. Despite their fascination with magnetism, the Greeks and Romans seem never to have realized that a magnetized needle points north. The compass was first developed in the Far East and the earliest European references to it date from the late 12th century.⁴⁹ Thereafter it became an essential

depending on the context. Thus, when Cybele is the subject of a print, it is the Anatolian Mount Ida, sacred to Magna Mater, that we are meant to connect with the lodestone (see note 24 above). But when the scene is set on Crete, as in this case, it may well be the magnetism of the other Mount Ida—home of “the naiad Amalthea, famous on the Cretan Mount Ida” (Ov., *Fast.* 5.115)—that is implied.

47 *Aen.* 3.104.

48 *Aen.* 3.171.

49 Kreutz 1973; Smith 1992.



Figure 7
Antonio Tempesta and Orazio
Brunetti, *Arcanis nodis: A walled
city besieged* (App. 15). Paris.

tool of navigation and eventually also of modern warfare. Another Parthenian print, produced around 1626 by Antonio Tempesta (1555–1630) and Orazio Brunetti (fl. c. 1610–1640), is unusual in representing a contemporary scene: a city besieged and attacked by night (fig. 7).⁵⁰ Sappers tunnel their way toward the city wall using a compass to orient their activities, while above ground the gunners are similarly dependent on a compass-and-quadrant device to adjust the direction and elevation of their cannon.⁵¹ The seated soldier on the right has a lodestone in his lap and is magnetizing the metal dart in his

⁵⁰ Appendix, no. 15.

⁵¹ Della Porta 1589, cited here in the English edition, Della Porta 1658, 208: “We use [the Compass] also in making passages, for to bring water under ground, in digging pits, in making Mines and Trenches, wherewith they use, with great skill, to blow up Forts, Castles, Rocks and Walls, by putting Gunpowder in them, and stopping all places of vent: the Compass guides them how to go on. Lastly, how to level the discharging of the Canon, both by night and day, it is of singular vertue, and for many other uses, too tedious to relate here.”

hand by applying its tip to the stone. In the background, a soldier in a tower uses the emblematic lodestone to draw up his sword, helmet, and shield emblazoned with the student's heraldry.⁵² It may seem a stretch to interpret a martial scene like this as an allegory of the Virgin's love, but given the conventions that govern the genre it cannot be anything else. One has to suppose that the soldiers who hone their magnetical skills on the field of war, do so in defense of the faith, and that the battle being waged is over the souls of men. The Thirty Years War (1618–1648) had accustomed Europeans to the rhetoric of religious conflict. In Rome, Catholic victories over Protestant forces were greeted with the ringing of church bells and pious rejoicing, and triumphs such the Battle of White Mountain in 1620, where the Protestants were defeated and evicted from Bohemia, were often attributed to the intercession of the Virgin Mary.⁵³ This print, too, implies the Virgin's interest in the siege: the compass needle under Marian influence ensures that the sappers dig straight, the cannons hit their mark, and the enemies of the Church meet the fiery fate reserved for them.

Tall Tales

Not all Parthenian prints involve compasses. Some take their inspiration from the tall tales about magnetism that abound in classical literature. An engraving by Giovanni Lanfranco (1582–1647) and Johann Friedrich Greuter shows a storm at sea and shipwrecked mariners clinging to the shattered remnants of their boats (*fig. 8*).⁵⁴ Ancient legends tell of distant shores where magnetic mountains destroy passing ships by plucking out their metal parts, including the very nails that hold them together. Shipbuilders in those regions were said to assemble their ships using only wooden pegs to avoid this danger.⁵⁵

52 The meaning of the tower remains obscure. Although it is clearly not part of the city walls, it seems too solidly built and too firmly planted on the ground to qualify as a siege tower.

53 *Heal* 2007, 3, 193–94, 272. Banners won during the Battle of White Mountain along with an image of the Adoration of the Shepherds supposedly carried onto the field by Catholic troops were donated to the Carmelite church in Rome, which was re-dedicated to S. Maria della Vittoria.

54 Appendix, no. 14.

55 Ptolemy locates the magnetic mountain on an island off the coast of India, whereas Olaus Magnus situates it in the far north, near his native Sweden; but they and other authors agree that magnetic coastlines pose a danger to mariners and that ships built in those regions are made with wooden pegs instead of iron nails. The skeptical Thomas Browne (1658, 55) repeats the legend only to dispose of it: "The Mine of this stone [i.e.,



Figure 8
Giovanni Lanfranco and Johann Friedrich Greuter, *Arcanis nodis: The Ship of Philosophy secured by Parthenian chains* (App. 14). Paris.

Petrarch, too, tells of a magnetic region that rips apart ships, likening the destructive cliffs of lodestone to the hard heart of his beloved who lures him to his doom;⁵⁶ and there is an especially vivid and enthralling account in the “Tale of the Third Dervish” from the *Arabian Nights*, wherein we encounter “the famous Black Mountain ... composed of adamant, which attracts to itself all the iron and nails in your ship; and as we are helplessly drawn nearer, the

lodestone] is in the sea-coast of *India*, whereto when Ships approach, there is no Iron in them which flies not like a bird unto those mountains; and therefore their Ships are fastened not with Iron but wood, for otherwise they would be torn to pieces. But this assertion, how positive soever, is contradicted by all Navigators that pass that way; which are now many, and of our own Nation; and might surely have been controuled by *Nearchus* the Admiral of *Alexander*: who not knowing the Compass, was fain to coast that shore.”

⁵⁶ Petrarch, *Canzoniere* 135.

force of attraction will become so great that the iron and nails will fall out of the ships and cling to the mountain, and the ships will sink to the bottom with all that are in them.”⁵⁷ Lanfranco nods to the legend by depicting a ship’s nail, violently bent, and a bit of metal flashing glued to the flank of the mountainous lodestone on the left. But in his dramatic retelling of the story, it is the tempest and not the magnetic mountain that wrecks ships at sea. The mountain’s occult virtue, on the contrary, brings deliverance rather than ruin. Alone of all the vessels in harm’s way, the Ship of Philosophy rides out the storm unscathed, because she alone is anchored to the safety of the shore by the mystical pull of the lodestone. At the helm sits Minerva, the embodiment of wisdom and patron of the Liberal Arts. Logic (Dialectic), with her falcon-crested helmet and key, stands at the prow contemplating the mystery of the Parthenian chains, while amidship queenly Metaphysics is surrounded by her handmaidens Astronomy, Geometry, Physics, and Ethics. By inverting the storyline, the print presents magnetism as a positive instead of a negative force and ties its salvational symbolism to the educational curriculum of the Roman College and its elite Academy.

Pliny mentions a pair of magnetic mountains near the River Indus, “the nature of one of which is to hold all iron and that of the other to repulse it; consequently, if a man has nails in his shoes, on one of the mountains at each step he is unable to tear his foot away from the ground and on the other he cannot set it down on the ground.”⁵⁸ In a print by Andrea Camassei (1602–1649) and Camillo Cungi (fl. 1597–1549), Pliny’s account of these magnetic mountains is imaginatively interwoven with the story of Alexander the Great’s Indian campaign (fig. 9).⁵⁹ Mounted on horseback beneath a banner embroidered with the Academy’s emblem, Alexander is shown traversing a magnetic

57 *The Arabian Nights* 1898, 103. The story continues: “At noon next day, as the pilot had foretold, we were so near to the Black Mountain that we saw all the nails and iron fly out of the ships and dash themselves against the mountain with a horrible noise. A moment after, the vessels fell asunder and sank, the crews with them. I alone managed to grasp a floating plank, and was driven ashore by the wind, without even a scratch.” See also Tuczay 2005, 273–77.

58 Plin., *HN* 2.98.

59 Appendix, no. 25. The *Commonitorium Palladii*, an early fifth-century text purportedly recording Alexander the Great’s exchanges with the Brahmans in India, mentions the subcontinent’s magnetic coasts and the custom of building ships without iron (Pfister 1910, 2). The *Commonitorium* does not describe the scene depicted in the print, but all the same, it may have inspired the inventor of the iconography to fuse the two traditions—the one concerning magnetic mountains in or near India and the other, Alexander’s Indian campaign—into a single narrative.



Figure 9
 Andrea Camassei and Camillo Cungi, *Arcanis nodis: Alexander the Great in India (App. 25)*. Paris.

landscape. The force of the lodestone underfoot is so powerful that his soldiers' iron weapons tumble from their hands and cannot be wrested off the ground, while the horses' iron shoes, wrenched from their hooves, litter the path. In the distance, the army of Porus approaches; the Battle of Hydaspes is about to begin.⁶⁰ Camassei treats this mildly comical subject with an appropriate lightness, embedding into the story a heraldic reference to the Spada family, a member of whom evidently acted as the student's sponsor. As the

⁶⁰ The battle in which Alexander defeated Porus took place in 326 BCE on the banks of the Hydaspes River. Known today as the Jhelum, this stream is part of the larger Indus River system and is therefore in that same region in which Pliny locates the magnetic mountains. The various sources that are here knitted together to form the subject of the print thus share a common geography.

three cavalry officers on the right struggle to hold onto their upraised swords, which are being dragged down to the magnetic ground, a banner emblazoned with three fleurs-de-lis flutters accidentally-on-purpose above them, the convergence of the two elements—lilies and diagonal swords—forming the honoree’s coat of arms.

Another tall tale that existed in many versions and was often repeated concerned iron statues in temples—cult statues, in other words—that were supposedly suspended in mid-air by means of magnetic levitation.⁶¹ Pliny records that Ptolemy Philadelphus built a temple in Alexandria in honor of his recently deceased sister and consort Arsinoe. “The architect Timochares had begun to use lodestone for constructing the vaulting in the Temple of Arsinoe in Alexandria,” writes Pliny, “so that the iron statue contained in it might have the appearance of being suspended in mid air.”⁶² Later authors embellished Pliny’s account with stories of similar prodigies: a magnetic statue of Helios in a chariot pulled by four horses, which Rufinus and others recorded in the Serapeum at Alexandria;⁶³ an iron statue of Mercury suspended between two lodestones as though flying through the air, supposedly to be seen in the city of Trier;⁶⁴ a colossal iron Bellerophon astride an airborne Pegasus;⁶⁵ and, most famously of all, the tomb of the prophet Muhammad, which legend held was made of iron and floated beneath a dome of lodestone.⁶⁶ Although

61 The topic is covered in great detail in Bayle 1734–1741, 7:337–39; and more recently in Lowe 2016, 247–78.

62 Plin., *HN* 34.42; Ausonius, X (“The Moselle”).314–17: “when bidden to commemorate Arsinoe, the incestuous bride [of Ptolemy II Philadelphus], [the architect Dinochares] poised her image in mid-air beneath the roof of her Pharian temple. For from the vaulted roof a load-stone sheds its influence and by its attraction draws the young queen towards it by her iron-wrought hair.” For later retellings of the tale, see Landi [Negroni] 1594, 13; Gilbert 1893, 3; and Kircher 1641, 262.

63 Rufinus, *Ecclesiastical History* 11.23: “Magnets, it is said, have the power to pull and draw iron to themselves. The image of the sun had been made by its artisan of the finest sort of iron with this in view: that a magnet, which, as we said, naturally attracts iron, and which was set in the ceiling panels, might by natural force draw the iron to itself when the statue was placed just so directly beneath it, the statue appearing to the people to rise and hang in the air. And lest it unexpectedly fall and betray the trick, the servants of the deception would say, ‘The sun has arisen so that, bidding Serapis farewell, it may depart for its own place.’” The translation is from Rufinus 1997, 81; for additional sources, see Bayle 1734–1741, 7:337–38; Lowe 2016, 253–57.

64 Bayle 1734–1741, 7:338; Lowe 2016, 263–64.

65 Lowe 2016, 258–60.

66 Browne 1658, 55: “For the relation concerning *Mahomet*, it is generally believed his Tomb at *Medina Talnabi*, in *Arabia*, without any visible supporters hangeth in the ayr between two Loadstones artificially contrived both above and below; which conceit is fabulous and evidently false from the testimony of Ocular Testators, who affirm his Tomb is made of Stone, and lyeth upon the ground.” See also Bayle 1734–1741, 7:337–38.

serious scientists dismissed such reports as fictitious, they were keenly interested in the possibility of magnetic levitation and conducted experiments using smaller objects to see if they could achieve it. In his treatise on magnetism published in 1629, the Ferrarese Jesuit Niccolò Cabeo claimed to have succeeded in suspending an iron needle between two magnets of equal force; but other scientists were unable to duplicate his result.⁶⁷ François Bernier (1620–1688) asserted that it was impossible “either to procure several magnets of the same force, or to apply them in such a manner, as that the iron in the middle shall not be more attracted on one side than on another, or that the iron should be throughout of that shape, thickness, and temper which are necessary to its being equally attracted on all sides; and it is certain that the smallest difference either in the loadstone, or the iron, or with regard to place, would prevent an equilibrium.”⁶⁸

Commissioned to design and engrave a thesis print based on the passage in Pliny, the artist Luca Ciamberlano (1580–1641) may not have given much thought to contemporary controversies over magnetic levitation, even if this was a topic of fascination to his learned audience (fig. 10).⁶⁹ He imagined the temple of Arsinoe as a Pantheon-like rotunda, lined with statues of the legendary pharaohs of Egypt, among them Ozymandias. Lodestones set into the coffers of the vault lift up the iron statue of the queen and hold her there, suspended from Parthenian chains. The statue’s upturned gaze gives her the look of a saint ascending into heaven; and since she is dressed and crowned as a queen, one cannot help but be reminded of the assumption of that other queen of heaven, a subject regularly depicted in the domes of churches dedicated to the Virgin Mary. It is intriguing to note, in this respect, that upon her death in or soon after 270 BCE Arsinoe was catasterized—that is to say, she was turned into a star—and Hellenistic sources suggest that the star with which she became associated was none other than the Pole Star, the *stella maris*. At any rate, she was worshipped by sailors as a protector against shipwreck and associated with the cult of Aphrodite Euploia (Aphrodite of the good-sailing).⁷⁰ Admittedly, since much of the evidence on which scholars now base

67 Cabeo 1629, 334–35.

68 Bernier 1684, V, 322–23; cited and translated in Bayle 1734–1741, 7:338.

69 Appendix, no. 16.

70 Green 2004, 247–48; Robison 2019.

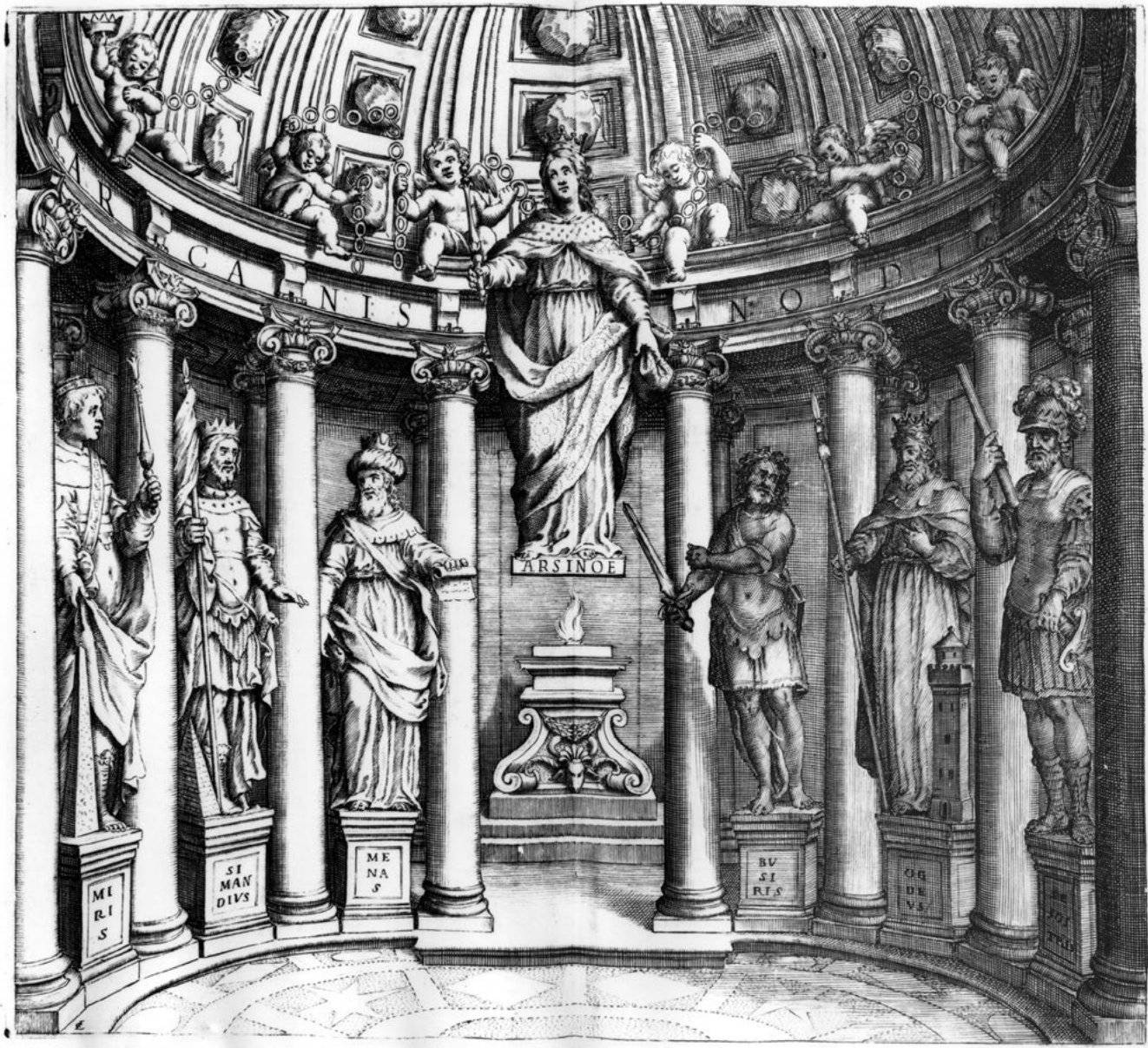


Figure 10
Luca Ciamberlano, *Arcanis
nodis: The Temple of Arsinoe*
(App. 16). Rome, Casanatense.

their understanding of the cult of Arsinoe has come to light only relatively recently, these particulars may not have been known to the person who provided Ciamberlano with his subject matter. Even so, it does seem that the

artist interpreted Arsinoe as a pagan type for Mary, patron of the Parthenians, and depicted her accordingly as if ascending into the heavens.⁷¹

Not all magnetic statues floated in air; some had other tricks up their sleeves. In the poem from which the phrase *ARCANIS NODIS* is taken, Claudian described a wondrous pairing:

Mars, who strikes cities with his bloody spear, and Venus, who changes human cares to ease, share a common shrine and temple built of gold. Each deity has his own image; Mars, a statue of polished iron, Venus, one fashioned out of loadstone. The priest duly celebrates their union. The nuptial torch precedes the choir. [...] But, lo, a prodigy: Cytherea, without quitting her place, attracts her husband to her, and [...] clasps Mars to her bosom with amorous breath. There she holds him suspended; her arms enfold the helmet of the god and clasp his whole body in a lifelike embrace. He, stirred by the far-compelling influence of her breath, is drawn towards her by the secret chains (*arcanis nodis*) of his jewel-bride. Nature presides over the divine marriage; a binding breath woos the steel to wedlock; suddenly two deities are mated in secret union.

And the poem continues:

What hidden warmth infuses mutual sympathy into these twin metals? What harmony makes one their stubborn souls? The stone sighs and burns, and smitten with love recognizes in the iron the object of its desire, while the iron experiences a tender attraction for the stone.⁷²

Since antiquity, philosophers and magicians have resorted to the language of erotic attraction to describe the magnet's power to draw iron to itself. In his treatise on natural magic, Giambattista Della Porta (c. 1535–1615) developed the analogy: "...iron is drawn by the Loadstone, as a bride after the bridegroom, to be embraced; and the iron is so desirous to join with it as her husband, and is so solicitous to meet the Loadstone: when it is hindered by its weight, yet it will stand an end, as if it held up its hands to beg of the stone, and flattering of it, ... and shews that it is not content with its condition: but if it once kist the Loadstone, as if the desire were satisfied, it then is at rest. And

71 The legends of levitating statues must have particularly appealed to Bernini, who delighted in astonishing effects of the kind. One thinks of his St. Teresa, apparently floating on cloud, or, even more, his St. Andrew in S. Andrea al Quirinale, pulled up into the vault by an invisible mystical force. In fact, Bernini's St. Andrew is conceptually remarkably similar to Ciamberlano's Arsinoe, even if he is infinitely more emotive and dynamic. Both statues float at the level of the entablature, directly above the altar, their upturned gazes fixed on the apex of a coffered dome teeming with putti.

72 Claudian, "The Magnet," XXIX (XLVIII).22–43.

they are so mutually in love, that if one cannot come to the other it will hang pendulous in the air.” And he added, citing Pliny: “What is more wonderful? Or wherein is Nature more wanton?”⁷³ Gilbert adopted the word “coition” to describe the mutual coming together of lodestone and iron; and the French, even today, use the word *aimant* to mean “magnet.”⁷⁴ There were some, indeed, who believed that the equivalence between magnetic and sexual attraction was real rather than metaphorical. Lodestones, whole or powdered, were a known ingredient in love-magic. Worn or ingested, they were credited with having the power of erotic coercion, attracting the beloved to the lover.⁷⁵ A magnet slipped under her pillow would draw a faithful wife into her husband’s arms but repulse an unfaithful one from the marital bed.⁷⁶

No Parthenian would have dared to base his thesis print directly on Claudian’s erotic verses. But we have seen that the genre often involves indirect, inverted, or paradoxical retellings of classical narratives, and so it comes as no surprise to find an engraving by Pomarancio and Greuter that unmistakably evokes Claudian’s poem, even as it substitutes a moralizing allegory for the text’s amorous imagery (fig. 11).⁷⁷ Given that the print showcases Venus and Mars beneath a banderole inscribed with Claudian’s own words *ARCANIS NODIS*, the connection of text and image is impossible to miss. But here, rather than embracing, the goddess of love and the god of war stand chastely side by side, as they and their infant cohorts are disarmed by the magnetic pull of the Palladium. Atop a base of lodestone, the cult statue of the virgin goddess Minerva sweeps up the iron arrowheads and love chains forged by Venus’s little cupids and the weapons, armor, and chains of war forged by Mars’s *ciclopini* in an inverse hailstorm of mystical attraction. The Palladium, too, has undergone a transformation. This is no longer the effigy of the warlike Minerva wearing breastplate and helmet that Aeneas transported from Troy to Rome. Having become the goddess of learning, she wears the robes of an orator and holds a scroll instead of a spear, with her owl at her side. This milder Palladium is safeguarded by the nine Muses, devotees of Minerva in her capacity

73 Della Porta 1658, 201.

74 Knoll 2020, 301.

75 O’Neil 1987, 103; Ruggiero 1993, 196–98.

76 Della Porta 1658, 215.

77 Appendix, no. 17.



Figure 11
 Antonio Pomarancio and Johann
 Friedrich Greuter, *Arcanis nodis*:
 Venus and Mars disarmed (App.
 17). Paris.

as patron and protector of the arts. As the Muses smile sweetly down on the discomfiture of Mars and Venus, two of them take it upon themselves to chase away the lovers' support teams. Without Discord and Envy to egg him on, Mars is pacified; without Ceres and Bacchus to coddle her, Venus cools down.⁷⁸

In this print, as in others in the series, the poetic source undergoes a reversal of its original meaning. But it remains the source all the same and the invention depends for its effect on the source being recognized. The narrative inversion—the unfamiliar twist on a familiar plot—initially disorients but then delights and instructs the viewer. Claudian becomes Claudian *moralisé*, and a

⁷⁸ The reference is to the popular adage *Sine Cerere et Baccho friget Venus*.

fabulous tale of erotic attraction between metal and stone is transformed into an allegory of chastity. The chains in this image are conventional ones—the chains that hold captive in love or in war—but the purifying pull of the Palladium renders them harmless, as reason triumphs over passion.

Nature's Realm

Magnetism is a force of nature. Man can harness it, he can even transmit it from one object to another, but before the 19th century he had no means of generating it *ex novo*. Several ARCANIS prints acknowledge Nature's hegemony in this regard by depicting the goddess herself, or one of her representatives, overseeing the action of the lodestone.⁷⁹ In a print by Pomarancio and Valérien Regnart (fl. 1620–1650), Nature appears in a palatial foundry, where she receives the offerings of the ironworkers on the left and the goldsmiths on the right (fig. 12).⁸⁰ The ironworkers present her with a plain round board loaded with iron links, as well as a handbell and a hammer (this last item both a product and a tool of their workshop); the goldsmiths offer up a glittering silver platter full of gold chains and jeweled rings. A competition is implied between the two groups of craftsmen, with Nature assuming the role of judge. Goldsmiths (*orefici*), silversmiths (*argentieri*) and ironworkers (*fabbri*) once belonged to the same guild in Rome; but the goldsmiths and silversmiths, convinced of the intrinsic superiority of the precious metals in which they worked and anxious to dissociate themselves from the “mechanical arts,” seceded from the larger body, establishing a professional corporation and confraternity of their own, officially recognized in 1509. The print accepts the idea of a hierarchical distinction between base and precious metals but turns it on its head. In Nature's workshop, it is the base metal that earns Nature's blessing, for iron responds to the magnetic pull of the lodestone and is lifted heavenward, whereas gold and silver, metals signifying worldly status and prestige, are immune to the stone's attraction and remain earthbound. Underpinning the subject matter is the classic duality of nature and art, emphasized in the chiasmic inscription in the entablature that runs around the room. Over the blacksmiths on the left, it reads IMPERIO NATVRAE (by the power

79 On the personification and iconography of Nature, the classic study is E.R. Curtius's “The Goddess Nature” (Curtius 1953, 106–27), but see also Dronke 1980 and Modersohn 1997.

80 Appendix, no. 19.



Figure 12
 Antonio Pomarancio and
 Valérien Regnard, *Arcanis nodis*:
 Nature in the Palace of Metallur-
 gy (App. 19). Windsor.

of Nature); over the goldsmiths on the right, ARTIVM OPIFICIO (by the craft of Art). Still, although their domains are distinct, the point here is not that nature and art exist in opposition to one another. Gold and silver are as much the products of nature as iron, after all; and iron, like gold and silver, must be refined and worked by art. Indeed, the interdependence of nature and art might even be taken for one of the primary meanings of the Parthenian emblem. For if the lodestone, raw and unshaped, is the product of nature, then the iron rings, forged and fashioned by man, must, in some sense, represent artifice; and thus the magnetic attraction that binds them together becomes a metaphor for the mimetic impulse that unites art and nature.

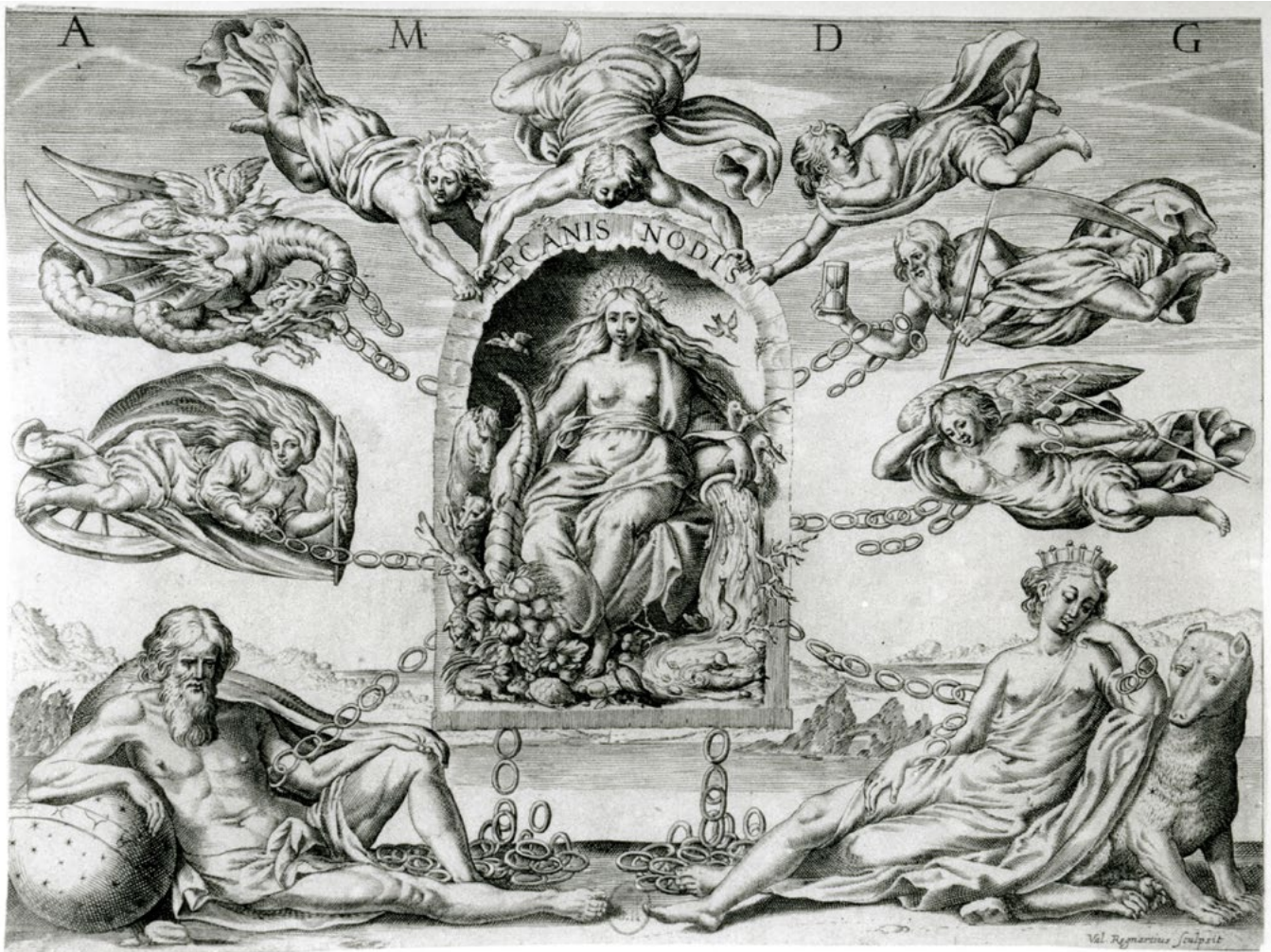


Figure 13
 Valérien Regnart, *Arcanis nodis*:
 Nature enthroned between heav-
 en and Earth (App. 33). Paris.

Another print starring the goddess Nature shows her enthroned in a grotto-like niche made of magnetic stone, with her teeming handiwork all around her (fig. 13).⁸¹ Paired divinities flank the niche and are attached to it by means of Parthenian chains. They stand for contradictory forces within the universe, Nature's domain. At the top, Apollo on the left and Diana on the right represent the sun and the moon, day and night. Next, a phoenix rising from the flames, signifying immortality, on the back of a dragon biting its own tail, symbolizing eternity, are placed opposite Father Time, who, with his hourglass and scythe, stands for death and the impermanence of all earthly things. Then comes Fortune contrasted with winged Somnus, the god of sleep and bringer

⁸¹ Appendix, no. 33.

of dreams, whom Virgil call “Death’s own brother.”⁸² And finally, seated in the lower corners, Uranus and Gaia represent heaven and Earth. All of the figures on the left, under Apollo, belong in some way to the celestial regions and are fixed, immutable, and eternal. This applies even to Fortune, because, although she is famously changeable, she is also dictated by the stars and thus outside man’s control; she cannot be influenced by the dreams and fantasies that men conjure up in their sleep.⁸³ In contrast, all of the figures on the right, below Diana, belong to the sublunary world and, like the moon herself, are subject to transience, change, and decay. At the very top, an androgynous figure with no identifying attributes holds onto both sides of the grotto as if for dear life: s/he perhaps represents *humana vita*, since humans, alone of Nature’s creatures, house an immortal soul within a mortal body and thus have a stake in both heaven and Earth.

For the ancients, Proteus, the shape-shifting old man of the sea, was an avatar of Nature. The many forms he could assume were a reflection of Nature’s infinite variety. Neoplatonist commentators on Homer associated him with “the original genesis of the universe, from which all parts of the established world were produced which we presently behold.”⁸⁴ The Renaissance mythographer Natale Conti added that “Proteus symbolized the beginning of all things and was the oldest god of all. He owned the keys of the sea and was in charge of everything, just as if he were the first principle of Nature’s totality.”⁸⁵ Given his identity as a nature god, it was easy for 16th- and 17th-century audiences to associate Proteus with the mysteries of magnetism. This was the theme of one of the earliest masques performed at the court of Queen Elizabeth I of England, a spectacle entitled *Proteus and the Adamantine Rock* (1595), in which the sea god was assigned dominion over

82 *Aen.* VI.278. Somnus (in Greek mythology, Hypnos) is traditionally shown with wings. The whirligig in his hand is more unusual. In Appendix, no. 35 below, similar whirligigs are held by the little breezes that pull the young hero’s chariot (fig. 40); and here, too, I think the toy is meant to signify air, or rather, the airy figments of the imagination, i.e., dreams.

83 The pairing of Fortune and Sleep brings to mind the Italian proverb “Fortuna, e dorme” (Who has good fortune, sleeps well). The similarity of the two figures in the ARCANIS print to Stefano della Bella’s charming depiction of the proverb in the opening line of his rebus on Fortune (c. 1639) is intriguing, even if the pairings do seem to have different meanings; <https://www.metmuseum.org/art/collection/search/382852>.

84 The Neoplatonist Heraclides of Pontus in his commentary on the fourth book of the *Odyssey*, cited in translation in Nohrnberg 1977, 583.

85 Conti 2006, 2:726.

the legendary magnetic cliffs at the ocean's edge. The plot revolved around a contest between Proteus's material magnetism and the more powerful moral magnetism of Elizabeth, for "the Queen attracts to herself the hearts of men, and the human heart moves the arm that can wield iron."⁸⁶ The reference on that occasion may have been specific to the English court; but, in fact, Proteus was often named in connection with magnetism, a force of nature as unfathomable in its actions and as variable in its manifestations as the mythological shape-shifter himself. Describing the lodestone, one 17th-century author wrote: "In sum, the operations of the magnet apply so variously to Medicine, to Philosophy, and to Mechanical Science, that like Proteus it changes imperceptibly into a thousand forms with its invisible virtue."⁸⁷ And another put a similar idea in slightly different terms: "There are so many varied opinions surrounding the attractive power of the magnet, that it has justifiably been assigned the name of Proteus."⁸⁸

Proteus is best known as a repository of occult knowledge. But although he is omniscient, he shares his understanding of the nature of things only under duress. Those who, like Menelaus or Aristaeus, wish to consult him must first capture him and constrain him in chains, a thing notoriously difficult to do because of his ability to take on multiple forms.⁸⁹ Precisely because of his shiftiness, he epitomizes the deceptiveness of appearances and the elusiveness of epistemological certainty, themes central to Renaissance thought.⁹⁰ Truth-seekers and philosophers are therefore defined by their willingness to confront and grapple with him. "For what else is Proteus but the image of Truth itself, turning itself into all the wonderful variety of things?"⁹¹

It is hard to think of a figure more pertinent to the emblem of the Parthenian Academy than Proteus, for he relates not only to the lodestone, in his

86 Welsford 1927, 163, citing Nichols 1823, 3:316. See also Orgel 1965, 8–18.

87 Terzago 1666, 93: "In somma, la Calamita tante sue operationi si alla Medicina, come alla Filosofia, e Meccanica comunica, che a guisa di Proteo in mille forme con la imperscrutabile sua virtù invisibilmente si cangia."

88 Castiglione 1668, part 3:66: "Sono adunque sì varie (come s'è potuto vedere) l'opinioni intorno questa attrattiva particolarità della Calamita, che giustamente fugli assegnato il nome di Proteo."

89 Hom., *Od.* IV.382–570; Verg., *G.* IV.387–529; Ov., *Fast.* I.363–80.

90 Orgel 1965, 9; Nohrnberg 1977, 111.

91 Bocchi 1574, 130–31, cited in translation in Nohrnberg 1977, 112. See also Gibaldi 1548, 228, cited in translation in Nohrnberg 1977, 111 n. 63: "... others saying [Proteus] to be truth, which does not show itself to all indiscriminately, but only to the few, those who know how to grasp it thoroughly."

capacity as a nature god, but also to the links, in that he shares his secret knowledge only when enchained. Proteus figures in two of the surviving ARCANIS prints. In the earlier of them, engraved by Johann Friedrich Greuter after a design probably attributable to his father Matthaeus, Proteus appears, rather unexpectedly, as an esoteric figure in strange dress reclining on the ground, wearing a lion skin rather like Hercules (fig. 14).⁹² Were it not for the shackles holding him captive and the inscription flanking him, he would be hard to recognize. The inscription reads PRIVS VINCLIS CAPIENDVS VT OMNES EXPEDIAT RERVM CAVSAS (he must first be enchained, that he may unlock all the causes of things). The phrase is adapted from two lines in Virgil's fourth *Georgic*. Cyrene, the mother of Aristaeus, is telling her son how to capture Proteus, so that he may explain to the youth why his bees are dying: "he must first be enchained," she says, "that he may unlock the whole cause of the sickness (*ut omnem expediat morbi causam*)."⁹³ The altered wording in the print expands the meaning of the phrase to encompass the universality of the deity's knowledge. At the same time, his position directly below the lodestone-and-links reinforces the Platonic concept of the transmission of divine intelligence that underlies the emblem. As for Proteus's exotic appearance, it would seem to reflect another mythic tradition, endorsed by Herodotus among others, according to which the sea god began life as one of the early kings of Egypt.⁹⁴ Whoever provided the print's iconography may have been thinking, in particular, of a passage in Diodorus Siculus, in which the author emphasizes Proteus's Egyptian origins and attempts to rationalize the myth of his shape-shifting by tracing it to "a practice among the rulers of Egypt to wear upon their heads the forepart of a lion, or bull, or snake as symbols of their rule; at times also trees or fire, and in some cases they even carried on their heads large bunches of fragrant herbs for incense, these last serving to enhance their comeliness and at the same time to fill all other men with fear and religious awe."⁹⁵ In Greuter's print, Proteus wears "the forepart of a lion" on his head, holds a flaming vase in one hand, and points to a flowering plant with other. The animals surrounding him—a dragon, a funny-looking dog or sphinx,

92 Appendix, no. 10.

93 Verg., *G.* IV.396–97. The phrase is punning, since the verb *expedio* in its original sense means "to release the foot from a snare or shackle." In other words, only when fettered will Proteus unfetter the truth.

94 *Hdt.* II.112–18; Bakker 2012.

95 *Diod. Sic.* I.62.

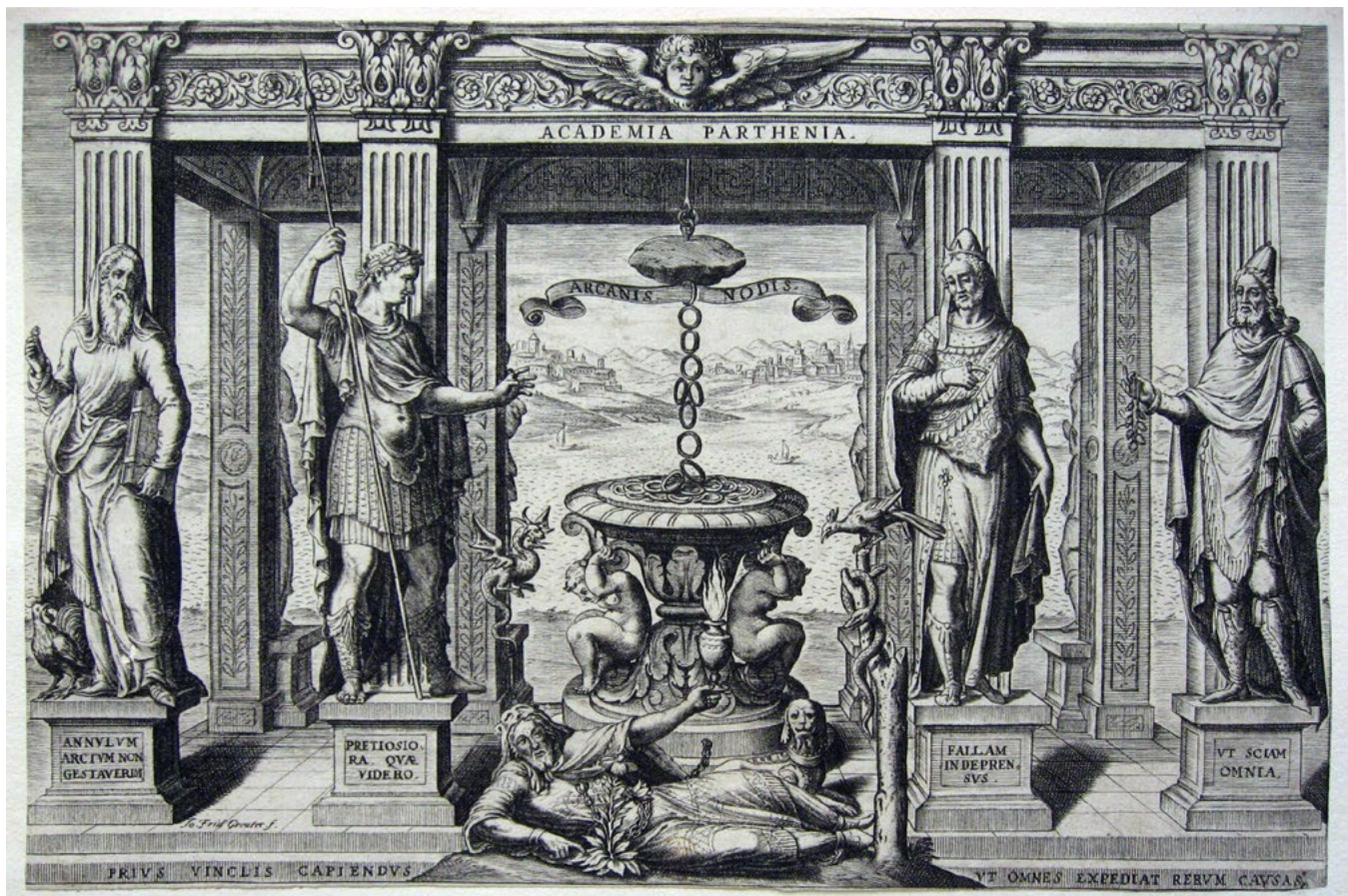


Figure 14
 Matthaues Greuter (attrib.)
 and Johann Friedrich Greuter,
*Arcanis nodis: The Parthenian
 emblem in a loggia decorated
 with statues, with Proteus
 reclining in the foreground* (App.
 10). Paris.

a bird (possibly a phoenix), and a serpent entwined around a tree trunk—do not exactly match those mentioned by Diodorus but nevertheless suggest Proteus’s connection to the natural world and his fabled mutability.⁹⁶

Another print involving Proteus is more conventional in that it depicts the well-known story of his entrapment and capture (fig. 15).⁹⁷ It diverges from classical accounts, however, by showing the three young men who surround the god using lodestones to magnetize the chain with which they bind him, while four men dressed as philosophers watch with understanding from the side lines. The inscription above the sea god is a shortened version of the same punning phrase that appears in the earlier print, borrowed (with modification to the verb’s tense and mood) from the fourth Georgic: EXPEDIET CAVSAS (he

⁹⁶ For the identification of the four statues in the loggia behind Proteus, see Appendix, no. 10.

⁹⁷ Appendix, no. 20.



Figure 15
 Antonio Pomarancio and
 Valérien Regnart, *Arcanis nodis*.
 The capture of Proteus (App.
 20). Paris.

will reveal the causes). Surrounding the central scene are medallion portraits of ten historical philosophers representing a thousand years of magnetical speculation, arranged in chronological order from top to bottom and linked by Parthenian chains.

In their theorizing about the workings of magnetism, the ancient philosophers, like their early modern counterparts, fell into two distinct schools of thought. Animists believed that the lodestone was in some sense alive, that it was possessed of a soul and shared in the divine *spiritus* or breath



Figure 16
 Valérien Regnard, *Arcanis nodis*:
 Greek philosophers debating the
 mysteries of magnetism (App.
 34). Paris.

that animates all things. Atomists, or materialists, argued instead for a more mechanical explanation of magnetic attraction, one that involved concepts of moist and dry, effluvia and pores, filaments and interlocking parts. These two traditions are showcased and contrasted in a thesis print attributable to Regnard, probably issued around the same time as the previous print (fig. 16).⁹⁸ In a landscape, six philosophers spanning an earlier millennium of Greek thought delve into the mysteries of the magnetic chain. Identified by the

⁹⁸ Appendix, no. 34.

names on the tablets nearest them, they include two pre-Socratics, Diogenes of Apollonia and Thales of Miletus, old men with forked beards in archaic dress; two representatives of the golden age of Greek philosophy, Epicurus and Plato, both middle-aged; and two later commentators, the Aristotelian Alexander of Aphrodisias and the Neoplatonist Proclus, depicted here as adolescents and disciples. The inscriptions on their respective tablets reveal the trio on the left to be materialist philosophers who understood magnetism as a mechanistic interaction of matter, and the trio on the right to be animist philosophers who thought of the lodestone as possessing a force or soul.⁹⁹ In this print and the previous one, the Parthenian chain takes on an additional meaning, standing for the transmission of ideas across the centuries. Each of the philosophers represents a link in the chain, passing on to successive generations his own understanding of the phenomenon. Students of magnetism at the Roman College would have recognized that the chain of transmission continued even down to their own day. The debate between animists and materialists still raged well into the 17th century, with theorists like Gilbert echoing Thales by declaring “the Loadstone to be animate, [it being] a part of the animate mother earth and her beloved offspring,”¹⁰⁰ while others insisted on a mechanistic explanation, like René Descartes who hypothesized that magnetic attraction was effected by streams of screw-shaped particles twisting into threaded channels. The print avoids championing either side in this ancient and ongoing debate, suggesting instead that philosophers who grapple with the quandary at the heart of magnetical science are engaged in a common pursuit of the truth.

Philosophical Chains and the Theory of Everything

The invisible link between heaven and Earth, the harmonious structure of nature, the cosmic order: these are themes implied to some degree by all of the prints in the series. But there is one, designed by Lanfranco and engraved by Johann Friedrich Greuter, that treats the subject more explicitly than most, positioning the gods and goddesses of Olympus in a neatly choreographed

⁹⁹ For the inscriptions and their sources, see the Appendix entry. For the contributions to the study of magnetism of the philosophers pictured here, see Radl 1988, passim; Keyser and Irby-Massie 2008, passim.

¹⁰⁰ Gilbert 1893, 312, citing Arist., *De an.* I.405a.



Figure 17
 Giovanni Lanfranco and Johann
 Friedrich Greuter, *Arcanis nodis*:
 The Platonic chain linking heav-
 en and Earth (App. 21). Paris.

cosmic hierarchy (fig. 17).¹⁰¹ In the heavenly zone above, the celestial gods (in other words, the deities with planetary associations) cluster around Apollo, the sun. On the left is Jupiter with his thunderbolt, next to him Saturn holding the scythe, then Venus, the Moon (Diana), Mercury, and finally warlike Mars. These seven divinities personify the Ptolemaic or geocentric solar system, conceived as a set of celestial spheres revolving concentrically around the Earth. Closest to Apollo, Lanfranco has depicted the bodies that, according to the Ptolemaic system, circle Earth inside the sun’s orbit (the Moon, Venus, and

¹⁰¹ Appendix, no. 21.

Mercury), while those that circle Earth outside the sun's orbit (Mars, Jupiter, and Saturn) occupy the margins.

Below, in the sublunary region, we find Juno with her peacock; Vulcan with his blacksmith's hammer; Cybele with her mural crown; and Neptune, seated beside the sea with shells strewn on the sand around him. These four deities represent the elements. Juno is traditionally associated with the sky, hence air; Vulcan with fire; Cybele with earth; and Neptune with water.¹⁰² Juno and Vulcan hover above the ground because air and fire are light and aspire upward, whereas earth and water are heavy and incline downward. All of the parts of the cosmos, celestial and terrestrial, are linked by chains that tie each deity to his or her neighbor and are conjoined at the top by the magnetic force of the lodestone held by Apollo. This same lodestone exerts its mystical influence on the iron links that fill the basin held by two putti, pulling them into a rope that binds heaven and Earth. The imagery is unmistakably cosmological and evokes the idea of the Great Chain of Being, according to which all things in heaven and Earth are hierarchically linked within a single, ordered, and interconnected system.¹⁰³

The concept of a unified hierarchy of being was first developed by the ancients and later taken up by Christian theologians, who produced complex schemas in which the Great Chain of Being descends from the hand of God down through the realms of the spiritual, the rational, the sensate, the insensate, and the inanimate, ending in the elements that are the raw materials of all matter (figs. 18–19). It is worth noting that St. Ambrose compared the diminishing of God's influence the further one goes down the chain, to the weakening of the lodestone's hold over each successive ring in a magnetic string.

102 Puzzlingly, in place of his usual trident, a two-pronged pitchfork lies on the ground next to Neptune. The bident is normally the attribute of Neptune's brother Pluto, god of the underworld. Yet it is hard to see how the deity pictured at the water's edge can be anyone other than Neptune. Narrative logic demands his presence here, and there are iconographic precedents for it, as well, in works such as Paolo Veronese's fresco on the vault of the main hall in Villa Maser, where the Four Elements in the guise of Juno, Vulcan, Cybele, and Neptune occupy the corners, while the seven planetary deities, seated on clouds in their correct Ptolemaic order, surround Divine Wisdom at the center. See, also, the schema illustrated in fig. 19, in which Air appears above Earth and Fire above Water. I can only conclude that the bident is pictured here by mistake. Either Lanfranco was careless or the engraver misconstrued the object when translating the drawing to the copper plate. It would not be the only time the two forks got mixed up; see G.B. Beinaschi's *Rape of Proserpina* (Sotheby's Milan, 11 June 2002, lot 125), in which Pluto is accompanied by a putto carrying a trident. All the same, it is surprising that the missing prong could have gone unnoticed and uncorrected in the hyper-erudite world of the Roman College.

103 Lovejoy 1936; Tillyard 1943, especially chapters 4–5; Lévêque 1959.



Figure 18 (left)
Diego Valadés (1533–c. 1582),
The Great Chain of Being, in
Rhetorica christiana ad concio-
nandi et orandi usum accom-
modata (between pp. 220 and
221), Perugia: P. G. Petrucci,
1579.

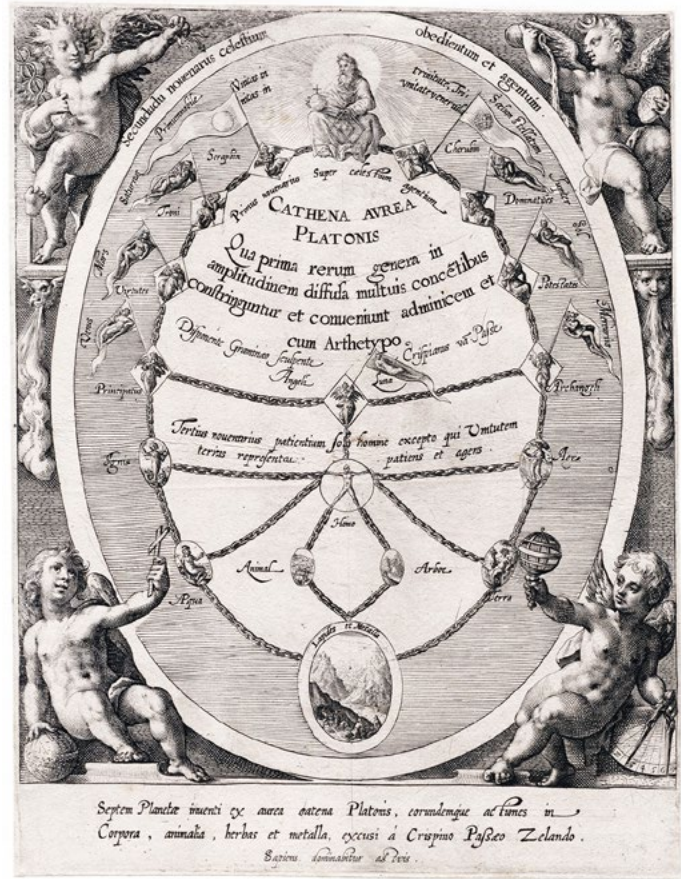


Figure 19 (right)
Theodor Graminaeus (1530–
1593) and Crispijn van de Passe
(1564–1647), The Great Chain
of Being, title plate to *Cathena*
aurea Platonis, a set of seven
engravings representing the
planets, c. 1600. Amsterdam.

Ambrose had already made the connection between the Great Chain of Being and the Parthenian emblem, twelve hundred and some years before the fact!¹⁰⁴

In Christian interpretations of the idea, it is God who sits at the top of the chain and from whom all else emanates. Ancient philosophers had a more abstract understanding of the uppermost link. Aristotle called it the Prime Mover, or First Cause. Plato referred to it simply as the Good, the source of being; and, in a famous metaphor in Book Six of the *Republic*, he likened it to the sun. The sun, he explained, not only illuminates so that we may see but is the source of generation and growth and nurture for all things in nature, just as the Good not only engenders knowledge of things, but is the source

104 On the metaphor of God as a magnet, see *The Roman Breviary* 1879, 2:1285: “For if there be in a stone a magnetic power which can make rings and straws and rods come and cleave thereon, how much more must not the Lord of all creatures have been able to draw unto Himself them whom he called?” See also Hale 1695; Posset 1995.

for the very existence and essence of truth. The connection between the sun and the chain linking heaven and Earth is made still more explicit in Plato's *Theaetetus*, a dialogue on the nature of knowledge, in which Socrates remarks "that Homer by 'the golden chain' refers to nothing else than the sun, and means that so long as the heavens and the sun go round, everything exists and is preserved among both gods and men, but if the motion should stop, as if bound fast, everything would be destroyed and would, as the saying is, be turned upside down."¹⁰⁵ Christian Neoplatonists took all this a step further and declared that "the sun is the image of God" and "renders all things divine."¹⁰⁶ The print thus conflates a whole series of Platonic ideas: the metaphor of the sun in the person of Apollo, the metaphor of the cord linking sun and Earth in the allusion to Homer's golden chain, and the metaphor of the transmission of divine inspiration in the lodestone and rings.

For all its metaphysical baggage, the image also lends itself to a more scientific reading. By the start of the 17th century, magnetism had come to be seen as having vital implications for the study of astronomy. That this mysterious force that both attracts and repels might generate or be generated by the turning of Earth on its axis, or by the orbit of the sun around the Earth or of the Earth around the sun, were ideas hotly debated at the time and used by heliocentrists and geocentrists alike to support their own theories. By seeming to account for action at a distance, magnetism offered the followers of Copernicus a way of understanding the structure of the solar system and the laws of planetary motion. Both Kepler and Galileo accepted Gilbert's theory that Earth itself is a giant magnet with a core of lodestone under high pressure. Indeed, Kepler went further, extending the notion to include the sun and the other planets. Magnetism seemed to him a way of elucidating not only what maintains planets in motion around the sun but also why their orbits are elliptical.¹⁰⁷ Opposing any and all theories that smacked of magnetic Copernicanism, Jesuit scientists rejected the notion that Earth is a magnet and that magnetism has any influence on planetary motion. They did not deny that

¹⁰⁵ Pl., *Theaetetus* 153C–D. Proclus may have had this passage in mind when he defined Homer's golden chain as linking the supercelestial gods with the sublunary divinities: our print could almost be read as a simplified version of his maddeningly complex philosophical system. On Homer's golden chain (*Il.* VIII.18–27), see Lévêque 1959; Acciarino 2018, 21–27; also, Appendix, no. 42.

¹⁰⁶ Ficino 1493, unpaginated (from the headings to chapters 9 and 11).

¹⁰⁷ Baldwin 1985, 156.

Earth possesses magnetic properties, but they argued that these are relatively weak and derive from celestial influxes rather than from a core of lodestone. Earth is held immobile at the center of the cosmos by gravity, they insisted; but magnetism plays a part in this, too, although a lesser part, by stabilizing Earth's axial tilt whenever celestial commotions (caused by the rapid rotation of the heavens) or terrestrial disturbances (caused by tides, tempests, or other upheavals) jostle it out of its correct attitude. By keeping the terrestrial poles in alignment with the celestial ones, magnetic attraction ensures that the angle of Earth's axis remains fixed. Thus, the very phenomenon that heliocentrists were investigating as a possible explanation for planetary motion, Jesuit geocentrists seized on to support and refine their own belief in Earth's divinely-ordained immobility at the center of the universe.

Even if these developments have no direct bearing on the print under discussion, they form the background against which it would have been viewed. In an image like this, contemporary theories about magnetism merge with the much older conceit of the Great Chain of Being; science and symbolism come together to reveal a deeper truth. At a casual glance, one might assume that Apollo is using the lodestone to draw the links heavenward. But 17th-century experimentalists were acutely aware that the attraction between lodestone and iron is a mutual one, each pulling equally on the other, rather than a unilateral one “unjustly appropriated unto the loadstone.”¹⁰⁸ Kircher himself argued not only that Earth's magnetic poles have a natural appetite for the celestial poles, but that the celestial poles are similarly drawn to the poles of Earth.¹⁰⁹ So perhaps the idea implicit in this print is that heaven and Earth hold each other in a kind of perfect and harmonious equilibrium.

One finds this concept alluded to in a number of Parthenian prints. In one, a pair of putti hold up the emblematic lodestone-and-links atop a plinth on which is inscribed an image of Earth suspended from heaven by a chain ([fig. 20](#)).¹¹⁰ In another, a putto uses a magnetic chain to triangulate and fix Earth's position relative to the Pole Star ([fig. 5](#)).¹¹¹ The appearance in several of the prints of the constellation Ursa Minor constitutes an even clearer reference

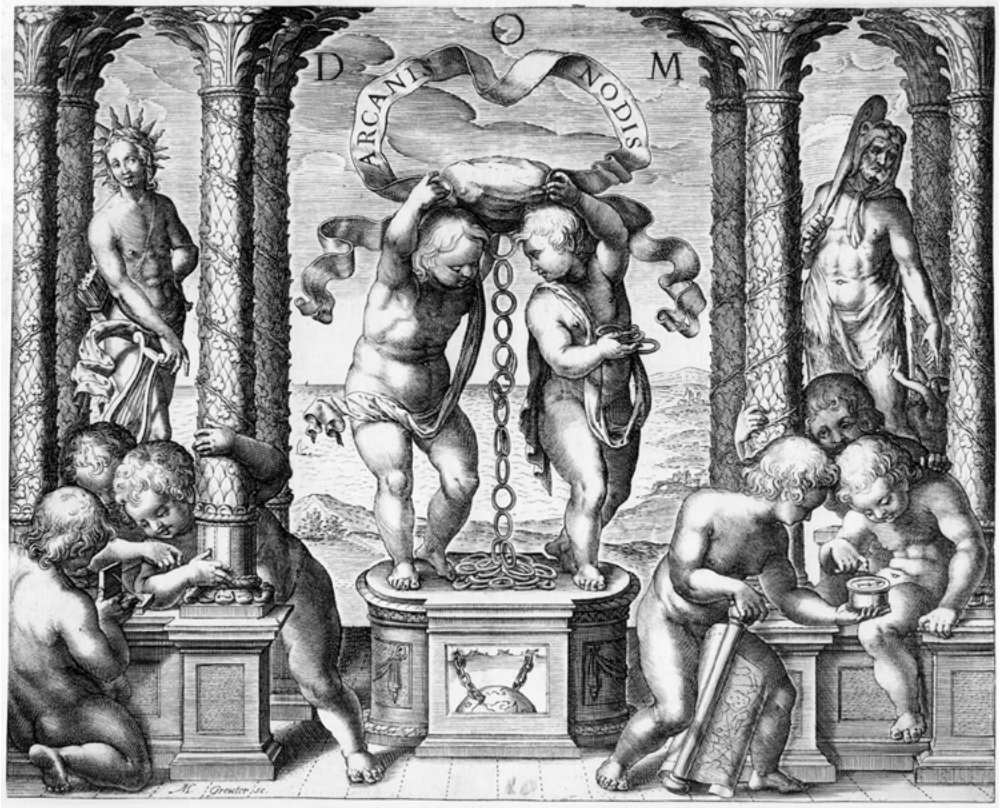
¹⁰⁸ Browne 1658, 51; see also Cabeo 1629, 346–47: “Nec magnes trahit proprie ferrum, nec ferrum ad se magnetem provocat, sed ambo pari conatu ad invicem confluunt.”

¹⁰⁹ Baldwin 1985, 158–59, citing Kircher 1641, 40.

¹¹⁰ Appendix, no. 5.

¹¹¹ Appendix, no. 38.

Figure 20
 Matthaues Greuter, *Arcanis nodis*: Two putti supporting the Parthenian lodestone-and-links between Apollo and Hercules (App. 5), Vienna.



to the Jesuit theory that a magnetic alignment between the earthly and heavenly poles is what keeps Earth tilted on her axis at the center of the universe. Consider, for example, the engraving discussed above depicting Nature enthroned in her niche of lodestone (fig. 13).¹¹² Reclining at the lower edge of the composition, Uranus and Gaia represent heaven and Earth, he leaning against a stellar globe, she snuggling up to Ursa, because Ursa is the constellation closest to the celestial pole, that vital region of the sky whose magnetic properties help to regulate and maintain Earth's perfect centrality within the cosmos.

The interconnectedness of things is a consistent theme in the prints commissioned by the boys of the Parthenian Academy to decorate their thesis broadsheets. The idea of a unifying physical force, with characteristics of attraction and repulsion, that governs everything in the universe, a *vis occulta* linking heaven and Earth and joining together all things in creation, perme-

¹¹² Appendix, no. 33. For other prints featuring Ursa, see Appendix, nos. 9 and 12.

ates Jesuit thinking about magnetism. It is particularly emphasized in the work of Athanasius Kircher and nowhere more elegantly expressed than in the frontispiece to his second treatise on magnets, *Magnes, sive de Arte Magnetica* (fig. 3). Published in 1641, around the time that the series of Parthenian thesis prints was coming to an end, it picks up where they left off. A web of magnetic chains connects the symbols of the celestial, sublunary, and human domains, and links them to the arts and sciences (perspective and mechanics; geography, astronomy, and cosmography; poetry, rhetoric, and music; mathematics and physics; natural magic and medicine; philosophy and, at the pinnacle, theology). On the ribbon that flutters across the upper half we read the explanation: OMNIA NODIS ARCANIS CONNEXA QUIESCUNT (“All things connected by secret links are at rest”). In other words, a magnetic force holds all of creation in a divinely-calibrated equilibrium, or, to quote the Jesuit Jacques Grandami, whose book on magnetism, promising *A New Demonstration of the Immobility of the Earth*, followed Kircher’s *Magnes* by only four years: “The goal of magnetic virtue is the good and quiet of the Earth, the conservation of the Earth in its immobile place in the middle of the elements and at an equal distance from all parts of the ends of the sky, in order that it may receive light and necessary influxes which were established by divine wisdom and divine goodness for the health of men.”¹¹³

To say that Kircher and the young magneticians of the Roman College were seeking a unified theory of everything is not, I think, anachronistic. Admittedly, the Parthenian prints are not in any strict sense scientific. They do not deal, except tangentially, with the pressing geophysical and astronomical questions of their day, to do with latitude and longitude, magnetic declination and dip, geographic vs magnetic poles, electric vs magnetic attraction, atomist vs animist theories of matter and force, and whether magnetism holds the world in place at the center or sets it in motion around the sun. They represent the other side of the coin; they use poetic imagery in place of empirical evidence, tailoring the philosophy, mythology, and tall tales of the ancients to their institutional and Christian agenda. And yet, as Kircher’s frontispiece reminds us, the map of knowledge has infinitely porous and permeable

113 Grandami 1645, preface, cited in translation in Baldwin 1985, 168. Through his experiments with *terrellae*—little Earth-shaped lodestones—Grandami demonstrated that magnetic bodies always come to rest in a fixed east–west orientation, which seemed to confirm “the Aristotelian principle that all moving bodies, including magnetic ones, come to rest in their natural place” (Pumfrey 2000, 386).

borders. The Parthenian prints are the products of an intellectual culture that understood rhetoric as a sister discipline and handmaiden to natural philosophy: in them we discover art and science linked in a chain of inquiry into the universal and unifying forces that permeate nature and shape the condition and destiny of man.

Acknowledgments

Jennifer Montagu has long shared my fascination with the ARCANIS prints and the discoveries and insights that we have exchanged over the years are reflected in these pages. Other links in the chain include Martin Clayton, Jeffrey Collins, Francesca Curti, Lakhana Ly, Walter Melion, Mary Pardo, Geno Rice, and David Stone. A research fellowship from the Institute for Advanced Jesuit Studies at Boston College gave me the opportunity I needed to complete the article.

APPENDIX

CHECKLIST OF THESIS PRINTS FEATURING THE EMBLEM OF THE PARTHENIAN ACADEMY AT THE ROMAN COLLEGE

Preliminary note: With one exception (Appendix, no. 1), the following checklist is limited to prints commissioned for the *atto piccolo*, or small act, a defense usually undertaken at the end of the first year of the three-year course in philosophy. The emblem does show up in a few other contexts. It can be found, for example, on the title page to Landi's pamphlet and in the frontispieces to Kircher's later books on magnetism (figs. 3–4). Senior Parthenians defending all of philosophy and/or all of theology sometimes tucked the lodestone-and-links into their thesis prints as a way of advertising their membership in the Academy. But the prints they commissioned for the *atto grande* follow a different set of conventions and when they do include the Academy's emblem, it is always in an ancillary capacity; it does not influence the choice of subject matter nor is it reflected in the iconography. Those prints are therefore not included in the checklist. I should also mention that, since thesis prints were often re-issued for subsequent defenses, they tend to exist in multiple states. The entries in the Appendix describe, whenever possible, the first finished state of each print; no attempt has been made to list all post-original states.

1) Anonymous, 1593 (fig. 2)

Student: Franz von Dietrichstein (Carinthia and Moravia).¹¹⁴

Description: The lodestone and links with the Academy's motto are suspended within an elaborate frame labeled ACADEMIA PARTHENIA, with Fame seated above and Faith and Religion flanking the emblem. The student's arms below are complemented by imperial eagles above. 17.5 × 19 cm.

¹¹⁴ For the student's coat of arms pictured on the statue bases, see Rietstap 1903–1926, 2:pl. CCIII. Franz von Dietrichstein (1570–1636) was a member of a prominent noble family from Moravia with close ties to the imperial court in Vienna, who came to Rome as a young man to complete his education at the Roman College. After defending all of philosophy and serving as private chamberlain to Pope Clement VIII, he was elevated to the cardinalate in 1599 and appointed archbishop of Olomouc. He went on to have an important political career, serving on the emperor's privy council, and later as governor of Moravia and cardinal protector of the Holy Roman Empire. Dietrichstein is credited with being the first to exhibit the emblem of the Parthenian Academy in public, which he did, according to Landi, at his philosophy defense at the Roman College, a grand affair attended by 22 cardinals (Landi [Negroni] 1594, 3–4).

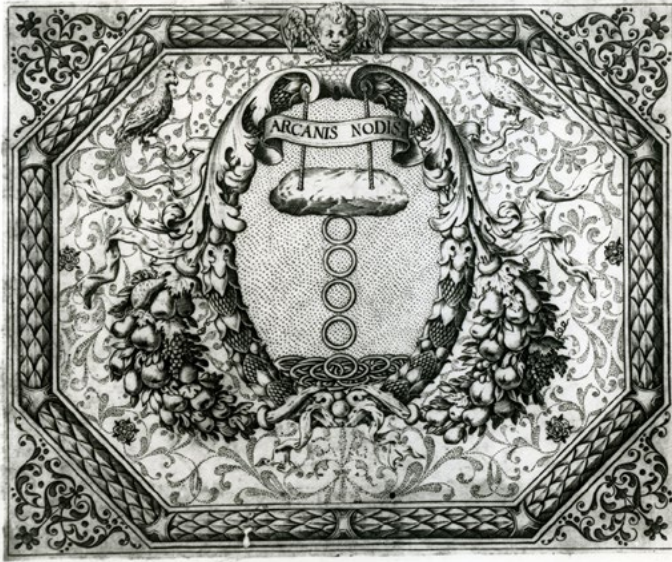


Figure 21 (left)

Anonymous, *Arcanis nodis*:
The emblem of the Parthenian
Academy at the Roman College
(App. 2). Windsor.



Figure 22 (right)

Anonymous, *Arcanis nodis*:
The emblem of the Parthenian
Academy in an architectural
setting (App. 3). Windsor.

2) Anonymous (fig. 21)

Description: The lodestone and links with the Academy's motto are suspended within an oval frame surrounded by an octagonal border of laurel. The peregrine falcons left and right may refer to the heraldry of the unidentified student, or they may signify Logic because, according to Ripa, "come il falcone s'in alza a volo a fin di preda, così il logico disputa altamente per far preda del discorso altrui, che volentieri alle sue ragioni si sottomette."¹¹⁵ 15 × 18.5 cm.

3) Anonymous, c. 1610 (fig. 22)

Student: uncertain.¹¹⁶

Description: The lodestone and links with the Academy's motto are suspended within a domed tempietto labeled ACADEMIA PARTHENIA. Paired statues of Minerva face one another from niches in the projecting wings. 20 × 21 cm.

¹¹⁵ Ripa 1618, 314 (*Logica*).

¹¹⁶ The print contains no coat of arms per se, but the pinecones atop the architecture could be heraldic, referring to the arms of either the Bellarmino (Rietstap 1903–1926, 1:pl. CLXVIII) or the Pinelli (Rietstap 1903–1926, 5:pl. LIX). Francesco Bellarmino, who defended philosophical theses in 1614 and theological theses in 1617, is a possible candidate. Also worth noting is the crenellated wall on the shield of the Minerva on the right; its specific form, with its carefully delineated rows of masonry topped with three v-shaped merlons, is identical to the escutcheon of the Roman family Moidalchini (Rietstap 1903–1926, 4:pl. CXX). This might be an example of a print commissioned by one student and re-used with the addition of new heraldry by another.



Figure 23
Matthaeus Greuter, *Arcanis nodis*: The emblem of the Parthenian Academy in a rustic rotunda (App. 4). Windsor.

4) Matthaeus Greuter (1566–1638), c. 1615 (fig. 23)

Student: uncertain.

Description: The lodestone and links with the Academy's motto are suspended within a rustic temple labeled ACADEMIA PARTHENIA. Paired eagles and lions issuant, presumably heraldic, face one other from projecting wings. On the left a coiled serpent and on the right a satyr's mask spout water into shell-shaped basins. Signed *MG f.* 16.5 × 20 cm.

5) Matthaeus Greuter, c. 1620–1628 (fig. 20)

Student: uncertain.¹¹⁷

Description: Within an architecture of palmate columns, two putti stand atop a plinth and support

the motto, lodestone, and links, between statues of Apollo and Hercules. Below the sun god a trio of putti study a sundial, while at the foot of Hercules a similar threesome investigate the workings of a compass, its needle magnetized by contact with the lodestone, or *lapis Herculea*. Both divinities are associated with rhetoric; for a comparable pairing, see Appendix, no. 44. On the plinth is an image of Earth suspended from a celestial chain. Signed *M. Greuter Sc.* 19 × 24 cm.

Bibliography: New Hollstein German, no. 139.

6) Matthaeus Greuter, c. 1615¹¹⁸ (fig. 24)

Student: unidentified.¹¹⁹

¹¹⁷ The print contains no heraldry and the identity of the student who originally commissioned it is not known. An intact Parthenian broadsheet in Florence features this print in the upper half and an engraved cartouche labeled "Propositiones," containing eight points for debate written in by hand, in the lower half. The student in this instance was one Lorenzo Vecchi of Siena, who defended in Logic at the Roman College on 17 January 1629. But we can be fairly sure that Vecchi was not the student who originally commissioned the print, since anyone who could afford the cost of a new engraving would likely have issued a typeset broadsheet rather than one filled in by hand. After their first use, it was common for thesis prints to be re-issued by other students, often multiple times, until the copper plates became too worn to yield further impressions; for comparison, see *figs. 51, 52*. My thanks to Jörg Diefenbacher for providing the information concerning the Florence impression, which I have not had a chance to see for myself.

¹¹⁸ A copy after the print by Jean Appier Hanzelet (1596–1647) is dated 1617.

¹¹⁹ The print contains no coat of arms, but in the state illustrated here the squirrels and hearts that decorate the pavement and balustrade are likely to refer to the student's heraldry.

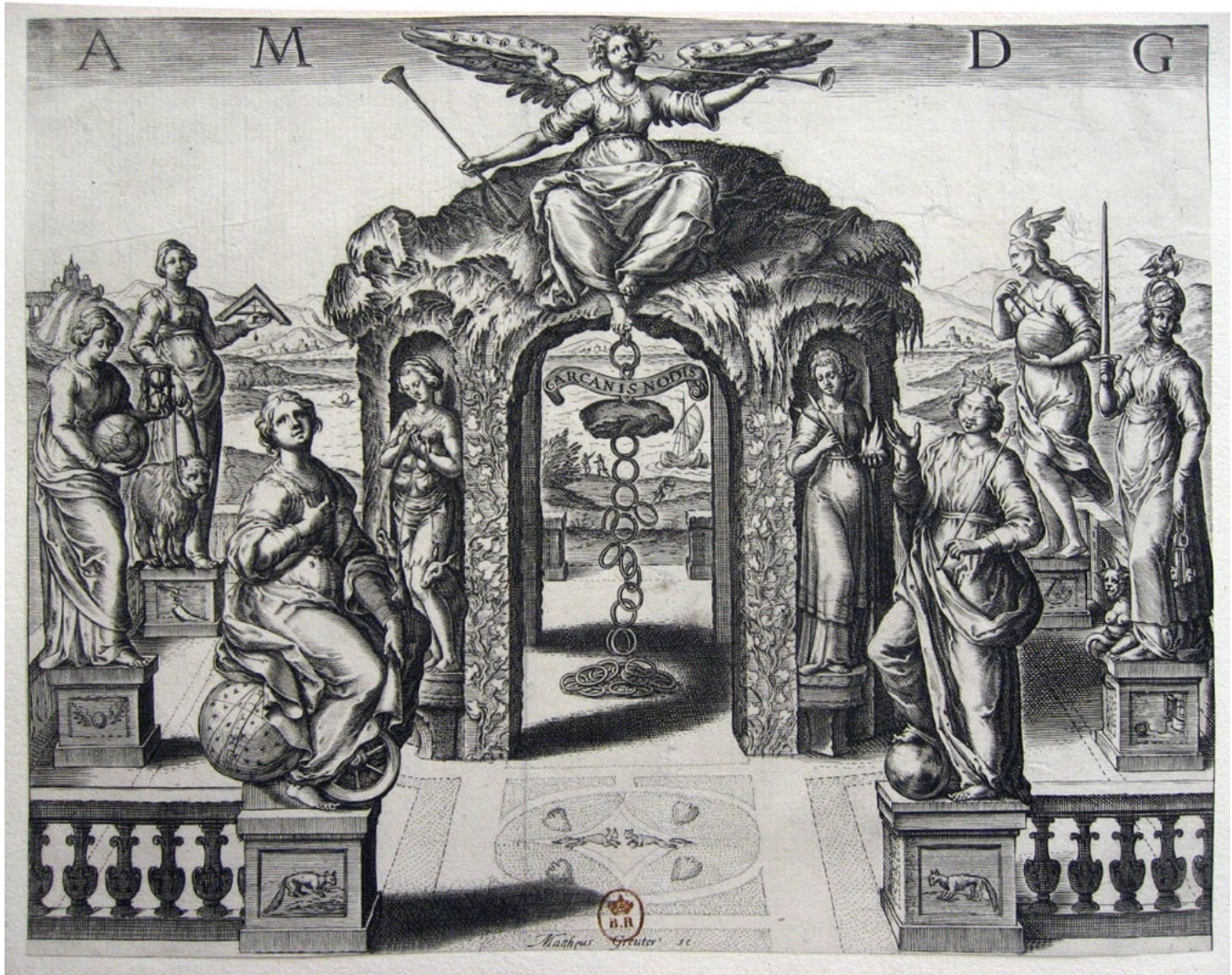


Figure 24
 Matthaeus Greuter, *Arcanis nodis*: The Parthenian emblem in a rustic grotto dedicated to Nature and Art (App. 6). Paris.

Description: The lodestone and links with the Academy's motto are suspended within a rustic rotunda, decorated with statues of Nature and Art. Winged Fame is perched on top. On the balustrade enclosing the temple precinct are sculptural personifications representing, clockwise from the left foreground: 1) Theology; 2) Physics; 3) Ethics; 4) Mathematics; 5) Logic; and 6) Metaphysics. Inscribed above with the Jesuit tag AMDG (*ad maiorem Dei gloriam*) and signed *Matthaeus Greuter sc.* 19.5 × 24.5 cm.

Bibliography: New Hollstein German, no. 136.

**7) Paolo Guidotti (1559–1629)
and Matthaeus Greuter, c. 1620 (fig. 25, also fig. 52)**

Student: Bonsi (Florence).¹²⁰

Description: Mercury, the god of thieves, descends surreptitiously into Vulcan's forge, bearing the lodestone, which he uses to attract and steal away the iron links being hammered into shape on the anvil. One of his workers tries to wake crippled Vulcan, who dozes on the job, to warn him of the theft in progress. Vulcan was a noted chain-maker—it was he who forged the chains that bound Prometheus to the rock, that fettered Juno to her throne, and that trapped his adulterous wife Venus in the embrace of her lover Mars—and the scene plays with that aspect of his identity. Mercury is the god of thieves but also of eloquence: the implication is that the Parthenian chain, held together by the attractive power of persuasion, binds more strongly than any mere physical chain of iron. The contest of Nature and Art, a theme alluded to in several of the ARCANIS prints (cf. Appendix nos. 6 and 19), may be implied here, too, with Mercury representing Nature and Vulcan Art.¹²¹ Inscribed AMDG and signed *Eques Burghesius Guidottus inv./ M. Greuter sc.* 20 × 24.5 cm.

Bibliography: New Hollstein German, no. 137.

8) Giovanni Lanfranco¹²² and Matthaeus Greuter, c. 1630 (fig. 26, also fig. 51)

Student: Roberti (Rome).¹²³

120 Rietstap 1903–1926, 1:pl. CCLXII. The heraldic eight-spoked rimless wheel of the Bonsi appears on the anvil and on the cuirass and shield next to Vulcan and is echoed in the cartwheel lying on the floor near the hearth. The student was probably a nephew of Cardinal Giambattista Bonsi (1554–1621).

121 In Ben Jonson's 1615 satirical masque *Mercury vindicated from the Alchemists at Court*, Mercury, avatar of the element Hg and defender and representative of Mother Nature, triumphs over the artist-chemist Vulcan, Mercury reviling "this polt-footed *Philosopher*, old *Smug* here / of *Lemnos*, and his smoaky family [of cyclops]" and accusing him of "the adultery and spoil of *Nature*." Although the context is different, the print seems to have in common with the masque the idea that Mercury and Vulcan embody a fundamental nature/art opposition, with Mercury here associated with the lodestone, the unshaped product of nature, and Vulcan with the links, the manufactured products of the blacksmith's art. It is through Mercury's intervention (i.e., the force of eloquence) that the two elements, meaningless on their own, come together to form the meaningful emblem.

122 In the state illustrated here, the inventor's name appears to have been polished out, although traces of it may still be visible to the left of the engraver's name. The design has been attributed to Giovanni Lanfranco since at least the 18th century.

123 The Roberti arms (Crollanza 1886–1890, 2:431) are pictured on the tower in the middle ground and alluded to in the stars and lion's head that decorate the city gate, and in the stars scattered across the night sky. The student was probably Carlo Roberti (1605–1673), who was later elected *principe* of the Parthenian Academy and in 1632 defended all of philosophy, dedicating his theses to Ferdinand II, Grand Duke of Tuscany. He

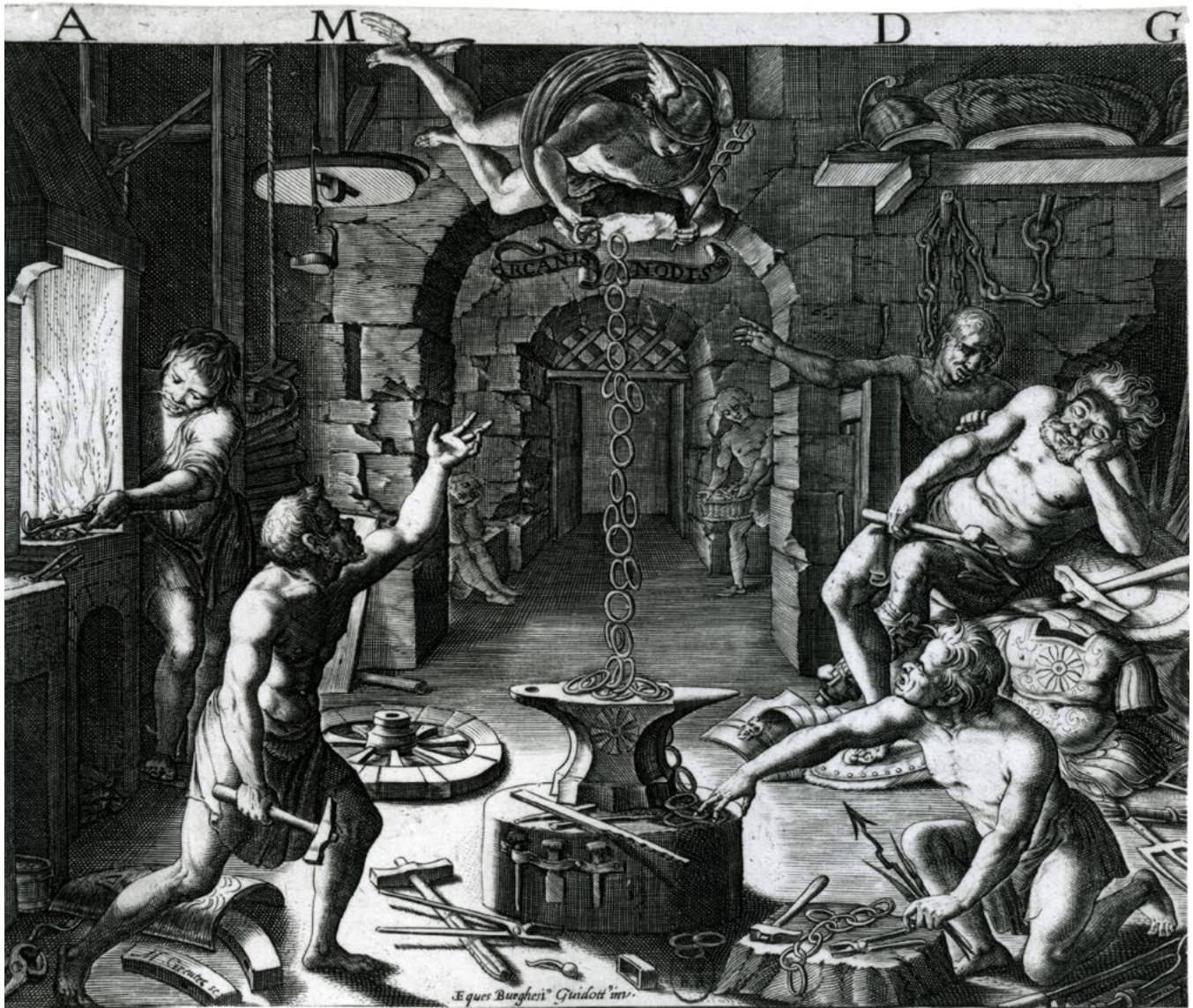


Figure 25
 Paolo Guidotti and Matthaeus Greuter, *Arcanis nodis*: Mercury stealing into Vulcan's forge (App. 7). Paris.

Description: A city in flames is assaulted by night. On the left, citizens fall and are crushed under tumbling masonry. On the right, soldiers defending the walls pour boiling oil and drop rocks onto the attackers, who attempt to break down the gates using a battering ram. In the background, soldiers and residents escape from a tower into a waiting boat by clambering down a magnetic chain suspended from a giant lodestone inscribed with the Academy's motto.

went on to have a long and distinguished career in the Church, culminating in his elevation to the cardinalate in 1667.



Figure 26
 Giovanni Lanfranco (attrib.)
 and Matthaeus Greuter, *Arcanis
 nodis: A city assaulted by night*
 (App. 8). Paris.

The subject has been identified as the Fall of Troy, but there are no obvious indications to support the interpretation: no wooden horse, no sign of Aeneas and his family in flight; nor would one expect to see battering rams used against the gates of Troy, since the doors were opened by the Greeks within. If, indeed, the print represents a specific historical episode, it is more likely to be the Fall of Tyre in 332 BCE. Alexander took the heavily fortified island city after a particularly bloody seven-month siege. According to the sources, the Macedonians attacked the city walls using battering rams, while the defenders “took to the rooftops, showering stones and whatever happened to be to hand on the approaching Macedonians” (Curt., *Life of Alexander the Great* 4.4.12). When the city was finally taken, most of the citizens were either killed or sold into slavery, but others “found safety with the Sidonians among the Macedonian troops. Although these had entered the city with the conquerors, they remained aware that they were related to the Tyrians [...] and so they secretly

gave many of them protection and took them to their boats, on which they were hidden and transported to Sidon. Fifteen thousand were rescued from a violent death by such subterfuge” (Curt., *Life of Alexander the Great* 4.4.15). The Sidonians’ heroic rescue of their fellow Phoenicians might explain the scene of escape in the middle ground. Signed *M. Greuter sc.* 27 × 37.5 cm.

Bibliography: New Hollstein German, no. 138.

9) Johann Friedrich Greuter, c. 1620 (fig. 27)

Student: Buonvisi (Lucca).¹²⁴

Description: The lodestone and links with the Academy’s motto are suspended in the archway of an ornate palace courtyard labeled ACADEMIA PARTHENIA. Above, on a cloudbank, Apollo attaches a shield bearing the student’s heraldic comet to the garment of an armed female deity. She resembles Minerva, and Minerva’s armor and Gorgon-decorated shield lie discarded at her feet; but her starry dress, helmet, and lance suggest that she is being inducted into the company of constellations. Rather than Minerva, therefore, perhaps she is another παρθένος, namely, Virgo, the sixth sign of the zodiac. Hyginus identifies Virgo as Astraea, the goddess of Justice, but adds that “others call her a daughter of Apollo by Chrysothemis, an infant named Parthenos, or Virgin. Because she died young, she was put by Apollo among the constellations” (Hyg., *Poet. astr.* II.25).¹²⁵ On the left, the sky goddess Juno is seated beside the constellation Ursa; on the right, a female figure dressed in star-spangled robes is possibly Nox, the goddess of night. Although the significance of the scene remains obscure, it is bound to be connected in some way to the student’s astral heraldry. Inscribed above AMDG and signed *I. F. Greuter sculp.* 19 × 26 cm.

Bibliography: New Hollstein German, no. 33.

¹²⁴ Rietstap 1903–1926, 1:pl. CCCLII; Crollanza 1886–1890, 1:155. The student was presumably a relative of Cardinal Buonviso Buonvisi (1551–1603) and of Girolamo Buonvisi (1607–1677), who became a cardinal in 1657.

¹²⁵ If the scene does have astrological implications, it is worth noting that, according to Manilius, “the temperaments of those whose span of life she pronounces at their birth, Erigone [i.e., Virgo] will direct to study, and she will train their minds in the learned arts. She will give not so much abundance of wealth as the impulse to investigate the causes and effects of things. On them she will confer a tongue which charms, the mastery of words, and that mental vision which can discern all things, however concealed they be by the mysterious workings of nature” (Marcus Manilius, *Astronomica* IV.189–96). Could there be a better sign for a budding scholar immersed in the study of rhetoric and the natural sciences?

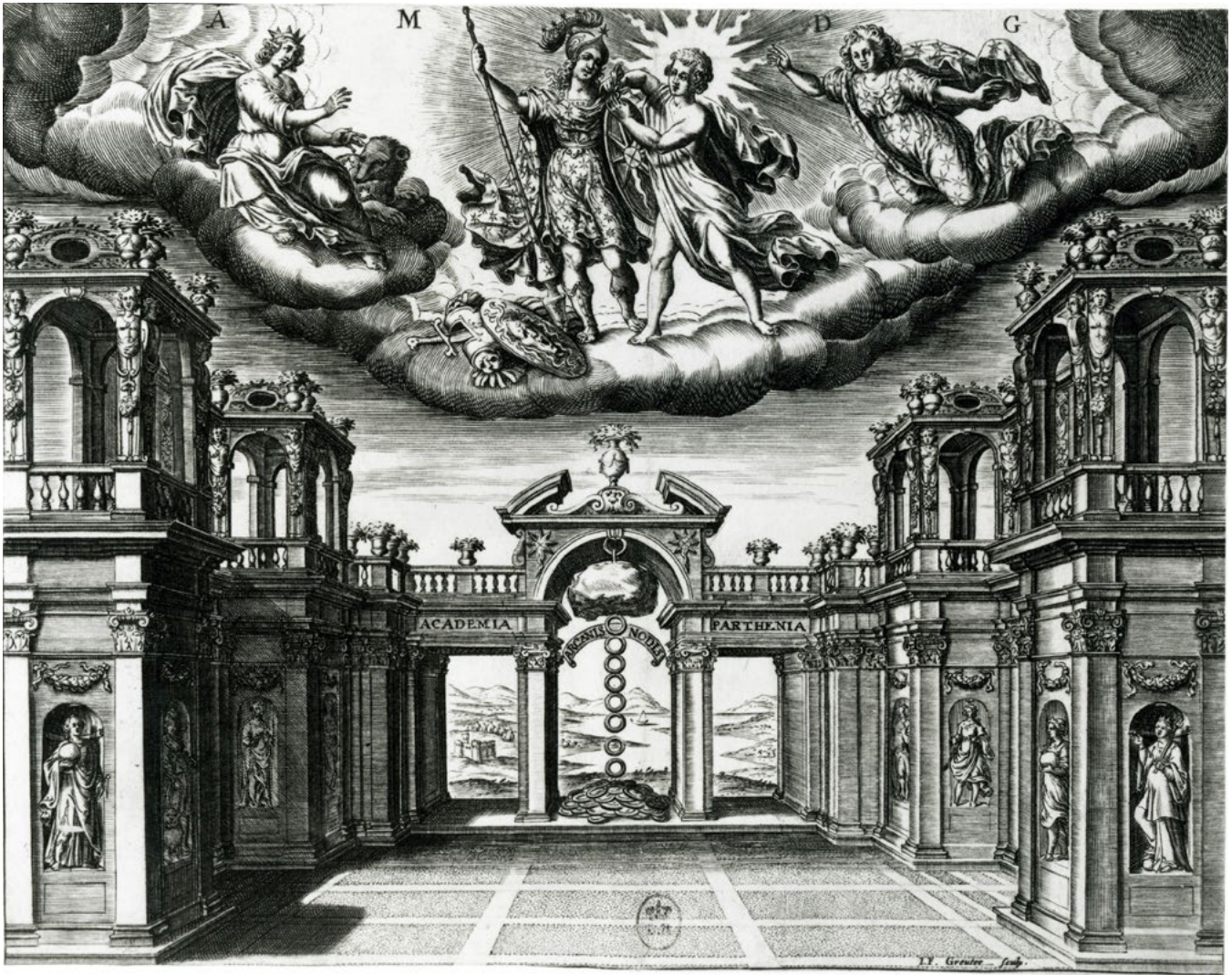


Figure 27
 Johann Friedrich Greuter,
Arcanis nodis: A palace
 courtyard with Apollo and other
 celestial divinities (App. 9).
 Paris.

10) Matthaues Greuter (attrib.) and Johann Friedrich Greuter, c. 1620 (fig. 14)

Description: In an ornate loggia, inscribed ACADEMIA PARTHENIA, the lode-
 stone, suspended from the vault, attracts iron rings heaped on a circular
 support below, with the Academy's motto on a banderole. Below the emblem,
 a man lies on the ground in chains. He is the prophetic sea god Proteus, who
 famously changes shape in order to escape from those who come to consult
 him. The inscription along the lower edge of the print reads PRIVS VINC-
 LIS CAPIENDVS VT OMNES EXPEDIAT RERVM CAVSAS (he must first be
 enchained, that he may reveal all of the causes of things), a phrase borrowed
 with modifications from Virgil (*G. IV.396–97*). On Proteus, his relevance to the

Parthenian emblem, and his curious appearance in this particular print, see the relevant pages of the article.¹²⁶

Statues of men decorate the exterior of the loggia. Each wears or is in some way associated with one or more finger rings, implying an analogy between this form of personal adornment and the iron rings of the emblem. The statue on the far left represents Pythagoras, with a book, a rooster, and a generously sized ring.¹²⁷ Next to Pythagoras is Hannibal, who gazes at the pile of emblematic rings at the center of the composition and ponders his victory at Cannae, where he seized the gold rings of the Roman soldiers killed in the battle and sent them to Carthage as proof of his exploit. There, his brother Mago “ordered [the] gold rings to be poured out in the vestibule of the senate house, and so great was the mound they formed that according to some sources they amounted when measured to more than three modii. [...] Then, so the defeat be shown to be even greater, Mago added by way of explanation that only knights wore this status symbol, and of knights only the most distinguished” (Livy, *History of Rome* XXIII.12). But seeing the seemingly worthless iron rings responding to the magnetic pull of the Marian magnet, Hannibal realizes that these are more precious than all the gold rings in the world.¹²⁸ Third from the left is King Gyges of Lydia, who owned a magical ring that made the wearer invisible (Pl., *Resp.* II. 259–60).¹²⁹ Finally, on the far right, a philosopher holds a string of rings on a ribbon. Aristotle is described by several ancient

126 Proteus is also the subject of Appendix, no. 20.

127 The ring is explained by the inscription on the statue base: ANNVLVM ARCTVM NON GESTAVERIM (I would not have worn a tight ring). Pythagoras was credited with the popular adage *Arctum annulum ne gestate* (never wear a tight ring), which means, “do not by imprudence waste your property, and contract debts, which will lead to the loss of your liberty; neither pay so much deference to the opinions of others, as to embrace them implicitly, without first submitting them to a careful examination. Persons who are so tractable are said ‘to be led by the nose,’ and of such, artful men do not fail to take advantage. Also, be not ready to bind yourselves by vows, or oaths, to do, or to refrain from any act. If the thing be proper in itself, you will have sufficient incentive to do it, without laying such obligations or restrictions upon yourself; the necessity for which can only arise from imbecility, or inconstancy of mind, which you should rather endeavour to cure than to indulge” (Bland 1814, 1:9). The rooster is a reference to Lucian’s dialogue *Gallus*, in which Pythagoras, who promoted the idea of the transmigration of souls, appears reincarnated as a rooster.

128 My thanks to Jennifer Montagu for recognizing Hannibal and directing me to the story of the rings. For comparison, see Sébastien Slodtz’s marble statue of Hannibal (1704, Louvre), who stands next to a basin overflowing with rings. In the print, the inscription on the statue base reads PRETIOSIORA QVAE VIDERO (the more precious things that I will have seen).

129 The phrase inscribed on the statue base—FALLAM INDEPRENSVS (I will escape undiscovered)—is adapted from Verg., *Aen.* V.590–91.

authors as a bit of a dandy who wore multiple rings, so perhaps this is he.¹³⁰ The inscription on the statue base—VT SCIAM OMNIA (that I may know all things)—would certainly be fitting for Aristotle, “the man who knew everything.” The words also echo the omniscience of Proteus, knower of “all the causes of things.” The attribution of the invention to Matthaeus Greuter is here suggested on the basis of style. Signed lower left: *Io. Frid. Greuter f.* 22 × 32.5 cm. *Bibliography*: New Hollstein German, no. 32.

11) Johann Friedrich Greuter c. 1620–1629 (fig. 28)

Description: Eleven putti suspend magnetic chains from a lodestone mounted on a central tiered support. Inscriptions: AMDG and signed *Io. Frid. Greuter sculp.* 19 × 23.5 cm.

Bibliography: New Hollstein German, no. 34.

12) Antonio Pomarancio (attrib.)¹³¹ and Johann Friedrich Greuter, 1620–1629 (fig. 1)

Student: unidentified.¹³²

¹³⁰ Diog. Laert. V.1.1; Ael., *VH* 3.19: “Plato did not like the way [Aristotle] lived or his physical appearance. Aristotle wore elaborate clothes and shoes; he also had his hair cut in a style that displeased Plato; he wore many rings and prided himself upon this.”

¹³¹ Although only Greuter’s name appears on the plate, the invention is here attributed to Pomarancio on the basis of style. The two artists frequently collaborated, producing numerous Jesuit-related thesis prints and frontispieces. Pomarancio was especially fond of depicting infants and his compositions are full of playful putti, who often engage in mock battles or other kinds of confrontations denoting allegorical oppositions, as in this case, where the children and their marine counterparts emphasize the division of land and sea (cf. Appendix no. 17 below; and Rice 2007, 234–35, n. 15–16). The swaggering pose of Neptune is also highly characteristic of Pomarancio’s figurative style (cf. Mars in Appendix no. 17 below; the personification of Rome in New Hollstein German, G.F. Greuter, no. 41; or the standard-bearer in *ibid.*, no. 57). Sylvain Kerspern has attributed the design, instead, to Jacques Stella (http://www.dhistoire-et-dart.com/Stella/Stella-cat-Rome-1631_32ca.html#ArcanisNodisNeptune) and his view is supported by a handwritten annotation on the impression in Vienna that likewise assigns the invention to the French painter (illustrated in New Hollstein German, no. 29). Like Pomarancio, Stella was active as a designer of Jesuit thesis prints and frontispieces, especially in the years between Pomarancio’s death in 1630 and his own departure from Rome in 1634. He, too, collaborated with Greuter on occasion and the engravings they co-produced do superficially resemble this one. But Stella’s preferred figure type tends to be slenderer and more contained than Pomarancio’s, his drapery tamer, and his putti less animated and individualized in their actions. In any case, whether the design is Pomarancio’s or Stella’s, it is certainly not Greuter’s, and the print serves as a reminder that even when the plate is signed only by the engraver, there is often an unacknowledged collaborator behind the scene, who provided the drawing on which the composition is based.

¹³² The student’s coat of arms features a grain funnel, a millstone, and a waterwheel in water, with a shaft or mace to the right of these objects, so possibly he had a name like Molinari, Mulino, Mola, or Macina.

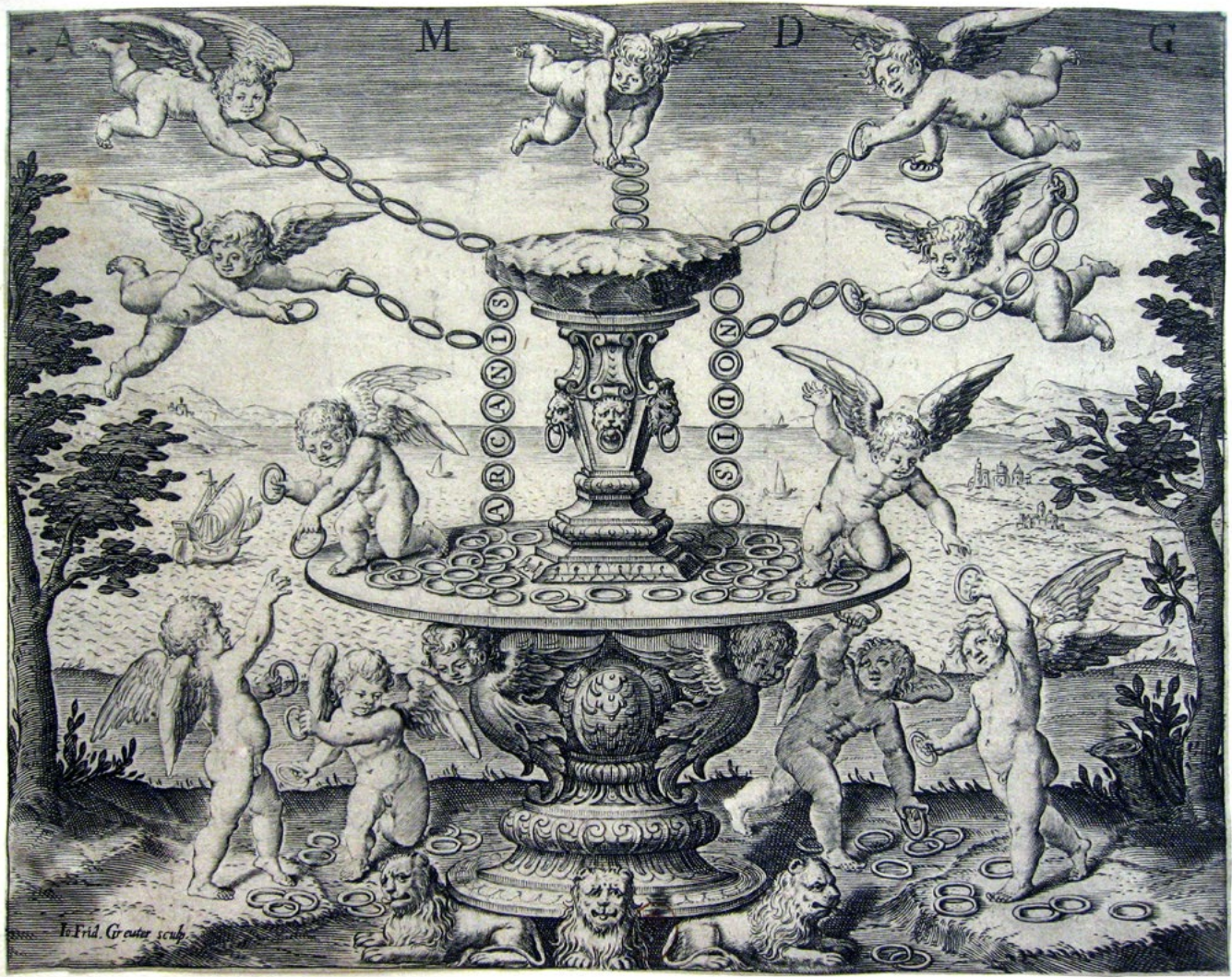


Figure 28
 Johann Friedrich Greuter,
Arcanis nodis: Eleven putti
 playing with the Parthenian links
 (App. 11). Paris.

Description: Seated on shore against a boulder-sized lodestone, Cybele, goddess of the earth, demonstrates for Neptune, god of the sea, the magnetic properties that she has imparted to his trident: by rubbing it with the lodestone in her right hand, she has turned it into a compass with the power to point north and thus an instrument of salvation for storm-tossed ships at sea. Suspended from a ribbon so that it swings freely, the iron trident points in the direction of the Pole Star, at the tip of the tail of the constellation Ursa Minor, visible just behind Neptune's head in the upper right corner of the print. Below, Cybele's infant followers teach Neptune's *tritonini* the principles of compass-making. Two of them are already rubbing their toy tridents to the foot of the lodestone, while another tests its magnetic virtue by balancing his

trident on his finger. On the far left, two putti hold up the lodestone-and-rings labeled with the Academy's motto. In the background, behind Cybele's boulder, her chariot pulled by lions awaits her under a crescent moon. The print is discussed in detail in the opening sections of the article. Signed *I. Fed. Greuter incid.* 20 × 29 cm.

Bibliography: New Hollstein German, no. 29.

13) Giovanni Lanfranco and Theodor (Dietrich) Krüger (c. 1575–1624), c. 1623 (fig. 29)

Student: probably Sforza Pallavicino (Parma and Rome).¹³³

Description: Juno, her star-spangled cloak billowing across the sky, leans out of her chariot pulled by peacocks, holding an enormous lodestone. Putti distribute shields, on the left to Minerva, mounted on horseback, who battles the forces of ignorance and barbarism represented by centaurs and fauns; and on the right to Divine Justice wielding her thunderbolt against a harpy, a sphinx, a siren, and a python. Two putti ready gold chains to honor the victors. The student's coat of arms on a shield in the center foreground is about to be swept up by the force of magnetic attraction into the chain of links and shields suspended from Juno's lodestone. The meaning is explained by a secondary emblem inscribed on another of the shields, which shows a link about to be pulled into the Parthenian chain, with the motto *additus attollar* (joining it, I will be elevated). Signed *Io. Lanfran. Parm. Inv./Teodoro Crueger sculp.* 24.5 × 34 cm.

14) Giovanni Lanfranco and Johann Friedrich Greuter, c. 1622–1625 (fig. 8)

Student: uncertain.¹³⁴

Description: Vessels are wrecked and men drown in a stormy sea, but the Ship of Philosophy survives the turmoil, safely anchored to the lodestone on shore

133 A prize pupil of the Jesuits, Marquis Sforza Pallavicino (1607–1667) defended philosophical theses at the Roman College in 1625, dedicating them to Pope Urban VIII. Shortly thereafter, he abdicated his title in favor of his younger brother Alfonso and took holy orders, eventually joining the Society of Jesus in 1637. He went on to have an illustrious career as a historian, academician, and member of the Curia, and in 1657, under Pope Alexander VII, he became a cardinal. Assuming he undertook his *atto di logica* two years before his defense in philosophy, as was the norm, the print can be dated 1623 and is thus one of the last known works by the engraver, who died in Rome in January of the following year.

134 The print contains no coat of arms per se but the eagle-prowed ship and the eagles and checkerboards that decorate its stern are probably heraldic.



Figure 29
 Giovanni Lanfranco and Theodor
 (Dietrich) Krüger, *Arcanis
 nodis*: Minerva (Virtue) and
 Divine Justice defeating the
 Vices with Juno's aid (App. 13).
 Düsseldorf.

by magnetic chains. Minerva guides the ship from the tiller, falcon-crested Logic sits in the bow, while amidships Metaphysics is surrounded by Astronomy, Geometry, Physics, and Ethics. Legend tells of magnetic islands and coastlines that exert such a powerful force that they pluck the nails from passing ships, causing them to disintegrate and founder: the bent nail and section of metal flashing glued to the foot of the mountainous lodestone allude to this tradition. The print and its sources are discussed in more detail in the article. Signed *Io. Lanfranco. del. / Io. Frid. Greuter. sc.* 23.5 × 31.5 cm.
Bibliography: New Hollstein German, no. 28.

15) Antonio Tempesta and Orazio Brunetti, c. 1626 (fig. 7)

Student: Rapaccioli (Collescipoli and Rome).¹³⁵

Description: Under cover of night, before a walled city under siege, cannons are aimed and sappers dig tunnels, both with the aid of compasses. The seated soldier on the right is magnetizing an iron needle by rubbing it against a lodestone. From a tower near the city wall, a soldier leans out, holding the emblematic lodestone and using the magnetic chain suspended from it to hoist up a sword, a helmet and a shield emblazoned with the student's heraldic turnip. The print is discussed in more detail in the article. Signed *Ant. Temp in. / Hor. Brun. F.* 24 × 34.5 cm.

16) Luca Ciamberlano, c. 1626–1632 (fig. 10)

Description: In a classical rotunda, in front of a flaming altar, the iron statue of the Egyptian queen Arsinoe is held in suspended equilibrium from powerful lodestones set into the coffers of the vault. Earthbound statues of the Egyptian pharaohs Miris, Ozymandias, Menes, Busiris, Ogdus, and Sesostris fill the intercolumniations. The print and its sources are discussed in detail in the article. Signed *LC.* 27 × 30.5 cm.

17) Antonio Pomarancio and Johann Friedrich Greuter, c. 1627 (fig. 11)

Student: possibly Cravenna (Milan) or Omati (Milan and Piacenza).¹³⁶

Description: The lovers Venus and Mars stand chastely side by side, she holding Cupid's bow and arrow and he, a spear. Venus is attended by an army of *amorini* busily manufacturing weapons and chains of love, while next to Mars a similar troupe of infant cyclops forge weapons and chains of war. All are disarmed by the magnetic pull of the Palladium, the cult image of Pallas Athena, standing on a base of lodestone, which grabs the metal tips of the arrows and spears, the lengths of chain and pieces of armor, and by neutral-

¹³⁵ Rietstap 1903–1926, 5:pl. CXXVII. The student who commissioned the print was almost certainly Francesco Rapaccioli (1608–1657), who two years later, in 1628, defended all of philosophy at the Roman College, dedicating his theses to Cardinal Francesco Barberini. Curiously, the engravings he commissioned for that subsequent occasion—his thesis print by Simon Vouet and Johann Friedrich Greuter and the frontispiece to the volume of poems sung during his defense, designed by Antonio Pomarancio and engraved by Johann Friedrich Greuter—also feature nocturnal subjects (see Rice 2009). Rapaccioli was a favorite of the Barberini and after completing his education rose rapidly through the curial ranks, becoming a cardinal in 1643.

¹³⁶ For the student's coat of arms, on the ground behind Mars's right leg, cf. Rietstap 1903–1926, 2:pl. CXLVIII (Cravenna); https://www.wikiwand.com/it/Nobilt%C3%A0_milanese#/O (Omati).

izing them establishes the superiority of reason over undisciplined passion. The Palladium is safeguarded by the nine Muses, who chase away the traditional allies of Venus (Bacchus and Ceres) and Mars (Envy and Discord). See the article for a fuller analysis of the print and its sources. Inscribed at the top with the Academy's motto and signed *Ant. Pomerancius delin. / IFed. Greuter inc.* 28.5 × 37.5 cm.

Bibliography: New Hollstein German, no. 30.

18) Antonio Pomarancio and Jérôme David,¹³⁷ c. 1622–1625 (fig. 30)

Student: Este (Ferrara).¹³⁸

Description: A wave-tossed boat approaches the safety of a harbor. Standing at the helm, a youth wearing a rooster-crested helmet and reading from an open book represents Study. Seated in front of him, a young man wearing a winged helmet with an eagle crest and holding a bow and arrows represents Intellect (*Ingegno*). Kneeling in the bow is Logic, a female figure with a Solomon's knot on her breast.¹³⁹ In a second boat, Physics and Astronomy (?) pilot Logic's craft into the harbor by means of the magnetic chain. On the right, Minerva (or a statue of her) stands at the entrance into the harbor, while above, putti blow on trumpets and display a banderole with the Academy's motto. The iconography is similar to that of Appendix no. 14; Logic plays the same role in each, meting out the magnetic chain that safeguards the Ship of Learning from the dangers that buffet it. Signed with the names of both artists. 25 × 33 cm.

Bibliography: Mariano 2017, 190.

19) Antonio Pomarancio and Valérien Regnart, c. 1625–1629 (fig. 12)

Description: Nature, wearing a robe embroidered with birds and beasts and holding a scepter to indicate her dominion, descends on clouds into a palatial workshop. An artisan kneels in front of her, pouring iron links from a basket, which are swept upward by the powerful lodestone held overhead by two putti, labeled with the Academy's motto. An inscription in the entablature that

137 The impression illustrated here is cropped at the lower edge, cutting off part of Pomarancio's name and all of David's. Another impression, in poor condition but untrimmed and bearing both artists' names, is in the collection of the Istituto Centrale per la Grafica in Rome (FC 44606; vol. 37H14).

138 The Este coat of arms topped by a coronet appears on Minerva's shield in the impression in Rome (see the previous note); it has been polished out and covered over with hatching in the later state illustrated here.

139 These personifications are loosely derived from Ripa 1618, 256 (*Ingegno*); 314 (*Logica*); 509–10 (*Studio*).



Figure 30
 Antonio Pomarancio and Jérôme David, *Arcanis nodis: The Ship of Intellect tugged into safe harbor by means of the Parthenian chain* (App. 18). Windsor.

runs around the room divides the space in two: on the left it reads IMPERIO NATVRAE (by the power of Nature); on the right, ARTIVM OPIFICIO (by the craft of art). Beneath the former, blacksmiths are at work forging arms and armor out of iron and steel; beneath the latter, workers in precious metals make fine objects such as chalices, jewelry, and gold chains. Each side is represented by a female figure accompanied by a winged putto, who offers up the products of her respective workshop. The figure on the left presents more iron links piled on a plain round board, as well as an iron hammer and a small bell; the figure on the right offers rings of a different sort—gold finger rings—plus other jewels and a gold chain arranged on a glittering silver platter. In this contest between base and precious metals, Nature favors the former, because iron alone responds to the occult virtue of the magnetic stone. The

colossal spiral columns flanking Nature are perhaps meant to recall the columns of Bernini's bronze baldacchino, which were in production in the Vatican foundry at the time the print was made. Their inclusion here helps to define the setting as a palace of metallurgy, where blacksmiths, goldsmiths, and metal workers of every stamp apply their craft under Nature's guardianship.¹⁴⁰ The print is discussed in more detail in the article, under the subheading Nature's Realm. Inscribed above AMDG and signed *Ant Pomerancius delin. / Valerianus Regnartius sculp.* 24 × 30 cm.

Bibliography: Mariette 1969, 210, no. 78: "La nature formant par la seule vertu d'une pierre d'aimant une chaisne de fer plus merveilleuse que celles qui ont été faittes par l'Art."

20) Antonio Pomarancio and Valérien Regnart, 1621–1629 (fig. 15)

Student: unidentified.¹⁴¹

Description: The central scene represents the shape-shifting sea god Proteus, who, having been caught and enchained, resumes his natural form. His captors use lodestones to magnetize the chain with which they bind him (although, surprisingly, the chain itself is a conventional one made of linked links). Four philosophers look on, contemplating and discussing the scene. The banderole above Proteus is inscribed EXPEDIET CAVSAS (he will disclose the causes), an abbreviated paraphrase of a passage in Virgil's *Georgics* (IV.396–97) that also appears in an earlier Parthenian print starring Proteus (see Appendix no. 10 above). The print is discussed in the article.

Surrounding the framed scene in roughly chronological order are medalion portraits of ten late antique and medieval philosophers who wrote on magnetism, linked to one another by Parthenian chains. They are, on the left, from top to bottom, Alexander of Aphrodisias (fl. 200 CE), Ammonius Hermiae (c. 440–c. 520), Simplicius of Cilicia (c. 490–c. 560), Avicenna (980–1037), and Albertus Magnus (c. 1200–1280); and on the right, from top to bottom, Themistius (317–c. 390), John Philoponus (c. 490–c. 570), Boethius (c.

¹⁴⁰ An alloy of copper and tin, bronze is not magnetic. Pomarancio nevertheless seems to associate it with the base metals favored by Nature, for among the offerings presented by the winged putto on the left is a hand bell, an object made of bronze. Bronze-founders—"fonditori di metallo"—were, in fact, in the same professional association as the ironworkers. See *Statuti* 1839, 19, no. 7; Centofanti 1999.

¹⁴¹ The student's heraldry, framed in a circle of links, appears just below the figure of Proteus.

477–524), Averroes (1126–1298), and Thomas Aquinas (1225–1274).¹⁴² Inscribed above AMDG, and signed *Ant. Pomeran. Invent. / Valerianus Regnartius sculpsit.* 27 × 30.5 cm.

Bibliography: Mariette 1969, 210, no. 77.

21) Giovanni Lanfranco and Johann Friedrich Greuter, c. 1622–1625 (fig. 17)

Student: unidentified.¹⁴³

Description: In the sky, Apollo holds the lodestone from which is suspended the magnetic chain which he draws up from a basin full of links held by two putti below. On either side of Apollo are the planetary deities Jupiter, Saturn, Venus, Diana, Mercury, Mars. A conventional chain connects these celestial deities with the gods of the sublunary world, who symbolize the four elements: Cybele (earth), Juno (air), Vulcan (fire), and Neptune (water). The print and its philosophical frame of reference are discussed in more detail in the final section of the article. Inscribed above, AMDG. Signed *Io: Lanfrancus delin. / Io: Federicus Greu: sc.* 25 × 32.5 cm.

Bibliography: New Hollstein German, no. 26.

22) Giovanni Lanfranco and Johann Friedrich Greuter, c. 1622–1625 (fig. 31)

Student: Filonardi (Rome).¹⁴⁴

Description: In antiquity, the lodestone was often referred to as the Hera-clean or Herculean stone. It probably got this label from Heraclea, a town in Lydia in Asia Minor said to be a source of high-quality lodestone. Inevitably, though, as a rock that exerts force over other objects, it came to be associated with the strongman himself, and the print alludes to that tradition by illustrating a medley of episodes from Hercules's life.¹⁴⁵ The hero himself stands

¹⁴² On the philosophers depicted here and their contributions to the study of magnetism, see Radl 1988, passim; Keyser and Irby-Massie 2008, passim; Jones and Taub 2018; and Lindberg and Shank 2013, passim.

¹⁴³ The crowned spread eagle on the side of the basin of links (lower center) is probably heraldic, but the motif is so common that, without colors to distinguish it, there is no way of pinpointing the family to whom it belongs.

¹⁴⁴ Rietstap 1903–1926, 2:pl. CCCXXIV. The student may have been a nephew of Cardinal Filippo Filonardi (1582–1622).

¹⁴⁵ Della Porta 1658, 190: "Plato saith, some call it Heraclius. Theophrastus in his book of Stones calls it 'Ἡράκλειον, that is Herculeum, because he found it about the city Heraclea. Others think it denominated



Figure 31
 Giovanni Lanfranco and Johann Friedrich Greuter, *Arcanis nodis*: Three myths involving Hercules (App. 22). Paris.

near the center, holding up a magnetic boulder inscribed HERCVLEVS LAPIS ACADEMIAE PARTHENIAE. Near the center is Hesione, daughter of King Laomedon, who like Andromeda was offered up as sacrifice to appease a voracious sea monster. Hercules, finding her chained to a rock, liberated her and killed the monster (Diod. Sic. IV.42; Valerius Flaccus, *Argonautica* II.451–549; Philostr., *Imag.* XII). Prometheus, too, on the far right, was bound with chains and suffered the torture of an eagle perpetually pecking at his liver, until Hercules shot the bird and set him free (Diod. Sic. IV. 15; Quint. Smyrn. VI. 268–72).¹⁴⁶ On the left is a slumbering giant, probably either Antaeus or

from Hercules: for as he conquered and subdued all beasts, and men, so this stone conquers Iron, which conquers all things.”

¹⁴⁶ An earlier state of the print differs from the one illustrated here in that it shows Prometheus with only the subtlest of wounds and omits the slaughtered eagle at his side. Presumably the engraver was instructed to make the wound gorier and to add the bird in order to facilitate the identification of the figure. While he was

Alcyoneus, both of whom were sons of the earth goddess Gaia, from whom they derived their strength. Hercules defeated Antaeus by lifting him off the ground, severing his connection with his mother (Apollod., *Bib.* II.5.11; Luc., *Civil War* IV.609–55), and Alcyoneus by dragging him outside the borders of his native land (Apollod., *Bib.* I.6.1–2). Hercules’s rescues of Prometheus and Hesione, both involving chains and both salvational in import, are easily related to the Academy’s emblem. The significance of the Antaeus / Alcyoneus story is harder to pinpoint, but probably has to do with the giant’s connection to his mother the earth.¹⁴⁷ The lodestone is a product of the earth, and just as the giants derived strength from their contact with the ground, so iron derives magnetic virtue from its contact with the lodestone. Overhead, a spread eagle holds a banderole inscribed with the Parthenian motto. The bird is heraldic, as is the oak tree at the far left of the composition, both alluding to the Filonardi coat of arms, which hangs from a branch of the tree. Signed *Io. Lanfr. delin. / Io. Fred. Greuter inc.* 25.5 × 38 cm.
Bibliography: New Hollstein German, no. 27.

23) Pietro da Cortona and Charles Audran, c. 1629–1633 (fig. 6)

Student: Rondinini (Rome).¹⁴⁸

Description: Aeneas, accompanied by his father Anchises and his companion Achates, stops briefly on Crete, where he consults a navigational chart with the help of Melissa and Amalthea, the daughters of the king of Crete. Jupiter appears overhead, banning the Trojans from settling on the island and reminding them that their destiny is Rome. Jupiter’s eagle holds the lodestone

at it, he also scattered a few more broken links onto the magnetic ground. Both states are illustrated in New Hollstein German.

¹⁴⁷ Curiously, although no extant text from antiquity describes either Antaeus or Alcyoneus sleeping, vase painters regularly depicted the latter stretched out on the ground, sound asleep, sometimes with Hypnos himself squatting on his chest or flying above him. Presumably Lanfranco or his iconographic adviser was aware of this visual tradition. Lanfranco had giants on his mind around the time he designed the print; his painting of *Norandino and Lucina discovered by the Ogre* (c. 1619–1624) and his Borghese ceiling (1624–1625) are roughly contemporaneous with it. In purely formal terms, the beautifully foreshortened figure of the giant is also reminiscent of the swooning Virgin in the *Road to Calvary* that the artist painted for the Sacchetti chapel in S. Giovanni dei Fiorentini, also around the same time (1621–1624).

¹⁴⁸ Ameyden 1910–1914, 2:170–71. The student was probably Bonaventura Rondinini (born 1611) or his younger brother Paolo Emilio (1617–1668); or, indeed, both of them in succession. The brothers were friends of the Barberini nephews, and Paolo Emilio was later made a cardinal by Pope Urban VIII (1643).

and links directly over the compass, which points in the direction that the Trojan fleet, visible on the horizon, has already taken. References to magnetism and other invisible forces of attraction abound. A swarm of bees on the far right, drawn from their hive by the scent of flowers, converge to form the coat of arms of the student's sponsor, Cardinal Antonio Barberini; the Maltese cross on the side of the ship confirms that the bees are his. See the article for a fuller discussion. Signed *Petr. Beretin. Corton. del. / K. Audran Paris. inc. Romae.* 27 × 38 cm.

Drawings: Vienna, Albertina, inv. 904. Pen and ink and wash over black chalk; 27.5 × 39 cm. (Birke and Kertész 1992–1997, 1:470–71, with mention of other preliminary studies, one in the Morritt Collection at the Bowes Museum and another auctioned at Sotheby's 10 Dec 1968, lot 17 and 2 Dec 1969, lot 103.)

Bibliography: Mariette 1996–2003, 3:642; Weigert 1939, 1:185, no. 156; Rice 1998, 192–94.

24) Alessandro Vaiani (d. 1632) and Charles Audran, c. 1630 (fig. 32)

Student: unidentified.¹⁴⁹

Description: In a rugged landscape, between steep cliffs, river gods representing cities and regions of France pour forth their waters. The devices on their oars link them with Paris (Seine), Lyon (Rhône), Dauphiné (Isère), and so forth. The two lions passant on the stone in the lower right corner are the symbol of Bigorre, a region in southwest France only recently incorporated into the royal domain (1607). At the center of this watery gathering, a giant slab of lodestone is supported on poles over a plinth or altar inscribed with the Parthenian motto. Fleurs-de-lis scattered at random across the surface of the lodestone identify it with France. They have the appearance of being consubstantial with the stone, like fossils preserved in matrix, as though to suggest that the very bedrock of France contains the seeds of its royal destiny.¹⁵⁰ In place of the usual iron links, crowns and victory wreaths float upward

¹⁴⁹ The student's coat of arms appears on the shield hanging from the trophy on the left. It is difficult to make out. Topped with a knight's helmet, it is quartered, with a lion (?) rampant in quadrants 1 and 4 and with three stars over three flowers or branches in quadrants 2 and 3. The heraldry is similar but not identical to that of a French family, the Bertin de Saint-Géran (Rietstap 1903–1926, 1:pl. CXCVII). Although most Parthenian prints (with the notable exception of Appendix, no. 1) were commissioned by Italians, the apparently French subject matter of this particular print makes it more likely that a Frenchman was involved.

¹⁵⁰ Compare, for example, the slab full of ammonite fossils illustrated in Bauhin 1598, bk 4:7; <https://archive.org/details/historianovietadoobauh/page/6/mode/2up>.



Figure 32
Alessandro Vaiani and Charles Audran, *Arcanis nodis*: An altar to military glory surrounded by river gods (App. 24). Paris.

from platters arranged on the plinth, responding to the stone's inexorable pull. The crowns are not those worn by kings and peers; they are the military prizes that, in antiquity, were awarded to Roman soldiers for feats of extraordinary heroism: mural crowns for the first soldier to scale the walls of a besieged town; camp crowns for the first soldier to penetrate an enemy encampment; and naval crowns for the first man to board an enemy ship during an engagement at sea.¹⁵¹ Along with the trophies hanging from the poles, the wreaths and crowns imply that this is an altar to French military glory. If or how it might

¹⁵¹ These military crowns are described by several ancient authors, in particular Aulus Gellius (*NA* V.6.16–19), and are illustrated in several early modern texts, including Paradin 1557, 248–54 and Lauro 1610, pl. 16. Vaiani must have consulted one of these, probably Lauro, because his crowns are identical in every respect. The crowns were also sometimes used to top the coats of arms of certain cities.

relate to recent events within the realm, such as the siege and capture of the Huguenot stronghold of La Rochelle (1627–1628), is less clear.

Intriguingly, Mariette related the print “to the conquests of Louis XIII in the Alps.”¹⁵² He evidently had in mind the opening engagements in the War of the Mantuan Succession, when French troops, pushing their way into Italy, ended the Spanish siege at Casale Monferrato and took possession of the fortress town of Pinerolo. The landscape in the print does vaguely recall the mountain pass linking France and Italy, where, on 6 March 1629, the French army under the personal command of the king broke through defensive barricades that had been set up to block their approach.¹⁵³ The victory at Pas de Suze (Susa) had important consequences, in that it forced the duke of Savoy to break his treaty with Spain and to give France access to northern Italy through his territories. The river god whose pointing finger hovers above the word ARCANIS might, then, be the Dora Riparia, the river that runs through Susa; the two-towered castle on his oar recalls the arms of that town.¹⁵⁴ The trefoil cross on the oar of the younger, beardless river god on the right is a motif associated with Savoy and might therefore refer to French territorial expansion into Piedmont.¹⁵⁵ The horizontally striped shield on the oar of the river god immediately behind him resembles the arms of Pinerolo, besieged and captured by the French in 1630.¹⁵⁶

Whatever its precise meaning, the French subject matter is unprecedented in an ARCANIS print, as is (assuming it was intended) the reference to contemporary political events. It would be fascinating to know more about

152 Mariette 1996–2003, 3:642: “Les Divinités des fleuves qui ont leurs sources dans les Alpes, étonnés d’y voir parmy eux une pierre d’aiman marquée aux armes de France, à laquelle des couronnes et les autres marques de la victoire viennent s’attacher d’elles mêmes. Cette piece emblematicque, qui a rapport aux conquestes de Louis XIII dans les Alpes, est du dessin d’Alexandre Vaiani.”

153 A print by Abraham Bosse, one of several recording the battle of Pas de Suze in progress, shows rocky cliffs dotted with cypresses and raggedy pine trees similar to those in the upper right quadrant of Vaiani’s composition: <https://gallica.bnf.fr/ark:/12148/btv1b6945260g?rk=128756;0>.

154 Many small fortress towns have similar heraldry, however, and without their distinguishing colors the arms are not unique to Susa.

155 The trefoil cross in white, when combined with the Maltese cross in green, forms the badge of the Order of SS. Maurice and Lazarus, the military knighthood established by the dukes of Savoy in 1572. It appears emblazoned on the armor of both Carlo Emanuele I (r. 1580–1630) and his son Vittorio Amedeo (r. 1630–1637), and is stamped on Savoyard coins of the period.

156 The original arms of the town of Pinerolo (alternating black and white horizontal stripes) can still be seen on the façade of the church of S. Maria Liberatrice in Pinerolo, built shortly after the plague of 1630.

the circumstances of the commission. Coincidentally, in 1629, around the time that the print was made, the Italian Jesuit Niccolò Cabeo dedicated his treatise on magnetism, the first major work on the subject to be published since William Gilbert's *De Magnete* of 1600, to Louis XIII of France. Signed *Alexander Vaianus Inve. / C. Audran sculpsit*. 27 × 37.5 cm.

Bibliography: Mariette 1996–2003, 3:642; Weigert 1939, 192, no. 217.

25) Andrea Camassei and Camillo Cungi, c. 1635–1637 (fig. 9)

Student: unidentified.¹⁵⁷

Description: Alexander the Great and his army in India arrive at a magnetic region, the force of which plucks the metal shoes from their horses' hooves and drags their iron weapons to the ground. The Academy's emblem appears on the banner above Alexander and the student's coat of arms on Alexander's shield. The heraldry of the dedicatee is also present, implanted into the narrative on the right, where a banner embroidered with three fleurs-de-lis flutters over three swords tugged downward by the ground's irresistible magnetic force, the two motifs converging to form the arms of a member of the Spada family.¹⁵⁸ The army of King Porus approaches in the distance. The print and its sources are discussed in more detail in the article, under the subheading Tall Tales. Signed *A. C. D. / C. C. S.* 25 × 32 cm.

26) Giovanni Antonio Lelli (1591–1640) and Camillo Cungi, c. 1634–1637 (fig. 33)

Student: Casale or Casali (Rome).¹⁵⁹

Description: Minerva uses the Parthenian chain to join Metaphysics, standing behind her on the left, with Physics, Logic (?), Medicine, Law, and Philosophy. The iconography emphasizing the interconnectivity of the disciplines prefigures that of the frontispieces to Kircher's *Magnes* (1641), illustrated above at **fig. 3**, and his later *Ars magna sciendi sive combinatoria*, volume II (1669). Putti in the upper right corner hold aloft the emblematic lodestone; two more in the upper left corner support the student's coat of arms, topped by a knight's helmet. Signed *Ioannes Antonius Laelius inventor / C. Cungi F.* 25.5 × 37.5 cm.

¹⁵⁷ The shield is quartered, with (1) a lion rampant facing right, holding a flower or branch, a bend with three stars; (2) two stars over a chevron; (3) a single star over a horse and a bull facing one another, each issuant from three monts; and (4) a single star.

¹⁵⁸ Rietstap 1903–1926, 5:pl. CCCXXIX.

¹⁵⁹ Rietstap 1903–1926, 2:pl. XXXIII; Ameyden 1910–1914, 1:273.



Figure 33
Giovanni Antonio Lelli and
Camillo Cungi, *Arcanis nodis*:
Minerva using the Parthenian
chain to link Metaphysics to
Philosophy, Law, Medicine, and
other academic disciplines (App.
26). Paris.

27) Giovanni Antonio Lelli and Camillo Cungi, c. 1636–1637 (fig. 34)

Student: probably Vitaliano Visconti Borromeo (Milan).¹⁶⁰

Description: A heroic male figure in his prime, dressed in antique armor, stands in a watery setting, surrounded by three river gods and four tree-topped

¹⁶⁰ Heraldic references point to the likelihood that the student was a member of the Visconti Borromeo family of Milan. Note, in particular, the *biscione* (the viper devouring a child) of the Visconti and the bridle of the Borromeo, the two charges that, when quartered, make up the heraldry of the Visconti Borromeo (Crollanza 1886–1890, 3:102). Almost certainly the print was commissioned by Vitaliano Visconti Borromeo (1618–1671), who undertook an *atto di logica* at the Roman College sometime in the mid to late-1630s. The second son of Count Fabio Visconti Borromeo and Bianca Spinola, Vitaliano enrolled as a boarder at the Roman Seminary in 1628, at the age of ten, but was expelled three years later because of his involvement in a student revolt. After a brief sojourn at the Collegio Clementino, he transferred to the Roman College, where he completed the three-year course in philosophy and earned his doctorate (Rome, APUG, ms. 2801, 793). Later, he entered the Church and in 1666 he was made a cardinal by Pope Alexander VII. What might be another coat of arms—an arcaded palace façade below a coronet—is held by one of the putti just to the left of the hero, but I have not so far been able to identify or relate it.



Figure 34
Giovanni Antonio Lelli and
Camillo Cungi, *Arcanis nodis*:
The mythic progenitor of the
Visconti dynasty (App. 27).
Paris.

nymphs pouring water from vases. The iconography is dense and difficult to parse, but clearly has to do with Milan, the native city of the student who commissioned the print. The haloed miter and scourge are attributes of St. Ambrose, bishop (374–397) and patron saint of the city.¹⁶¹ The rivers may be those that cut across Lombardy, enclosing Milan on three sides: Adda, Ticino, and Po, all notoriously prone to flooding.¹⁶² If so, then the water-pourers should

161 The whip or scourge symbolizes Ambrose's vigorous quashing of heresy and is a common attribute of the saint. See, for example, coins issued in Milan during the period of Visconti rule—specifically, the *grosso*, also known as the *ambrosino*—which features the bishop, enthroned, wearing his miter and wielding his whip in his right hand, on the obverse. The haloed miter could also allude to another sainted archbishop of Milan, Carlo Borromeo, to whom the student was related.

162 The river god on the left holds a shield decorated with an arcuated bridge, possibly a reference to the 14th-century Ponte Azzone Visconti, which spans the River Adda where it exits the Lake of Como at Lecco. The river god on the right has no shield but sits in a chariot decorated with a leafless tree and pulled by crows; Ticino's source in the frigid Alps might explain his wintry appearance. The river god swimming in the foreground is undoubtedly Po. He wears a wreath of poplar leaves tucked inside his coronet. Intriguingly,

be the Heliades, the sister of Phaeton who turned into poplar trees on the banks of the Po as they mourned the fiery death of their foolhardy brother.¹⁶³ Who, then, is the protagonist, crowned with a coronet held over his head by an imperial eagle, symbol of Ghibelline Milan? Already by the end of the 14th century, court genealogists had invented an ancient ancestry for the Visconti, which they traced back to a certain grandson of Aeneas, one Anglus. Embracing this legendary past, the Visconti adopted the name Anglus as an honorific and used it on their medals and in other panegyric contexts. The hero in the print could be this mythical forebear Anglus, therefore, or he could be a more recent member of the family—the obvious candidate being Gian Galeazzo Visconti (1351–1402), first duke of Milan—in the guise of Anglus. The fact that the figure is dressed *all'antica* but holds a staff tipped with a cross suggests that a conflation of some sort is intended.¹⁶⁴ Depicted as the progenitor of the dynasty, he wears a medallion with the Visconti sunburst on his chest, and has objects around him identifying Lombardy as a land of agricultural plenty, learning, nobility, and piety. The Academy's motto is not included in any state that I have come across, but the lodestone and links on the hero's shield along with the blank banderole connect the print to the Parthenian series. Signed *Ioannes Antonius Laelius Inventor / Camillus Cungius F.* 26.5 × 38.5 cm. *Drawing:* Florence, Uffizi (Fischer Pace 1997, 50–51, cat. 24 and fig. 27).

28) Giovanni Antonio Lelli and Johann Friedrich Greuter, c. 1635 (fig. 35)

Student: Guastavillani (Bologna).¹⁶⁵

this old man river, alone of all the figures in the print, is not present in Lelli's preparatory drawing and seems to have entered the design as an afterthought.

163 The identification of the water-pourers as the Heliades is made problematic by the fact that their leafy tree-tops look more like laurels than like poplars.

164 The family's mythic genealogy is outlined in Pietro da Castelletto's 1403 funeral oration for Gian Galeazzo Visconti and is illustrated in the accompanying family tree, illuminated by Michelino da Besozzo, which opens with the marriage of Venus and Anchises and continues through a series of crowned profile portraits of Aeneas, Ascanius, Anglus, and so on down through the generations, culminating in portraits of Gian Galeazzo and his two sons (Paris, BN, ms. 5888, f. 7; <https://gallica.bnf.fr/ark:/12148/btv1b10020318d/f25.image>).” Curiously, Lelli seems to have modeled the hero not on the likeness of Gian Galeazzo but on that of an earlier and less illustrious member of the family. With his bifurcate beard and long wavy hair parted down the middle, he bears a strong if idealized family resemblance to Galeazzo I Visconti (1277–1328), as pictured in Giovinio 1549, 182 (https://www.britishmuseum.org/collection/object/P_1856-1213-191).

165 The coat of arms of the Guastavillani consists of three concentric rings, or *armille*. After being made a cardinal by Pope Gregory XIII, Filippo Guastavillani (1541–1587) quartered his arms with those of the



Figure 35
 Giovanni Antonio Lelli and
 Michel Natalis, *Arcanis nodis*:
 A panoply hung from a tree in
 honor of Minerva (App. 28).
 Paris.

Description: Near an army encampment, a panoply of armor hangs from a lodestone supported by putti in the branches of a tree. It is inscribed VICTRICI PALLADI (to the victorious Pallas Athena). On the left, a female figure in armor (possibly Minerva herself, although, in truth, she does not look very Minerva-like) points to the trophy while holding a shield decorated with the Academy's emblem and the student's coat of arms. On the right, the commander of the army likewise draws attention to the panoply. Soldiers gathered behind both figures appear to be amazed by what they see. There are several instances in classical literature of trophies being dedicated to Minerva by the

Boncompagni (Crollalanza, 1886–1890, 1:510) and the student who commissioned this print advertises his relationship to the cardinal by taking the Boncompagni dragon as his helmet crest. The position of the coat of arms directly below the emblematic rings draws attention to their formal similarity and suggests that the Guastavillani rings are lifted up by that same mystical power of attraction that draws the rings of the Parthenian Academy.

likes of Odysseus (Hom., *Il.* X.459–68); Alexander the Great (Arr., *Anab.* 1.16.7); and Pyrrhus of Epirus (Plut., *Vit. Pyrrh.* xxvi.5). But none of these accounts quite fits with what is represented here. This is one of several ARCANIS prints still in search of its subject. Signed *Io. Ant. Lelius delin. / IF. Greuter inci.* 26 × 37.5 cm.

Bibliography: New Hollstein German, no. 31.

29) Giovanni Antonio Lelli and Valérien Regnart, c. 1635 (fig. 36)

Description: Minerva enters stage left in a triumphal chariot pulled by eagles. She is a Christianized version of herself, personifying Divine Wisdom; her shield bears a cross above the Medusa head and her banner is embroidered with the pelican feeding its young with its own blood, a symbol of Christ. She is preceded by her prisoner, captive Ignorance, wearing a bat diadem decorated with poppy pods and bound with magnetic chains suspended from the emblematic lodestone and motto carried aloft by winged putti.¹⁶⁶ On the right, three Vices confront and threaten the goddess. One aims an arrow in her general direction while stepping on a caduceus, the symbol of eloquence and industry. Another pulls an arrow out of a quiver, apparently to supply the archer; a shield emblazoned with a satanic sea-serpent is propped up next to him. The third Vice, an old man holding a snake and flowers in his left hand and three indecipherable objects (meant to be barbed fishhooks) in his right, answers the description of Deceit (*Inganno*) in Cesare Ripa's *Iconologia*.¹⁶⁷ In the upper left corner, above Minerva, a putto holding a flaming torch is surrounded by rays of light. In the upper right corner, in contrast, storm clouds define an area of inky darkness, out of which a putto extends an unlit torch toward the Vices. The two torches, one lit and one unlit, epitomize the oppositions at the core of the invention: day and night, enlightenment and confusion, industry and sloth, virtue and vice. The architectural backdrop reminiscent of the Campidoglio provides an appropriate setting for Minerva's victory parade. Signed *Io. Ant. Lælius invent. / Val. Regnartius sculp.* 26.5 × 39.5 cm.

¹⁶⁶ Ripa 1618, 247–48: “Ignoranza ... in capo haverà una ghirlanda di Papavero ... & a canto vi sarà per l'aria un Pipistrello overo Nottola.” Ignorance is associated with Night “perche, come dice Pierio Valeriano lib. 25, alla luce somiglia la sapienza, & alle tenebre, dalle quali non esce mai la Nottola, l'ignoranza.”

¹⁶⁷ Ripa 1618, 256–57: “nella mano destra tenga molti hami, e nella sinistra un mazzo di fiori, dal quale esca una serpe. Si dipinge con gli hami in mano, come quelli che coperti dall'esca pungono, e tirano pungendo la preda, come l'ingannatore, tirando gl'animi semplici dove ei desidera. [...] Il mazzo di fiori con la serpe in mezzo, significa l'odor finto della bontà, donde esce il veleno vero degli effetti nocivi.”

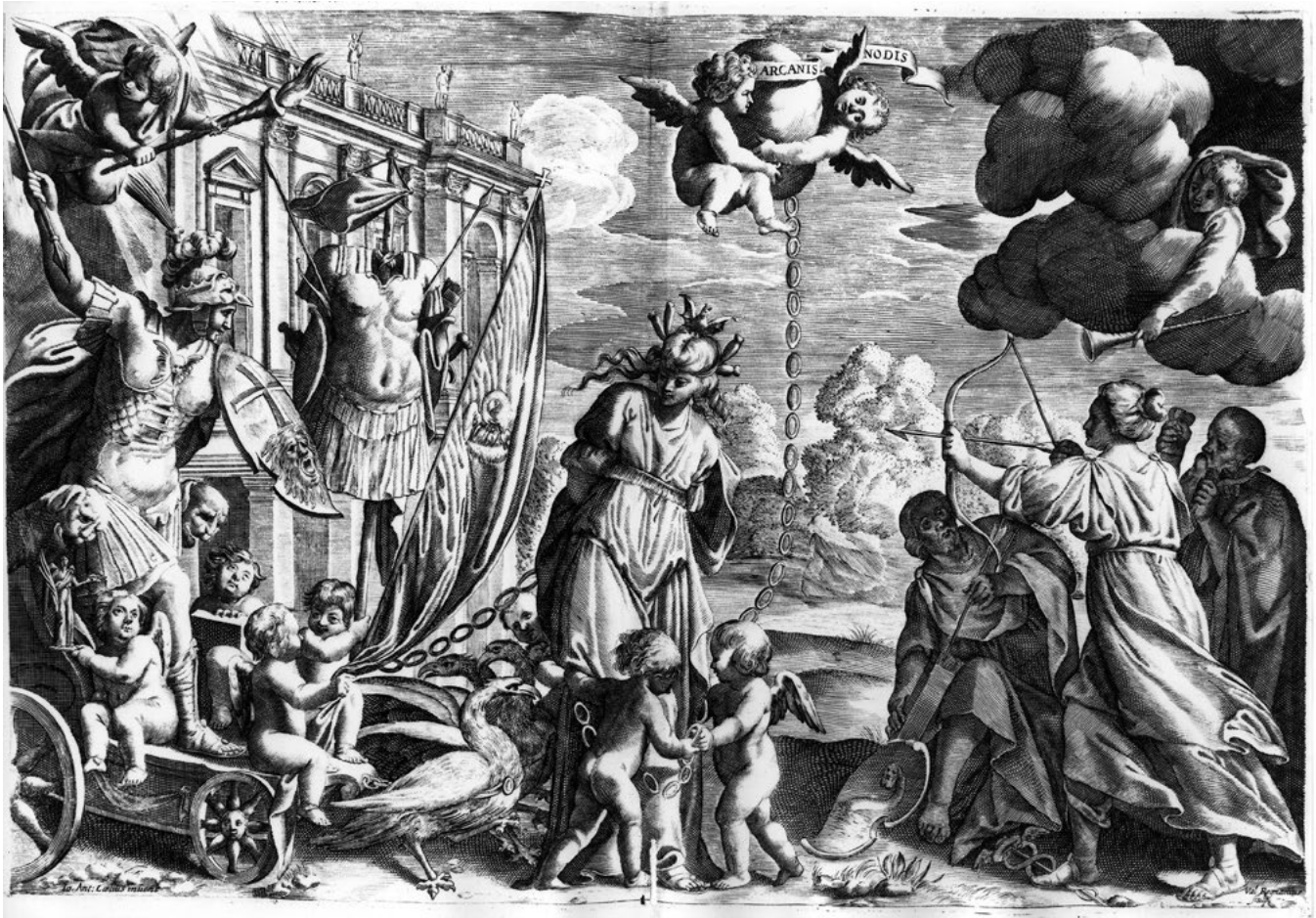


Figure 36
Giovanni Antonio Lelli and
Valérien Regnart, *Arcanis nodis*:
The triumph of Wisdom over
Ignorance and Vice (App. 29).
Rome, Casanatense.

30) Valérien Regnart (fig. 37)

Description: A central tiered pedestal supports the lodestone and links with the motto of the Academy. Flanking it are female figures personifying four branches of mechanical or applied knowledge that harness and utilize the power of magnetism. They are, from left to right, Astronomy, accompanied by a putto with a diptych sundial; Geometry, Perspective, or *Misura* (Measurement), wearing a garment decorated with straight lines, and with a putto holding a plumb-line or sounding lead; Military Architecture, with a putto holding arms, and with a shield depicting a fortification; and Navigation or Hydrography, with a putto holding a tiller, and with a model ship and a nautical chart. Inscribed above, *DOM* (*Deo optimo maximo*). Signed *Valerianus Regnartius sculpsit*. 19.5 × 26.5 cm.

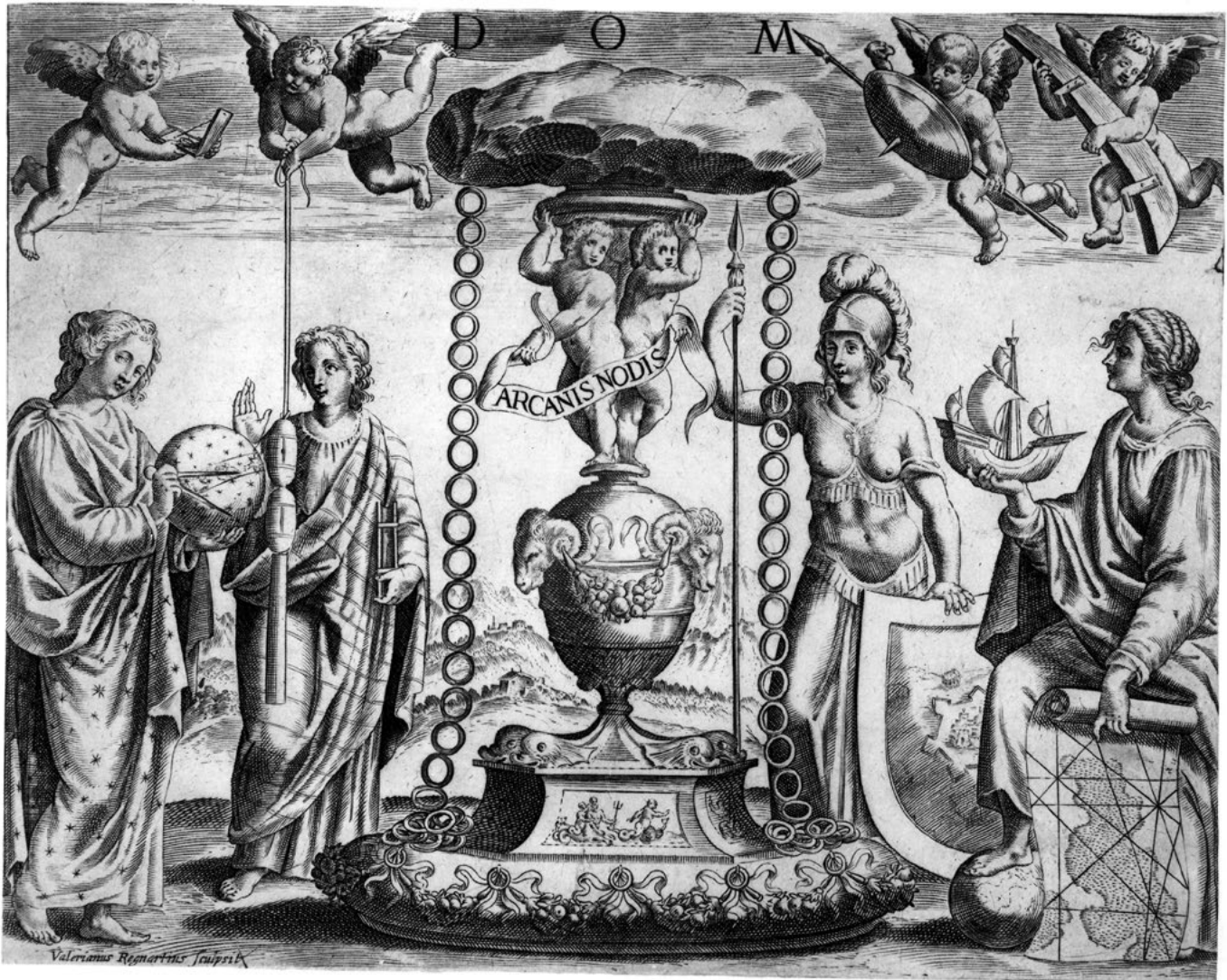


Figure 37
Valérien Regnart, *Arcanis nodis*:
The Parthenian lodestone and
links flanked by personifications
of four mechanical sciences
(App. 30). Paris.

31) Valérien Regnart, c. 1630 (fig. 38)
Student: probably Giovanni Grillo (Genoa).¹⁶⁸

¹⁶⁸ Rietstap 1903–1926, 3:pl. XCVI. The student's coat of arms, representing a cricket (in Italian, *grillo*), is depicted on the stone in the lower right corner. In 1630, Giovanni Grillo, a convict (or boarder) at the Roman Seminary, made an *atto di logica* "fuori del Seminario"; i.e., at the Roman College (Rome, APUG, ms. 2801, 816: "Giovanni Grillo convittore havendo studiato la logica in Seminario fece una disputa di tutta la logica fuori del Seminario, stampando le sue conclusioni"). This student came to a bad end. After leaving school, he set up as a banker and married but he lived extravagantly and squandered money to the extent that his bank failed and he ended up in prison (*ibid.*, 794).



Figure 38
Valérien Regnard, *Arcanis nodis*.
The gods of Olympus defeating
the rebellious giants (App. 31).
Paris.

Description: Jupiter and the other Olympians defeat the rebellious giants in the primordial battle known as the gigantomachy. 17th-century physicists could not have known the theory widely accepted today, that lodestones are formed when magnetite is subjected to a magnetic field generated by lightning strikes. And yet one could almost imagine that whoever chose the subject of the print had some intuition of this. For by representing Jupiter flinging his thunderbolt at the boulders tossed up from the subterranean regions, he was, in a sense, illustrating the origin of lodestones. In the background, two river gods inhabit a serene landscape where a cloud-borne figure holding the emblematic lodestone draws iron rings up from the ground, as if to indicate that the metaphorical chain linking heaven and Earth—i.e., the natural order of things—has been restored following the disruption of the giants’ uprising. The motto is missing from the state illustrated here. Signed *Val. Regnardius sc.* 27 × 38 cm.

32) Valérien Regnart, c. 1630 (fig. 39)

Description: Rhetoric, crowned with roses and with the fire-breathing Chimaera at her feet, holds a plumb-line and various instruments in one hand and the emblematic lodestone in the other.¹⁶⁹ Her hybrid pet (the Chimaera is part lion, part goat, and part serpent) symbolizes the three categories of oratory outlined by Aristotle, namely, the deliberative, the forensic [judicial], and the epideictic.¹⁷⁰ To the left and right are two orators, each with a potted rose bush beside him. The rose next to the elderly orator on the left is flowering, and putti gather its blossoms and weave them into a wreath. The rose next to the youthful philosopher on the right bares its thorns, and a putto whips himself with one of its barbed branches. The tablets the two men hold are likewise of contrasting design, the one elegantly framed and the other without ornament. Together, the two orators stand for the opposing objectives, positive and negative, that Aristotle assigned to each of his three categories of rhetoric: “The deliberative kind is either hortatory or dissuasive [...] The forensic kind is either accusatory or defensive [...] The epideictic kind has for its subject praise or blame” (Arist., *Rh.* I.3). Three putti festoon the statue base with the magnetic chain suspended from the lodestone in Rhetoric’s hand, while another of them hovers overhead with a banderole, blank in the state illustrated here, but certainly meant to carry the motto *ARCANIS NODIS*. The impression illustrated here is missing a strip in the lower left corner, where

¹⁶⁹ The lodestone is a perfect metaphor for the art of rhetoric, for just as the magnet influences and attracts iron, so rhetoric influences and attracts those who listen to it. The analogy is expressed in the caption to Marin Bonnemier’s *Allegory of Rhetoric* in his series of prints representing the Seven Liberal Arts (c. 1563–1573): “J’attire à moy, comme Fer faict l’Aymant, / Tout noble Coeur de vertu autentique, / Par mes beaux vers & parler resonant: / C’est le devoir de Dame Rethorique”; <http://hdl.handle.net/10934/RM0001.COLLECT.85178>. One of the best-known figures of rhetoric is the so-called Gallic Hercules, who fetters his audience with chains that extend from his mouth to their ears, symbolizing the powerful allure of words (cf. the symbol for rhetoric on the frontispiece to Kircher’s *Magnes*, illustrated above at fig. 3). Given Hercules’s association with the magnet—the *lapis herculea*—and the Gallic Hercules’s association with chains, one might have expected that the Gallic Hercules would make an ideal subject for a Parthenian thesis print, but, somewhat surprisingly, he shows up in none of them, or at least none of them that has survived.

¹⁷⁰ Ripa (1618, 444) describes Rhetoric as “Donna bella, vestita riccamente, [...] & alli piedi vi sarà una chimera.” He goes on to explain: “La Chimera, come è dipinta al suo luogo, Nazianzeno, e lo espositore d’Hesiodo intendono per questo mostro le tre parti della Rettorica, cioè la giudiciale per lo Leone, per cagione del terrore, che dà i rei, la dimostrativa per la capra, percioche in quel genere la favella suole andare molto lascivamente vagando: & ultimamente la Deliberativa per lo Dragone per cagione della varietà degl’argomenti, & per li assai lunghi giri, & avvolgimenti, de quali fa di mestiere per il persuadere.” See also Sambucus 1564, 142–43.



Figure 39
 Gregorio Grassi (attrib.) and
 Valérien Regnart, *Arcanis nodis*:
 A statue of Rhetoric between
 two opposing orators (App. 32).
 Paris.

one might expect to find the name of the inventor (probably Gregorio Grassi). Signed *Val. Regnartius sculp.* 25 × 31.5 cm.

33) Valérien Regnart, c. 1630 (fig. 13)

Description: Nature sits enthroned in a rustic niche made of lodestone, teeming with birds, fish, and other animals, and with an abundance of fruits and vegetables pouring out of her cornucopia. Attached to the niche with magnetic chains are Uranus (heaven) and Gaia (Earth), reclining below. The bear-shaped constellation against which Gaia leans is Ursa Minor, home to the pole star. Above, paired figures personifying the opposing forces that govern men's lives are attached to the niche by magnetic chains. They are, from top to

bottom: the sun vs the moon, or day vs night; the dragon biting its tail (eternity) accompanied by the phoenix rising from the flames (immortality) vs Father Time, representing decay and the brevity of life; and finally, Fortune (opportunity) vs Sleep (dreams, fantasies). A seventh figure at the very top lacks identifying attributes but might symbolize *vita humana*. This print is discussed in more detail in the article, under the subheading Nature's Realm. Inscribed AMDG and signed *Val. Regnartius sculpsit*. 20 × 26.5 cm.

34) Valérien Regnart (attrib.), c. 1630 (fig. 16)

Student: possibly Muccioli (Urbino and Rome).¹⁷¹

Description: In a landscape, six philosophers, representing a millennium of Greek thought, delve into the mystery of the magnetic chain. Identifiable by the names on the tablets, they include two pre-Socratics, Diogenes of Apollonia (fl. fifth c. BCE) and Thales of Miletus (c. 624/23–c. 548/45 BCE); two representatives of the golden age of Greek philosophy, Epicurus (341–270 BCE) and Plato (c. 429/23–c. 348/47 BCE); and two later commentators, Alexander of Aphrodisias (late second-early third c. CE), an Aristotelian, and Proclus (412–85 CE), a Neoplatonist. The inscriptions on their respective tablets express ideas associated with each but in words adapted from other sources or composed *ad hoc*. They read, from left to right, CONFLIGVNT HVMIDA SICCIS. Diog. Apol. (the moist counters the dry; cf. Boethius, *Consolatio Philosophiae* IV.6.21); TRAHIT SVA QVEMQVE VOLVPTAS. Alex. Aphr. (each is drawn by his own desire; Verg., *Ecl.* II.65); AFFINES COEVNT ATOMI. Epic. (adjacent atoms converge); SPIRITVS INTVS AGIT. Plato (the spirit within moves it; cf. Verg., *Aen.* VI.726); COGNATO SYDERE MARTIS. Procl. (like to the planet Mars); VITAE ALIMENTA TRAHIT. Thal. Mil. (it draws the food of life). A seventh tablet at the center is inscribed with the Academy's motto. The print is discussed in more detail in the article.

In the background, miners excavate a mountain of iron, extracting metal rings with the aid of a lodestone. The reference here is, I think, to the Ethiopian lodestone, which was said to be so powerful that it was used to mine iron: “the Ethiopians ... alone have the power to attract the iron of the mine

¹⁷¹ The stylized oak and star atop the hillock in the background presumably refer to the student's heraldry. Taken together, they resemble the arms of the Muccioli family of Rome, described as “[un] albero di quercia a due rami incrociati, fruttata e fogliata al naturale su monte a 3 cime di oro uscente dalla punta su azzurro, stella (5 raggi) di oro in alto su azzurro” (Spreti 1928–1936, 4:738).

without the use of tools by placing the stone beside it” (Sil., *Pun.* III.265–67; see also Plin., *HN* XXXVI.25). Unsigned, but attributable to Regnart on the basis of style. 20 × 25.5 cm.

35) Giovanni Antonio Lelli and Michel Natalis (1610–1668), 1634–1638 (fig. 40)

Student: Facchinetti (Bologna)¹⁷²

Description: A youthful hero, a stand-in for the student, is seated in a chariot pulled by infant breezes with whirligigs. Over his head, a flame symbolizing his *ingegno* (his intellect, his native wit) is fanned by winged putti waving feathers. The student’s coat of arms topped by a coronet is tucked into the lower left corner; his heraldic tree also appears on the hero’s breast-badge and on the harness of his little breezes. Four female figures approach the youth with gifts. They are, from left to right, Natural Philosophy, wearing a badge representing Diana of Ephesus and accompanied by a putto holding a terrestrial globe, who presents the youth with a cloak; Logic, wearing a badge representing a key symbolic of syllogistic reasoning and with a putto holding the Academy’s emblem, who gives him a sword; Physics or Astronomy, with a putto holding a compass and a square, who awards him a crown of stars; and a fourth figure, probably either Ethics or Metaphysics, with a badge representing a compass needle pointing north and with a putto holding a book, who presents the youth with a scepter. The iconography is explicitly astrological. In the sky overhead, the constellation Gemini appears between the planets Saturn and Mercury. Each of the twelve signs of the Zodiac is associated with one of the four elements; Gemini is an air sign, which explains the airy infants attending the hero: the breezes with their pinwheels and the putti fanning with feathers. Gemini is ruled by Mercury (Saturn is also involved, although in a lesser capacity), and the conjunction of Gemini and Mercury makes for “men of admirable sharp fancys, extream-studious and Capable of Learning, guilefull or wily, wise, wary, divining well, or giving good advice, acting all humane affaires with great dexterity and judgment. The Genius of such people [...] inclines to the Mathematicks, Astrology, eloquence, Learning any Art with much ease, of excellent deportment in all the Cours of their Lives, well versed in history, antient things, monuments of the dead, old writings, Notion of

¹⁷² Rietstap 1903–1926, 2:pl. CCXCVI. Belonging to the family of Pope Innocent IX (1590–1591) and Cardinal Giovanni Antonio Facchinetti (1575–1606), the student was probably a younger brother or cousin of Cesare Facchinetti (1608–1683), who began his curial career in 1632 and became a cardinal in 1643.



Figure 40
Giovanni Antonio Lelli and Michel Natalis, *Arcanis nodis*: A young hero rewarded for excellence in four academic disciplines (App. 35). Paris.

the Lawes and Constitutions of Nations, Kingdom, Commonwealths...”¹⁷³ The print implies that the student’s excellence in each of the subjects represented by the quartet of ladies (who together more or less personify the three-year course in philosophy) is dictated by his stars. Signed *Io: Ant: Laelius inventor / M. Natalis F.* 26.5 × 36 cm.

Bibliography: Mariette 1996–2003, 2:182; Renier 1866–1870, 9: 126–27, no. 86.

¹⁷³ The English astrologer William Lilly, commenting on the horoscope of Elias Ashmole, as cited by Geneva 1995, 166–67.

36) Bartolomeo Mendozzi¹⁷⁴ and Michel Natalis, c. 1638 (fig. 41)

Student: Frangipani Mattei (Rome).¹⁷⁵

Description: Enthroned at the center of the composition, Rome receives the tiara along with crowns, coronets, and helmets symbolizing her universal authority. She holds a globe inscribed SPQR. A shattered idol lies at her feet, indicating the triumph of Christian over pagan Rome. Her pedestal is decorated with the she-wolf and bears the inscription CONSILIO ET ARMIS (by counsel and arms). Representing *consilium*, Minerva approaches the throne from the left accompanied by putti holding objects associating with learning, while Mars, representing *arma*, approaches from the right accompanied by putti carrying weapons and banners.¹⁷⁶ Her shield bears the Academy's emblem; his, the student's coat of arms. Above, putti wave banners and pennants embroidered with the symbols of the city's *rioni*. A pair of river gods occupy the lower corners. Apart from the emblem, the print contains no reference to magnetism and could be a reworked later state of a non-Parthenian invention. Signed *M. N. fe. / Bartolomeus Mendozza del.* 25.5 × 37.5 cm.

Bibliography: Mariette 1996–2003, 2:183.

174 Bartolomeo Mendozzi (c. 1600–after 1644) was a Caravaggist painter and his limited experience as a draftsman and designer of thesis prints is demonstrated by the naiveté of the composition. Both Mendozzi and Natalis worked for Vincenzo Giustiniani (1564–1637) during the 1630s, around the time that the engraving was made, which might explain how the painter came to be tapped for such an unlikely commission. On Mendozzi, see Curti 2020.

175 The student's shield is impaled (divided vertically), with the Mattei arms on the left and the Frangipani arms on the right. An identical *stemma* appears over the tomb of Laura Frangipani Mattei (d. 1635) in S. Francesco a Ripa (illustrated in Ferrari and Papaldo 1999, 89). The student who commissioned the print was probably one of the sons of Laura and her husband Ludovico Mattei, Duke of Paganica, most likely Orazio Mattei (1622–1688), who studied at the Roman College and who, many decades later, rose to the cardinalate (Stefano Tabacchi, sv Mattei, Orazio, in *DBI*, LXXII, 2008, online). If this is Orazio's thesis print, it was probably made around 1638, when he was 16 years old. In any case, it was made before Natalis returned to his native Liège in 1639.

176 The serpent encircling Minerva's spear alludes to the story of Erichthonius. Ultimately, the motif can be traced back to Phidias's lost cult statue in the Parthenon; but Mendozzi probably got the idea from a source closer to hand: the famous Minerva Giustiniani, which likewise features a serpent coiled around the goddess's spear. Now in the Vatican Museums, this sculpture was one of the most prized works of art in the collection of Mendozzi's patron Vincenzo Giustiniani, its status earning it the first plate in the first volume of the *Galleria Giustiniani*.



Figure 41
Bartolomeo Mendozzi and
Michel Natalis, *Arcanis nodis*:
Rome enthroned between
Minerva and Mars (App. 36).
Rome, ICG.

37) Giovanni Francesco Romanelli (c. 1610–1662) and Michel Natalis, c. 1636–1638 (fig. 42)

Student: Pallavicini (Genoa).¹⁷⁷

Description: A mounted soldier accompanied by a huntress on foot prepares to kill a stag brought to bay by a pack of hunting dogs. A boy follows behind, a pike over his shoulder and a shield decorated with the Academy's lode-stone and motto on his arm; the boy looks down at his dog, whose leash is made of conventional chain, clamped by magnetic attraction to the lode-stone on his shield. This attractive print is one of the more enigmatic in the

¹⁷⁷ A number of Pallavicini boys from the Genoese branches of the family were studying in Rome in the years when it is likely that the print was made. At the Roman Seminary alone, more than half a dozen of them show up in the records of enrollment in the 1630s. In 1637, Agostino Pallavicini (1577–1649) was elected Doge of Genoa and this occurrence may have been what motivated the Jesuits to encourage a younger relative of his to undertake a public defense at the Roman College.



Figure 42
Gianfrancesco Romanelli and
Michel Natalis, *Arcanis nodis: A*
stag hunt (App. 37). Paris.

series. The scene recalls the hunt of Dido and Aeneas (Verg., *Aen.* IV.129–59) and bears a striking similarity to certain earlier depictions of that episode, such as the one by Perin del Vaga in the *salotto celeste* of Palazzo Massimo alle Colonne in Rome (1537–1539). But the huntress represented here cannot be Dido, for the queen of Carthage hunted on horseback (her steed’s purple and gold trappings are vividly described by Virgil), nor would it be fitting to show Dido on foot beside a mounted Aeneas. This female figure more closely resembles Venus, when she appears, disguised as a huntress, to Aeneas and Achates (*Aen.* I.314–410); but, on the other hand, that encounter does not involve a hunt. So the print must represent some other, as yet unidentified story, perhaps involving Diana or one of her nymphs. There is another possibility, albeit a tenuous one. Logic (Dialectic) was sometimes personified as a huntress, with a bow in one hand and a hunting horn in the other, entering the

forest of opinion accompanied by her keen-nosed syllogistic hunting dogs.¹⁷⁸ Given that the print was commissioned for a defense in logic, it is not altogether impossible that its subject is linked in some way to that esoteric tradition. But the narrative seems to have nothing in particular to do with magnetism, and its overall significance remains obscure. Signed *IFr. Romanell. Viterb. De. / M. Natalis Fe.* 26.5 × 39 cm.

Bibliography: Mariette 1996–2003, 2:183 (“Une nymphe accompagnant un cavalier qui poursuit un cerf, d’après Jean François Romanelle”); Kerber 1973, 151–52 and 168 nn. 64–65.

38) Pietro da Cortona and Cornelis Bloemaert, 1633–1644 (fig. 5)

Student: Agostino de’ Conti di Marsciano (Viterbo and Rome).¹⁷⁹

Description: In an elaborate architectural frame flanked by standing ignudi is a coastal scene with galleys putting out to sea in pursuit of distant ships, guided by the mystical power (OCCVLTA VIRTUTE) of the Pole Star.¹⁸⁰ In a separate cartouche above, the Academy’s motto is given parallel significance: a winged putto positions the Earth and fixes it in relation to the Pole Star by means of the magnetic chain. Both emblems have Marian significance, stemming from the identification of the Virgin as the *stella maris*, star of the sea, an epithet

178 Reisch 1517, Bk 2, Tractatus 1:67, “Typus Logicae,” https://upload.wikimedia.org/wikipedia/commons/dd/Gregor_Reisch_-_Margarita_philosophica_-_4th_ed._Basel_1517_-_p._067_-_Typus_logicae_-_1000ppi.png; Hieronymus Cock after Frans Floris, “Dialectica,” 1550, <http://hdl.handle.net/10934/RM0001.collect.96292>; emblem of Dialectic in the form of a hunting scene, in Coricynius 1597. This last example seems especially relevant, given that the authors were students of rhetoric and philosophy at the Jesuit school in Olomouc and members of that institution’s chapter of the Parthenian Academy. All three images are illustrated and discussed, along with other examples of logical dogs, in Höltgen 1998.

179 In the post-original state illustrated here, the coat of arms belongs to Agostino de’ Conti di Marsciano, who made his *atto di logica* at the Roman College in 1644 (see Crollalanza 1886–1890, 2:87, under Marsciano). The legitimized natural son of Marcantonio de’ Conti di Marsciano (Ughelli 1667, 86), Agostino went on to defend all of philosophy four years later, in 1648, dedicating his conclusions to Cardinal Francesco Montalto. For his grand act, he once again issued a second-hand thesis print, this time one by Theodor van Loon and Francesco Villamena made over a quarter-century earlier. While completing the course in philosophy at the Roman College, he was also enrolled at the Sapienza (Rome’s law school), where he was an enthusiastic and prolific member of the most elite of the school’s belletristic academies, the Intrecciati, from 1645 until 1649 (*Fasti dell’Accademia degl’Intrecciati* 1673, 15, 17–18, 20–21, 23–25, 27–29, 32).

180 The phrase *occulta virtus* is a commonplace often applied to magnetic phenomena. To cite one other example, Giovanni Battista Guarini, *Il Pastor Fido*, act V, scene 1: “Come la calamita, ancorchè lunge / Il sagace nocchier la porti errando / Or dove nasce, or dove more il sole, / Quell’occulta virtute ond’ella mira / La tramontana sua, non perde mai.”

likening her to the Pole Star. Unsigned. The broadsheet as a whole measures 69 × 39 cm; the thesis print alone, 35.5 × 37.5 cm.

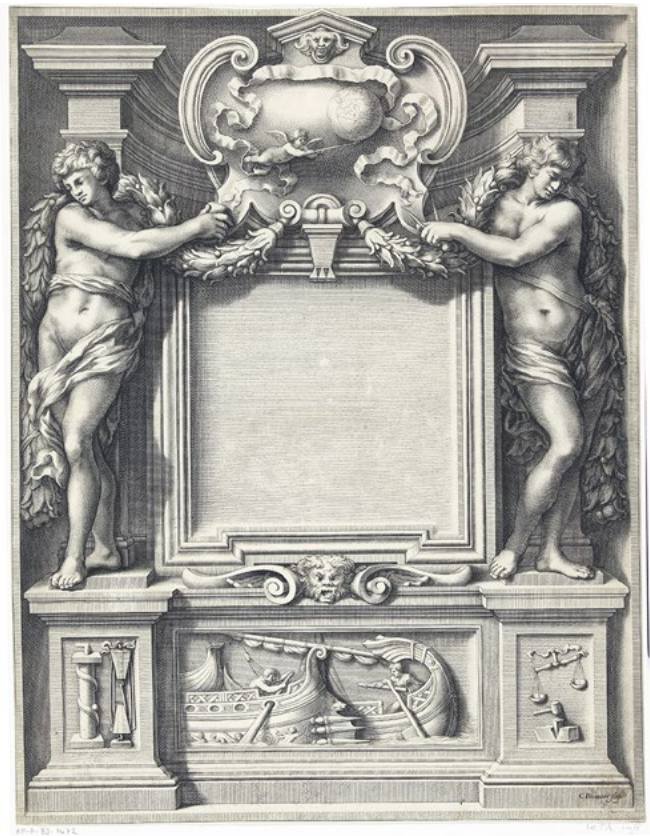
Note: The print did not start out as one of the ARCANIS series. The impression illustrated here is not the original state, but a significantly re-worked later state. An earlier, proof state is much closer to Cortona's original drawing and, like the drawing, includes no reference to the Parthenians or their emblem (figs. 43, 44).¹⁸¹ It was not uncommon for thesis prints to be re-issued, sometimes multiple times, the copper plate modified with each iteration to accommodate new heraldry, emblems, or other details. A closer look at fig. 5 reveals that the coastal scene with the student's coat of arms was printed from a separate plate. Everything inside the fictive frame, including the leaves of the laurel garlands where they dip down into the space, was blocked out, leaving a small, square blank area, into which the landscape was printed. Moreover, the cartouche at the top of the sheet was re-cut to incorporate the star, magnetic chain, and motto ARCANIS NODIS, none of which was there to begin with. Significantly, the lodestone was left out, making a nonsense of the emblem, always a telltale sign of a re-cut later state. Although fig. 5 is not the original state, it may be the first state to include the Parthenian motto and it is certainly more gracefully pieced together (particularly in the way the added

¹⁸¹ Rijksmuseum, RP-P-BI-1472; 48 × 37 cm. The print seems originally to have been designed either as the frontispiece to a very large book or as a small broadsheet perhaps meant to accompany a formal *dimostrazione* on some aspect or aspects of mechanical science. (Public demonstrations of this kind often took place at the Roman College, with star pupils presenting their teachers' findings in areas such as optics, mathematics, or physics.) The proof state, like the preparatory drawing on which it is based, features a wide plinth at the foot of the design, omitted in the later ARCANIS states. The plinth is decorated on the left and right with depictions of so-called "simple machines," devices used for enhancing force when applied to a load: an Archimedean screw, a pulley, a lever (part of a set of scales), and a wedge. At the center of the plinth, a pair of ancient war galleys confront each other, the rower in one and the steersman in the other demonstrating the principle of the fulcrum through their handling of their oars. The cartouche at the top of the print contains the putto and globe, but no star, no chain, and no motto on the banderole. Instead, the putto governs the globe by means of a long, straight staff. Given the imagery on the plinth, the putto's action might be meant to recall Archimedes's famous claim, "Give me a lever long enough and a fulcrum on which to place it, and I will move the world." In the proof state, the area inside the fictive frame, although empty, is carefully toned with parallel hatching and cast shadows, awaiting the contribution of the typographer, who was undoubtedly meant to fill it with text set in moveable type. But no finished first state with text has yet come to light and it is not clear that the engraving was ever issued in the form originally intended. The proof state is signed *C. Bloemaert sculp.* in the lower right corner of the plinth. Cortona's name does not appear, but the existence of the preparatory drawing in his hand confirms that the invention is his.



Figure 43 (left)
Pietro da Cortona, Preparatory drawing for fig. 44. Edinburgh.

Figure 44 (right)
Pietro da Cortona and Cornelis Bloemaert, Blank state of a broadsheet with a frame flanked by ignudi and adorned with machines and scenes alluding to mechanical science (cf. App. 38). Amsterdam.



landscape and the altered emblem are related to each other through the shared motif of the North Star) than some of the others that followed.¹⁸²

Drawing: Edinburgh, National Gallery of Scotland, inv. D 920. Black chalk; 49.5 × 37.5 cm. (MacAndrew 1990, 64–65, cat. 22). **Fig. 43.**

¹⁸² It was easy enough to reprint the frame without making further alterations to it, each time simply substituting the print inside frame. See, for example, Paris, Bibliothèque Nationale, Pc3 P10964 (where the coastal landscape is replaced by an entirely different landscape featuring an emblem unrelated to stars or to magnetism), or Rome, Biblioteca Casanatense, Vol. Misc. 1243 (issued by a student at the Scots College in Rome, *not* a member of the Parthenian Academy, for his philosophy defense in 1650, with the heraldic griffin of his dedicatee Cardinal Facciotti inserted into the frame).



Figure 45
Luigi Primo and Cornelis Bloemaert, *Arcanis nodis*: Nymphs dancing in a circle, with Apollo accompanied by the Hours in the sky overhead (App. 39). Paris.

39) Luigi Primo (also known as Luigi Gentile; c. 1605–1667) and Cornelis Bloemaert, c. 1640 (fig. 45)

Student: Raggi (Genoa).¹⁸³

Description: Between a pair of river gods reclining in the lower corners, six huntresses dance in a circle around two companions, who hold up the emblematic lodestone, one of them also pointing to it. All eight of the nymphs wear leafy wreaths and are linked together by the magnetic chain, while the six dancers also hold ribbons inscribed with the Academy’s motto. Overhead, Apollo gallops across the sky in his sun chariot, accompanied by the twelve fleet-footed Hours, whom he holds in check by means of a conventional chain.

¹⁸³ Rietstap 1903–1926, 5:pl. CXXI. Lorenzo Raggi (1615–1687), nephew of Cardinal Ottaviano Raggi (1592–1643), defended philosophical theses at the Roman College in 1637, before going on to become a cardinal himself in 1647. If the print was made for Lorenzo’s *atto di logica* (assuming that he undertook one), it would be datable to around 1635. But I think it more likely to be a somewhat later work and therefore commissioned by a younger relative of Lorenzo’s rather than by Lorenzo himself.

The huntresses are presumably the companions of Diana, Apollo's sister, and, as such, devotees of chastity. Perhaps this is why they dance around the Parthenian lodestone: they are celebrating its virginal associations. The imagery connecting a circle of dancers with the diurnal round of Apollo's chariot brings to mind Poussin's approximately contemporaneous *Dance to the Music of Time*, as well as earlier works, such as Taddeo Zuccari's *Dance of Diana and Her Nymphs* on the vault of the ground-floor south room of Villa Giulia (c. 1553). Signed *L. Primo del: / C. Bloemaert sculp.* 26.5 × 38.5 cm.
Bibliography: Bodart 1970, 1:166 and 2: fig. 67. Hollstein Dutch and Flemish, 76, no. 201.

40) Giacinto Gimignani (1606–1681) and Cornelis Bloemaert, c. 1638–1640 (fig. 46)

Student: possibly Manfroni (Rome) or Barbo (Venice).¹⁸⁴

Description: Cybele loans her lion-drawn chariot to the young hero (an idealized stand-in for the defendant), who rides in triumph past the Temple of Honor and Virtue, closely modeled on Giacomo Lauro's reconstruction of the same in his *Antiquae Urbis Splendor* of 1612.¹⁸⁵ The armillary sphere the young man holds in his right hand and the eyes embroidered on his cloak are symbols of Physics, since Physics involves the close observation of the motions of the cosmos.¹⁸⁶ (The fleurs-de-lis on his tunic are harder to explain.) Overhead, Jupiter directs his eagle to position the lodestone over the lions, catching their harness in its magnetic grip.¹⁸⁷ A putto drops flowers on the triumphal procession, while in the left background, the titular divinities of

¹⁸⁴ The coat of arms on the side of Cybele's chariot (a lion rampant overlaid by a diagonal band) is a relatively common one and could belong to any of several different families. The Manfroni, a Roman family, is one possible candidate (Rietstap 1903–1926, 4:pl. CXXXIII; Ameyden, 2:94); the Barbo or Barbi another (Rietstap 1903–1926, 1:pl. CXXII; Crollalanza 1886–1890, 1:92–93). The Raggi, who had sons at the Roman College in these years, have an almost identical *stemma* but their lion is crowned. (For the Raggi arms, see the previous entry.) The spread eagle above the coat of arms is presumably also heraldic, but its position outside the shield makes it difficult to read, and rather than forming part of the coat of arms, it may represent the crest (*cimiero*) that would normally appear above a nobleman's armorial helmet.

¹⁸⁵ Lauro 1612, pl. 30, "Templum Honoris et Virtutis" (<http://hdl.handle.net/10934/RM0001.COLLECT.625592>).

¹⁸⁶ For the eye as a symbol of Physics, see the frontispiece to Kircher's *Magnes* (fig. 3). Just as the first year of the three-year course in philosophy was devoted to Aristotle's logical works, so the second year was devoted to his physical works, and this print may have been commissioned by a student undertaking his small act in the second year rather than the first, and thus in physics rather than in logic.

¹⁸⁷ Jupiter's open-armed gesture of command, his interaction with his eagle, and the eagle's action in carrying the lodestone are all derived from an earlier ARCANIS print by Pietro da Cortona and Charles Audran (see Appendix no. 23 above).



Figure 46
Giacinto Gimignani and Cornelis Bloemaert, *Arcanis nodis*: A young hero riding in triumph past the Temple of Honor and Virtue, accompanied by Cybele and Jupiter (App. 40). Amsterdam.

the temple—Honor (a bearded male with a gold chain around his neck) and Virtue (Minerva)—offer laurels to the hero. The conceit is essentially armorial: the relationship of Jupiter’s and Cybele’s animal attributes—his eagle hovering with outstretched wings over her lions—mirrors the heraldry on the side of the chariot, where a spread eagle clutches the student’s shield emblazoned with a lion rampant. Notice how the tongues of Cybele’s lions protrude, evoking the “langued” lion in the coat of arms, while the harness that stretches diagonally across the lions’ bodies recalls the heraldic “bend,” i.e., the diagonal band that crosses the shield. Lion heads also decorate the wheels of the chariot, while the youth is seated on a lion-legged stool. Signed *Hyacinthus Gimignanus Pistoriensis del.* / *C. Bloemaert sculp: Romae.* 27 × 38 cm.

Drawing: Düsseldorf, KA (FP) 7053. Pen and brown ink with brown wash with white heightening, over black chalk; in two pieces, 15.5 × 19.5 and 11.5 × 17 cm (Merz 2005, 133, cat. 26 and fig. 124).

Bibliography: Hollstein Dutch and Flemish, 76, no. 200; Merz 2005, 132 (and for a later state, fig. 123).

41) Giovanni Angelo Canini (1609–1666) and Cornelis Bloemaert, c. 1647–1652 (fig. 47)

Student: unidentified.¹⁸⁸

Description: Minerva (loosely based on the statue of Minerva Giustiniani now in the Vatican Museums) visits the home of the Muses on Mount Helicon and the sacred Hippocrene spring, the source of poetic inspiration (Ov., *Met.* V.250–68). Jupiter orders his eagle to hold the lodestone inscribed with the Parthenian motto directly over her. Its magnetic force plucks the iron tip from her spear and the helmet from head, transforming her from a warrior goddess into a patron of the arts. Laurel climbs up around her spear shaft and a wreath of the same replaces her helmet.¹⁸⁹ Surrounding Minerva are the nine Muses, with Pegasus in the background striking the rock with his hooves. Signed *Io: Angelus Caninius Romanus del:/ C. Bloemaert sculp. Romae. 27 × 37.5 cm.*

Bibliography: Hollstein Dutch and Flemish, 76, no. 202.

42) Artists unknown

Description: In his *L'art des emblemes*, Claude-François Menestrier (1662, 103) describes an ARCANIS print that I have not so far been able to locate: “Les desseins des planches des Theses ne sont pas differens de ceux des Livres, reservé qu'on les peut prendre sur le nom, ou sur l'Academie ou elles doivent estre soutenuës. Comme on fait ordinairement au College Romain, dont la devise est un Ayman, qui attire des Anneaux de fer, avec ce mot *Arcanis nodis*. Car on y pris souvent à l'occasion de cette devise de beaux suiets d'Emblemes de Theses; comme un Iuppiter, qui tient en main un Ayman, qui attire par des Anneaux tous les Dieux, & les instrumens qui leur servent de symboles, l'Espée de Mars, la Faux [*sic*] de Mercure, le Trident de Neptune, la Faucille de Ceres, &c.”¹⁹⁰ It is, of course, possible that Menestrier was merely imagining the print that he describes, without having actually seen such a thing. The subject

¹⁸⁸ The student's coat of arms, tucked into the lower right corner, consists of a crowned spread eagle issuant in the chief, above a field bisected by a thin vertical band.

¹⁸⁹ The disarming of Minerva—her transformation from warrior goddess to patron of the arts and companion of the Muses—is also alluded to in Appendix no. 17 above.

¹⁹⁰ Menestrier 1662, 103.



Figure 47
 Giovanni Angelo Canini and
 Cornelis Bloemaert, *Arcanis
 nodis*: Minerva visiting the
 Muses on Mount Helicon (App.
 41). Rome, ICG.

matter—Homer’s golden chain, or, the tug-of-war between Jupiter and his fellow Olympians—is based on a passage in Book VIII of the *Iliad* (lines 18–27), in which Jupiter challenges the other deities who dare to thwart his will: “But come on, just try it, you gods, so that you all may know. Make fast from heaven a chain of gold, and lay hold of it, all you gods and all you goddesses; yet you could not drag to earth out of heaven Zeus the counselor most high, not even though you labored mightily. But whenever I was really minded to pull with all my heart, then with earth itself I would draw it up and with the sea as well; and the rope I would then bind around a peak of Olympus and all those things would hang in space. By so much do I surpass gods and surpass men.” Homer’s golden chain as a philosophical concept is discussed in the article.

Figure 48
Anonymous, Homer's golden
chain (cf. App. 42). Paris.



Curiously, there exists an etching representing this very episode, with the motto *ARCANIS NODIS* (fig. 48).¹⁹¹ But it cannot be the print Menestrier describes, because it does not show Jupiter holding a lodestone, nor does it include Ceres and her sickle. In fact, this etching is probably a pastiche of some sort, made by an artist who had only a partial understanding of the Parthenian emblem. The lodestone is left out; there are plenty of chains but they are conventional rather than magnetic; and although the motto is there, its meaning is lost. In addition, whoever made this etching was apparently unaware that the Parthenian prints are engraved. The work is unsigned; Mariette gave the invention of the figures to Romanelli, the invention of the landscape to Giovanni Francesco Grimaldi, and the etching to Claude Goyrand, but offered no explanation for these somewhat fanciful attributions.¹⁹²

¹⁹¹ Paris, Bibliothèque Nationale, Pc 3 fol. 28 × 39 cm.

¹⁹² Mariette 1969, 219, no. 35 (under Romanelli): “Jupiter assis dans l’Olympe attirant à luy tous les Dieux par le moyen de chaisnes de fer auxquelles ils se tiennent attachés. Pièce emblématique qui a rapport à l’encyclopédie de toutes les sciences, gravée a l’eau forte par Cl. Goyrand. Sans noms d’artistes. Le paysage dans le lointain, est du dessein de Jean Francesque Bolognese.” Mariette does not mention the motto.



Figure 49
 Sebastian Furck, Text frame
 for the lower half of a thesis
 broadsheet for a member of the
 Parthenian Academy (App. 43).
 Paris.

43) Sebastian Furck (1589–1666), 1610s (fig. 49)

Description: An elaborate strapwork frame surrounding a rectangular space designed to receive text, inscribed above, *ASSERTIONES*, and below, *Disputabuntur publice / IN ACADEMIA PARTHENIA / Collegij Romani Societ. IESV / A [blank] Anno [blank] Mense [blank] Die [blank] Hora [blank]*. On the left and right, Parthenian trophies of learning and fame hang from magnetic chains suspended from emblematic lodestones labeled with the Academy's motto. The print was designed to serve as the bottom half of a broadsheet, below an engraved image. See the following entry for a comparable example of a text frame. On the impression illustrated here, the adjective *Theologicae* has been added in pen after *ASSERTIONES*, but the rectangular space inside the frame, where the theses were probably written in by hand, has been sliced out and discarded. Signed *Seb. Fulcarus F.* 21.5 × 34.5 cm.



Figure 50

Gregorio Grassi and Valérien Regnart, Text frame for the lower half of a thesis broadsheet for a member of the Parthenian Academy (App. 44). Paris.

44) Gregorio Grassi and Valérien Regnart, c. 1635 (figs. 50, 51)

Description: A blank cartouche inscribed above PROPOSITIONES, and below *Publice disputandae* / IN ACADEMIA PARTHENIA / COLL ROMANI SOCIET IESV / A [blank] / Anno [blank] Mense [blank] Die [blank] Hora [blank]. Near the upper edge, winged putti hold emblematic lodestones and ribbons inscribed with the Academy's motto. The magnetic chains suspended from these lodestones drape over statues of Apollo with his lyre on the left and Hercules with his club on the right (for a comparable pairing of Apollo and Hercules, see Appendix no. 5 above). Apollo's pedestal is inscribed NEC VANIS IMPLET APOLLO (nor does Apollo fill with empty or vain things; cf. Verg., *Aen.* III.434). Notice the witty correlation between the inscription and Apollo's gesture indicating the empty cartouche where the theses would be written in by hand. The pedestal under Hercules bears the inscription LABOR OMNIA VINCIT IMPROBVS (unrelenting toil conquers all; cf. Verg., *G.* I.145–46). The putto at Apollo's feet is diligent and studies into the night (the late hour signi-



Figure 51 (left)
A thesis broadsheet for a member of the Parthenian Academy, in the upper half the print by Giovanni Lanfranco (attrib.) and Matthaeus Greuter described and discussed in App. 8 (fig. 26), and in the lower half the text frame by Gregorio Grassi and Valérian Regnart described and discussed in App. 44 (fig. 50). London.



Figure 52 (right)
A thesis broadsheet for a member of the Parthenian Academy, in the upper half a worn-out impression or crude copy of the print by Paolo Guidotti and Matthaeus Greuter described and discussed in App. 7 (fig. 25), and in the lower half the text frame by Luca Ciamberlano (attrib.) described and discussed in App. 45. Rome, BN.

fied by an owl), while his counterpart on the right urges a slumbering schoolmate to follow his lead. The print was designed to serve as the bottom half of a broadsheet, below an engraved image, as in fig. 51. Signed *Gregorius de Grasso Aquilanus inven. / sculp. Valerianus Regnartius*. 23.5 × 38 cm.

45) Luca Ciamberlano (attrib.) (fig. 52)

Description: A blank cartouche inscribed *PROPOSITIONES* and *Disputabuntur publice in Academia Parthenia / Coll. Rom. Soc. Iesu An. [blank] Mens. [blank] / die [blank] hora [blank]*. Like nos. 43 and 44 above, this is a prepared form designed to serve as the lower half of a broadsheet, providing a frame for conclusions written in by hand. It is either a very late and worn impression or a poor copy of a print originally made for some other purpose, given the lack of Parthenian imagery in the margins and the presence of multiple coats of arms. The example illustrated here is printed below a late, exhausted impres-

sion or a crude copy of Appendix no. 7 above. Approx. 17.5 × 25 cm.; whole broadsheet, 37.5 × 25 cm.

46) Giacinto Calandrucci and Benoît Thiboust, c. 1665–1695 (fig. 53)

Description: The print is considerably later in date than any of the others in the series, and differs, also, in that it is designed as a complete broadsheet, combining image and text frame in one. It was printed as a blank form, for use by multiple students, who were meant to fill it in by hand with the conclusions to be debated. The setting is a mystical forge, where putti manufacture and play with iron rings, while Divine Wisdom herself holds the lodestone, inscribed AMDG, which pulls the rings into a chain linking heaven and Earth. Two angelic artisans help Wisdom in her task, while also holding the banderole inscribed with the Academy's motto. Seated on cloud banks on either side are personifications of Philosophy, Theology, Metaphysics, Logic, Justice, Astronomy, Rhetoric, and Italy (?). Inscribed at the top of the cartouche *Conclusiones*; and along the bottom edge, *Disputabuntur publice in Academia Partheniana Coll. Rom. Soci. Iesu Mense [blank] Die [blank] Hora [blank]*.

Signed *Giacinto Calandruccio Inven. / B. Thiboust sculp.* 38.5 × 27 cm.

Drawing: Düsseldorf, FP934. Pen and brown ink over black chalk; 23.5 × 27 cm. (Graf 1986, 1:131, cat. no. 556; 2:277, fig. 625; 526, fig. A117.)

Figure 53
 Giacinto
 Calandrucci and
 Benoît Thiboust,
Arcanis nodis:
 Divine Wisdom in
 the Parthenian forge
 (App. 46). Rome,
 BAV.



Disputabuntur publice in Academia Partheniana Coll. Rom. Soci. Jesu. Mense Aprilis Die 22 Hora 1

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Index of Artists

Anonymous, nos. 1–3
Audran, Charles, nos. 23–24
Bloemaert, Cornelis, nos. 38–41
Brunetti, Orazio, no. 15
Calandrucci, Giacinto, no. 46
Camassei, Andrea, no. 25
Canini, Giovanni Angelo, no. 41
Ciamberlano, Luca, nos. 16, 45
Circignani, Antonio, *see* Pomarancio, Antonio

Cortona, Pietro da, nos. 23, 38
Cungi, Camillo, nos. 25–27
David, Jérôme, no. 18
Fulcarus, Sebastiano, *see* Furck, Sebastian
Furck, Sebastian, no. 43
Gentile, Luigi, *see* Primo, Luigi
Gimignani, Giacinto, no. 40
Goyrand, Claude, no. 42
Grassi, Gregorio, nos. 32 (?), 44

Greuter, Johann Friedrich, nos. 9–12, 14, 17, 21–22, 28
Greuter, Matthaeus, nos. 4–8
Guidotti, Paolo, no. 7
Krüger, Theodor (Dietrich), no. 13
Lanfranco, Giovanni, nos. 8, 13–14, 21–22
Lelli, Giovanni Antonio, nos. 26–29, 35
Mendozzi, Bartolomeo, no. 36
Natalis, Michel, nos. 35–37

Pomarancio, Antonio, nos. 12, 17–20
Primo, Luigi, no. 39
Regnard, Valérien, nos. 19–20, 29–34, 44
Romanelli, Gianfrancesco, nos. 37, 42
Tempesta, Antonio, no. 15
Thiboust, Benoît, no. 46
Vaiani, Alessandro, no. 24