Scripting Speech: A Manuscript Declamation in Sixteenth-Century Humanism

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Cambridge, 11 July 1600, the day of final disputations. A young man—taking an exam for the Master's degree—hands out printed poems to the audience. He steps forward to the pulpit and opens with an elegant speech. After formulating the thesis, he explains the theological points at issue and disproves the standard objections. The disputation continues as planned, but not without a few surprises, remarked upon by the moderator presiding over the examination:

> When the young man finished, first the Promoter or 'father', then the newly-created Doctors his 'sons' replied with arguments defending the contrary. But if they were found to be overstepping the limits of disputation or straying away from the matter at hand, they were brought back on track by the Moderator, who imposed his authority and warned them not to fight with the weapons of rhetoric and beat the air.

'Do not fight him with the weapons of rhetoric', the moderator barked, 'but stab him with the dagger of argument'.[2]

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[2] Biblioteca Apostolica Vaticana, MS Reg. lat. 666, 154r-v: 'Hoc peracto Promotor primum seu Pater: deinde iam creati Doctores eius filii, argu:[menta] contrarium defendentia opponebant, qui ubi cancellos disputationis transilire, vel a materia proposita nonnihil exorbitare videbantur, a Moderatore qui autoritatem suam interponebat, in viam reducebantur, et ne Rhetoricis hastis pugnarent, aeremque verberarent, admonebantur'. The marginal note reads: 'Hic moderator cum unus alterum oppugnasset: Noli (inquit) pugnare cum illo hastis rhetoricis: sed confodias eum pugione dialectico'. I have amended a previous

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This scene brings to the surface mixed feelings about rhetoric in the early modern university. The moderator voiced a formal expectation: that the use of rhetorical techniques had no place in disputation—which prompts a question. It is widely acknowledged that rhetoric was central within humanist education in the sixteenth century. So how, where, and when *did* students practice rhetoric if it defied the spirit of disputation?

This study offers an answer to this question by analysing 'declamation': a pedagogical format that was newly introduced into universities in the sixteenth century and that coexisted alongside disputation for over two centuries. To date, declamation has played a subsidiary role in histories of universities—especially when compared to disputation, a subject which has witnessed a recent revival.[3] Peter Mack argues that 'declamations were less important and less common than disputations', even while noting 'there is abundant documentary evidence that they were given'.[4] Indeed, the newest scholarship by Stuart McManus has shown that declamation was adopted throughout the world in the sixteenth century and practiced by students from Mexico City to Japan.[5] Declamations remained a staple of humanist education into the eighteenth century, proliferating in Europe and the Americas.[6] This paper puts declamation centre stage, looking afresh at a vital innovation in early modern education.[7]

translation: *The Diary of Baron Waldstein*, ed. G. W. Groos (London, 1981), 97–8. For the rite of handing out one's thesis in printed verses see William M. Barton, 'Singing the Science of Sound: Literary Engagement with Natural Philosophy in the Act and Tripos Verse of Oxford and Cambridge', in: Meelis Friedenthal, Hanspeter Marti, and Robert Seidel (eds.), *Early Modern Disputations and Dissertations in an Interdisciplinary and European Context* (Leiden, 2020), 164–187.

[3] See recently Olga Weijers, *In Search of the Truth: A History of Disputation Techniques from Antiquity to Early Modern Times* (Turnhout, 2013); Alex Novikoff, *The Medieval Culture of Disputation: Pedagogy, Practice, and Performance* (Philadelphia, 2013); Marion Gindhart, Hanspeter Marti, and Robert Seidel (eds.), *Frühneuzeitliche Disputationen: Polyvalente Produktionsapparate gelehrten Wissens* (Cologne, 2016); Dirk van Miert, 'The Disputation Hall in the Seventeenth-Century Dutch Republic: An Urban Location of Knowledge', in: Fokko Jan Dijksterhuis, Andreas Weber, and Huib J. Zuidervaart (eds.), *Locations of Knowledge in Dutch Contexts* (Leiden, 2019), 211–31; Meelis Friedenthal, Hanspeter Marti, and Robert Seidel (eds.), *Early Modern Disputations and Dissertations in an Interdisciplinary and European Context* (Leiden, 2020).

[4] Peter Mack, *Elizabethan Rhetoric: Theory and Practice* (Cambridge, 2004), 65.

[5] Stuart M. McManus, *Empire of Eloquence: The Classical Rhetorical Tradition in Colonial Latin America and the Iberian World* (Cambridge, 2021), 37, 124.

[6] See Trinity College Dublin, MS 1718, 18r-19r, 20r, 31v-34v, 35v, 37r-v; Andrew Clark, *Register of the University of Oxford* (2 vols, 5 pts, Oxford, 1887), ii, pt 1, 58–9, fn. 2; and McManus, *Empire of Eloquence*, 230 ff.

[7] Previous accounts of university declamation include William T. Costello, *The Scholastic Curriculum At Early Seventeenth Century Cambridge* (Cambridge MA, 1958), 31–4; J. M. Fletcher, 'Faculty of Arts', in: James McConica (ed.), *The Collegiate University* (*The History of the University of Oxford*, *Vol. III*, Oxford, 1986), 157–200, here 193–4; Laurence

As William Costello noted half a century ago, declamation was 'designed to show rhetorical and literary proficiency'.[8] One goal of this exercise was to demonstrate mastery of classical poets and authors. To date, John K. Hale has provided the most in-depth analysis through a study of John Milton's student-declamations at Cambridge.[9] Hale emphasizes that declamation was a literary performance disengaged from real issues. These performances were characterized by an unstructured flow of words and by an excessive reliance on rhetorical methods. Following Hale and others, I argue that student declamations remain an important object of analysis for literary scholars, philologists, and historians. Declamations allow us to reconstruct practices and conventions of speech within humanist education—in short, its oral culture.[10]

In this study, I develop an analysis of declamations as 'scripts'.[11] For declamation a student wrote a speech, most often in Latin, and performed it in front of an audience of peers. The central task of this exercise lay in the composition of a *script*—one that was, preferably, memorized and acted out without the help of a sheet of paper. In order to analyse what I call the 'scripted' format of declamation, I publish the manuscript of a Latin declamation together with an annotated English translation. This script was written by John Rainolds (1549–1607), the famous scholar and theologian, in the context of having to deliver a declamation while he was a master's student at Oxford. Why my insistence on manuscripts? Because previous scholars have tended to focus on printed declamations: texts that were often reworked for publication and thus have a dubious relationship to the original exercise.

Over the course of this study manuscripts will be established as the central source for a history of declamation. The manuscript I have selected enables us to see how students prepared oral performances. Through detailed technical discussions I show how Rainolds crafted his speech on

Brockliss, *French Higher Education in the Seventeenth and Eighteenth Centuries: A Cultural History* (Oxford, 1987), 174–77; Marc van der Poel, *De Declamatio bij de Humanisten*, De Graaf: Nieuwkoop 1987; Marc van der Poel, 'The Latin Declamation in Renaissance Humanism', *The Sixteenth Century Journal*, 20, 3 (1989), 471–8; Peter Mack, *Elizabethan Rhetoric*, 65–7; John K. Hale, *Milton's Cambridge Latin: Performing in the Genres,* –(Tempe, 2005), 67–106.

[8] Costello, *Scholastic Curriculum*, 32. [9] Hale, *Milton's Cambridge Latin,* 67–106.

[10] I emphasize the study of the 'living voice' (*la voix vive*) as demanded by Françoise Waquet, 'Au 'pays de belles paroles'. Premières recherches sur la voix en Italie aux XVIe et XVIIe siècles', *Rhetorica: A Journal of the History of Rhetoric* 11 (1993), 275–92 at 276. See further Françoise Waquet, *Latin, Or, The Empire of a Sign. From the Sixteenth to the Twentieth Centuries*, tr. by John Howe (London and New York, 2001), 152–73.

[11] I draw on the history of theatre: Bruce R. Smith, *Ancient Scripts and Modern Experience on the English Stage,* – (Princeton, 1988) and Peter Holland and Stephen Orgel(eds.), *From Script to Stage in Early Modern England* (New York, 2004).

the page: how he fashioned his own Latin rhymes; strung together verses of poetry; arranged citations and *exempla*; and staged an argument with an opposition of his own invention. These are but some examples of how the concept of 'script' defines this genre. Generally, I find that declamations were loosely structured in the form of classical orations. On a granular level, they were crammed with varying rhetorical set-pieces. Declamation was an opportunity to project classical learning through a display of elegant Latin. Following the precepts of Erasmian *copia*, students devised their scripts in an effort to both convince and impress.

The moderator's outburst in my opening scene has a point. Rhetorical display had no place in disputation because it belonged elsewhere: in declamation. This was not just mere formality. I argue that declamation and disputation are fundamentally dissimilar.[12] That is not to say that rhetoric did not find its way into disputation.[13] Rather, I mean to point out that both exercises had different formats and resulted in different experiences. As an exercise in the logic of argument, disputation consisted of a back-and-forth debate between a student and several opponents. Once the student had affirmed or negated a question (e.g., 'Does everything have a cause?') multiple opponents, usually holding senior positions, provided counter-arguments. The student had to respond to each in a back-and-forth conversation.[14] The emphasis lay in logical analysis: what could—and could not—be inferred from each other's premises. Declamation, on the other hand, was a self-contained set-piece and did not involve responding to live opponents. The situation was controlled entirely by the student: self-expression and self-presentation could be carefully prepared. Hence my terminology of 'script'.

As a case study, I have limited myself to Protestant Europe, but not because I assert any special link between declamation and Protestantism.[15] While it is true that declamations were first instituted at the University of Wittenberg, they never became a specifically Lutheran practice. Following the proliferation of Jesuit rhetorical theory, declamation was likewise adopted in the *ratio studiorum* of 1586 and 1599.[16] As already mentioned, newer scholarship has shown that declamation was instituted across the Catholic Iberian world, achieving a global impact by the late sixteenth

[12] Here I disagree with Hale, *Milton's Cambridge Latin* at 21.

[13] Weijers, *In Search of the Truth*, 207; Mack, *Elizabethan Rhetoric*, 61–5.

[14] Examples of medieval disputations: Weijers, *In Search of the Truth*, 149–76.

[15] For a study of the impact of Protestantism on English education see Ian Green, *Humanism and Protestantism in Early Modern English Education* (Farnham, 2009), 267–364.

[16] *Institutiones Scholasticae Societatis Jesu per Germaniam olim virgentes collectae concinnatae dilucidatae*, ed. G. M. Pachtler (2 vols, Berlin, 1887), ii, 173–75, 410–12.

century. I focus on Protestant Europe because it arguably offers the richest documentation of declamation through manuscripts. This will allow me to reconstruct in detail the kinds of scripts that were produced for declamation and to investigate how these were used in practice.

I proceed three-fold. First, I offer an up-to-date account of how declamation originated in Protestant universities and survey the documentary evidence. Second, I present an edition of a manuscript declamation in Latin, together with an annotated translation. Lastly, I analyse this document as a 'script', substantiating this category of analysis through a series of detailed technical discussions. The young John Rainolds provides a fascinating window on how public speaking—political and religious—was trained in universities through the composition of scripts. Disputation's role in public polemic has recently been reemphasized.[17] I suggest a similar avenue for the study of declamations, although an analysis of this particular question exceeds my present scope.[18]

I. DECLAMATION: THE REVIVAL OF A PRACTICE

The Queen's College, Oxford, MS 241, fols. 151^{r}-5^{r} is a manuscript that bears the title *Declamation in praise of astronomy* (*Declamatio in laudem astronomiae*). It survives with a twin, *Declamation in praise of injustice* (*Declamatio in laudem iniustitiae*), the adjacent fols. 156^{r}-8^{v}.[19] When John Rainolds (1549–1607) wrote out these scripts he was a master's student at Oxford. A member of Corpus Christi College, he received his M.A. at a celebratory disputation on 14 July 1572. In order to obtain his degree, Rainolds had been required to perform exercises in declamation. These, then, are the two manuscripts under review: lavishly prepared speeches on astronomy and injustice.[20]

His performance was well received. On obtaining his M.A., Rainolds was elected a reader in Greek at Corpus Christi and in this capacity he rose

[17] See Marianne Roobool, *Disputation by Decree: The Public Disputations between Reformed Ministers and Dirck Volckertszoon Coornhert as Instruments of Religious Policy during the Dutch Revolt (1577–1583)* (Leiden, 2010); Joshua Rodda, *Public Religious Disputation in England, 1558–1626* (Farnham, 2014).

[18] One excellent analysis of rhetoric at work in Rainolds' theological orations is given in Mack, *Elizabethan Rhetoric*, 61.

[19] A transcription and translation is provided in part II of the paper.

[20] Rainolds' student manuscripts are contextualized in Mordechai Feingold & Lawrence D. Green, 'John Rainolds', in: Edward Malone (ed.), *British Rhetoricians and Logicians, 1500–1660*, Second Series (*Dictionary of Literary Biography, Vol. 281*, Detroit,2003), 249–59, here 252.

John Rainolds (1549–1607) in the *Heroologia Anglica* (1620): 'When RAINOLDS hurls lightningbolts from his learned tongue the Roman Jupiter trembles, and rightly so.'[21]

[21] *Heroologia Anglica: hoc est clarissimorum et doctissimorum aliqout Anglorum, qui floruerunt ab anno Cristi* (Arnhem, 1620), [fol. 63].

to fame through lectures on Aristotle's *Rhetoric* (1572–78).[22] Rainolds was, and would remain, a man of the university—the epicentre of his life. He matured into a respected scholar and theologian, eventually becoming the president of Corpus as well as a leading Puritan in the early days of the King James Bible.[23] When Rainolds passed away, Joseph Scaliger felt genuine sadness for 'that most learned man'.[24] The theologian Daniel Featley eulogized Rainolds for his 'exact skill of divers *Languages*, and the perfect furniture of all *Arts* and Sciences', a human 'plac'd above the reach of Humane *Wit*'.[25]

My study of Rainolds takes place well before his apotheosis. His student manuscripts return us to his training at Oxford, revealing how he honed the skills that accounted for his later success. Contemporaries agreed: Rainolds was extremely eloquent; his orations drew large crowds;[26] his lectures, as Featley gushed, were themselves an '*aureum flumen rerum et verborum*', a golden torrent of things and words.[27] Many legends attest to the spell cast by Rainolds' words. He allegedly talked his brother into becoming a Catholic just as the latter managed to convert him into a Protestant—a war of words that was described as 'a strange *Duell*, much like that of *Eteocles* and *Polynices*', where both the one defeated the other, but neither were victorious.[28] What might we learn from this tale of brotherly love gone theologically awry?

As a lecturer in Greek, Rainolds reminded students that 'the seeds of the discipline [of rhetoric] are implanted in us by nature, but they grow through practice and exercise'.[29] It will be worthwile, I argue, to show how Rainolds' talent for speaking was an acquired talent. This takes us to the declamations he penned, and ultimately performed, while a student.

[22] A superb edition is available: Lawrence D. Green, *John Rainolds's Oxford Lectures on Aristotle's Rhetoric* (Newark, 1986).

[23] For Rainolds' life and work, see Mordechai Feingold, 'Rainolds, John (1549–1607)', *Oxford Dictionary of National Biography* (doi:10.1093/ref:odnb/23029); Mordechai Feingold, 'John Rainolds: Critic and Translator', in: M. Feingold (ed.), *Labourers in the Vineyard of the Lord: Erudition and the Making of the King James Version of the Bible* (Leiden, 2018), 105–59.

[24] Mordechai Feingold, 'Scaliger in England', in: Ann Blair & Anja-Silvia Goeing (eds.), *For the Sake of Learning: essays in honor of Anthony Grafton* (2 vols, Leiden and Boston, 2016), i, 58–9.

[25] Daniel Featley, *The Lives of Ten Excellent Men* (London, 1677), 6.

[26] James McConica, 'Humanism and Aristotle in Tudor Oxford', *The English Historical Review*, 94, 371 (1979), 291–317, here: 302–9.

[27] Daniel Featley, 'The Life and Death of John Reinolds', in: Thomas Fuller, *Abel Redevivus or The Dead Yet Speaking* (London, 1652), 477–91, here 478. This has often been requoted by modern commentators, e.g. Green, *John Rainolds's Oxford Lectures on Aristotle's Rhetoric*, 10; Russ Leo, *Tragedy as Philosophy in the Reformation World* (Oxford, 2019), 136. The phrase originates from Cicero, *Academica* 2.119.

[28] Featley, 'The Life and Death of John Reinolds', 478–9.

[29] Green, *John Rainolds's Oxford Lectures on Aristotle's Rhetoric*, 113.

In order to make clear what a declamation was and how it came to be part of early modern universities, we must clarify the history of this genre. Contemporary dictionaries defined declamation as 'an exercise in fained orations'; to declaim was 'to exercise a fayned argument'. Such speeches were associated with legal training for the Inns of Court.[30] This definition was mostly synonymous with the ancient meaning of *declamatio*. In ancient Rome, young men aspiring to the courts of the Republic performed *declamationes*, 'mock speeches', in order to train their public speaking.[31] This meant delivering a speech for a case in an imaginary trial. Declamations were exclusively practiced by men—a feature they would retain in the early modern period—and their mastery marked a transition to manhood, meaning the speaker was able to defend his views through skilful oratory.[32] The Roman rhetorician Quintilian held declamation in highest esteem. Although he recognized that these mock speeches could degenerate into verbal showboating, he nevertheless believed that they facilitated true preparation for life.[33]

The Renaissance saw the revival of declamations.[34] Humanist scholars resurrected the genre of declamation out of the tracts of Quintilian, Cicero, and Seneca the Elder. But in doing so they freed it from its legal parameters and re-envisioned it as a pedagogical tool for students of the *studia humanitatis*. Rudolph Agricola and Erasmus advocated that any students in grammar school or university apply themselves to declamation. They hoped that such exercises would foster good argumentation and—most importantly—an eloquent style of spoken Latin.[35]

[30] *The Dictionary of Syr Thomas Eliot Knyght* (London, 1538), 30r ('Declamatio'); *Huloets Dictionarie, newelye corrected* (London, 1572), np ('Declame'). For further context see D.S. Bland, 'Rhetoric and the Law Student in Sixteenth-century England', *Studies in Philology* 54, 4 (1957), 498–508; Jayne Archer, Elizabeth Goldring & Sarah Knight (eds.), *The Intellectual and Cultural World of the Early Modern Inns of Court* (Manchester, 2013); and Maksymilian Del Mar, 'The Declamatory Tradition of Normative Inquiry: Towards an Aesthetic History of Legal and Political Thought', *Jus Cogens*, 1 (2019), 151–171.

[31] See S. F. Bonner, *Roman Declamation in the Late Republic and Early Empire* (Berkeley and Los Angeles, 1949); Donald L. Clark, *Rhetoric in Greco-Roman Education* (New York, 1957), 213–61; Michael Winterbottom, *Roman Declamation* (Bristol, 1980); Wilfried Stroh, 'declamatio', in: Bianca-Jeanette and Jens-Peter Schröder (ed.), *Studium declamatorium. Untersuchungen zu Schulübungen und Prunkreden von der Antike bis zur Neuzeit*, (*Beiträge zur Altertumskunde, vol.* , Munich and Leipzig, 2003), 5–34.

[32] Maud Gleason, *Making Men: Sophists and Self-Presentation in Ancient Rome*, (Princeton, 1995), xxii.

[33] Quintilian, *Institutio Oratoria*, II.10.2–12.

[34] Anthony Grafton and Lisa Jardine, *From Humanism to the Humanities. Education and the Liberal Arts in Fifteenth- and Sixteenth-Century Europe* (London, 1984), 7–18, 72–82; Jutta Sandstede, 'Deklamation: III. Renaissance, Humanismus, Reformation', in: *Historisches Wörterbuch der Rhetorik* (2 vols, Darmstadt, 1992–1994), ii, 489–92.

[35] Grafton and Jardine, *From Humanism to the Humanities*, 122–60; Marc van der Poel, *De Declamatio bij de Humanisten*(Nieuwkoop, 1987), 343–51.

Looking back as historians, we are likely to encounter a declamation in print. The sixteenth century witnessed the genre's first publications. Printed publications were penned, not by students, but by well-established scholars. Erasmus is a famous case, his declamations adopting the format of a speech in praise of people, buildings, or cities, but choosing as objects of laudation things like matrimony, medicine, and folly.[36] The declamations of Erasmus have been notoriously hard to characterize. His famous 'Declamation in praise of folly', *Moriae encomium declamatio* (1511), oscillates continually between humour and gravity. He defended his *Declamatio de laude matrimonii* (1518) with such passion that these were more to him than just exercises.[37]

A focus on these texts, I think, can mislead us. Erasmus, Agricola, and Agrippa von Nettesheim never *performed* what they published under the title of 'declamations' as speeches. That happened in their wake when their ideals became practice. If we are to unlock declamation as a pedagogical practice, we must study declamations that were written and performed by students. As will emerge by way of Rainolds' manuscript, declamation was an exercise that trained students to write *scripts*, which were then memorized and acted out in front of an audience.

The University of Wittenberg was the first to introduce declamation.[38] Founded in 1502, Wittenberg was a new pin on the largely medieval map of European universities. Wittenberg quickly became the centre of both the Lutheran Reformation and the *studia humanitatis*, boasting a new curriculum with emphases on history, rhetoric, and poetry, as well as the first chairs in Greek and Hebrew. The author of these reforms was the humanist Philipp Melanchthon.[39] His later biographer Joachim Camerarius—once a rhetoric tutor at Wittenberg—wrote that 'exercises for writing and speaking' (*exercitationes scribendi dicendique*) had only begun to exist there in 1523 when Melanchthon instituted the practice of 'declaiming publicly' (*publice declamari*).[40] As the university's rector, Melanchthon had decreed

[36] See *Declamationes aliquot Erasmi Roterodami* (Leuven, 1520); Desiderius Erasmus, *The Praise of Folly*, ed./tr. Hoyt Hopewell Hudson, with a new forward by Anthony Grafton (Princeton, 2015).

[37] Marc van der Poel, 'The Latin Declamation in Renaissance Humanism', *The Sixteenth Century Journal*, 20, 3 (1989), 471–8, here 472, 477.

[38] Marc van der Poel, *De Declamatio bij de Humanisten*, 346. For selected archival documents, see Gustav Bauch, *Die Einführung der Melanchthonischen Declamationen . . . an der Universität zu Wittenberg*, (Breslau, 1900).

[39] Sachiko Kusukawa, *The Transformation of Natural Philosophy. The Case of Philip Melanchthon*, (Cambridge, 1995); Heinz Scheible, *Melanchthon: Eine Biographie* (Munich, 1997).

[40] *Joachim Camerarius: Das Leben Philipp Melanchthons*, ed. Heinz Scheible and tr. Volker Werner (Leipzig, 2010), 80. For Camerarius' appointment as *rhetor*, see Bauch, *Die Einführung der Melanchthonischen Declamationen*, 15–16.

that declamations be performed twice a month. One week the professors of rhetoric and grammar 'declaimed'; the other week the students did so under the guidance of a tutor. The written scripts of the students were then 'examined and corrected' by the professor of rhetoric.[41]

As Georg Spalatin noted in a 1523 letter to the elector of Saxony, the founder of the university, these new exercises were 'pursued with hard work and diligence' (*mit vleis und treulich nochgangen*).[42] Declamation came into its own at Wittenberg, separate from disputation. The reasoning was such that the humanists perceived disputations to be sterile. Spalatin noted that they had 'become a disgrace entirely' (*gentzlich zum schympff worden*). Melanchthon's statutes hence justified declamations on the basis that 'philosophical disputations had begun to grow cold'. Consequently, a clear separation was made: declamation was overseen by the professors of rhetoric and grammar, whereas disputation was limited to physics and mathematics.[43]

These rules soon became practice. In a manuscript written by Melanchthon in 1539, we find a list of speakers and topics that clearly separates those who had disputed (*haben disputirt*) from those who had declaimed (*haben declamirt*). In the fall term of 1538, then, declamations were given 'On Franconia', 'On one's home' and 'On Emperor Conrad'.[44] The last declamation was published in 1539, affording us a glimpse of how then-professor of rhetoric Veit Winsheim had showered Conrad III in praise, speaking of him as an 'example of piety, humanity, and highest moderation'. Among various rhetorical flourishes, Vinsheim peppered his speech with quotations in Greek as well as verses from Vergil's and Lucan's poems.[45] Declamation was a showy affair. In contrast to disputation, it focused on style and presentation, less on argument and analysis. Declamations were witty, highly rhetorical, and spoken aloud in elegant Latin.

[41] Walter Friedensburg (ed.), *Urkundenbuch der Universität Wittenberg* (2 vols, Magdeburg, 1926), ii, 129: '…statuimus ut singulis mensibus bis declametur, alias a professoribus rhetorices et grammatices, alias ab adulescentibus iuxta rhetoris arbitrium. Declamationes adulescentium a Rhetorices professore recognoscentur [sic] ac emendentur'.

[42] Bauch, *Die Einführung der Melanchthonischen Declamationen*, 12.

[43] Ibid.; Friedensburg (ed.), *Urkundenbuch der Universität Wittenberg*, ii, 129: 'Postquam frigere coeperunt philosophicae disputationes…statuimus ut singulis mensibus bis declametur, alias a professoribus rhetorices et grammatices…Et quia naturae mathematumque cognitio perquam necessaria est rebus humanis, volumus, ut itidem singulis mensibus disputent vel physici ac mathematum professores, vel alii quos ei rei idoneos esse professores iudicaverint'.

[44] Landesarchiv Thüringen - Hauptstaatsarchiv Weimar, EGA, Reg. O. Nr. 337, fol. 4: 'Von Michaelis uff Lucie: In facultate artium sind die lectiones alle gelesen und alle disputation und declamation gehalden. haben disputirt: decanus Vitus Amberbach, Philippus Melanchthon, licentiat Melchior, Isleben. haben declamirt: Matthaeus Francus vom Frankenland, Vitus Amberbach de patria, Vitus Winshem de imperatore Cunrado'.

[45] Veit Winsheim, *Declamatio scripta a Vito Winsemio* (Wittenberg, 1539), np: '…exemplum pietatis, humanitatis, ac summae moderationis…'

Melanchthon was an avid composer of declamations, so much so that he even wrote them for others to speak.[46] The declamations he penned created a back catalogue of speeches that could be accessed for almost any occasion: from odes to ancient emperors and modern institutions to lamentations on the novelties of fashion and the miseries of pedagogy. These declamations follow a pattern. The first, 'on the liberal arts', is typical. Its slew of Greek quotations displayed a familiarity with the newest trend in humanist learning; its frequent questions to the audience ('What do you know about the lyre of Orpheus?') kept listeners engaged; and its theatre—an acted-out dialogue between Venus and Cupid—concluded the speech with a bang.[47] For Melanchthon declamation was a performance. Each declamation ended with a *dixi*, 'I have spoken'. This signalled the final word so that dramatic pauses could not be mistaken for the ending.

Precious little survives on these earliest performances. A 1524 letter, written by a student at Wittenberg, notes that Melanchthon 'had resurrected the ancient genus of declaiming from the netherworld' and

> was himself the first to compose and recite a classical specimen of this [verbal] strife, until he declaimed most forcefully in favour of studying law and then on another day listened to Wilhelm Nesen vehemently declaim to the contrary.[48]

This mythical 'first' encounter of declamation with counter-declamation conveys an important truth. Declamation was a different format from disputation. In the latter, there was a back and forth between a 'respondent' and his 'opponents'. But declamations were self-contained pieces. As such, they provoked counter-declamation at a separate date.

Declamation, then, was an exercise in performing speeches, not in conducting arguments. For a student, the topic of a declamation was proposed by the professor.[49] But the professor's liberty to choose the topic meant that declamation was also an opportunity for impromptu speech-making.

[46] His declamations are collected in: Karl Bretschneider (ed.), *Corpus Reformatorum* (101 vols, Halle, 1843), xi and xii, 5–392. For a selection see Karl Hartfelder (ed.), *Philippus Melanchthon Declamationes* (2 vols, Berlin, 1891–1894).

[47] Bretschneider (ed.), *Corpus Reformatorum*, xi, 6–10; 11 ('Scitis de Oprhei Lyra quid?'); 12–14.

[48] Bauch, *Die Einführung der Melanchthonischen Declamationen*, 18: 'Revocavit ille [Melanchthon] ab inferis vetus declamandi genus…Eius autem certaminis ipse primus specimen aedidit et classicum cecinit, dum pro iuris studio potentissime declamavit et altero die Guilielmum Nesenum, contra vehentissime declamantem audivit'. Melanchthon's declamation was published a year later as *Oratio de legibus* (Grossenhain, 1525).

[49] Richard Wetzel (ed.), *Melanchthons Briefwechsel* (22 vols, Stuttgart, 1991–2021), i, 101: 'Exercebatur iuventus pulcherrima ratione, cum propositis thematis declamaret…' (1519).

Professors often gave declamations as *Gelegenheitsreden*, 'speeches for special occasions' like opening a lecture or closing a commencement ceremony.[50] Declamations like these were a form of entertainment. Humanists even travelled outside of the university to give declamations at local gymnasia, for example, declamations in praise of medicine or the Angels' Song.[51] Showering something with praise was (and remains) the domain of humanists. To be sure, exercises in laudation had already been practiced at private schools like the one run by Guarino da Verona (1374–1460),[52] but it was only in the sixteenth century that declamation became instituted within university curricula. The outpouring of declamations praising medicine during the sixteenth-century—from Erasmus to Wolfgang Lazius—reveals how the institutionalization of these exercises had an effect on apologetic oratory.[53]

With the Edwardian Statutes of 1549, declamation was introduced in the University of Oxford. Master's students had to attend declamation every Friday from 2 to 3 o'clock. Each week two students performed a declamation in praise of a given subject; the following week two different students gave the counter-declamation.[54] Modern scholars have long known that declamation existed in sixteenth-century Oxford. And yet, I think, they have failed to grasp its central place in the curriculum.[55] In Oxford, just as in Wittenberg, declamation was a weekly exercise—like disputation. In 1550 John ab Ulmis described a week at Oxford, crammed as it was with different types of training:

[50] E.g. Sebastian Linck, *Declamatio de primorum studiorum ordine & ratione, in publica Ingolstadiana Academia Schola habita* (Ingolstadt, 1537).

[51] Alexander Seitz, *Declamatio in laudem artis medicae… in Gymnasio Basiliensi… publice recitata*(Basel, 1528); anon., *Declamatio de cantico Angelorum Lucae II. recitata a scholastico in gymnasio Stettinensi* (Wittenberg, 1550).

[52] Grafton and Jardine, *From Humanism to the Humanities*, 17.

[53] Desiderius Erasmus, *Declamatio in Laudem Nobilissimae Artis Medicinae* (London, 1536); Österreichische Nationalbibliothek, Vienna, MS 9472, 15r-29r, 'De artis medicae praestantia et antiquitate declamatio Wolfgangi Lazii Viennae medici Caesaris'.

[54] Strickland Gibson (ed.), *Statuta antiqua Universitatis oxoniensis* (Oxford, 1931), 344; 359; 348: 'Bacchalaureorum declamationes erunt diebus Veneris ab hora pomeridiana secunda ad tertiam. Prima vero hebdomoda duo ordine bacchalaurei unum thema tractabunt, cuius contrariam sententiam duo alii defendant [h]ebdomoda sequente'. See further: J. M. Fletcher, 'Faculty of Arts', in: in: James McConica (ed.), *The Collegiate University* (*The History of the University of Oxford*, *Vol. III*, Oxford, 1986), 157–200, here 193–4.

[55] Cf. e.g. James McConica (ed.), *The Collegiate University*, 30, 54, 60, 66, 341, 693; Mack, *Elizabethan Rhetoric*, 65–7.

> On Mondays and Wednesdays the [doctoral students] hold disputations; and on Thursdays the students in divinity, physic and law dispute among themselves in regular and alternate turns. Lastly, on Fridays and Saturdays the [M.A. students] exercise themselves in acts and declamations.[56]

That declamation was a weekly event speaks to its importance. For Oxford, it has been much-remarked upon how disputation occurred every week within the colleges.[57] Yet the same holds true of declamation. Merton College, for example, held weekly declamations from 1560 onwards, fining students 12 pennies if they neglected these exercises. There even exists documentation showing how the university would not allow M.A. candidates to graduate unless they had fulfilled declamation requirements.[58] Declaiming was central to the M.A. experience at Oxford. One sixteenth-century voice echoed the new reality that students attended declamations twice a week, adding that they were practiced 'often in private'.[59]

If Rainolds' two declamations of 1572 tell us one thing, it is that these exercises are best described as performing a script. The sentences were written out the way they would be spoken. Take Rainolds' declamation in praise of astronomy. 'Why', Rainolds asked his audience,

> will neither the nobility of heroes, nor the grandeur of the most eminent people, nor the majesty of the Gods, excite us—who are educated in the arts of the Muses—for this esteemed knowledge?[60]

Rainolds' script, when spoken aloud, sounds spontaneous and improvised. But as documents from Merton College reveal, 'declamations were usually given from memory and without the help of a sheet of paper'.[61] As the manuscript shows in detail, what gave the appearance of being unrehearsed was in fact carefully crafted. The student's dazzling display of poetry, his

[56] *Letters Relative to the English Reformatio*, ed. Hastings Robinson, (2 vols, Cambridge, 1846–47), ii, 418–21, here 419–20. To avoid confusion, I use 'doctoral students' instead of 'masters' and 'M.A. students' instead of 'bachelors of arts', the latter expressions always denoting the degree *already held* rather than the degree to be acquired.

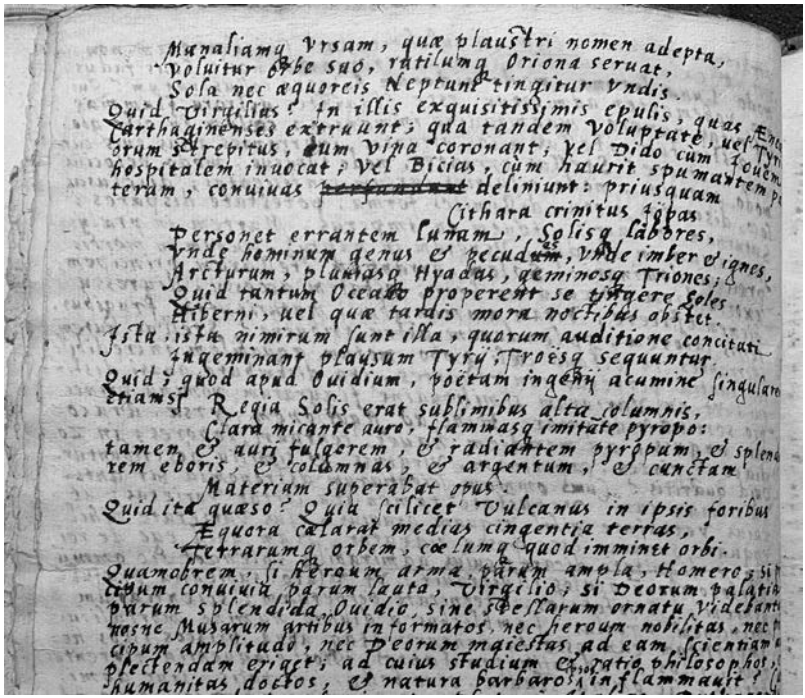
[57] James McConica (ed.), *The Collegiate University*, 15, 19, 34, 38, 58, 60.

[58] J. M. Fletcher, *Registrum annalium collegii mertonensis 1521–1567* (Oxford, 1974), 198, 254; J. M. Fletcher, 'Faculty of Arts', 194.

[59] Nicolai Fierberti, *Oxoniensis in Anglia Academiae descriptio* (Rome, 1602), 32–3: '… incumbit enim illi [= Baccalaureo] priuatim saepius declamare, ac moderante Magistro, theses ex vniuersa Philosophia desumptas bis singulis hebdomadis vel tueri, vel impugnare'. For more on university-wide requirements see Mack, *Elizabethan Rhetoric*, 58 ff.

[60] MS 241, 152v: 'Quamobrem … nosne Musarum artibus informatos, nec heroum nobilitas, nec pri[n]cipum amplitudo, nec Deorum maiestas, ad eam scientiam amplectendam eriget; ad cuius studium & ratio philosophos, & humanitas doctos, & natura barbaros ipsos inflammauit?'

[61] J. M Fletcher (ed.), *Registrum annalium collegii mertonensis 1521–1567*, 254: '… declamationes consuetas memoriter et absque subsidio cartae …'



The declamation as script.

frequent questions and allusions, even his jokes, were prewritten. The diligence with which he corrected the final version, substituting words to avoid repetitions, speaks to the polish of his script.[62] The illusion of good speaking was that it flowed freely.

The second insight into declamation is that the goal of this exercise was eloquence—and eloquence alone. Were the positions presented viable? Did the speaker believe them? These questions were irrelevant. Take Rainolds' declamation on injustice. 'In front of an audience most just', he wrote for his opening line, 'it is invidious to decorate injustice with praise'.[63] But then came his spirited defence of injustice as a means to success. Why have students do this? Because, by having students adopt an

[62] MS 241, e.g. 151v: 'decus' for 'ornamentum', 154r: 'dissidiret' for 'dissentiret'.

[63] MS 241, 156r: 'Coram iustissimis auditoribus iniustitiam ornare praeconio, inuidiosum est'.

artificial posture (in which they defended a thesis bordering the absurd), the focus was on being as elegant as possible with one's words.

Rainolds' script was full of oratorical fireworks. Against the precepts of a Cicero, indeed, against the precepts of any professor who taught Cicero, Rainolds arranged words into his own elaborate schemes:

> *Quam omnes gentes, omnes ætates, omnes nationes, in reuocandis præteritis, in moderandis præsentibus, in providendis futuris tam oportunam existimarunt: vt Homerus ad bellu[m], ad pacem Vergilius; Ouidius ad diuina, ad humana Ausonius; oratores, poëtæ, mathematici, philosophi, ad grauia, leuia; iucunda, tristia; ætherea, terrestria; summa, media, infima, pernecessariam fateantur.*
>
> All races, all times, and all peoples, judged [astronomy] to be so useful, for retrieving the past, overseeing the present, and foreseeing the future. Homer thinks it necessary for war and Vergil for peace; Ovid for divinity and Ausonius for humanity; orators, poets, mathematicians, and philosophers for matters weighty or light, dismal or bright; on both heaven and earth; and for things of high, middle, low worth.[64]

The student gave his sentences rhythm by creating segments similar in form, length, and sound. By reiterating these schemes again and again, Rainolds imposed structure onto the sentence, gradually allowing bi-, tri-... to become n-colons. Rainolds ended the sentence with an eruption of 'a's—*grauia, leuia, iucunda, tristia, ætherea, terrestria, summa, media, infima*—each word rhyming with the previous word, thus filling the air with a harmony of sound.

This was a deliberate attempt at creating a particular style of *spoken* Latin: an ornate way of speaking the words. Just as Mannerist builders had crafted architectural forms full of complex symmetries, so too palaces of sound could be built from the Latin language. In a different portion of the manuscript, Rainolds scripted a set of alliterations that he sung as an ode to the planets:

> *... disclusas loco, discretas motu, dissimiles forma, potestate dispares.*
>
> ... distinct in place, discrete in motion, dissimilar in form, and disparate in power.[65]

Many more examples might be given.

This attention to the sound and rhythm of Latin shows how the declamation was written with oral delivery in mind.[66] These stylistic

[64] MS 241, 155r. [65] MS 241, 152r.

[66] Its relationship to the Elizabethan style of 'euphuism' is debatable – see the classic article: William Ringler, 'The Immediate Source of Euphuism', *PMLA*, 53, 3 (1938), 678–86.

considerations offer but a small glimpse of what Rainolds' manuscript has in store. I hope to show, flagging here Rainolds' eerily beautiful performance of Homeric verses, that scripts like these are precious artifacts of past eloquence—intricate verbal dances enacted by both students and professors flexing their lips through declamatory speaking. With this said, I present Rainolds' manuscript declamation in full and provide commentary on its various set-pieces.

Before I begin, a final note. Declamations were increasingly slipped into disputations in the form of long opening orations. At Oxford this happened often during the *comitia* or 'Act', the celebratory disputation at the end of the year. Instead of answering the question, a disputant might choose to declaim the value of philosophy, using up most of his time with a prepared speech in hand.[67] Academic speaking in the Renaissance had an inclination toward spectacle, and contemporary sources describe the Act as a *spectaculum*. Indeed, for Oxford's Act a stage was erected in the Church of St Mary the Virgin. Here speakers took to the stage to perform a variety of exercises, showcasing their learning and eloquence.[68] When Queen Elizabeth visited Cambridge (1564) and Oxford (1566), the university put on disputations as they put on plays: so that she could watch the academicians perform.[69] Later, in the seventeenth century, this kind of entertainment produced the biting comedy of the *terrae filius* speeches.[70] University speaking would always be performing. Rainolds' declamation was hence 'written for action': it equipped its speaker with a script, waiting to be acted out.[71]

[67] A good example is found in Janice Gunther Martin, 'A 1585 Oxford Ceremonial Student Oration', *History of Universities* 31, 2 (2018), 48–81, here 72–8. See more broadly on this phenomenon: Mack, *Elizabethan Rhetoric*, 61 ff.

[68] Nicolai Fierberti, *Oxoniensis in Anglia Academiae descriptio*, 33–4. For the procedure, see Andrew Clark, *Register of the University of Oxford* (2 vols, 5 pts, Oxford, 1887), ii, pt 1, 76–9. For the Oxford MA exam questions see ibid. at 170–9.

[69] See Debora Shuger, 'St. Mary the Virgin and the Birth of the Public Sphere', *Huntington Library Quarterly*, 72, 3 (2009), 313–346. The relevant sources are in: John Nichols (ed.), *The progresses and public processions of Queen Elizabeth* (3 vols, London, 1823), i, 167–89, 206–17, 229–43; Charles Plummer (ed.), *Elizabethan Oxford: Reprints of Rare Tracts* (Oxford, 1887), 125–50. See further: J. W. Binns, 'Elizabeth I and the universities', in: John Henry and Sarah Hutton (eds.), *New perspectives on renaissance thought: essays in the history of science, education and philosophy* (London, 1990), 244–52.

[70] Kristine Haugen, 'Imagined Universities: Public Insult and the *Terrae Filius* in Early Modern Oxford', *History of Universities* 16, 2 (2000), 1–31; Felicity Henderson, 'Putting the Dons in Their Place: A Restoration Oxford *Terrae Filius* Speech', *History of Universities*, 16, 2 (2000), 32–64.

[71] This has parallels to: Lisa Jardine and Anthony Grafton, "Studied for Action': How Gabriel Harvey read his Livy', *Past and Present*, 129, 1 (1990), 30–78.

II. TRANSCRIPTION AND ANNOTATED TRANSLATION OF THE QUEEN'S COLLEGE, OXFORD, MS 241, FOLS. 151^{R}-5^{R}

This is the script for a declamation, performed by John Rainolds in 1572 for his M.A. degree at Oxford. For readability's sake I have partitioned the continuous text of the manuscript into paragraphs. All square brackets indicate my own editorial interventions, as when expanding abbreviations ('itaq[ue]') or inserting words for the intended meaning ('post Iliadem [scribere]'). All other punctuation devices highlight Rainolds' interventions: his deletions ('~~perfundunt~~'), corrections ('pecud~~um~~^{es}') and extralinear insertions ('…*{dum ea…}…').

[fol. 151^{r}]

Declamatio in laudem Astronomiæ

Mea sic est ratio, & semper fuit, ornatissimi iuuenes; ut quemadmodum Persæ, maiestatem regiam, sine muneribus, adire uerebantur: similiter & ego, tam literato conuentui, sine præfatione, prælegere pertimescam. Etenim, & illi, quem quasi Deum, colebant; quasi patrem, amabant; quasi regem timebant; eum muneribus non venerari perindignum arbitrabantur: & ego, quos tanquam amicos, reuereor; tanquam fratres amplector; tanquam auditores exhortor; eos præfatione non dignari, perabsurdum existimo. Nobis verò non solùm suadent maiorum instituta, quæ voluntario non deserimus; verùm etiam denuntiant legum præscripta, quibus necessario morem gerimus: vt, quia studiorum appropinquat vacatio, literis græcis & latinis quasi feriatis; ne turpiter languentes desidia torpeamus, mathematicas interea disciplinas interpretemur.

Cùm enim plerunq[ue] sic sint humana ingenia; quo magis inertiæ vacamus in feriis, eo minus industria valemus in feriis: ob eam causam diuinus ille senex, ne in otio quidem nos otiari voluit; ne nimium otiando, negotiis minus apti, non remittere leuiter, sed amittere nequiter animos videremur. Itaq[ue] singulari sapientia præcepit, in illis artibus percipiendis, hanc succisiui quasi temporis vsuram insumeremus: quas propter excellentiam Græci μαθηματικὰς, quasi solas & summas disciplinas nuncuparunt.

Earum autem omnium, Platonis quidem iudicio, principem astronomiam, tam ad omnes vitæ partes necessariam habemus; vtilitate tam fructuosam, oblectatione tam iucundam; tam amœnam ad ornatum, tam gloriosam ad honorem; vetustate tam antiquam, claritate tam illustrem, rebus singulis tam opportunam: vt cuiusuis ingeniu[m] extinctum incendere, exhaustum reficere, acutum instruere, infractum acuere; cuiusuis

animum a fæce stultitiae ad flore[m] sapientiæ; a despicatis studiis ad generosos spiritus; a terræ sordibus ad cœli sidera traducere posse iudicetur.

Cuius eximiam laudem, quia nudius septimus, egregius adolescens, humanitate, doctrina, eloquentia politissimus, in exornanda philosophia publicè praedicauit; & uerbis ita dulciter, vt diuina[m] artem diuinitus illustrasse; & rebus ita grauiter, vt auditoru[m] animos magnopere comouisse; & se[n]tentiis ita breuiter, vt permulta perpaucis acutissimè perstrinxisse omnibus videretur: idcirco mihi ad perorandi munus, cùm verecundius tum diffidentius ingrediendum arbitror; verecundius, quia post Homerum, Iliadem [scribere], quod aiunt, temeritatis est, quam declinare semper volui; diffidentius, quia Venerem ab Apelle inchoatam perficere, difficultatis est, quam aspernari nunquam potui. Illud vnum in his angustiis timenti fiduciam, afflicto solarium impertit; quod in ista lubrica dicendi ratione materia talis oblata est: de qua, nec quisquam nihil, nisi infantissimus; nec vnus omnia, etsi disertissimus, co[m]memorare ualeat.

[**fol. 151^{v}**] Decoranda quippe laudibus est ea disciplina, quæ maximis ornamentis uel ad vsum, uel ad ~~ornamentum~~^{decus} sic undiq[ue] refulget: vt quid taceam, quam quid eloquar; vbi finiam, quam vnde ordiar, inuenire sit difficilius. Quid alii sentiant, et nescio, nec laboro; pro mea quidem parte, nec dubito, & affirmo; astrorum ~~disciplinam~~ cognitionem, siue a Mercurio, vt censet Diodorus; siue ab Atlante, ut testatur Plinius; siue a Prometheo, ut opinatur Seruius; siue, vt Cicero scribit, ab Assyriis; siue ut Josephus refert, a Chaldeis; siue, ut Proclus arbitratur, ab Ægyptiis originem habuerit: non solum antiquitate, cum vetustissimis; & varietate, cum iucundissimis artibus co[m]parandam; verum etiam nobilitate, uel illustrissimis; & vtilitate vel, præstantissimis scientiis præferendam.

Nam primò quide[m], vt antiquitas auctoritatem astronomiæ conciliet, cùm homines illis priscis & primis temporibus, sine sede, sine lege, sine iure, sine fide, palantes & errantes in agris vagarentur; quid tandem agebant? excolebant vitam moribus? erant inculti; mentem literis? erant indocti; vrbem legibus? erant dispersi; linguam eloquentia? erant barbari. Quid igitur agebant? Omnes sine dubio, naturæ instinctu ad cognitionis cupiditatem trahimur: nec potest aliquis aliquando perpetua cessatione mentis obtorpescere. Animus enim semper agit aliquid, & peruestiganda reru[m] scientia, tanquam pabulo nutritur: Ciceronis est. Ad rerum verò scientiam disquire[n]dam quasi faces animis adiecit admiratio: Aristotelis est. Nihil autem admirari vehementius solemus, quàm rerum cœlestium pulchritudinem & motionem: Theophrasti est. Mortales igitur antiquissimi suum studium in rerum cœlestium contemplatione sine controversia collocabant.

Cùm enim animo cæci, ratione parum cernerent; & cognitio per sensus ad animum permanaret; & sensuum celeritate mirabiliter valerent; & aspectu sensu acerrimo cœlestia pertingerent: partim consuetudine, quæ

suspicerent, contemplandi; partim cupiditate, quæ nescierant, perdiscendi; in obseruatione Solis, & lunæ, & cœli, & siderum, & motuum, & corporum cœlestium, oculorum quasi ductu mirificè desudarunt. Anaxagoras quidem, cùm ex eo quæreretur quem ad finem se creatum fuisse iudicaret: vt cœlum & solem, inquit, intuear. Socrates autem apud Platonem, oculos nobis ad percipiendam astrorum scientiam a summo reru[m] opifice fabricatos prodit. *{Pergit vlterius, Mercurius Trismegistus: Omnes homines a Deo fatos esse confirmat, ad diuinorum operum cognitionem, & motionem ~~a~~ stellarum cœlestium contempla[n]da[m]}. Eam igitur a diuino numine profectam, ante cunctas artes tam olim enatam, ab vltimis temporibus tam diu retentam: non, rationum modo clarissimarum lumine, sed grauissimoru[m] etiam testium auctoritate, liquidissime dilucescit. Iam verò varietas rerum cœlestium, tum descriptionis mira pulchritudine, tum operis descripti rara maiestate, sic humanorum luminum aciem præstringit: vt nullum Apellem tam variè pingere, nullum, Lysippum tam variè fingere, nullum Ciceronem tam variè dicere potuisse existimemus. Quem enim non moueant illæ cœli conuersiones, illæ motuum vicissitudines, illa cursuum constantia, stellarumq[ue] omnium vel ordo, uel [**fol. 152^{r}**] ambitus, uel distinctio, vel pulchritudo? Cui stuporem non incutiat cœlum innumeris ignibus coruscans, modo Solis radiis, modo Lunæ lumine, modo siderum fulgore collustratum? Quis non vehementer admiretur, esse flagra[n]tes astroru[m] flammas infinitas numero, magnitudine immensas: cœlum in octo globos distinctum stellas alias errantes, inerrantes alias suis cursibus coërcere? Stellas errantes, modo tardius, modo velocius, modo apertius, modo occultius cursum conficientes; disclusas loco, discretas motu, dissimiles forma, potestate dispares; Saturnum in lucris, Iouem in imperiis, Martem in prœliis, Mercurium in studiis, Venerem in nuptiis, Lunam in morbis præcipuè dominari: Solem, errantium stellarum principem, exorta diem, occasu noctem, æstatem accessu, digressu hiemem efficere; vitam animantibus, maturitatem frugibus, terris calorem, splendorem astris tribuere?

Stellas autem inerrantes in octauo cœli globo, motum æquabilem incredibili constantia perpetuò conseruantes, ita distributè quasi distingui; vt ex variarum similitudine figurarum nomina principio sortit[u] videantur. Hinc ad Aquilonem, vrsæ, dracones, angues; ad meridiem naues, centauri, lepores; in zodiaco, pisces, capricorni, virgines, & similia describuntur.

Quid quæritis? Cum omnium scientiarum astronomia sit antiquissima; cum vetustate tamen ita certat varietas: ut cuius vetustate nihil vsquam grauius, eius varietate nihil vnquam suauius esse posse videatur. Nam quid ego de rei tantæ dignitate dicam? cuius admirabilis splendor sic omniu[m] philosophoru[m] oculos illustrauit: vt Plato sapientia præfulgentem; Aristoteles, æternitate perpetuam; scientiarum principem Proclus; Iamblichus

a diuino numine mortalibus impertitam eam esse fateantur. Itaq[ue] apud priscos illos heroas, illos prudentia præstantes, illos eloquentia florentes heroas; sic omnia studia, siue belli, siue pacis; siue domi, siue militiæ; siue iocosa, siue seria; siue ad Deos, siue ad homines pertinentia, rerum cœlestium tractatione perspergebantur: vt ex insignibus contempta, ex illustribus obscura, ex præcellentibus, ex diuinis, uix mediocria, uix humana sine astrorum cognitione futura putarentur. Idq[ue] sane peregregiè videntur indicasse diuini poëtæ, qui Corybantes præcipites furore ferri, quod Lunæ defectionis causas nescierint; Atlantem cœlum humeris sustinere, quod cœlestium conuersionum causas didicerit, prudentissime finxerunt.

Quid Homerus? Nonne, cum Thetidem a Vulcano facit impetrantem, vt Achilli in Hectorem arma fabricetur; indignum prorsus opus tanto artifice futurum iudicauit, nisi in ipso Achillis clypeo,

> Impiger æthereas cælasset Mulciber arces,
> Oceania vagos fluctus, terrasq[ue] iacentes;
> Phœbæamq[ue] facem, radiataq[ue] lumina lunæ,
> Astraq[ue], sidereas, quibus vndiq[ue] fulget Olympus,
> Pleiadasq[ue], Hyadasq[ue], & sævu[m] Orionis ensem,
> [**fol. 152**^{v}] Mænaliamq[ue] vrsam, quæ plaustri nomen adepta,
> voluitur orbe suo, rutilumq[ue] Oriona seruat,
> Sola nec æquoreis Neptuni tingitur vndis.

Quid Vergillus? In illis exquisitissimis epulis, quas Æneæ Carthaginenses extruunt; qua tandem voluptate, uel Tyriorum strepitus, cum vina coronant; vel Dido cùm Iovem hospitalem inuocat; vel Bitias, cùm haurit, spumantem pateram, conuiuas ~~perfundunt~~ deliniunt: priusquam

> Cithara crinitus Iöpas,
> Personet errantem lunam, Solisq[ue] labores,
> Vnde hominum genus & pecud~~um~~^{es}, vnde imber & ignes,
> Arcturum, pluuiasq[ue] Hyadas, geminosq[ue] Triones;
> Quid tantum Oceano properent se tingere soles
> Hiberni, uel quæ tardis mora noctibus obstet.
> Ista, ista nimirum sunt illa, quorum auditione concitati
> Ingeminant plausum Tyrii, Troësq[ue] sequuntur
> Quid, quod apud Ouidium, poëtam ingenii acumine singularem etiamsi
> Regia Solis erat sublimibus alta columnis,
> Clara mirante auro, flammasq[ue] imita[n]te pyropo:
> tamen & auri fulgerem, & radiantem pyropum, & splendorem
> eboris, & columnas, & argentum, & cunctam
> Materiam superabat opus.
> Quid ita quæso? Quia scilicet Vulcanus in ipsis foribus
> Æquora cælarat medias cingentia terras,
> Terrarumq[ue] orbem, cælumq[ue] quod imminet orbi.

Quamobrem, si heroum arma, parum ampla, Homero; si pri[n]cipum conuiuia, parum lauta, Vergilio; si Deorum palatia, parum splendida, Ouidio, sine stellarum ornatu videbantur nosne Musarum artibus informatos, nec heroum nobilitas, nec pri[n]cipum amplitudo, nec Deorum maiestas, ad eam scientiam amplectendam eriget; ad cuius studium & ratio philosophos, & humanitas doctos, & natura barbaros ipsos inflammauit?

Cur enim viri diuina sapientia, Plato in Italiam, Pythagoras in Persiam, Democritus in Ægyptum tantas peregrinationes labore tanto susceperunt: nisi vt Europam, Asiam, Africa[m] peragrando, a Tarentino Archita, Plato; a Persaru[m] Magis Pythagoras; a sacerdotibus Ægyptiis Democritus, reru[m] cœlestium cognitionem perdiscerent? Cur Athenienses Beroso Babylonio statuam inaurata lingua posuerunt? Cur Romani Adrianum, Adrianus astrologos tantis honoribus & præmiis cumularunt? Cur reges ex sacerdotibus, sacerdotes ex Mathematicis apud Ægyptios deliguntur? Cur Persæ regiu[m] nemini deferunt principarum, qui non Scientia siderum diligentius imbuatur? quasi tum deniq[ue] beatas res publicas fore iudicarent, cùm ipsis, aut disciplina siderum scientissimi præfici cœpissent; aut qui præficerentur, omne suum studium ad perdiscendam siderum scientiam contulissent. Non est enim astronomia cæterarum similis artium, quarum aliæ de verbis, de sonis aliæ; aliæ de numeris, ~~aliæ~~ de mensuris aliæ; aliæ de moribus hominu[m], aliæ de naturis corporum [**fol. 153r**] astronomia pertractat sphæras cœlestes, errantes stellas, & cœli circulos & mundi cardines; vt tantum reliquis omnibus debat præcedere, quantum cœlestia terrenis, æterna fluxis immortalia caducis antecellunt. Si spectemus igitur astronomiæ vetustatem, nihil antiquius; si varietatem, nihil iucundius; si dignitatem, nihil diuinius, necesse est existimemus: ad vtilitatem verò si cogitationem conuerterimus, sic ad singulas vitæ partes necessariam reperiemus; ut sine ipsa ne viui quidem, cum ipsa vitam egregiè propagari, merito iudicemus.

Quid enim? Potestne quinquam fingi magis opportunum, ad victum, argricultura; ad opes, mercatura; medicina, ad valetudinem; disciplina, ad virtutem; ad securitatem, scientia militari? Sine dubio nihil potest.

Potestne sine siderum scientia perite agricola, terram exercere; mercator, maria traiicere; remedia præbere medicus; disciplinis imbui studiosus; imperator copiis militaribus præesse? Mihi credite, nunquam potest.

Ad agriculturam enim quàm necessaria siderum scientia videatur, ecquem locupletiorem testem, quàm Columellam; doctiorem, quam Vergilium; graiuiorem, quam Hesiodum, desideratis?

Scribit Columella libro unidecimo de re rustica, necessariam esse cuiusq[ue] officii monitionem eam, quæ pendet ex ratione siderum cœli. Canit Vergil in primo georgicon.

Tam sunt Arcturi sidera nobis,
Hœdoru[m]q[ue] dies seruandi & lucidus anguis:
Quam quibus in patriam ventosa per æquora vectis
Pontus & ostriferi fauces tentantur Abydi.

Hesiodus autem in operibus & diebus

Cum tibi Pleiades Atlantides exoriuntur,

quantam narrationem contexit, quo sidere sit aranda terra, purgandus ager, sementis facienda; quando vites serendæ, fodiendæ, putandæ; plantandæ arbores, tondendæ pecudes; quando fruges demetendæ, triturandæ, uentilandæ; percipiendi fructus, vina recondenda.

Quid, quod Cei Caniculæ exortum summa diligentia quot annis obseruabant, ut fœcundus an sterilis annus instaret, ex eo præsagientes, in vbertate, lætius; in egestate, cautius sibi prouiderent. Cùm enim esset canicula caliginosa & obscura; cœlu[m] crassum, ideoq[ue] pestilens; vnde sterilitas; cùm autem illustris appareret & perlucida; cœlum purum, ideoq[ue] salutare; vnde fertilitas continuo sequebatur. Quo circa non solum ad agricolaru[m] officia, uerum etiam ad prognostica cœli et tempestatum, admodum necessaria videtur cœlestium conuersionum cognitio. Ad nauigandi uero scientiam tantas haud dubiè co[m]moditates apportat, vt non sine causa Romanus ille Homerus, cursus astroru[m] a nauicullariis diligentissimè primo seruatos fateatur.

Nauita sideribus numeros & nomina fecit,
Pleiadas, Hyadas, claramq[ue] Lycaonis Arcton.

[**fol. 153ᵛ**] Aratus quidem in Phænomenis, & ex Arato noster Ouidius, docent, & Graios & Phœnices vtrosq[ue] nauigandi peritissimos alteros ad Helicen, id est vrsam maiorem; alteros ad Cynosuran, id est vrsam minorem, gubernacula moderari.

Magna minorq[ue] feræ, quarum regit altera Graias,
Altera Sidonias utraq[ue] sicca rates & reliq.

Sapienter itaq[ue], ut omnia, Vergilius; cum diligentis & periti gubernatoris exemplar delineare statueret. Palinuru[m] descripsit,

Qui clauum affixus & hærens
Nusquam amittebat, oculosq[ue] sub astra tenebat.

Quid medicina? Nam illa sine rerum cœlestium cognitione recte suum munus administrare potest? Scio certè, non edoctus, a medicis; sed expertus, in morbis (fecit enim vt plura scirem quàm vellem, valetudinis infirmitas) peritos medicos nec venas incidere, nec purgare corpora, nec medicinas adhibere, nisi prius animdaversa siderum ratione; quo nimirum criticis, quos vocant, diebus suarum curationum tempora circumscribant. Itaq[ue]

Ficinus pereruditus medic[us], comentariis in Plotinum, multos fauentibus astris se sanasse; & feliciores semper in medendo dies horasque seruasse profitetur: vt quisquis medicinam sine siderum scientia facere conetur, nobilissimæ disiplinæ mysteria prophanare & polluere videatur.

Quid humaniores literæ? Ne ipsa quidem sine rerum cœlestium perceptione perdiscuntur? Marsilius Ficinus celeberrimus philosoph[us] asseueranter affirmat, eos solos uel disertissimè posse dicere, vel acutissimè contemplari: qui Solis, & Mercurii, & Veneris exorta, studium in eloquentia uel contemplatio[n]e collocant. Idem astrologum iubet consuli, quæ stella vitæ faueat. Idem definitas horas distinguit, quibus ingenium disciplinis excolamus. Quo mihi elegantius uidetur illud, quod scripsit Aristoxenus ab Indo quodam sapiente Socrate[m] responsum. Dicenti Socrati eum optimè philosophari, qui res humanas consideraret: subiecit Indus, eum res humanas scire nunquam posse qui diuinas ignoraret.

Iam vero in rei militaris scientia sic pene dominari videtur astronomia: vt sine hac præstantissimus imperator in nullo esse numero, mediocris hac imbutus præstantissimos sæpe superare valeat. Luna quidem plena maximos in Oceano maritimos æstus efficere consueuit. Id ignorauit Cæsar; eaq[ue] propter maximum se fecisse naufragium Cæsar ipse confitetur. Eclipsis Solis accidit, cu[m] Luna inter Solem & terram interiecta, crassitudine sui corporis eius radios obscurat. Id ignorauit Xerxes; eaq[ue] propter cum putaret pestem græciæ portendi, pestem sibi comparasse, testis est Herodotus. Fit lunæ defectio, cùm ipsa e regione Solis in vmbram terræ incurrens, eius interpositu tenebris opacatur. Id ignorauit Nicias; eaq[ue] propter nobilitatis Atticæ florem elisisse, classemq[ue] pulcherrimam turpissimè dissipasse, auctor est Thucydides. Longe secus Pericles, Atheniensibus, Solis; longe secus Sulpicius, Romanis, lunæ, defectu conturbatis: causas utriusq[ue] ex intima siderum scientia depromendo, formidine[m] minueru[nt], [**fol. 154^{r}**] fiduciam adiecerunt.

Quodsi neq[ue] viuere, sine agricultura; nec copiose viuere, sine mercatura; nec valentes viuere, sine medicina; nec immortales viuere, sine disciplinis; nec securè viuere, sine militari scientia poterimus: cùm harum omnium facultatum præstantia firmissimis astronomiæ præsidiis nitatur; ecquis eam satis amplis laudibus illustret, cuius benignitate, vitam, ab inedia; domum, ab inopia; corpus, a dolore; famam, ab interitu; nos ipsos ab hostium furore vindicamus? Magna sunt ista, sed humana: maiora, qua sequuntur, sed diuina. Futurarum enim rerum euenta præsagire; bellum, pacem, pestem, famem, siccitates, imbres prænoscere; quo demum quisque fato nascatur, prædicere; quæ singula ex mutuis, ut loquantur astronomi, planetaru[m] aspectibus certissime præuidentur; non humano artificio, sed diuino beneficio mortalibus tributa, mihi prorsus persuadeo.

Atq[ue] hic, inuitus equidem, a Xenophonte summo philosopho dissentirem: nisi is ipse non inuitus a Platone philosophorum principe ~~dissentiret~~ dissideret. Xenophon, in iis quae a Socrate dicta retulit, iubebat, inquit. Socrates operam eatenus in rerum cœlestium cognitione poni, quoad noctis, & mensis, & anni tempora pernosceremus; ad profectiones, ad nauigationes, ad custodias, ad alia quæcunq[ue] vel noctu, vel mense, vel anno geruntur, perite discernenda. Ac ista quidem a nocturnis venatoribus, & gubernatoribus, & aliis qui talia studiosè quærunt, facillimè perdisci. Verum tantisper in [illegible deletion] astronomia percipienda studium collocare *{dum ea quæ eodem circuitu non coërcentur,} dum, stellarum errantium motus & naturas, quàm longe terra distet, quas conuersiones efficiant, earumq[ue] causas quærendo frangerent; uehementer dehortabatur Hactenus Xenophon.

At, quanto diuinius, Plato in epinomide? Necesse est, inquit, is uerè dicatur astronomus: non qui secundum Hesiodum, & alios istius modi, ita siderum scientiæ studeat, vt eoru[m] exortus & obitus modò contempletur: sed qui perlustret octo cœlestes ~~globos~~ ambitus; quorum septem circa suum quisq[ue] torquet orbem, sic, vt nullum ferè vnquam nisi diuinum ingenium admirabili acumine possit intueri. Primum enim Luna, modo crescens, modo senescens, suum circuitum menstruo spatio summa celeritate conficit. Deinde vero Sol varia conuersione suum orbem peragrans, solstitiali & brumali reuocatione se conuertit. Tertius Lucifer & quartus Mercurius, cursum habent Solis motui nec celeritate multum, nec tarditate disparem. His alii tres accedunt; quorum summus Saturnus tarditate maximè reliquis antecessit; velocius Saturno Iupiter, & velocius Ioue Mars, suum vterq[ue] circulum peruagantur. Octauus autem cœli globus infinitis sideribus splendissime refulgens, & incredibili celeritate mirabiliter concitatus, cæteros septem ingentes orbes sui corporis ambitu coërcet; & eos in orientem nitentes, in occidentem motione rapidissima contorquet.

Hæc in epominide Plato; hæc eadem in politia Socrates; nec refragatur Socrati Timæus; nec a Timæo discrepat Gorgias. Laudemus igitur Xenophontis suauitatem; sed præferam[us] tamen Platonis philosophiam: vt alterius venustatem, [**fol. 154**^{v}] in verbis, imitari; alterius veritatem, in rebus, amplecti studeamus. Sunt itaq[ue] non solum stellarum cursus co[n]sta[n]tes & immutabiles; verum etiam iudicia rerum futurarum ex ipsis facta, sic illustria, sic explorata: vt apud græcos vulgare prouerbium vsurpetur, qui res ex se perobscuras, certis indiciis illustratas, stellis notari dicunt. Quo mihi præclarius sensisse videtur doctissimus Plotinus, qui in ipso exordio disputationis. Num stellæ quicqua[m] agunt; non omnia quidem a stellis fieri, sed in omnibus rebus futura significari magnopere contendit.

Quare non immerito Porphyrius in libro de oraculis. Quæcunq[ue] tandem fatalia uel Apollo Delphis, uel Fortuna Præneste, uel Sibylla Cumis, uel Jupiter Dodonæ Vaticinati fuerint; ea sine dubio singula stellarum observatione prædicta fuisse uehementer asseuerat. Omnium enim effectus uel nota[n]t, astra, uel monent; si Senecæ suffragamur: &, si Ia[m] blicho credimus, cœlestia terrenis suo tactu moderantur. Causam quæritis? Rerum vniuersa compages, coniunctione quadam, & conuenientia, & cognatione, & quasi co[n]centu natura sic colligantur; vt quæcunq[ue] sita sint infra Lunam, æthereorum corporum tanquam dominatu & imperio temperentur. Quis enim negat terrena corpora ex elementorum concretione componi; & elementorum naturas a stellis errantibus immutari; & errantium stellarum orbes supremi cœli conuersione contorqueri? Ptolomaus quidem excellens mathematicus, in opere quadripartito, incredibilem esse vim & efficientiam astrorū in corporibus concretis disputat.

M. autem Cicero nobilissimus orator, in primo de diuinatione, quod aliæ salubres, aliæ pestilentes terræ iudicentur; in aliis arata, in aliis retusa ingenia progignantur; ad cœli varietatem reuocat. Mercurius vero Prismegistus, admirabilis philosophus, in Æsculapio demonstrat, eas in æthereis corporibus inesse qualitates, & vires, & motiones; quaru[m] efficacitas in animam omnium generum, formarum omnium, & vniuersam rerum naturæ machinam exercetur. Cùm itaq[ue] vita corporibus nostris a stellis infundatur, teste Platone; ideoq[ue] corporum affectiones stellarum principatui subiiciantur, teste Plotino: ob eam causam, & pereleganter vt poëta; & persapienter, ut philosophus, exclamat Ausioni[us],

> Omnia quæ vario rerum metimur in actu
> Astrorum dominatus agit.

Hanc igitur stellarum efficientiam sciunt astronomi, & quia sciunt, euenta prænoscunt; & quæ prænoscunt, futura prædicunt: non solum ista peruagata, serenitates, imbres, tempestates, grandines; verum etiam illa rariora, quo fato: qua fortuna, quibus auspiciis omnes oriantur.

Vitellium, scribit Dio, præmonitum ab astrologis, ad imperium se peruentarum; peruenit: Othoni cladem illaturum; intulit: paucis diebus interiturum; interiit. Cosmo Medici scribit Iouius, a [**fol. 155**^{r}] Basilio prædictum, eum opulentam hæreditatem aditurum; adiit: vitam diuturnam acturum; egit: summa felicitate fruiturum; obtinuit. Agrippinam, scribit Tacitus, consuluisse mathematicum de Nerone filio, num regnaturus esset. Regnabit, inquit ille, sed matrem interficiet. Interficiat, inquit illa, modò regnet. Euentum expectatis? regnauit & interfecit. Ecquis igitur antiquitati clarissimis consignatæ monumentis fidem deroget? aut ecquis ita certas futurorum prædictiones non miram afferre commoditatem

iudicet. Vides aduenta[n]tia bona? gaudebis: vides imminentia mala? vitabis. Sæuiet pestis? valetudini consules. Inuadet hostis? ciuitatem præmunies. Opprimet fames? Victui prouidebis. Nihil est deniq[ue] tam oportunum, nihil tam expetendum, nihil tam gloriosum; quod non siderum scientia diligenter instructus luculente conficiat.

Quid enim magis oportunum, quàm diuitiis circumfluere? Thales Milesius, cum præuideret astrorum cognitione, maximam olearum fertilitatem fore: oleas omnes in agro Milesio priusquam florerent, pecunia coëmptas; cùm iam maturuissent; vendidit vt voluit, & vberrimu[m] quæstu[m] fecit. Quid magis expetendum, quàm valetudinem tueri? Hippocrates Cous, cum ex affectione cœli prænosceret, pestilentiam ab Ilyriis ad græcos peruenturam: morbi nascentis igniculos extinguens, imminenti incendio græcia[m] liberauit. Quid magis gloriosum, quàm hominibus salutem dare? Anaximander, cum instare terræmotus qui Spartam euerterent, ex stellis præsagiret; monuit Spartanos, ut relictis moenibus in agris excubarent: paruerunt Spartani; corruit ciuitas, & ciues euaserunt.

Quid vultis amplius? Videtis astronomiam sic omnium quasi luminum splendore distingui, sic omnium virtutu[m] quasi floribus exornari: vt grauiores antiquitate deliniat; leuiores varietate reficiat; nobilitate pelliciat doctiores; tardiores emolumentis accendat: non abiecta, sed insignia; non mortalia, sed æterna; non terrena, sed cœlestia, pertractet: egentibus subsidia, diuitibus solatia, fœlicibus ornamenta, calamitosis perfugia subministret. Quam omnes gentes, omnes ætates, omnes nationes, in reuocandis præteritis, in moderandis præsentibus, in provide[n]dis futuris tam oportunam existimarunt: vt Homerus ad bellu[m], ad pacem Vergilius; Ouidius ad diuina, ad humana Ausonius; oratores, poëtæ, ~~phi~~ mathematici, philosophi, ad grauia, leuia; iucunda, tristia; ætherea, terrestria; summa, media, infima, pernecessariam fateantur.

In terra colenda, mari transeundo, morbis sanandis, exercendis studiis, armis tracta[n]dis; tantas agricolis, & nautis, & medicis, & philosophis, & militibus vtilitates affert: vt victum, a Cerere; copias, a Neptuno; salutem ab Apolline; virtutem, a Minerua; securitatem, a Marte; generi humano comparasse videatur. Quamobrem, si diuitiis locupletes, opibus honorati; si valetudine integri, dignitate clari; si literis eruditi, gloria illustres; a Marte tuti, a Musis culti, a fortunis firmi, a doctrinis nobiles esse uolueritis: humilia co[n]temnite, sublimia suspicite; mediocria probate, ad excellentia contendite; vt non in terras deiecti, in cænu[m] deuoluti, sed ad stellas euecti, ad cœlu[m] excitati, ab hominib[us] ad heroas, ab heroibus ad Deos penetrare possitis.

Dixi.

Ioan. Rainoldus.

[**fol. 151r**]

Declamation in praise of Astronomy

So my procedure goes, and always has gone, o most decorated youths: I dare not—just as the Persians dared not visit his royal majesty without gifts—lecture to so learned an audience without a preface. Indeed, the Persians thought him worthy of venerating with gifts whom they worshiped as if he were God, loved as if he were a father, and revered as if he were a king. And so I think it absurd not to honour those, through a preface, whom I respect as friends, embrace as brothers, and exhort as listeners.

Not only our ancestors' customs, which we will not voluntarily abandon, truly command us: also the statutes' prescriptions,[72] which we will inevitably obey, command that—because the vacation from our studies approaches,[73] when Greek and Roman letters are laid to rest—we must not grow disgracefully weak [and] listless through laziness, but in the meantime comprehend the mathematical disciplines. For the most part, however, human inclinations are such that the more lazy and inactive we are during the holidays, the less capable we are of industry then. For that reason that Divine Old Man wanted us not to waste away the days through idleness. He did not want us to rest excessively, become less attached to our labours, and to give up easily. Instead we were to be seen as banishing wicked spirits. In his exceptional wisdom, therefore, he commanded that we make use of our spare time within those arts which are to be learned and which the Greeks call μαθηματικὰι because of their excellence, the only and highest forms of knowledge as it were.

Among all of these arts the foremost is, in Plato's judgment, astronomy.[74] We consider it so necessary for all walks of life, so fruitful due to its utility, so enjoyable in its ability to delight, so pleasant for the adornment [of the world], so glorious in its reputation, so ancient in its long existence, so illustrious through its brilliance, and so useful for everything. One may judge it to have the power to reawaken dormant ingenuity, replenish it when it has been depleted, refine it when it has [already] been sharpened, and sharpen it when it has been blunted. Moreover, it has the power to lead the mind from the dregs of stupidity to the flowers of wisdom, from contemptible studies to superior spirits, from the clods on the ground to the stars in the sky.

[72] The statutes of Corpus Christi Oxford were instituted in 1517 by the college's founder Bishop Fox. See Mordechai Feingold, *The Mathematicians' Apprenticeship: Science, Universities and Societies in England 1560–1640* (Cambridge, 1984), 36–7.

[73] 'Vacation' (*vacatio*) meant the long summer break (July to October) in between trinity and michaelmas terms at Oxford.

[74] Cf. *Epinomis*, 989e-990d, which ranks astronomy before geometry; *Politeia*, 527c, 529a-d ranks geometry before astronomy.

Seven days ago, an outstanding youth—highly refined in character, education, eloquence—publicly spoke special praise of astronomy during his praise of philosophy. And with words so sweet that he seemed to everyone to have illuminated a divine art from heaven; and of matters so weighty that he seemed to have moved the hearts of his listeners; and with sentences so short that he seemed to have sharply drawn together very much in very little. Therefore, I judge that I should enter into the orator's chair more cautiously and more sceptically. More cautiously, because 'to write an Iliad after Homer', as they say,[75] is a matter of temerity I have always wished to avoid. And more sceptically, because finishing the [painting of] Venus Apelles left unfinished[76] is a matter of difficulty that I have never been able to disdain. Despite these difficulties one thing gives confidence to the fearful and a bright place for the distressed. Namely, to use a slippery manner of speaking, our subject matter present itself like this: neither can one recall nothing about it, except if one is most childish, nor can one recall everything about it, even if one is most eloquent.

[**fol. 151^{v}**] Indeed this discipline [of astronomy] should be decorated with praise. It glitters from all sides with the biggest ornaments, be it for its utility or its splendour, so that it will be more difficult to find what I leave unsaid than what I say; or where I finish than where I begin. What others may think, I neither know nor care. Indeed, for my part, I do not doubt, but affirm that knowledge of the stars originated either from Mercury, as Diodorus recommends;[77] or from Atlas, as Pliny testifies;[78] or from Prometheus, as Servius opines;[79] or, as Cicero wrote, from the Assyrians;[80] or, as Josephus reports, from the Chaldeans;[81] or, as Proclus judges, from the Egyptians.[82] Not only is it comparable to the most ancient arts because of its antiquity and to the most pleasant arts because of its variety; it is also preferable to the most brilliant sciences because of its nobility and to the most outstanding 'sciences' because of its utility.

Above all, antiquity provides the authority of astronomy. When in those ancient & first times humans were roaming around, without a residence,

[75] *Post Homerum Iliadem scribere* was a common humanist saying indicating the impossibility of imitating Homer. I thank Will Theiss for his remark that Rainolds in haste omitted the 'scribere'. See further Theodor und Barbara Mahlmann, '*Iliada post Homerum scribere* – Prüfstein frühneuzeitlicher Autorschaft', in: Ralf Bogner et al. (eds.), *Realität als Herausforderung: Literatur in ihren konkreten historischen Kontexten* (Berlin, 2011), 47–92.

[76] Cf. *Historia Naturalis*, 35.9 for Pliny the Elder's account of the unfinished painting of Venus by the 4th-century-BCE Greek sculptor Apelles.

[77] Cf. *Bibliotheca*, 1.16.

[78] Cf. *Historia Naturalis*, 2.6; 7.56.

[79] Cf. (Servius) *Ad Eclogas/Bucolica*, 6.42.

[80] Cf. *De Divinatione*, 1.19; 2.46. Cicero, in fact, names the Babylonians here.

[81] Cf. *Antiquitates Judaicae*, 1.167–8.

[82] Cf. Proclus, *A Commentary on the First Book of Euclid's Elements*, tr. by Glenn Morrow, (Princeton, 1992), 51–2. Proclus, in fact, was talking about geometry.

without law, without right, without faith, vagabonding and wandering on the fields: what did they end up doing? Did they improve their life through mores? They remained unimproved. Did they cultivate their mind through letters? They remained unlearned. Did they build a city with laws? They remained scattered. Did they perfect their tongue through eloquence? They remained barbarous. What, then, did they do? Undoubtedly all of us are driven, through the impulse of our nature, towards the thirst for knowledge, for one cannot somehow come to a halt through perpetual rest of one's mind. The soul is always doing something and is nourished by food for thought, as Cicero said,[83] by knowledge yet-to-be-known. As Aristotle said,[84] admiration fixes—like a torch for the mind—one's attention on knowledge yet-to-be-known. However, as Theophrastus said,[85] we tend to admire nothing more strongly than the beauty and motion of celestial things. Hence the most ancient mortals brought together their efforts, unquestionably, through the contemplation of the heavens.

Blinded by their spirit they discerned very little through reason. Knowledge flowed from their senses right into their soul. For when it came to the speed of their senses they were miraculously capable. With their most accurate sight they stretched out to the heavens. In part they did so due to a habit of contemplating things they admired; in part they did so due to a thirst for learning things they did not know. By observing the Sun and Moon and heavens and stars and movements and heavenly bodies they exerted themselves, as if their eyes had been wondrously led. Anaxagoras, when asked why he was born, proclaimed: 'so that I may look upwards to the sky and the Sun'.[86] Plato's Socrates, too, propounds that our eyes were fashioned by the highest creator of things for knowledge, yet-to-be-known, of the stars.[87] *[88]{Hermes Trismegistus goes even further: he confirms that all human beings are destined by God for knowledge of divine works & the yet-to-be-contemplated movements of the heavenly stars}[89] This knowledge has progressed from divine will. So long ago before all the arts it was born, and has been preserved from distant epochs for so long a time.

It begins to shine most brightly, not only through the light of the most prominent arguments, but also through the authority of the most serious witnesses. Indeed the variety of celestial things so captivates the sharp gaze

[83] Cf. *De Senectute*, 14 [par. 49].
[84] Cf. *Metaphysics*, 1.2., 982b.
[85] Cf. Fred Dübner, *Theophrasti Characteres* (Paris, 1840), 'Simplicii Comentarius in Epicteti Enchiridion', 100.
[86] Cf. Diogenes Laertius, *Lives of Eminent Philosophers*, 2.3. [par. 10].
[87] Cf. *Timaeus*, 47A.
[88] The asterisk in the MS refers to a sentence scribbled vertically into the left margin, here enclosed in {…}.
[89] Cf. Marsilio Ficinio, *Mercurii Trismegisti Pymander… eiusdem Asclepius* (Basel, 1532), 34.

of human eyes through both the wondrous beauty of describing it and the rare majesty of the work [of art] described. We may suppose that Apelles could have painted nothing so variedly, Lysippus sculpted nothing so variedly, Cicero spoken of nothing so variedly [as the stars]. Who is not moved by those revolutions in the heavens, those alterations of their motions, that constancy of their passage, the order of all the stars, [**fol. 152r**] or their orbit or division or beauty? Whom do the heavens not instil with a sense of wonder? Those sparkling skies, with their countless lights, illuminated at varying moments through the Sun's beams, the Moon's light, and the stars' gleam? Who does not greatly admire that the blazing flames of the stars are infinite in number and incalculable in magnitude? That the heavens are separated into eight spheres, confining both wandering and fixed stars into their paths? That the planets complete their passage either more slowly or more quickly, more visibly or more covertly? That they are distinct in place, discrete in motion, dissimilar in form, and disparate in power? That Saturn has special dominion over gains, Jupiter over dynasties, Mars over battles, Mercury over studies, Venus over marriages, and the Moon over diseases? That the Sun, the first among planets, brings about the day through its rise and the night through its decline, the summer through its proximity and the winter through its distance? That it provides animals with life, fruits with ripeness, regions with warmth, and stars with light?

The fixed stars in the eighth sphere of the heavens, forever conserving their uniform motion with incredible constancy, are separated in such an orderly way that, given the similitude between their various shapes, their names seem to have come out of a first drawing of lots. In consequence, bears, dragons and serpents proceeded towards the North; ships, centaurs and hares towards the South. In the zodiac, fish, capricorns, virgins & similar things are represented.

What more do you want? Because astronomy is the most ancient of all the sciences. And yet its variety competes with its antiquity so that due to its antiquity it seems that nothing is more serious [than astronomy], but due to its variety it seems nothing is more sweet. What can I say about the dignity of such a big subject? Its admirable light has illuminated the eyes of all the philosophers: Plato confesses that it shines through its wisdom,[90] Aristotle that it is eternal in its timelessness,[91] Proclus that it is foremost among the sciences,[92] and Iamblichus that it was imparted to mortals by divine will.[93]

[90] Cf. *Epinomis*, 990 a-b.

[91] Cf. *Physics* 8.6, 258b26–259a9.

[92] This is, in fact, false – see Proclus, *A Commentary on the First Book of Euclid's Elements*, tr. Glenn R. Morrow (Princeton, 1970), 29–35.

[93] Cf. Iamblichus, *De mysteriis Aegyptiorum, Chaldaeorum, Assyriorum* (Lyon, 1549), 166.

That is why, when it comes to those ancient heroes, those heroes that excelled at prudence and blossomed with eloquence, we observe: all their enterprises were sprinkled with a touch of the celestial, whether in war or peace, at home or in battle, in playful or serious situations, in matters pertaining to Gods or humans. Without knowledge of the stars, their enterprises would be regarded as insignificant among noteworthy and as obscure among illustrious things, as barely ordinary among what is excellent and as merely human among what is divine.

The divine poets, certainly seem to have pointed this out most brilliantly. They, very prudently, taught that the Corybantes[94] dangerously get carried away in a frenzy because they had not known the causes of the lunar eclipse; [they also taught] that Atlas holds up the heavens on his shoulders because he had learned the causes of the celestial revolutions.

What about Homer? Did he not—when he has Thetis get Vulcan to fashion armour for Achilles against Hector—state bluntly that this work [of art] would be unworthy of so excellent a craftsman [as Vulcan] if it were not for the fact that on Achilles' Shield itself,

> Industrious Mulciber had sculpted castles in the sky,
> waves that churn in the Ocean and lands that motionless lie,
> fire from Phoebus[95] and the Moon's rays radiating,
> stars with which Olympus[96] glistens all over,
> the starry Pleiades and Hyades and blazing sword of Orion,
> [**fol. 152**^{v}] and the Bear of Maenalus,[97] named after the plough,
> as it observes red-gold Orion revolving on its orb,
> bathing not once in Neptune's waves.[98]

What about Vergil? At those most exquisite feasts which the Carthaginians put together for Aeneas: remember the noises of the Tyrians when [their hosts] fill the wine cups up to the brim?[99] Or when Dido invokes Jupiter

[94] Dancing priests who worshipped the goddess Cybele.

[95] Rainolds translates Homer's *ἠέλιόν* ('Sun') as *Phoebaeam facem* ('Phoebean fire'). The Sun-god bears the name Phoebus in Roman Mythology, cf. *Metamorphoses* 2.24, 36, 110.

[96] Rainolds here renders Homer's *οὐρᾰνός* ('sky') as *Olympus*. The ancient Greeks had identified Gods' palaces on top of Mount Olympus (which had been built by Vulcan) with the planets in the sky, cf. *Iliad* 1.605 ff.

[97] Rainolds translates Homer's *Ἄρκτόν* ('Bear') as *Maenaliam ursam* ('Maenalian Bear'). Ovid first introduced the 'Maenalian' epithet for the Homeric Bear in the *Tristia* 3.11.8. 'Maenalian' indicates a mountain in Arcadia of which Lycaon was king. In mythology the daughter of Lycaon had been transformed into a bear by Zeus and placed into the sky. See: Ludewig Ideler, *Untersuchungen über den Urpsrung und die Bedeutung der Sternnamen* (Berlin, 1809), 293–4; William Smith, *A Classical Dictionary of Greek and Roman Biography, Mythology and Geography*, Revised & Rewritten by G. E. Marindin (London, 1904), 103.

[98] Cf. *Iliad* 18.484–9.

[99] I read Virgil's *coronant* (literally: 'to crown') as meaning 'to fill to the brim'. See: Michael Roberts, 'Virgil and the Gospels: The *Evangeliorum libri* IV of Juvencus', in: R. Rees (ed.), *Romane Memento: Vergil in the Fourth Century* (London, 2004), 47–61, here 52.

as God of hosts? Or how—when Bitias drinks from a foaming *patera*—they are ~~inebriating~~[100] charming their guests? Until at last, with pleasure,

> Long-haired Iopas with his *cithara*
> sings of the wandering Moon and the Sun's toils,
> of whence come men and beasts, rain and fire,
> of Arcturus, rainy Hyades, and the twin Bears,
> of why in Winter suns make such haste to set behind the Ocean,
> of what delay slows down the lingering nights.[101]

Exactly this, exactly this! Clearly, by hearing those things, people had gotten excited:

> The Tyrians increase their applause, the Trojans follow suit.[102]

And what is one to say about the following? In Ovid, a poet unique in his shrewdness of ingenuity, even if…

> the Sun's palace stood high on elevated columns,
> bright with marvellous gold and fiery bronze,[103]

…and despite the brightness of the gold & shining bronze & the splendour of the ivory & columns & silver & all, it is still the case that

> the workmanship surpassed the material.[104]

Why, I ask, is this the case? Because evidently onto its [the palace's] gates Vulcan

> had sculpted the waters surrounding the central Earth,
> the Earth's circle, and the heavens that hang above it.[105]

Why, if these are the shields of heroes, do they not appear to be glorious enough to Homer without the stars' adornment? And why, if these are the feasts for the most eminent people, do they not appear luxurious enough to Vergil without the stars' adornment? And why, if these are the palaces of the Gods, do they not appear glamorous enough to Ovid without the stars' adornment? Why will neither the nobility of heroes, nor the grandeur of the most eminent people, nor the majesty of the Gods, excite us—who are educated in the arts of the Muses—for this esteemed knowledge, while *ratio* drives philosophers to study it, *humanitas* the learned, and *natura* those barbarians?

Why, then, had men of divine wisdom embarked on pilgrimages—Plato in Italy, Pythagoras in Persia, Democritus in Egypt—and with such great

[100] I read Rainolds' crossed-out *perfundunt* (literally: 'drenching') as meaning 'inebriating'.
[101] Cf. *Aeneid* 1.740–6. Rainolds omits 741: '…docuit quem maximus Atlas'.
[102] Cf. *ibid.* 1.747. [103] Cf. *Metamorphoses* 2.1–2. [104] Cf. *ibid.* 2.5.
[105] Cf. *ibid.* 2.6–7.

effort, if not to traverse Europe, Asia, and Africa to acquire knowledge of celestial matters, as did Plato from Archytas of Tarentum, Pythagoras from the Persian Magi, and Democritus from the Egyptian priests? Why had the Athenians erected a statue with a golden tongue for Berosus the Babylonian? Why had the Romans showered Adrianus and Adrianus in turn the astrologers with such big honours and gifts? Why do the Egyptians select kings from priests and priests from mathematicians? Why do the Persians not report to the most eminent kings if they haven't been taught more carefully the science of the stars? At the time they judged that nations would be beautiful when they began to put in charge those who were most proficient in the discipline of the stars or devoted all their efforts to acquiring knowledge of the stars. Astronomy is not similar to the rest of the arts. Of the latter some treat words, others speech; some numbers, others measures; some the mores of humans, others the natures of bodies. [**fol. 153^{r}**] But astronomy studies the celestial spheres, planets, circles of the heavens and Earth's poles. It must come before everything else, just as the celestial comes before the terrestrial, the eternal and immortal before the transient and fleeting. It is therefore inevitable for us to think that if we consider astronomy's antiquity, nothing is more ancient; its variety, nothing is more pleasant; its dignity, nothing is more divine. If we were to deploy this knowledge for its usefulness, we'd find that it is necessary for the each part of life. We may judge its merit to lie in the fact that we cannot live without it, because through it alone life may continue excellently.

But why is this so? Cannot something more beneficial be taught? Agriculture to produce food? Commerce to produce wealth? Medicine for health? Discipline for virtue? Military knowledge for security? Without doubt, nothing can.

But surely, even without the science of the stars, the farmer can skilfully work the earth, the merchant traverse the seas? The doctor can administer his remedies, the student be taught the disciplines, and the general command his troops? Trust me, none of them can. The science of the stars is found to be necessary for agriculture: do you need a more reliable witness than Columella? A more learned witness than Vergil? A more serious witness than Hesiod?

Columella writes in the 11th book of *De re rustica* that a warning is necessary about the duties of each [month], which depends on the consideration of the stars in the sky.[106] Vergil sings in the first book of his *Georgica*:

> We too must observe the stars of Arcturus,
> the Days of Children and the Bright Serpent,
> as carefully as those who, sailing home through windswept seas,
> attempt to cross the [Black] Sea and the straits of oyster-bearing Abydus.[107]

[106] Cf. *De re rustica*, 11.31. Rainolds forgets to copy 'menstrui' into his MS, leaving the 'cuiusque' standing alone

[107] Cf. *Georgica*, 1.204–7.

Yet in Hesiod's *Works and Days*,

> when the Pleiades, the daughters of Atlas, show themselves to you,[108]

how great a narrative he had woven of how—with the help of a particular constellation—lands may be ploughed, fields cleaned, seeds sewn; times determined when vines are to be planted, pulled up, and pruned; trees planted and cattle shaved; crops harvested, threshed, and tossed into the air; fruit collected and wine stored.

What is one to say about the following? The Ceans observed every year and with highest diligence the appearance of *Canicula*,[109] prognosticating from it whether the year was going to be fertile or barren. In case of abundance, they acted with greater happiness; in case of scarcity, they acted with greater caution. When *Canicula* was covered with mist and obscured, the heavens were murky and hence deleterious. Scarcity followed. When *Canicula* appeared illuminated and pure, the heavens were clear and hence advantageous. Fertility followed, immediately. Therefore, knowledge of the celestial revolutions appears to be greatly necessary, not only for the tasks of farmers, but also for prognosticating skies and storms.

Indeed, it undoubtedly has such great benefits for knowledge of navigation that—not without reason—that Roman Homer acknowledges that the passages of the stars were most diligently observed from small ships:

> The sailor assigned numbers and names to the stars:
> the Pleiades, Hyades, and bright Arctos Lycaonis.[110]

[**fol. 153^{v}**] Aratus in the *Phenomena*,[111] as well as our Ovid drawing from Aratus, teach that Greeks and Phoenicians, both highly skilled at navigation, direct their rudder towards Helike, that is *Ursa Maior*, and Cynosura, that is *Ursa Minor*.

> Of the beasts, big and small, one guides Greek ships,
> the other Sidonian ships, both to dry land etc.[112]

For this reason, Vergil decided wisely, as always, to delineate the exemplar of the diligent and skilful helmsman. He described Palinurus,

> Who held and clung to the steering oar,
> never let go, and kept his eyes fixed to the stars.[113]

[108] Cf. *Erga kai Hemerai*, 383.
[109] Rainolds took this from Cicero, *De Divinatione*, 1.1.
[110] Cf. *Georgica*, 1.137–8.
[111] Cf. Aratus, *Phaenomena*, ed. Douglas Kidd (Cambridge, 1997), 75 [verses 36–9].
[112] Cf. *Tristia*, 4.3. [lines 1–2].
[113] Cf. *Aeneid*, 5.852–3.

What about medicine? Can it fulfil its duties properly without knowledge of celestial things? Even though I was not trained by physicians, I have had experiences with illnesses (weakness of health meant that I knew more than I wanted to). I know with certainty that experienced doctors do not cut veins, purge bodies, or use cures, except if they have clearly circumscribed—on the basis of prior judicious observation of the stars—periods within their treatments as 'critical'[114] (as they call them) days. The erudite medical man Ficino professes, in his commentaries on Plotinus, that many had healed themselves with the help of advantageous stars and that the more successful healers always kept the days and hours in treatment.[115] It follows that someone trying to practice medicine without the science of the stars seems to desecrate and stain the secrets of the noblest discipline.

What about the *Literae Humaniores*? Are they studied seriously without any comprehension of celestial matters? Marsilio Ficino, the most celebrated philosopher, strongly affirms that those alone can speak most eloquently and think most clearly who work on their eloquence or contemplation when the Sun, Mercury and Venus appear. The same bids that an astrologer be consulted as to which star favors life. The same singles out definite hours in which we may cultivate our ingenuity[116] through studies.[117] Therefore, what seems rather elegant to me is what Aristoxenus wrote about some man from India who had wisely responded to Socrates.[118] To Socrates, who was saying that he philosophizes best who examined human affairs, the man from India responded: he who ignored divine affairs could never know human ones.

Moreover, astronomy appears almost to determine the science of warfare so that without it the best general has no worth; a mediocre general, instructed in astronomy, may oftentimes defeat the best generals. A full Moon regularly causes the highest tides in the ocean. This, Caesar had not known. That is why Caesar himself admits that he had brought about the greatest wrecking of ships.[119] A solar eclipse occurs when the Moon is

[114] With 'critical' days medical astrologers meant the severe stages of an illness, correlated with lunar and solar cycles. See Monica Azzolini, 'Reading Health in the Stars: Politics and Medical Astrology in Renaissance Milan', in: Günther Oestmann, H. Darrel Rutkin & Kocku von Stuckrad (eds.), *Horoscopes and Public Spheres. Essays on the History of Astrology* (Berlin and New York, 2005), 183–206, here 188–9.

[115] Cf. Marsilio Ficino, *Plotini divini illius è platonica familia philosophi, de rebus philosophicis libri* (Solingen, 1540), 129v.

[116] For an analysis of the meaning of *ingenium* see Rhodri Lewis, 'Francis Bacon and Ingenuity', *Renaissance Quarterly* 67, 1 (2014), 113–63.

[117] Cf. Marsilio Ficino, *De vita libri tres* (Basel, 1529), 16

[118] Cf. Eusebius of Caesarea, *Praeparatio Evangelica*, tr. E. H. Gifford (Oxford, 1903), 509.

[119] Cf. *Bellum Gallicum*, 4.29.

placed between the Sun and Earth, blocking the rays of light through the thickness of its body. This, Xerxes did not know. That is why when he believed that devastation in Greece had been foretold he brought devastation on himself, as Herodotus attests.[120] A lunar eclipse happens when the Moon travels on a line with the Sun and into the Earth's shadow, through whose interjacent position it is obscured. This, Nicias had not known. That is why [he] destroyed the best in the Attic nobility and squandered the most beautiful army in the most hideous fashion, as Thucydides writes.[121] Wholly different was Pericles with the Athenians, who were disturbed by a solar eclipse, and Sulpicius with the Romans, who were disturbed by a lunar eclipse. By extracting the causes of both eclipses out of intimate knowledge about the stars, these men lessened fear [**fol. 154r**] and increased trust.

If, then, we cannot live without agriculture nor live plentifully without trade, healthily without medicine, eternally without studies, or safely without military knowledge, is there anyone who exalts astronomy with enough praise? Because it is through the most fervent aid of astronomy that the excellence of all these capabilities is preserved. Through the benevolence of astronomy we protect our life from starvation, our home from poverty, our body from pain, our reputation from ruin, ourselves from the rage of enemies. These matters are important and yet they remain human. More important are the matters that follow onto them: divine ones. Divine matters, which may only be foreseen with certainty through the 'mutual' (as astronomers say) aspects of the planets, were given to mortals—this I am truly persuaded of—not through human artifice, but by divine grace, so mortals may predict future events; foreknow war, peace, plague, starvation, droughts and rainstorms; and finally, foretell what purpose, according to fate, anyone was born for.

And here I would be disagreeing, for my part involuntarily, with a most eminent philosopher, Xenophon, if he did not willingly disagree with Plato, the first among philosophers. Xenophon says, in his account of the sayings of Socrates, that he commanded that effort should be put into knowledge of celestial things only insofar as we would be finding out with skill the times of the night, month, and year for the purposes of journeying, navigating, protecting, and whatever else occurs in the night, month, or year.[122] Indeed, these things are easily learned by nocturnal hunters, helmsmen, and others who inquire into such things. Xenophon advised strongly against putting one's efforts into astronomy insofar as it

[120] Cf. *Histories*, 7.37. [121] Cf. *History of the Peleponnesian War*, 7.50.4.
[122] Cf. *Memorabilia*, 4.7.4–5.

includes *[123]{those things not placed on the same orb} wearing oneself out by calculating the motions and natures of the planets, how far away the Earth is, what the revolutions produce, and the causes thereof.[124]

Yet how much more divine is Plato in the *Epinomis*?[125] It is necessary, said Plato, that the following person be truly called an astronomer: not he who—according to Hesiod and others of his ilk—studies the science of the stars so that he may observe their rising and setting; but he who closely scrutinizes the 8 celestial cycles, of which 7 revolve each on their own orb, so that no one can ever fully look up to [the] divine intelligence other than with astonishing acuteness. Firstly the Moon, as it grows at one time and declines at another, completes its monthly cycle with the greatest speed. Then the Sun, as it revolves on its orb with varying speed, returns after it has been recalled through the summer and winter solstices. Thirdly and fourthly, there are Lucifer and Mercury, following a course which I would not distinguish from the Sun's motion in terms of higher speed or slowness. To these, 3 more are to be added of which Saturn is the biggest, greatly surpassing the others in terms of its slowness. Jupiter is faster than Saturn and Mars faster than Jupiter as both revolve on their orbs. Yet it is the eighth sphere of the heavens, glistening spectacularly with endless stars and spinning miraculously with incredible speed, that holds in place the 7 other enormous orbs through the revolution of its body and it turns these orbs with the most rapid speed in the West as they appear in the East.

These things Plato said in the *Epinomis*; Socrates also said them in the *Politeia*.[126] Neither does Timaeus oppose Socrates nor does Gorgias disagree with Timaeus. Let us therefore praise the pleasantness of Xenophon, yet still prefer the philosophy of Plato so that [**fol. 154^{v}**] we can try to imitate the former's elegance in words and embrace the latter's truth in substance. The movements of the stars, therefore, are not only constant and immutable, but the judgements about the future made from them are so brilliant and so known that there is a common proverb among the Greeks: they say that matters which are in themselves highly obscure are brought to light with reliable evidence from observing the stars. Thus, it seems to me, the most learned Plotinus, who was [mentioned] at the beginning of the disputation, had perceived things more clearly. On the question of whether the stars effect anything, he contends that not all things are brought about by the stars, but that the future is forcefully revealed by the stars in all things.[127]

[123] The upwards arrow in the MS refers to a sentence scribbled vertically into the left margin, here enclosed in {…}.

[124] Cf. *Memorabilia*, 4.7.4–5. [125] Cf. *Epinomis*, 990a-b for what follows.

[126] *Ibid.*; Plato, *Politeia*, 10, 616d-617b. [127] Cf. *Enneads*, 2.3, 1.

Hence Porphyry rightly tells us in his book on oracles, that whatever fate Apollo of Delphi, Fortuna of Praeneste, Sybil of Cumae, or Jupiter of Dodona prophesied, these things, so Porphyry asserts strongly, have undoubtedly been predicted by observing the stars.[128] For the stars either signify or warn us of the outcomes of all things. If we support Seneca and believe Iamblichus, then the celestial governs the earthly through its movement.[129] You seek the reason for this? The connections between things in all of nature are bound together through a certain conjunction, harmony, affinity, and quasi-unanimity so that whatever is situated below the Moon is governed by the rule and law of celestial bodies. For who denies that terrestrial bodies are made from the concretion of the elements? That the qualities of the elements are altered by the planets? That the orbs of the planets are spinning around because of the revolutions in the highest heavens? Indeed, Ptolemy, the excellent mathematician, argues in his quadripartite work that the force that the stars exert on solidbodies is incredible.[130]

M.[arcus Tullius] Cicero, the noblest of orators, refers back to the variety of the heavens in his first book on divination:[131] some stars are judged to be beneficial, others detrimental to the Earth; some produce refined, others weakened dispositions. The admirable philosopher Mercurius Trismegistus demonstrates in his *Asclepius* that within celestial bodies there inhere qualities, powers, and motions whose influence is at work within the soul of all kinds, of all forms, and within the universal machine of the things of Nature.[132] Given, as Plato attests,[133] life is poured into our bodies through the stars, it follows, as Plotinus attests,[134] that the inclinations of bodies are subordinate to the authority of the stars. Therefore Ausonius exclaims, elegantly like a poet and wisely like a philosopher:

> Everything we measure in its varied behaviour
> the rule of the stars directs.[135]

Astronomers, therefore, know this influence of the stars. And because they know it they can prognosticate events. And because they prognosticate

[128] Cf. Eusebius of Caesarea, *Praeparatio Evangelica*, tr. E. H. Gifford (Oxford, 1903), 142–3. N.B.: Porphyry's 'book' only survives as fragments in Eusebius.

[129] Seneca the Younger, *Natural Questions*, 2.11, 2; 2.32, 6; Iamblichus, *De mysteriis Aegyptiorum, Chaldaeorum, Assyriorum* (Lyon, 1549), 34–5, 72–3.

[130] Cf. *Tetrabiblos*, 1.2.

[131] Cf. *De Divinatione*, 1.36.

[132] Marsilio Ficinio, *Mercurii Trismegisti Pymander… eiusdem Asclepius* (Basel, 1532), 122, 124–5.

[133] Cf. *Timaeus*, 41d-42a.

[134] Cf. *Enneads*, 2.3, 1.

[135] Cf. *Eclogarum Liber*, 7, 1–2.

events they can foreknow the future. This means not only events that are ubiquitous, such as good weather, rain, tempests, and hailstorms, but also events that are less common because of fate and fortune through whose auspices all things come to exist.

[Cassius] Dio wrote that Vitellius attained power after being forewarned by astrologers that he would attain it; that he inflicted harm on Otho after being forewarned that he would inflict it; that he died after being forewarned he would die in a few days.[136] Jovius wrote that Cosimo de' Medici [**fol. 155r**] took possession of a rich inheritance after being forewarned by Basilius that he would take possession of it; lived a long life and obtained highest happiness after being forewarned that he would enjoy it.[137] Tacitus wrote that Agrippina had sought counsel from a mathematician about her son Nero on whether he would rule. 'He will rule', the mathematician said, 'but murder his mother'. 'May he kill me', she said, 'so he may now rule'.[138] Do you want the result? For he did rule and commit murder. Is there anyone who withdraws their trust in antiquity as it is recorded through its most famous monuments? Or who believes that such secure predictions about the future do not yield miraculous advantages? Seeing good things approach? You will rejoice. Seeing bad things loom? You will escape. Will a disease cause havoc? You will attend to well-being. Will an enemy invade? You will protect the city. Will starvation take you by surprise? You will make provisions. In the end, nothing is too opportune, desirable, or glorious that he who has been carefully instructed in the science of the stars does not splendidly attain it.

What could be more opportune than overflowing in riches? Because Thales of Miletus, using knowledge of the stars, foresaw that there would an extremely high yield of olive trees, he bought all the olive trees on Milesian soil with money before they flowered. Once they had ripened, he sold them as he pleased and made the biggest profit.[139] What could be more desirable than protecting your health? Because Hippocrates of Cos foretold from influences in the sky that the plague would be transmitted from the Illyrians to the Greeks, he liberated Greece by immediately lighting a fire, extinguishing the flare-ups of the newborn disease.[140] What could be more glorious than saving peoples' lives? Because Anaximander foresaw from the stars that earthquakes were approaching which would

[136] Cf. *Roman History*, 64, 4; 65, 4.
[137] Paolo Giovio, *Historiarum sui temporis Tomus Secundus* (Florence, 1552), 323.
[138] Cf. *Annales*, 14.9.
[139] Cf. Aristotle, *Politics*, 1.4., 1259a.
[140] Cf. Pliny, *Naturalis Historia*, 36.79.

destroy Sparta. He warned the Spartans to sleep in the fields once they had left behind the city walls. The Spartans obeyed, the city collapsed, the citizens escaped.[141]

What more do you want? You can see that astronomy is adorned as if with the brilliance of all its lights and embellished as if with the flowers of all its virtues. It entices the more serious [among us] with its antiquity and reinvigorates the more light-hearted through its variety; it attracts the more learned with its nobility and excites the less learned with its [practical] benefits. It investigates not secondary, but primary matters; not mortal, but eternal matters; not terrestrial, but celestial matters. It supplies help to the needy and solace to the rich, ornaments to the happy and refuge to the miserable. All races, all times, and all peoples, judged [astronomy] to be so useful, for retrieving the past, overseeing the present, and foreseeing the future. Homer thinks it necessary for war and Vergil for peace; Ovid for divinity and Ausonius for humanity;[142] orators, poets, mathematicians, philosophers, think it necessary for matters weighty or light, dismal or bright; on both heaven and earth; and for things of high, middle, low worth.

Astronomy offers such great benefits to farmers cultivating the ground, sailors traversing the sea, doctors healing diseases, philosophers advancing studies, and soldiers wielding weapons so that it seems to have provided humankind with nourishment through Ceres, with supplies through Neptune, with health through Apollo, with virtue through Minerva, and with security through Mars. If you are rich with wealth and equipped with resources, if you are sound in health and renowned for dignity, if you are learned in letters and illustrious through fame, if you want to be protected by Mars, cultivated by the Muses, strengthened through fortune, and ennobled through teaching, then look down on what is lowly and look up to what is sublime. Question what is ordinary and strive for what is excellent. Do this so that you may not be tossed onto the earth and thrown headlong into the filth, but so that you may be lifted up to the stars and raised up to the heavens; so that you may transition from humans to heroes and from heroes to Gods.

I have spoken.

John Rainolds.

[141] Cf. Cicero, *De Divinatione*, 1.50.

[142] Cf. Rainolds' discussions of Achilles' Shield (Homer), Dido's feast (Vergil), and the Sun's palace (Ovid) in the main body of the paper.

III. ANALYSIS

The following analysis reconstructs Rainolds' declamation as a script. On a general level, I show that he devised his script using the structure (*dispositio*) of a classical oration. Hence he wrote a speech consisting of a preface, narration, proposition, confirmation, refutation, and conclusion. This outline would have been laid out for Rainolds in the *Rhetorica ad Herennium*, the most common manual of rhetorical theory in students' libraries at Oxford and Cambridge.[143] But he might also have taken his cues from one of the hundreds of manuals printed after the invention of moveable type.[144] Wherever possible, I cross-reference Rainolds' choices with ancient manuals—notably by Cicero and Quintilian—as well as with more advanced modern manuals such as the *Elementa rhetorices* (1531) by Philipp Melanchthon.

The most rewarding aspect of Rainolds' manuscript lies in its rhetorical set-pieces. I excavate the technical intricacies that Rainolds built into his speech. From crafting his own Latin rhymes to pre-emptively disarming possible objections, we will see just how well-prepared the student was with his script in hand. I emphasize how Rainolds had his local audience in mind. His script constantly alluded to the Oxford academicians and targeted their sensibilities. It will be revealed how institutional knowledge played an important role in crafting a successful performance.

Exordium: Greek stars over Oxford Skies

As every rhetoric manual taught, a classical speech began with an *exordium*. The aim of this preface was to make the audience receptive and attentive, but above all, well-disposed to the speaker.[145] 'I dare not lecture to so learned an audience without a preface'—Rainolds began by addressing listeners on both the graduate and undergraduate. Likening his preface to a gift for kings, Rainolds further invoked his listeners as 'those whom I respect as friends, embrace as brothers, and exhort as

[143] Mack, *Elizabethan Rhetoric*, 51–2, esp. fn. 20. See more broadly, James Murphy and Michael Winterbottom, 'Raffaele Regio's 1492 Quaestio Doubting Cicero's Authorship of the *Rhetorica Ad Herennium*: Introduction and Text', *Rhetorica: A Journal of the History of Rhetoric*, 17 (1999), 77–87.

[144] J. J. Murhpy, 'One Thousand Neglected Authors: The Scope and Importance of Renaissance Rhetoric', in: J. J. Murphy (ed.), *Renaissance Eloquence: Studies in the Theory and Practice of Renaissance Rhetoric* (Berkeley, 1983), 20–36.

[145] *Rhetoricorum ad Herennium libri quator* (4 vols, Cologne, 1562), i, 6–11. Quintilian, *Institutio Oratoria*, 4.1.5 and Cicero, *De Oratore*, 2.115, in particular, stress the central importance of *captatio benevolentiae.*

listeners'.[146] These lines were scripted for an audience he knew well: his academic peers.

Rainolds introduced his topic by reminding the room of the exercises the previous week. '7 days ago', Rainolds recalled, 'an outstanding youth—highly refined in character, education, eloquence—publicly spoke special praise of astronomy during his praise of philosophy'. Another student had already invoked Rainolds' subject during last week's declamation. Rainolds recounted for the room how his fellow student had spoken

> with words so sweet that he seemed to everyone to have illuminated a divine art from heaven; and of matters so weighty that he seemed to have moved the hearts of his listeners; and with sentences so short that he seemed to have sharply drawn together very much in very little.

'I judge', Rainolds countered, 'I should enter into the orator's chair more cautiously and more sceptically'. His own praise of astronomy aimed to supersede its predecessor; Rainolds likened his effort—so he told his listeners—to 'finishing the [painting of] Venus that Apelles left unfinished'.[147] Rainolds was going to complete the unfinished work of his predecessor, consciously violating the maxim *manum de tabula* (hands off the board).[148] The Oxford context sets the entire scene for Rainolds' script. While Greek became an immensely popular subject in sixteenth-century Oxford, astronomy was in decline. In theory, M.A. students like Rainolds were supposed to study astronomy for two terms following the New Statutes (*Nova Statuta*) of 1564/5.[149] But when Henry Savile lectured on astronomy at Oxford in 1570, he masterfully expounded Ptolemy and Copernicus in front of a near-empty classroom. Savile lamented that Oxford had given itself wholly to the pursuit of 'eloquence, the Greek language and civic

[146] MS 241, 151r: 'Mea sic est ratio, & semper fuit, ornatissimi iuuenes; ut quemadmodum Persæ, maiestatem regiam, sine muneribus, adire uerebantur: similiter & ego, tam literato conuentui, sine præfatione, prælegere pertimescam. Etenim, & illi, quem quasi Deum, colebant; quasi patrem, amabant; quasi regem timebant; eum muneribus non venerari perindignum arbitrabantur: & ego, quos tanquam amicos, reuereor; tanquam fratres amplector; tanquam auditores exhortor; eos præfatione non dignari, perabsurdum existimo'.

[147] MS 241, 151r: 'Cuius [= astronomiae] eximiam laudem, quia nudius septimus, egregius adolescens, humanitate, doctrina, eloquentia politissimus, in exornanda philosophia publicè praedicauit; & uerbis ita dulciter, vt diuina[m] artem diuinitus illustrasse; & rebus ita grauiter, vt auditoru[m] animos magnopere comouisse; & se[n]tentiis ita breuiter, vt permulta perpaucis acutissimè perstrinxisse omnibus videretur: idcirco mihi ad perorandi munus, cùm verecundius tum diffidentius ingrediendum arbitror; verecundius, quia post Homerum, Iliadem [scribere], quod aiunt, temeritatis est, quam declinare semper volui; diffidentius, quia Venerem ab Apelle inchoatam perficere, difficultatis est, quam aspernari nunquam potui'.

[148] See Desiderius Erasmus, *Adagia* (Basel, 1523), 96. I thank Anthony Grafton for pointing out this adage.

[149] Mordechai Feingold, *The Mathematicians' Apprenticeship: Science, Universities and Societies in England 1560–1640* (Cambridge, 1984), 41.

philosophy', being 'now more Attic than Athens herself'.[150] Cambridge had followed a similar trend. In 1542, Roger Ascham wrote to a friend how Greek authors were becoming so popular with students that they now superseded the Roman classics that had once dominated:

> Herodotus, Thucydides, and Xenophon are more on the lips and in the hands of everyone now than Livy was then. What you once heard about Cicero, you now hear about Demosthenes… The labour and example of our [Regius Professor of Greek John] Cheke enflamed and fanned this passion for letters. Twice he publicly lectured on all of Homer and all of Sophocles; he also lectured on all of Euripides and almost all of Herodotus; and all this, free of charge.[151]

This purported paradise of classical learning nicely captures the heyday of humanism. Only two years after Savile's complaint that Greek and its allied subjects had taken over the university of Oxford, professors had selected as declamation topics—for Rainolds and other students—the praise of astronomy and philosophy, respectively. If students were to speak eloquent praise of these disciplines, they would have to un-speak the prevailing trend.

Astronomy at Oxford had been relegated to a subject to be studied during the summer vacation.[152] And of this unfortunate circumstance Rainolds reminded his audience:

> …because the vacation from our studies approaches, when Greek and Roman letters are laid to rest, we must not grow disgracefully weak [and] listless through laziness, but in the meantime comprehend the mathematical disciplines….[153]

Rainolds was admonishing his peers: he had copied out phrases from the statutes of Corpus Christi, which scolded students for being too *langue(sce)*

[150] Robert Goulding, 'Humanism and Science in the Elizabethan Universities', in: Jonathan Woolfson (ed.), *Reassessing Tudor Humanism* (London, 2002), 223–242. (Quote from: 231). The lectures are analysed more fully in Goulding's *Defending Hypatia. Ramus, Savile, and the Renaissance Rediscovery of Mathematical History* (Dordrecht, 2010), 75–116.

[151] *The Whole Works of Roger Ascham*, ed. Rev. Dr. Giles (3 vols, London, 1864–1865), i, 26: 'Herodotus, Thucydides, Xenophon, magis in ore et manibus omnium teruntur, quam tum Titus Livius. Quod de Cicerone olim, nunc de Demosthene audires. Plures Isocrates hic in manibus puerorum habentur, quam tum Terentii. Nec Latinos interim aspernamur, sed optimos quosque et seculo illo aureo florentes ardentissime amplexamur. Hunc literarum ardorem et incendit et fovit Checi nostri labor et exemplum. Qui publice gratis praelegit totum Homerum, totum Sophoclem, et id bis: totum Euripidem, omnem fere Herodotum'.

[152] Goulding, *Defending Hypatia*, 79–87.

[153] MS 241, 151r: '…vt, quia studiorum appropinquat vacatio, literis græcis & latinis quasi feriatis; ne turpiter languentes desidia torpeamus, mathematicas interea disciplinas interpretemur. Cùm enim plerunq[ue] sic sint humana ingenia; quo magis inertiæ vacamus in feriis, eo minus industria valemus in feriis: ob eam causam diuinus ille senex, ne in otio quidem nos otiari voluit; ne nimium otiando, negotiis minus apti, non remittere leuiter, sed amittere nequiter animos videremur. Itaq[ue] singulari sapientia præcepit, in illis artibus percipiendis, hanc succisiui quasi temporis vsuram insumeremus: quas propter excellentiam Græci μαθηματικὰς, quasi solas & summas disciplinas nuncuparunt. Earum autem omnium, Platonis quidem iudicio, principem astronomiam'.

ntes and surrendering too easily to *otium*.[154] The study of astronomy, Rainolds noted, was ordered by 'the statutes' prescriptions, which we [students] will inevitably follow'.[155]

It is clear by now that Rainolds was speaking as a student. From Rainolds' library we can surmise that he acquired two astronomy textbooks for his summer studies at Oxford: Clavius' commentary on Sacrobosco's *De Sphaera* (1570) and Valerius' *De Sphaera* (1564).[156] Rainolds' script reflected the qualitative understanding of the cosmos as given in these (Ptolemaic) textbooks. By design, declamation eschewed technical mathematics. Rainolds alluded to this potentially embarrassing fact in a 'slippery manner of speaking' (*lubrica dicendi ratione*). 'Our subject matter', he noted, 'presents itself like this':

> neither can one recall nothing about it, except if one is most childish, nor can one recall everything about it, even if one is most eloquent.[157]

Rainolds would speak elegantly *of* astronomy, thereby really showing his knowledge of poetry and history. The fact that Rainolds was elected a reader in Greek, shortly after, illustrates the artificial setup of declamation. For a fleeting moment, the discipline that had overtaken astronomy could return to its defence.

Propositio: Astronomy as the Highest Art

Now that Rainolds had coaxed his audience into his arms, it was time to state the proposition (*propositio*). 'Astronomy', the student proclaimed emphatically, 'is not similar to the rest of the arts'.

[154] *Statutes of the Colleges of Oxford* (3 vols, Oxford and London, 1853), ii, 57: 'Baccalaureis etiam, ne ipsi otio languescant animosque et studia in vacationibus solvant nedum remittant, praecipimus, ter ad minus singulis septimanis . . . legant algorismum vel tractatum de sphaera vel de motu planetarum'. Quoted in Feingold, *Apprenticeship*, 37.

[155] MS 241, 151r: 'Nobis . . . denuntiant legum præscripta, quibus necessario morem gerimus . . .'

[156] My remarks about Rainolds' library rely on the research of Mordechai Feingold. By the beginning of the 17th century, Clavius' edition of *De Sphaera* superseded Sacrobosco as the standard astronomy textbook in Oxford. See Mordechai Feingold, 'Mathematical Sciences and New Philosophies', in: Nicholas Tyacke (ed.), *Seventeenth-Century Oxford* (*The History of the University of Oxford, Volume IV*, Oxford 1997), 359–448, here: 378. For Sacrobosco's previous dominance see Francis Johnson, 'Astronomical Text-Books in the Sixteenth Century', in: E. Underwood (ed.), *Science, Medicine and History. Essays . . . written in honour of Charles Singer* (2 vols, Oxford, 1953), i, 285–302; Owen Gingerich, 'Sacrobosco as a Textbook', *Journal for the History of Astronomy*, 19, 4 (1988), 269–73.

[157] MS 241, 151r: '. . . quod in ista lubrica dicendi ratione materia talis oblata est: de qua, nec quisquam nihil, nisi infantissimus; nec vnus omnia, etsi disertissimus, co[m]memorare ualeat'.

> It must come before everything else . . . if we consider astronomy's antiquity, nothing is more ancient; its variety, nothing is more pleasant; its dignity, nothing is more divine.[158]

The message of this panegyric was simple: no other subject could surpass astronomy in its qualities. For the praise of a city, Quintilian recommended highlighting the antiquity, beauty, variety, and utility of its structures.[159] Following this scheme, Rainolds laid out: 'We consider astronomy'

> so necessary for all walks of life, so fruitful due to its utility, so enjoyable in its ability to delight, so pleasant for the adornment [of the world], so glorious in its reputation, so ancient in its long existence, so illustrious through its brilliance, and so useful for everything.[160]

A mundane proposition was dragged out *ad infinitum*. Like many other students, Rainolds was using a random object of laudation to train his oral delivery of Latin. Scripting lavish sentences became a goal in its own right, elevating the effects of speech over the subject matter.

Narratio: The First Memory of the Stars in Epic Poetry

Narratio was the first act in a classical oration. In a court-room speech—the most common genre—this consisted of a brief description of the facts.[161] But as Melanchthon had noted, a praise-speech was different: after the *exordium* the speech became a 'continuous narration' (*perpetua narratio*). Thus a speech praising Caesar mainly consisted in a retelling of his life and deeds. And a speech praising philosophy cycled through the various ancient inventors of the subject.[162] Rainolds adopted a continuous narration, opening with a lengthy exposition of the stars' first appearances in mythological poetry. This developed his first major theme, namely that 'of all the sciences astronomy is the most ancient'.[163]

The standard contemporary account saw astronomy as old as Creation. This knowledge had been revealed to Adam in the Garden of Eden,

[158] MS 241, 152v-153r: 'Non est enim astronomia cæterarum similis artium . . . vt tantum reliquis omnibus debat . . . Si spectemus igitur astronomiæ vetustatem, nihil antiquius; si varietatem, nihil iucundius; si dignitatem, nihil diuinius'.

[159] Quintilian, *Institutio Oratoria*, 3.7.26–27.

[160] MS 241, 151r: '. . . astronomiam, tam ad omnes vitæ partes necessariam habemus; vtilitate tam fructuosam, oblectatione tam iucundam; tam amœnam ad ornatum, tam gloriosam ad honorem; vetustate tam antiquam, claritate tam illustrem, rebus singulis tam opportunam'.

[161] *Rhetoricorum ad Herennium libri quator* (4 vols, Cologne, 1562), i, 11–14.

[162] Philipp Melanchthon, *Elementorum rhetorices libri duo* (Wittenberg, 1531), D5r, D5v-D6r, D6v-D7r.

[163] MS 241, 152r: 'Cum omnium scientiarum astronomia sit antiquissima'.

preserved on two pillars through Noah's Flood, and then reintroduced into the world by Abraham.[164] But Rainolds decided to steer clear of biblical narratives, placing astronomy into the theogony of the Greeks. 'I do not doubt but affirm', he announced, 'that [our] knowledge of the stars originated either from Mercury, as Diodorus recommends, or from Atlas, as Pliny testifies, or from Prometheus, as Servius opines'.[165] Tidbits of this history Rainolds would have found in Polydore Vergil's *De Inventoribus Rerum* (1499)—a popular reference-work of which he owned three copies—under the heading 'astronomy'.[166] His astronomy textbook likewise included commonplaces about astronomy's pagan roots:

> And those people do not go amiss, who make Atlas the first inventor of this discipline and so prolong the following origin myth: that he bore the heavens on his shoulders, because he had been the first to study the passages of the Sun and Moon, the revolutions, and systems of all stars.[167]

Why did John Rainolds of all people link astronomy to the pagan creation story? Because this allowed him to recite elegant verses of poetry in front of his listeners. For Rainolds, epic poetry offered an enticing trove of passages for his performance. Rainolds' *narratio* was not the affirmation of astronomy's true history, but a rhetorical opportunity for its glorification in the setting of epic.[168]

Rainolds assured his listeners that the stars had long elevated the heroes of legend:

> When it comes to those ancient heroes . . . we observe: all their enterprises were sprinkled with a touch of the celestial, whether in war or peace, at

[164] See Nicholas Popper, "Abraham, Planter of Mathematics': Histories of Mathematics and Astrology in Early Modern Europe', *Journal of the History of Ideas*, 67, 1 (2006), 87–106. For further analyses of histories of astronomy as well as source materials see Noel Swerdlow, 'Science and Humanism in the Renaissance: Regiomontanus's Oration on the Dignity and Utility of the Mathematical Sciences', in: Paul Horwich (ed.): *World Changes. Thomas Kuhn and the Nature of Science* (Cambridge MA, 1993), 131–68; Anthony Grafton, 'From Apotheosis to Analysis: Some Late Renaissance Histories of Classical Astronomy', in: Donald Kelly (ed.), *History and the Disciplines. The Reclassification of Knowledge in Early Modern Europe* (Rochester NY, 1997), 261–76; Robert Westman, *The Copernican Question: Prognostication, Skepticism, and Celestial Order* (Oakland, 2011), 119.

[165] MS 241, 151v: '. . . nec dubito, & affirmo; astrorum disciplinam cognitionem, siue a Mercurio, vt censet Diodorus; siue ab Atlante, ut testatur Plinius; siue a Prometheo, ut opinatur Seruius'.

[166] Polydore Vergil, *De inventoribus rerum libri tres* (3 vols, Venice, 1499), i, np (ch. 17).

[167] Christopher Clavius, *In Sphaeram Ioannis de Sacro Bosco Commentarius* (Rome, 1570), 4: 'Neq[ue]; vero desunt, qui Atlantem huius disciplinae primum inuentorem faciunt, voluntq[ue]; inde fabulam illam originem traxisse, ipsum videlicet humeris suis coelum sustinuisse, quod primus cursum Solis, & Lunae, Syderumq[ue]; omnium conuersiones, rationesq[ue]; vigore animi, soltertiaq[ue]; curasset tradendas hominibus'.

[168] Thus unlike: Anthony Grafton, *Joseph Scaliger: A Study in the History of Classical Scholarship* (2 vols, Oxford, 1983–1993), i, 206–12.

> home or in battle, in playful or serious situations, in matters pertaining to Gods or humans. Without knowledge of the stars, their enterprises would be regarded as insignificant among noteworthy and as obscure among illustrious things.

'The divine poets', Rainolds claimed, 'seem to have pointed this out most brilliantly'.[169] The shimmering traces the stars had left in epic poetry he would now reignite through his own words.

The ancient poets loomed large in the imagination of learned Elizabethans.[170] Rainolds selected as his triad Homer, Vergil, and Ovid. From their poems he copied passages into his script so he could recite them in front of his audience. This was a display of his own eloquence. But it also placed the stars among the heroes of myth. 'So long ago before all the arts', the student recalled, 'the science of the stars was born, and has been preserved from distant epochs for so long a time'.[171]

What better place to find the first memory of the stars than the Big Bang of the classical world: Homer's *Iliad?* Rainolds selected the verses about the making of Achilles' shield. The battle of Troy was nearing its end. Patroclus, that reckless youth, had been killed. Achilles, his enraged lover, was out to exact revenge. And Thetis was persuading Vulcan to make a shield. 'What about Homer?' Rainolds interjected. 'Did he not—when he has Thetis get Vulcan to fashion armour for Achilles against Hector—state bluntly that this work [of art] would be unworthy of so excellent a craftsman if it were not for the fact that on Achilles' Shield…'[172] The trailing dots indicate where Rainolds would begin to recite how Vulcan had perfected the shield by etching into it the stars.

The verses Rainolds recited represented a moment of ekphrasis (*descriptio*): a visual description of a work of art. Ekphrasis was a well-known rhetorical device in both ancient and early modern times. By describing an artwork, a speaker hoped to delineate in words the thing represented by that work. If it was a particularly brilliant work of art, it was hoped, then

[169] MS 241, 152r: 'Itaq[ue] apud priscos illos heroas, illos prudentia præstantes, illos eloquentia florentes heroas; sic omnia studia, siue belli, siue pacis; siue domi, siue militiæ; siue iocosa, siue seria; siue ad Deos, siue ad homines pertinentia, rerum cœlestium tractatione perspergebantur: vt ex insignibus contempta, ex illustribus obscura, ex præcellentibus, ex diuinis, uix mediocria, uix humana sine astrorum cognitione futura putarentur. Idq[ue] sane peregregiè videntur indicasse diuini poëtæ'.

[170] For the satirical poets the definitive account is: Angela J. Wheeler, *English Verse Satire from Donne to Dryden: Imitation of Classical Models* (Heidelberg, 1992).

[171] MS 241, 151v: 'Eam [= scientiam astrorum]…ante cunctas artes tam olim enatam, ab vltimis temporibus tam diu retentam'.

[172] MS 241, 152r: 'Quid Homerus? Nonne, cum Thetidem a Vulcano facit impetrantem, vt Achilli in Hectorem arma fabricetur; indignum prorsus opus tanto artifice futurum iudicauit, nisi in ipso Achillis clypeo,…'

Thetis holding Achilles' Shield in a lost fragment from the 1st century BCE.[173]

the resulting description would be brilliantly vivid.[174] It is important to note that no visual reconstructions of Achilles' shield existed in Rainolds' time. The latter had to recreate its image through words alone.

Rainolds teased his listeners with allusions to *descriptio*. 'The variety of celestial things', he told them, 'captivates the sharp gaze of human eyes through both the wonderous beauty of describing it and the rare majesty of the work [of art] thereby described'. 'We may suppose', he continued, 'that Apelles could have painted nothing so variedly, Lysippus sculpted nothing so variedly, Cicero spoken of nothing so variedly'.[175] The stars, in

[173] The image is taken from Otto Jahn, *Griechsiche Bilderchroniken* (Bonn, 1873), Taf. II B. (We do not know of any early modern depictions of Achilles' shield). For more on this fragment see Michael Squire, *The Iliad in a Nutshell* (Oxford, 2011), 311–24, 355–8. For a 'wertfreie Betrachtung' see Nina Valenzuela Montenegro, *Die Tabulae Iliacae. Mythos und Geschichte im Spiegel einer Gruppe frühkaiserzeitlicher Miniaturreliefs* (Berlin, 2004), 15, 150–68, 239–51.

[174] Heinrich F. Plett, *Rhetoric and Renaissance Culture* (Berlin, 2004), 336–49; Claire Preston, 'Ekphrasis: painting in words', in: Sylvia Adamson, Gavin Alexander, and Katrin Ettenhuber (eds.), *Renaissance Figures of Speech* (Cambridge, 2007), 115–132.

[175] MS 241, 151v: 'Iam vero varietas rerum cœlestium, tum descriptionis mira pulchritudine, tum operis descripti rara maiestate, sic humanorum luminum aciem præstringit: vt nullum Apellem tam variè pingere, nullum, Lysippum tam variè fingere, nullum Ciceronem tam variè dicere potuisse existimemus'. All that remains of Lysippus' works are copies: see Rolf Michael Schneider, 'Der Hercules Farnese', in: Luca Giuliani (ed.), *Meisterwerke der antiken Kunst* (Munich, 2005), 136–57.

their infinite variety, had defied being captured in images or words. But according to Homer, Vulcan, the mythical God of metalworking, had managed just this: to capture the variety of the stars in a work of art.

In order to mirror this work of art through a work of words, Rainolds recited Homer's description of the shield using his own verse translation. To set it up his way, 'on Achilles' shield itself…'

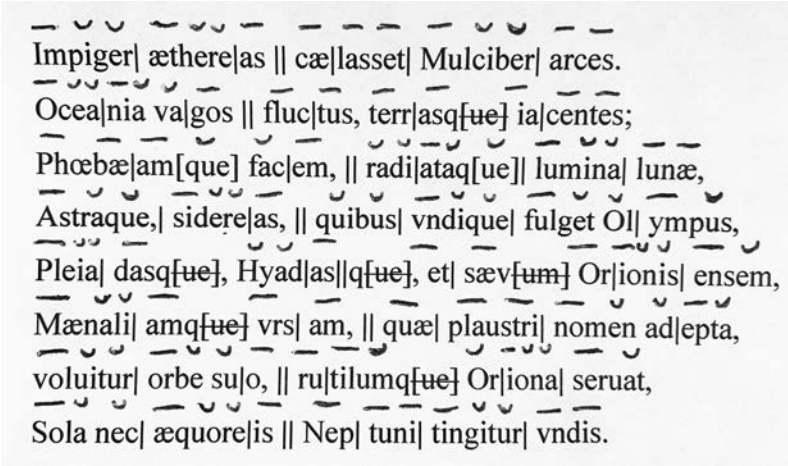
Impiger æthereas cælasset Mulciber arces,
Oceania vagos fluctus, terrasq[ue] iacentes;
Phœbæamq[ue] facem, radiataq[ue] lumina lunæ,
Astraq[ue], sidereas, quibus vndiq[ue] fulget Olympus,
Pleiadasq[ue], Hyadasq[ue], et sævu[m] Orionis ensem,
Mænaliamq[ue] vrsam, quæ plaustri nomen adepta,
voluitur orbe suo, rutilumq[ue] Oriona seruat,
Sola nec æquoreis Neptuni tingitur vndis.

Industrious Mulciber had sculpted castles in the sky,
waves that churn in the Ocean and lands that motionless lie,
fire from Phoebus and the Moon's rays radiating,
stars with which Olympus glistens allover,
the starry Pleiades and Hyades and blazing sword of Orion,
and the Bear of Maenalus, named after the plough,
as it observes red-gold Orion revolving on its orb,
bathing not once in Neptune's waves.
(*Iliad*, 18.484–9)

Rainolds' recital was—and is—one of a kind.[176] He had translated Homer's Greek into his own Latin, beautifying it with linguistic ornaments. Vulcan became Mulciber. Why? So that *Im-pi-ger* and *Mul-ci-ber* could mirror each other in sound and syllable. Together these words were opposite ends of an acoustic chiasmus, enclosing *aethereas* and *caelasset* whose 'ae's and 'as's rhymed. The student also forcefully broke apart *aethereas arces*, placing *arces* at the end of the verse so that it could rhyme with *iacentes* below it. And in the third verse, he translated Homer's *σελήνην πλήθουσαν* stylistically loose as *lumina lunae:* to let the 'lu's rhyme.

Underlying these rhymes was rhythm. My own metric analysis reveals that Rainolds rebuilt the epic meter of Homer's Greek—the dactylic hexameter—within his own Latin versification:

[176] One appreciates the unique quality of Rainolds' translation if one compares it to previous Latin translations of *Iliad* 18.484–9, notably: [1] Andreas Divus, *Homeri Poetarum Omnium Principis Ilias* (Venice, 1537), 209–10 (the first full Latin translation of the *Iliad* in verse-form); [2] Lorenzo Valla et al., *Homeri poetae clarissimi Ilias* (Venice, 1502), LXXVIII.



The author's scansion of Rainolds' own versification of Iliad, 18.484-9.

Mastery of Latin meters was central to contemporary university education. Indeed, academic success could depend on the ability to recite Latin poetry with intonation and rhythm, ending in derision if one failed.[177] Rainolds used the rhythm of the meter to emphasize his own symmetries and rhymes. Thus *Impiger* and *Mulciber* mirrored each other rhythmically as dactyls (— ⏑ ⏑); moreover, the chiasmus they formed was perfectly split in the middle by a dramatic pause, the *caesura* (||).

Several of Rainolds' word choices seem also to have been motivated by a desire to keep the metre. In verse 3, he rendered Homer's ἠέλιόν not as *Solem*, but as *Phœb-æ-am-que fac-em:* this gave him a total of 6 syllables (instead of a mere 2) to arrive at the required number of beats. The addition of 'que's (as in *Astra-que* in verse 4) was also a way of manipulating the metre. In some instances this resulted in beautiful elisions: in verse 5, …*que Hy-a-das-que et*… (6 syllables), when spoken, became *qhy-a-das-qet* (4 syllables).[178] I cannot analyse all the subtleties here. But it is enough to say that Rainolds skilfully crafted these Latin verses with his own

[177] Sara Knight, "If some of the eminent learned would dare to begin': Neo-Latin Metre at the Early Modern English Universities', in: Stefan Tilg and Benjamin Harter (eds.), *Neulateinische Metrik: Formen und Kontexte zwischen Rezeption und Innovation* (Tübingen, 2019), 239–55. (See the other contributions in this volume for the vitality of Neo-Latin prosody). For the origins of metrical analysis within humanism, see Robert Black, *Humanism and Education in Medieval and Renaissance Italy Tradition and Innovation* (Cambridge, 2001), 318–20.

[178] Here Rainolds followed Ovid, *Metamorphoses* 13.291–295, here 293. (NB: *Metamorphoses* was the classic text by which English students learned prosody, see Knight, 'Neo-Latin Metre'.)

symmetries and rhymes—a small masterpiece in the Elizabethan recital of Homer.

Rainolds was displaying his talent as a Latin stylist. His unique versification served rhetorical aims: the beauty of the verses meant to resound the beauty of what was being described. 'The variety of celestial things', as Rainolds said, was so dazzling that 'Cicero could have spoken of nothing so variedly'.[179] It was here that poetic verse could do more than formal oratory. If the star-studded shield of Achilles had captured the variety of the heavens in a work of art, then Rainolds' poesis attempted to do the same through a work of verse.

Rainolds scripted his recitation down to the last detail. He then followed up with a question: 'What about Vergil?' Conveniently Vergil's *Aeneid* picked up the story of Homer's *Iliad*. After the battle of Troy was lost, Aeneas and the last of the Trojans embarked on their treacherous odyssey, eventually shipwrecking on the coast of North Africa. There, the queen Dido greeted them with a banquet. Rainolds, making this temporal leap, began to carefully paint the scene within his listeners' minds:

> At those most exquisite feasts which the Carthaginians put together for Aeneas: remember the noises of the Tyrians when they fill the wine cups to the brim? Or when Dido invokes Jupiter as God of hosts? Or how—when Bitias drinks from a foaming *patera*—they are charming their guests?[180]

Initially, Rainolds was going to note that the hosts were 'inebriating' their guests. Yet this last word (~~perfundunt~~) he crossed out, deciding instead that they were 'charming' (*deliniunt*) them. The feast was to remain in bounds. 'Until at last', Rainolds wrote (launching his next recital),

> Long-haired Iopas with the *cithara*,
> sings of the wandering Moon and the Sun's toils,
> of whence come men and beasts, rain and fire,
> of Arcturus, rainy Hyades, and the twin Bears,
> of why in Winter suns make such haste to set behind the Ocean,
> and a delay slows down the lingering nights.
> (*Aeneid*, 1.740–6)

Iopas the bard had captured the stars, not in painting or in sculpture, but in song. After the stars' physical representation on the shield, Rainolds displayed their non-physical rendition in music. This is an impressive

[179] MS 241, 152r: 'Iam vero varietas rerum cœlestium . . . sic humanorum luminum aciem præstringit: vt . . . nullum Ciceronem tam variè dicere potuisse existimemus'.

[180] MS 241, 152v: 'Quid Virgillus? In illis exquisitissimis epulis, quas Æneæ Carthaginenses extruunt; qua tandem voluptate, uel Tyriorum strepitus, cum vina coronant; vel Dido cùm Iovem hospitalem inuocat; vel Bitias, cùm haurit, spumantem pateram, conuiuas ~~perfundunt~~ deliniunt: priusquam . . .'

example of ekphrasis; to this day, examples always centre on the visual. Directly after Rainolds finished reciting Iopas' song, he erupted with an exclamation: *Ista, ista!* 'Exactly this, exactly this!' Rainolds elaborated that 'hearing' the starry song had left listeners 'excited'. He closed with the next line from the *Aeneid:*

> The Tyrians increase their applause, the Trojans follow suit.[181]
> (1.747)

Everything led up to this moment. The song had ended, applause had erupted. The audience in the myth was showing its approval of the stars. And this enthusiastic response is what Rainolds hoped of his own audience in Oxford.

Rainolds' script strung together poetry into a narrative: the twinkling stars that adorned Achilles' shield resounded once again in the song of Dido's bard. Yet this had required some editorial intervention. While copying verses from the *Aeneid*, Rainolds had suppressed a portion of the original: in between the first and second lines of Iopas' song, Vergil mentioned that Iopas 'was taught by the mighty Atlas' (*docuit quem maximus Atlas*).[182] But in Rainolds' narration the first system of 'describing' (*descriptio*) the stars originated with Vulcan and the shield of Achilles. So, the student erased Atlas to create continuity—and, it seems, no one had noticed.

To complete the cycle, Rainolds transitioned to a third epic poet—Ovid— for his last instance of starry ekphrasis. Quoting the opening lines of book 2 of Ovid's *Metamorphoses*, Rainolds recounted how *a* son of *the* sun had ascended into the sky. The solar palace was an object of supreme beauty. And yet, Rainolds noted, 'despite the brightness of the gold and shining bronze and the splendour of the ivory', one could not help but notice:

> The workmanship surpassed the material.
> (*Metamorphoses*, 2.5)

[181] MS 241, 152v: '…
Cithara crinitus Iöpas,
Personet errantem lunam, Solisq[ue] labores,
Vnde hominum genus & pecud~~um~~[es], vnde imber & ignes,
Arcturum, pluuiasq[ue] Hyadas, geminosq[ue] Triones;
Quid tantum Oceano properent se tingere soles
Hiberni, uel quæ tardis mora noctibus obstet.
Ista, ista nimirum sunt illa, quorum auditione concitati
Ingeminant plausum Tyrii, Troësq[ue] sequuntur'.

[182] *Aeneid* 1.741.

'Why, I ask, is this the case?' Rainolds interjected. 'Because evidently', he continued, 'onto [the palace's] gates Vulcan'

> had sculpted the water surrounding the central Earth,
> the Earth's circle, and the heavens that hang above it.[183]
> (2.6–7)

Just as Homer's Vulcan had carved the stars onto the shield, Ovid's Vulcan had done so on the palace's gates. These verses from the *Metamorphoses* closed the circle, reaffirming the stars' Homeric origins. The point of this entire sequence, Rainolds explained, was that the poets could not have done what they did without the stars:

> Why, if these are the shields of heroes, do they not appear to be glorious enough to Homer without the stars' adornment? And why, if these are the feasts for most eminent people, do they not appear luxurious enough to Vergil without the stars' adornment? And why, if these are the palaces of the Gods, do they not appear glamorous enough to Ovid without the stars' adornment?[184]

Here Rainolds was scripting rhetorical questions that he would throw at his listeners, a technique known as 'interrogating' the audience (*interrogatio*).[185] He ended with a self-searching question:

> Why will neither the nobility of heroes, nor the grandeur of the most eminent people, nor the majesty of the Gods, excite us—who are educated in the arts of the Muses—for this esteemed knowledge?[186]

Rainolds cleverly included himself into the 'us': an university carried away by its love affair with ancient letters. Calliope had enticed Oxford through poetry, Clio through history. But why could the muse of astronomy not attract an audience?

[183] MS 241, 152v: 'Quid, quod apud Ouidium, poëtam ingenii acumine singularem etiamsi
Regia Solis erat sublimibus alta columnis,
Clara mirante auro, flammasq[ue] imita[n]te pyropo:
tamen & auri fulgerem, & radiantem pyropum, & splendorem
eboris, & columnas, & argentum, & cunctam
Materiam superabat opus.
Quid ita quæso? Quia scilicet Vulcanus in ipsis foribus
Æquora cælarat medias cingentia terras,
Terrarumq[ue] orbem, cælumq[ue] quod imminet orbi'.

[184] MS 241, 152v: 'Quamobrem, si heroum arma, parum ampla, Homero; si pri[n]cipum conuiuia, parum lauta, Virgilio; si Deorum palatia, parum splendida, Ouidio, sine stellarum ornatu videbantur . . .?'

[185] *Rhetoricorum ad Herennium libri quator* (4 vols, Cologne, 1562), iv, 112; Quintilian, *Institutio Oratoria*, 9,2,7.

[186] MS 241, 152v: 'Quamobrem . . . nosne Musarum artibus informatos, nec heroum nobilitas, nec pri[n]cipum amplitudo, nec Deorum maiestas, ad eam scientiam amplectendam eriget; ad cuius studium & ratio philosophos, & humanitas doctos, & natura barbaros ipsos inflammauit?'

It is here that Rainolds' script was most profound. His *narratio* was a story with a moral, carefully directed at his Oxford audience. Rainolds had begun his speech by noting that 'Greek and Roman letters are laid to rest' in the approaching summer vacation. Hopefully, the spare time would incentivise students to 'comprehend the mathematical disciplines'. As Rainolds traced the stars through Greek and Roman poems, he used the preeminence of classical letters to elevate the object of his praise. All students of letters would feel inclined to study astronomy if they realized that the constellations that beautified their poems still adorned the skies above.

Confutatio: Remorseless Counter-Citation

Having used the medium of verse to convey the beauty of the heavens, Rainolds transitioned to the argumentative part of his script. In a classical oration, this was *confirmatio* and *confutatio*: arguments confirming one's own proposition and arguments refuting the opponent.[187] Melanchthon had recommended incorporating these two acts into a continuous narration.[188] Rainolds indeed included them, but he inverted the typical order, beginning with the confutation first. This had a well-known classical precedent: Cicero, in his famous Second Philippic, first refuted the charges made against him by his adversary—Marc Antony—before expounding his own case.[189] The foregrounded *confutatio* of Rainolds may likewise be read as a response to previous speakers. In his preface, Rainolds mentioned a student from last week's exercise declaiming in praise of philosophy; indeed, at Oxford, students delivered speeches in praise of many different disciplines.[190] Rainolds, therefore, began with a rebuttal of preceding cases before laying out his own.

Rainolds' handling of alternative arguments reveals an important contrast with disputation. An ideal medieval disputant would lay out opposing viewpoints in detail and examine their implications carefully. And for good reason: opponents would have the chance to respond.[191] But the

[187] *Rhetoricorum ad Herennium libri quator* (4 vols, Cologne, 1562), i, 14–23.

[188] Philipp Melanchthon, *Elementorum rhetorices libri duo* (2 vols, Wittenberg, 1531), i, D5v-D6r.

[189] Cicero, *Philippics 1–6*, tr. D. R. Shackleton Bailey, rev. John Ramsey and Gesine Manuwald, (Cambridge MA, 2009), 53. Other speeches in which Cicero inverts the order of confirmatio-confutatio have proven harder to analyze, see Cicero, *Pro P. Sulla Oratio*, ed. D. H. Berry (Cambridge, 1996), 46–8, esp. fn. 243.

[190] See, e.g., Henry Dethick, *Oratio in Laudem Artis Poeticae*, ed. William Ringler and tr. Walter Allen Jr. (Princeton, 1940). This oration was falsely ascribed to Rainolds by Ringler, see: James Binns, 'Henry Dethick: in Praise of Poetry: the First Appearance in Print of an Elizabethan Treatise', *The Library*, 5, 3, 199–216, esp. 205–7.

[191] See, e.g., Henry of Harclay. *Ordinary Questions I-XIV*, ed./tr.Mark Henninger and Raymond Edwards (New York, 2008), 78–131.

declamation did not have a dialogical format: students delivered a stand-alone speech. This meant that any engagement with objections was entirely self-orchestrated. Rainolds had to rhetorically construct an opposition, one whose objections he could heroically defuse.

On the page, Rainolds scripted an artificial conversation between himself and an imaginary opponent. He let this opponent raise an objection in turn, refuting it immediately through a prewritten answer. This rhetorical device was called *ratiocinatio*, 'reasoning by questions and answers', and was meant to give monologs a more conversational style.[192] Indeed, Cicero and Quintilian encouraged speakers to 'answer their own questions' (*sibi ipsi responsio*).[193] Rainolds devoted much of his declamation to voicing concerns in the form of: 'Is not *x* more useful to us than astronomy?' He would then dramatically turn each objection on its head, showing how every *x*, in fact, relied on astronomy.

The opening of Rainolds' *ratiocinatio* set a clear tone by interrogating listeners:

> Cannot something more beneficial be taught [than astronomy]? Agriculture to produce food? Commerce to produce wealth? Medicine for health? Discipline for virtue? Military knowledge for security?

To which Rainolds replied in his own voice,

> Without doubt, nothing can.

He raised another slew of pretend-objections:

> But surely, even without the science of the stars, the farmer can skilfully work the earth, the merchant traverse the seas? The doctor can administer his remedies, the student be taught the disciplines, and the general command his troops?

Rainolds' response was unwavering.

> Trust me, none of them can.[194]

[192] *Rhetoricorum ad Herennium libri quator* (4 vols, Cologne, 1562), iv, 112–14.

[193] Cicero, *De Oratore*, 3.54.207; Quintilian, *Institutio Oratoria*, 9.3.90.

[194] MS 241, 153r: 'Quid enim? Potestne quinquam fingi magis opportunum, ad victum, argricultura; ad opes, mercatura; medicina, ad valetudinem; disciplina, ad virtutem; ad securitatem, scientia militari? Sine dubio nihil potest. Potestne sine siderum scientia perite agricola, terram exercere; mercator, maria traiicere; remedia præbere medicus; disciplinis imbui studiosus; imperator copiis militaribus præesse? Mihi credite, nunquam potest'. These types of exchanges were typical university banter, see Anthony Grafton, 'From De die natali to De emendatione temporum: The Origins and Setting of Scaliger's Chronology', *Journal of the Warburg and Courtauld Institutes*, 48 (1985), 100–143, here 100.

To instil this trust within his listeners Rainolds marshalled the authority of ancient authors:

> The science of the stars is found to be necessary for agriculture: do you need a more reliable witness than Columella? A more learned witness than Vergil? A more serious witness than Hesiod?

Rainolds then recited the appropriate passages from each author, passages which he would have ideally memorized.[195] From Columella he selected an aphorism about how farmers heeded the stars' warnings. From Vergil he took elegant verses on how farmers made use of the constellations. And from Hesiod he relayed the idea that farmers observed the Pleiades when harvesting their crops. The strategy here was simple: overwhelm the opposition with a mountain of citations.

Richard Serjeantson calls this use of citations 'remorseless accumulation'.[196] Rainolds was refuting his imagined opposition, creating an overabundance of positive evidence in the guise of considering negative evidence. Indeed, Rainolds introduced his own evidence—'as Herodotus attests', 'as Thucydides writes' etc.—using the formulas Erasmus had prescribed for verbal *copia*.[197]

The accumulation of authorities has much in common with the practice of commonplacing. Rainolds strung citations together as if they were a coherent whole, skewering the contexts from which he drew them.[198] For

[195] MS 241, 153r: 'Ad agriculturam enim quàm necessaria siderum scientia videatur, ecquem locupletiorem testem, quàm Columellam; doctiorem, quam Virgilium; graiuiorem, quam Hesiodum, desideratis?
Scribit Columella libro unidecimo de re rustica, necessariam esse cuiusq[ue] officii monitionem eam, quæ pendet ex ratione siderum cœli. Canit Virgil in primo georgicon.
Tam sunt Arcturi sidera nobis,
Hœdoru[m]q[ue] dies seruandi & lucidus anguis:
Quam quibus in patriam ventosa per æquora vectis
Pontus & ostriferi fauces tentantur Abydi.
Hesiodus autem in operibus & diebus
Cum tibi Pleiades Atlantides exoriuntur,
quantam narrationem contexit, quo sidere sit aranda terra, purgandus ager, sementis facienda; quando vites serendæ, fodiendæ, putandæ; plantandæ arbores, tondendæ pecudes; quando fruges demetendæ, triturandæ, uentilandæ; percipiendi fructus, vina recondenda'.

[196] See Richard Serjeantson, 'Testimony: The artless proof', in: Sylvia Adamson, Gavin Alexander, and Katrin Ettenhuber (eds.), *Renaissance Figures of Speech* (Cambridge, 2007), 179–94, here 186.

[197] Erasmus, *De copia verborum ac rerum*, in: B. Knott (ed.), *Opera omnia* (Ordo 1,tomus 6, Amsterdam, 1988), 132.

[198] This substantiates what Ann Blair has said about commonplacing as the stockpiling of decontextualized citations, see: Ann Blair, 'Humanist Methods in Natural Philosophy: The Commonplace Book', *Journal of the History of Ideas*, 53, 4 (1992), 541–51; Ann Blair, *Too Much to Know. Managing Scholarly Information before the Modern Age* (New Haven, 2010), ch. 2.

example, he cited Columella and Vergil side by side as if they were in agreement. 'Vergil sings in the first book of his *Georgics*':

> We too must observe the stars of Arcturus,
> the Days of Children and the Bright Serpent,
> as carefully as those who, sailing home through windswept seas,
> attempt to cross the [Black] Sea and the straits of oyster-bearing Abydus.
> (*Georgica*, 1.204–7)

Rainolds recited these verses together with a line from Columella on how farmers used heavenly observations. This pairing was no accident: when we open Columella's *De re rustica* at the line quoted, we stumble across the above verses from Vergil. But Columella had cited these verses to disprove them: 'against this observation [by Vergil]', Columella insisted, 'I have disputed with many arguments'.[199] Columella had thus disagreed with Vergil about astronomy's utility; out of Rainolds' mouth these ancient voices were chanting in unison.

Rainolds built his case for the utility of astronomy from a myriad of sources. The following verses from Vergil's *Georgics* were supposed to prove that astronomy was of use to navigators:

> The sailor assigned numbers and names to the stars:
> the Pleiades, Hyades, and bright Arctos Lycaonis.
> (*Georgica*, 1.137–8)

In the second line of this recitation the student faithfully reproduced the Greek names within Vergil's Latin:

> *Pleiadas, Hyadas, claramq[ue] Lycaonis Arcton*.

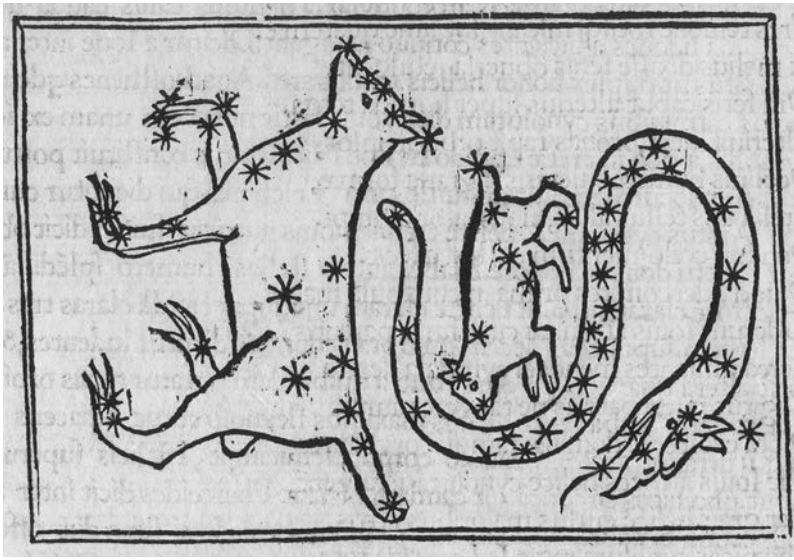
Homer's *Πληϊάδας*, *Ὑάδας* and *Ἄρκτόν* had simply been written out in Latin by Vergil—a detail that did not elude Rainolds, the soon-to-be reader in Greek. Details like these helped illustrate the point that Roman knowledge about the utility of the stars derived from Greek sources. One example Rainolds gave was how Ovid had used the information contained in Aratus' *Phaenomena*:

> Aratus in the *Phaenomena*, as well as our Ovid drawing from Aratus, teach that Greeks and Phoenicians, both highly skilled at navigation, direct their

[199] *De re rustica* 11.31–32: 'Contra quam observationem multis argumentationibus disseruisse me non infitior in iis libris, quos adversus astrologos composueram. Sed illis disputationibus exigebatur id, quod improbissime Chaldaei pollicentur, ut certis quasi terminis, ita diebus statis aëris mutationes respondeant: in hac autem ruris disciplina non desideratur eiusmodi scrupulositas; sed, quod dicitur, pingui Minerva quamvis utile contingent villico tempestatis futurae praesagium…'

rudder towards Helike, that is Big Bear (*Ursa Maior*), and Cynosura, that is Small,Bear (*Ursa Minor*).

Rainolds owned an edition of Aratus' poem, containing the verses about these constellations alongside an image.[200]



Big and Small Bear in Rainolds' edition of Aratus (1499).

Having laid bare the original source, Rainolds recited the verses in Ovid's *Tristia* that were based on Aratus:

> Of the two beasts, big and small, one guides Greek ships,
> the other Sidonian ships, both to dry land etc.[201]
> (*Tristia*, 4.3.1–2)

[200] *Julii Firmici Astronomicorum libri octo integri, & emendati, ex Scythicis oris ad nos nuper allati. Marci Manilii Astronomicorum libri quinque. Arati Phaenomena Germanico Caesare interprete, cum commentariis & imaginibus. Arati eiusdem Phaenomenon fragmentum, Marco T.C. interprete. Arati eiusdem Phaenomena, Ruffo Festo Avienio paraphraste. Arati eiusdem Phaenomena Graece. Theonis Commentaria copiosissima in Arati Phaenomena Graece. Procli Diadochi Sphaera Graece. Procli eiusdem Sphaera, Thoma Linacro Britanno interprete* (Venice, 1499), np.

[201] 152r-153v: 'Aratus quidem in Phænomenis, & ex Arato noster Ouidius, docent, & Graios & Phœnices vtrosq[ue] nauigandi peritissimos alteros ad Helicen, id est vrsam maiorem; alteros ad Cynosuran, id est vrsam minorem, gubernacula moderari'.

This requoting of sources was a way for Rainolds to display the textual lineages behind the poetry he recited. And it showed how the utility of astronomy was already an important subject in ancient authors.[202]

Rainolds continued to stage questions and answers. In his script, this was perhaps his favourite technique. 'What about x?' (*Quid x?*) he would ask seemingly at random, only to disarm the interjection with an answer he had already written out. 'What about medicine?' he asked. Then came his prepared remarks on how physicians determined the critical stages of a patient's illness—the so-called 'critical' days—by using knowledge of lunar cycles. Every assertion Rainolds made, however trivial, was backed by a citation. In the case of medical astrology, proof was given through a single line from Ficino's *Commentaries on Plotinus* that vaguely supported the point. Prewritten jokes were also part of Rainolds' script. 'Even though I wasn't trained by physicians', he commented, 'I have had experiences with illnesses'. To which he added cheekily: 'weakness of health meant that I knew more than I wanted to'.[203]

The invocation of the Neoplatonist Ficino—and the subsequent flood of Platonic references—speaks to another important point. It is no coincidence that Rainolds emphasized Plato as 'the first among all philosophers'.[204] In the sixteenth century, Plato and his followers were much read and cited in Oxford and Cambridge.[205] The 1589 catalogue of Corpus

Magna minorq[ue] feræ, quarum regit altera Graias,
Altera Sidonias utraq[ue] sicca rates & reliq'.

Cf. with Aratus' *Phaenomena* 36–44. Modern scholars are still drawing these types of connections to this day: see Emma Gee, *Ovid, Aratus and Augustus. Astronomy in Ovid's Fasti* (Cambridge, 2000), 66–70.

[202] Ancients sources were likewise mined for these purposes within textbooks, see Pietro Omodeo, '*Utilitas astronomiae* in the Renaissance: The Rhetoric and Epistemology of Astronomy', in: Matteo Valleriani (ed.), *The Structures of Practical Knowledge* (Berlin, 2017), 307–31.

[203] MS 241, 153v: 'Quid medicina? Nam illa sine rerum cœlestium cognitione recte suum munus administrare potest? Scio certè, non edoctus, a medicis; sed expertus, in morbis (fecit enim vt plura scirem quàm vellem, valetudinis infirmitas) peritos medicos nec venas incidere, nec purgare corpora, nec medicinas adhibere, nisi prius animdaversa siderum ratione; quo nimirum criticis, quos vocant, diebus suarum curationum tempora circumscribant. Itaq[ue] Ficinus pereruditus medic[us], comentariis in Plotinum, multos fauentibus astris se sanasse; & feliciores semper in medendo dies horasque seruasse profitetur: vt quisquis medicinam sine siderum scientia facere conetur, nobilissimæ disiplinæ mysteria prophanare & polluere videatur'.

[204] MS 241, 154r: '. . . Platone philosophorum principe . . .'

[205] See Sears Jayne, *Plato in Renaissance England* (Dordrecht, 1995), 83–114; Mordechai Feingold, 'The occult tradition in the English universities of the Renaissance: a reassessment', in: Brian Vickers (ed.), *Occult and Scientific Mentalities in the Renaissance* (Cambridge, 1984), 73–94; Sarah Hutton, 'Plato in the Tudor Academies', in: Francis Ames-Lewis (ed.), *Sir Thomas Gresham and Gresham College. Studies in the intellectual history of London in the sixteenth and seventeenth centuries* (Aldershot, 1999), 106–24; Charles B. Schmitt, *John Case and Aristotelianism in Renaissance England* (Kingston, 1983), 164–7.

Christi's library contained the translations of Plato by Ficino and Serranus, as well as the Aldine edition, and Rainolds' library was full of texts by Plato and the Neoplatonists Plotinus, Iamblichus, and Ficino. References to (Neo-)Platonism in academic orations were common in the period.[206] Unsurprisingly, Platonic authors made frequent appearances in Rainolds' declamation.[207] The theological undertones of Platonism were clear to Rainolds' audience.[208]

Associations between Platonism and divine realities, especially the heavenly spheres, had long been activated in laudations of astronomy in early sixteenth-century Wittenberg.[209] The Platonic fascination with the heavenly realm was likewise an important trope in Elizabethan England, as John Dee showed in his preface to Billingsley's Euclid (1570).[210] Rainolds displayed such commitment to Plato that he even expounded the Platonic order of the planets, in which the Sun (not Mercury) came second.[211] This defied his Clavius textbook that had noted that 'such an order of the planets had long ago been refuted by the Astrologers'.[212]

Rainolds' repeated allusions to an extramundane Platonic reality sat quite uncomfortably with his case for astronomy's utility. Plato was routinely held in contempt by those who championed the earthly applications of astronomy. The French educational reformer Petrus Ramus (1515–1572)

[206] J. R. Liddell, 'The Library of Corpus Christi College, Oxford, in the Sixteenth Century', *The Library*, 4 XVIII, 4 (1938), 385–416, here 404. For student orations see Janice Gunther Martin, 'A 1585 Oxford Ceremonial Student Oration'. 52–3; Henry Dethick, *Oratio in Laudem Artis Poeticae*, ed. William Ringler and tr. Walter Allen Jr. (Princeton, 1940), 17–18, 38–41, 47.

[207] MS 241, 151v-152r; 154r-v.

[208] See, e.g., the classic D. P. Walker, *Ancient Theology: Studies in Christian Platonism from the 15th to the 17th Century* (Ithaca, 1972).

[209] See Kusukawa, *The Transformation of Natural Philosophy*, 125–44, esp. 126–7.

[210] Jennifer Rampling, 'The Elizabethan Mathematics of Everything: John Dee's 'Mathematicall Praeface' to Euclid's *Elements*', *BSHM Bulletin: Journal of the British Society for the History of Mathematics*, 26, 3 (2011), 135–146, here 140.

[211] MS 241, 154r: '. . . Primum enim Luna, modo crescens, modo senescens, suum circuitum menstruo spatio summa celeritate conficit. Deinde verò Sol varia conuersione suum orbem peragrans, solstitiali & brumali reuocatione se conuertit. Tertius Lucifer & quartus Mercurius, cursum habent Solis motui nec celeritate multum, nec tarditate disparem. His alii tres accedunt; quorum summus Saturnus tarditate maximè reliquis antecessit; velocius Saturno Iupiter, & velocius Ioue Mars, suum vterq[ue] circulum peruagantur. Octauus autem cœli globus infinitis sideribus splendissime refulgens, & incredibili celeritate mirabiliter concitatus, cæteros septem ingentes orbes sui corporis ambitu coërcet; & eos in orientem nitentes, in occidentem motione rapidissima contorquet. Hæc in epominide Plato'.

[212] Christopher Clavius, *In Sphaeram Ioannis de Sacro Bosco Commentarius* (Rome, 1570), 87: 'Vetvstissimi autem Aegyptii, Plato in Tymaeo, Arist. In 2 de caelo cap. 12. & 1 Metereo. Cap 4 putarunt hunc esse ordinem in sphaeris coelestibus, vt infimum locum occuparet Luna; hanc statim subsequeretur Sol; hunc Mercurius . . . Sed talis quoq[ue]; ordo Planetarum, caelorum iamdudum ab Astrologis est refutatus'.

had criticized Plato's philosophy as high-minded and ethereal: 'I cannot praise Plato's position . . . Mathematics will only be complete when its applications—the purpose for which it was invented—have been perfected'. Henry Savile, while rebuking Ramus, agreed that Plato saw the mathematical disciplines as the 'contemplation of eternal realities'.[213] To contemporaries, Plato's philosophy was one of lofty realities. Rainolds had previously commended Hesiod for championing the earthly applications of astronomy in agriculture, but now he unabashedly used Plato to prove the contrary:

> It is necessary, said Plato, that the following person be truly called an astronomer: not he who—according to Hesiod and others of his ilk—studies the science of the stars so that he may observe their rising and setting [for farming]; but he who closely scrutinizes the 8 celestial cycles.[214]

This moment reveals that the internal consistency between citations was not central to epideictic (praise) oratory. Instead, one piled up citations to maximize the evidence in favour of the lauded object. Rainolds cited Hesiod to champion astronomy as an aid to agriculture; then he cited Plato to champion its otherworldly nature. The intended effect was clear: astronomy was to appear praiseworthy for both its utility and divinity, even if the sources disagreed.

This offers important lessons about citation in Renaissance epideictic oratory. There was such a large pool of sources from which to justify the praise—should I cite Plato for the divinity of astronomy? Hesiod for its earthly uses?—that one could not render them wholly consistent. Citation became a device that spotlighted only the positive features of a lauded object. Rainolds' script, therefore, teemed with citations pretending to support a common argument.

Confirmatio: Assembling Evidence

From confutation Rainolds moved swiftly to confirmation. As Cicero noted, both segments supported each other: 'it is neither possible to refute statements made against you unless you prove your own, nor to prove your

[213] Quoted in: Robert Goulding, '*Testimonia humanitatis:* the early lectures of Henry Savile', in: Francis Ames-Lewis (ed.), *Sir Thomas Gresham and Gresham College. Studies in the intellectual history of London in the sixteenth and seventeenth centuries* (Aldershot, 1999), 125–45, here: 132–3.

[214] MS 241, 154r: 'Necesse est, inquit [Plato], is uerè dicatur astronomus: non qui secundum Hesiodum, & alios istius modi, ita siderum scientiæ studeat, vt eoru[m] exortus & obitus modò contempletur: sed qui perlustret octo cœlestes ~~globos~~ambitus'.

own statements without refuting your opponent's'.[215] The central method Rainolds used to prove the virtue of astronomy was to select and deploy *exempla*.[216]

Rainolds would begin by formulating a general maxim:

> Astronomy appears almost to determine the science of warfare so that without it the best general has no worth; a mediocre general, instructed in astronomy, may oftentimes defeat the best generals.[217]

Rainolds then expounded historical examples proving the maxim. Thus famous military defeats traced back to a failure to understand the stars. An improper understanding of eclipses had led to negative outcomes in battle. The ancients—like many of Rainolds' contemporaries—viewed eclipses as portents signifying the downfall of an enemy.[218] Rainolds' *exempla* sought to show that this was a gross misunderstanding based on a superstitious attitude towards the stars, turning their praiseworthy light into ominous foreboding.

'A solar eclipse', Rainolds explained, 'occurs when the Moon is placed between the Sun and Earth, blocking the rays of light through the thickness of its body'.[219] This sentence read just like the definition in his astronomy textbook. In the textbook, the Moon simply blocked out the Sun.[220]

'This, Xerxes didn't know', the student explained. 'That is why', he continued, 'Xerxes believed that devastation in Greece had been foretold'. But—Rainolds added gleefully—he 'brought devastation on himself'.[221] The student's nod to Herodotus as the source for this example allowed the audience to recall the famous outcome: Xerxes would have his throne

[215] Cicero, *De Oratore*, 2.81.331, see Cicero, *On the Orator: Books 1–2*, tr. E. W. Sutton and H. Rackham (Cambridge MA, 1942), 447.

[216] The history of the rhetorical *exemplum* has been well-studied, see J. D. Lyons, *Exemplum: The Rhetoric of Example in Early Modern France and Italy* (Princeton, 1989); Timothy Hampton, *Writing from History: The Rhetoric of Exemplarity in Renaissance Literature* (Ithaca, 1990); Christoph Daxelmüller, 'Narratio, Illustratio, Argumentatio. Exemplum und Bildungstechnik in der frühen Neuzeit', in: Walter Haug et. al. (eds.), *Exempel und Exempelsammlungen* (Tübingen, 1991), 77–94; Volhard Wels, *Triviale Künste. Die humanistische Reform der grammatischen, dialektischen und rhetorischen Ausbildung an der Wende zum 16. Jahrhundert* (Potsdam, 2011), 176–81.

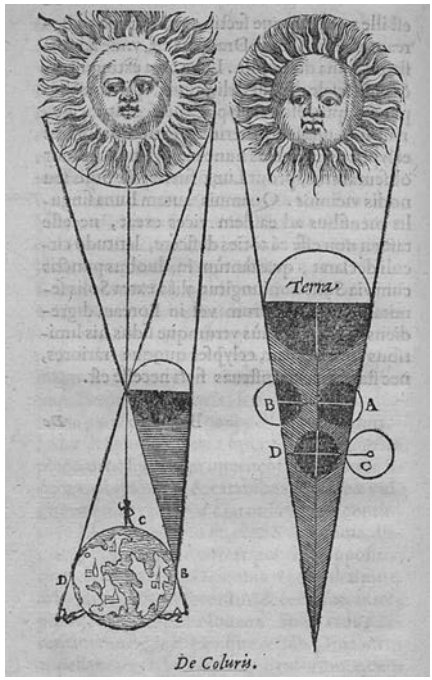
[217] MS 241, 153v: '…in rei militaris scientia sic pene dominari videtur astronomia: vt sine hac præstantissimus imperator in nullo esse numero, mediocris hac imbutus præstantissimos sæpe superare valeat'.

[218] See Anthony Grafton, 'Eclipses', in: Simon Hornblower & Anthony Spawforth (eds.), *The Oxford Classical Dictionary* (Oxford, 1996), 502.

[219] 153v: 'Eclipsis Solis accidit, cu[m] Luna inter Solem & terram interiecta, crassitudine sui corporis eius radios obscurat'.

[220] Cf. Cornelius Valerius, *De Sphaera* (Antwerp, 1564), 10–12.

[221] MS 241, 153v: 'Id ignorauit Xerxes; eaq[ue] propter cum putaret pestem græciæ portendi, pestem sibi comparasse, testis est Herodotus'.



The solar and lunar eclipse in Rainolds' edition of Valerius (1564).

erected opposite the Island of Salamis only to watch the devastation of the wrong fleet—his own.

Rainolds rehearsed a second definition from his textbook. 'A lunar eclipse', he explained, 'happens when the Moon travels on a line with the Sun and into the Earth's shadow'. Then came another laconic one-liner. 'This, Nicias hadn't known'. Now Rainolds used Thucydides as his source: Nicias had misread the lunar eclipse to signify that his troops should remain in Sicily. Rainolds' verdict on the outcome was unforgiving: Nicias had 'destroyed the best in the Attic nobility' and 'squandered the most beautiful army in the most hideous fashion'.[222] The failure to possess an adequate understanding of astronomy led to disaster in the past and embodied a lesson for the future.

[222] MS 241, 153v: 'Fit lunæ defectio, cùm ipsa e regione Solis in vmbram terræ incurrens, eius interpositu tenebris opacatur. Id ignorauit Nicias; eaq[ue] propter nobilitatis Atticæ florem elisisse, classemq[ue] pulcherrimam turpissimè dissipasse, auctor est Thucydides'.

The moral function of *exempla* was typical of *historia* in the period.[223] Interesting is how Rainolds' examples could have been used to make the reverse argument. The cases of Xerxes and Nicias could also have illustrated how astronomy only produced erroneous predictions in warfare. Erasmus had been aware of the myriad uses of an example; he hence advised speakers to clearly contrast examples of vice with examples of virtue.[224] Embracing this precept, Rainolds contrasted the cases of Xerxes and Nicias with their positive counterparts:

> Wholly different was Pericles with the Athenians, who were disturbed by a solar eclipse, and Sulpicius with the Romans, who were disturbed by a lunar eclipse. By extracting the causes of both eclipses out of intimate knowledge about the stars, these men lessened fear and increased trust.[225]

The story about Pericles was well-attested by Cicero, Plutarch, and Quintilian.[226] According to Plutarch, Pericles had demonstrated the real cause of the eclipse by holding his cloak into the sun and casting a shadow. An eclipse was hence nothing to fear: a simple illusion, a mere shadow over the earth.[227]

The audience to whom Rainolds was speaking presumably knew what actually caused eclipses; yet textbook astronomy had not eclipsed ancient history. Examples from antiquity were important to illustrate truths that the textbook did not. The ability to recite examples at will is what made for persuasive speech. *Exempla* were always selected and arranged for the argument at hand. Rainolds consciously juxtaposed the figures of Xerxes and Nicias with Pericles, attributing all positive outcomes to their knowledge of astronomy and all negative outcomes to their failure to grasp it.

Rainolds ended by highlighting how the stars foretold bright futures. 'The movement of the stars', he announced, 'are not only constant and immutable, but the judgements about the future made from them are so brilliant'. After listing the ancient oracles he declared that 'the stars signify

[223] Nicholas Popper, *Walter Ralegh's History of the World and the Historical Culture of the Late Renaissance* (Chicago, 2012), 37–9.

[224] Erasmus, *De copia verborum ac rerum*, in: B. Knott (ed.), *Opera omnia* (Ordo 1, vol. 6, Amsterdam, 1988), 248 (contentio demonstrativa).

[225] MS 241, 153v-154r: '. Longe secus Pericles, Atheniensibus, Solis; longe secus Sulpicius, Romanis, lunæ, defectu conturbatis: causas utriusq[ue] ex intima siderum scientia depromendo, formidine[m] minuerunt, fiduciam adiecerunt'.

[226] Cicero, *De re publica* 1.25; Plutarch, *Lives*, Pericles, XXXV; Quintilian, *Institutio Oratoria*, 1.10.46–7.

[227] For the chronologer's disenchantment of eclipses, see Anthony Grafton, 'Some Uses of Eclipses in Early Modern Chronology', *Journal of the History of Ideas*, 64, 2 (2003), 213–29.

or warn us of the outcomes of all things'.[228] Now Rainolds was siding with those *Sterngucker*—Luther's pejoration of choice for astrologers—who 'gazed' at the heavenly lights and foretold earthly happenings.

> Astronomers, therefore, know this influence of the stars. And because they know it they can prognosticate events. And because they prognosticate events they can foreknow the future.[229]

This trivial syllogism was backed by an overabundance of *exempla*. Quoting Cassius Dio and Tacitus, Rainolds gave examples of how ancient astrologers had predicted the rise of Roman emperors from Vitellius to Nero. He also relayed a contemporary example from Jovius' *Historiarum Sui Temporis* (1552), explaining how an astrologer-mathematicus had foretold that Cosimo I de' Medici would achieve fortune and longevity (before he became the second duke of Florence). Rainolds closed his confirmation with the cases of Hippocrates and Anaximander, who both used the stars to save Greece and Sparta from diseases and earthquakes.[230]

Having accumulated his examples on the page, Rainolds made sure to script a direct appeal to the audience:

> Is there anyone who withdraws their trust in antiquity as it is recorded through its most famous monuments? Or who believes that such secure predictions about the future do not yield miraculous advantages? Seeing

[228] 154v: 'Sunt itaq[ue] non solum stellarum cursus co[n]sta[n]tes & immutabiles; verum etiam iudicia rerum futurarum ex ipsis facta, sic illustria, sic explorata: vt apud græcos vulgare prouerbium vsurpetur, qui res ex se perobscuras, certis indiciis illustratas, stellis notari dicunt. Quo mihi præclarius sensisse videtur doctissimus Plotinus, qui in ipso exordio disputationis. Num stellæ quicqua[m] agunt; non omnia quidem a stellis fieri, sed in omnibus rebus futura significari magnopere contendit. Quare non immerito Porphyrius in libro de oraculis. Quæcunq[ue] tandem fatalia uel Apollo Delphis, uel Fortuna Præneste, uel Sibylla Cumis, uel Jupiter Dodonæ Vaticinati fuerint; ea sine dubio singula stellarum observatione prædicta fuisse uehementer asseuerat. Omnium enim effectus uel nota[n]t, astra, uel monent'.

[229] MS 241, 154v: 'Hanc igitur stellarum efficientiam sciunt astronomi, & quia sciunt, euenta prænoscunt; & quæ prænoscunt, futura prædicunt'.

[230] MS 241, 154v-155r: 'Vitellium, scribit Dio, præmonitum ab astrologis, ad imperium se peruentarum; peruenit: Othoni cladem illaturum; intulit: paucis diebus interiturum; interiit. Cosmo Medici scribit Iouius, a Basilio prædictum, eum opulentam hæreditatem aditurum; adiit: vitam diuturnam acturum; egit: summa felicitate fruiturum; obtinuit. Agrippinam, scribit Tacitus, consuluisse mathematicum de Nerone filio, num regnaturus esset. Regnabit, inquit ille, sed matrem interficiet. Interficiat, inquit illa, modò regnet. Euentum expectatis? regnauit & interfecit… Quid magis expetendum, quàm valetudinem tueri? Hippocrates Cous, cum ex affectione cœli prænosceret, pestilentiam ab Ilyriis ad græcos peruenturam: morbi nascentis igniculos extinguens, imminenti incendio græcia[m] liberauit. Quid magis gloriosum, quàm hominibus salutem dare? Anaximander, cum instare terræmotus qui Spartam euerterent, ex stellis præsagiret; monuit Spartanos, ut relictis moenibus in agris excubarent: paruerunt Spartani; corruit ciuitas, & ciues euaserunt'. The Basilius example is taken from: Paolo Giovio, *Historiarum sui temporis Tomus Secundus* (Florence, 1552), 323.

> good things approach? You will rejoice. Seeing bad things loom? You will escape… In the end, nothing is too opportune, desirable, or glorious, that he who has been carefully instructed in the science of the stars does not splendidly attain it.[231]

Rainolds' accumulation of *exempla* had solidified into his foregone conclusion. Throughout his script Rainolds associated the light of the stars with the light of the discipline. Astronomy 'glitters from all sides with the biggest ornaments'; 'It shines most brightly through the clearest of computations'; 'Its admirable light had illuminated the eyes of all the philosophers'. 'You can see', he told his listeners, 'that astronomy is adorned as if with the brilliance of all its lights'.[232] To a critic, however, the heavens were not always so brilliant: eclipses showed how the stars could also yield disaster. Yet the only celestial influence that Rainolds allowed was caused by the illuminated bodies themselves, not the dark shadows that were cast onto them.

Conclusio: The Perfect Orator

Why study declamations? Because they give us intimate glimpses of how students once trained themselves to be fluent in a classical language. The early modern university had formulated the dream that its students be able to speak elegantly in Greek or Latin. We saw in Rainolds' manuscript how a student tried to craft eloquence on the page. He wrote out the sentences the way he would speak them. He copied out verses of poetry so that he could impress listeners with memorized performances. And he preformulated questions to his audience, creating the illusion of spontaneity, but always having the answer already at hand. It was important to Rainolds that he construct his speech from a wide range of authors, from poets to historians to philosophers. Without hesitation he interspersed these authorities for reasons of display.

In the final line of the manuscript, the genre of declamation becomes most visible. Study astronomy, Rainolds exhorted,

[231] MS 241, 155r: 'Ecquis igitur antiquitati clarissimis consignatæ monumentis fidem deroget? aut ecquis ita certas futurorum prædictiones non miram afferre commoditatem iudicet. Vides aduenta[n]tia bona? gaudebis: vides imminentia mala? vitabis. Sæuiet pestis? valetudini consules. Inuadet hostis? ciuitatem præmunies. Opprimet fames? Victui prouidebis. Nihil est deniq[ue] tam oportunum, nihil tam expetendum, nihil tam gloriosum; quod non siderum scientia diligenter instructus luculente conficiat'.

[232] MS 241, 151v-152r: '… ea disciplina, quæ maximis ornamentis… sic undiq[ue] refulgent', 'rationum modo clarissimarum lumine… liquidissime dilucescit', 'cuius admirabilis splendor sic omniu[m] philosophoru[m] oculos illustrauit'.; 155r: 'Videtis astronomiam sic omnium quasi luminum splendore distingui'.

> . . . so that you may be lifted up to the stars and raised up to the heavens; so that you may transition from humans to heroes and from heroes to Gods. I have spoken.[233]

Above all, manuscript declamations reveal how speech was trained, indeed mastered, through a *script*. Declamations were written out to be acted out. The kind of speech Erasmus prescribed—the overabundance and variety of expression—did not magically emanate out of Rainolds' mouth. Latin sentences had to be diligently devised, and then memorized, for performance.

There is a revealing irony in my story. Rainolds would, in old age, become a vocal critic of theatrical performance.[234] In the 1590s, he savaged actors for their overblown staginess and distinguished them sharply from orators, whose 'exercises of declaiming, answering, opposing, doe helpe to breede ripenes'.[235] Rainolds' younger self reveals, however, that this line cannot be so clearly drawn. As an Oxford undergraduate he had been a student actor in the play *Palamon and Arcite* (1566) and he later continued to use written scripts in his academic orations. Thus he delivered a speech in 1576 in which he acted out a dialogue between Dido and her sister Anna. 'O [Dido]', Rainolds recalled Anna as saying, 'you are dear to your sister, more than light!' But then Rainolds himself blurted out 'O pestilential flattery!', addressing Dido, a mythical character, himself: 'O [Dido], you are to flee your sister, more than the plague!'[236] Orating always meant performing.[237] And the declamation, with its lively scripts, embodied this form of staged orality. Its mode of address represented a clear departure from the disputation.[238]

Writing and delivering declamations—what I have analysed as 'scripting' a speech performance—became a formal requirement from the sixteenth century onwards. When the English Civil War (1642–1651) interrupted academics at Cambridge, declamation exercises resumed as

[233] MS 241, 155r: '. . . vt non in terras deiecti, in cænu[m] deuoluti, sed ad stellas euecti, ad cœlu[m] excitati, ab hominib[us] ad heroas, ab heroibus ad Deos penetrare possitis. Dixi'.

[234] See recently: Daniel Blank, 'Actors, Orators, and the Boundaries of Drama in Elizabethan Universities', *Renaissance Quarterly*, 70 (2017), 526–32.

[235] Ibid., 527.

[236] John Rainolds, *Orationes Duae: ex iis quas habuit in Collegio Corporis Christi . . . Anno 1576* (Oxford, 1597), 28–30: '*Anna refert. O Luce magis dilecta sorori!* O blanditias pestilentes! . . . O peste magis fugienda sorori!'

[237] This theme is further explored by Joel B. Altman, *The Tudor Play of Mind: Rhetorical Inquiry and the Development of Elizabethan Drama* (Berkeley, 1978).

[238] Rainolds, *Orationes Duae*, 13: '. . . presertim cum vestrae disputationes frigore magis quam fervore peccent'.

soon as hostilities subsided.[239] Only the sea-change of the nineteenth century washed declamation away, leaving it as an object for historical inquiry.[240] This study has used a declamation to reconstruct a form of Latin orality that originated in the *studia humanitatis*. Rainolds' scripts exemplify the kinds of scenarios that were typical. From his pen and lip flowed the vibrant defence of injustice as moral philosophy was at the height of popularity in Elizabethan Oxford, the elegant elevation of astronomy as it threatened to drown within a sea of classical letters.

The proliferation of the well-spoken did not breed truth. While Rainolds elevated astronomy above all arts, a fellow Oxford student, William Dethick, at a contemporaneous declamation, hijacked all of Rainolds' points for the elevation of poetry. 'Those who have drunk from the fountains of poetry', declaimed Dethick, understood 'even those subjects about which they know nothing'. Thus 'Aratus, who had only a casual knowledge of astronomy, wrote about the motions of the heavens, the courses of the stars, as if he had been brought up in the bosom of Saturn himself'.[241] Why study astronomy, if poetry had it covered? Rainolds, by contrast, had used poetry in order to elevate astronomy. That both students used the same texts for opposite ends shows that the goal was not truth, but victory, as one tried to outspeak the other.

What kind of skill was declamation ultimately? Rainolds had rehearsed and executed an elegant speech about astronomy. But what had he shown knowledge of? Astronomy? Or poetry and history? Rainolds' script enabled him to name every instance of astronomy in ancient history; and he could recite verses about the constellations from every poem. He could do everything but astronomy itself. He skilfully tiptoed around his subject by singing an ode to antiquity: the stars of modern times had also adorned the skies over Troy. To say something eloquent was to say something evocative. In the summer of 1572, Rainolds painted the stars of Homer into the skies of Oxford. Months later, Tycho's New Star appeared.

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[239] The Queen's College, Oxford, MS 241, 91r-v. This list of Cambridge declaimants for 15 August 1652 affirms that M.A. students *had* to declaim at least twice per year (otherwise they could not graduate and were fined) in front of the residential professors.

[240] E.g. Johann C. Wötzel, *Grundriß einer pragmatischen Geschichte der Declamation und der Musik* (Vienna, 1815).

[241] Henry Dethick, *Oratio in Laudem Artis Poeticae*, ed. William Ringler and tr. Walter Allen Jr., (Princeton, 1940), 34–5.