

City University of New York (CUNY)

## CUNY Academic Works

---

Theses and Dissertations

Hunter College

---

Spring 5-5-2019

### The Manuscript Copy of Sfera in the Morgan Library

Dana Hart

*CUNY Hunter College*

[How does access to this work benefit you? Let us know!](#)

More information about this work at: [https://academicworks.cuny.edu/hc\\_sas\\_etds/462](https://academicworks.cuny.edu/hc_sas_etds/462)

Discover additional works at: <https://academicworks.cuny.edu>

---

This work is made publicly available by the City University of New York (CUNY).

Contact: [AcademicWorks@cuny.edu](mailto:AcademicWorks@cuny.edu)

The Manuscript Copy of *Sfera* in the Morgan Library

by

Dana Hart

Submitted in partial fulfillment  
of the requirements for the degree of  
Masters of Arts in Art History, Hunter College  
The City University of New York

2019

Thesis Sponsor:

May 3, 2019

Date

Cynthia Hahn

Signature

May 3, 2019

Date

Wen-shing Chou

Signature of Second Reader

## Table of Contents

Acknowledgement	ii
List of Illustrations	iii-v
Introduction	1-3
Chapter 1	4-15
Chapter 2	16-31
Chapter 3	32-45
Chapter 4	46-56
Conclusion	57-58
Bibliography	59-62
Illustrations	63-94

## **Acknowledgement**

To Wilder Yost, editor extraordinaire.  
I couldn't have done this (or much else, for that matter) without you.  
Thank you for your support along the way.

## **List of Illustrations**

Figure 1. Binding of M.721. Pierpont Morgan Library. MS M.721.

Figure 2. Detail of spine of M.721. Pierpont Morgan Library. MS M.721.

Figure 3, Example of page layout, M.721 3r. Pierpont Morgan Library. MS M.721.

Figure 4, Detail of illuminated initial, M.721 7r. Pierpont Morgan Library. MS M.721.

Figure 5, Detail of initial illuminated in white vine style, M.721 1r. Pierpont Morgan Library. MS M.721.

Figure 6, Detail of zonal map, M.721 2r. Pierpont Morgan Library. MS M.721.

Figure 7, Detail of mappamundi, M.721 2v. Pierpont Morgan Library. MS M.721.

Figure 8, Detail of mappamundi with elements, M.721 7v. Pierpont Morgan Library. MS M.721.

Figure 9, Three illustrations of temporal zones and winds, M.721 15v. Pierpont Morgan Library. MS M.721.

Figure 10, Two mappamundi, M.721 14v. Pierpont Morgan Library. MS M.721.

Figure 11, Map of Mediterranean, M.721 15v and 16r. Pierpont Morgan Library. MS M.721.

Figure 12, Tower of Babel, M.721 17r. Pierpont Morgan Library. MS M.721.

Figure 13, Detail of overlap between illustration and text, M.721 19r. Pierpont Morgan Library. MS M.721.

Figure 14, Detail of coat of arms, M.721 1r. Pierpont Morgan Library. MS M.721.

Figure 15, Unlabeled map, M.721 23v. Pierpont Morgan Library. MS M.721.

Figure 16, Detail of uncolored island, M.721 23v. Pierpont Morgan Library. MS M.721.

Figure 17, Unfinished map, M.721 24v. Pierpont Morgan Library. MS M.721.

Figure 18, Detail of celestial map, M.721 1v. Pierpont Morgan Library. MS M.721.

Figure 19, Detail of zonal map, M.721 2r. Pierpont Morgan Library. MS M.721.

Figure 20, Two mappamundi, M.721 14v. Pierpont Morgan Library. MS M.721.

Figure 21, Detail of mappamundi with elements, M.721 7v. Pierpont Morgan Library. MS M.721.

Figure 22, Example of portolan map influence, Alexandria and Cairo, M.721 21r. Pierpont Morgan Library. MS M.721.

Figure 23, Map of Mediterranean, M.721 15v and 16r. Pierpont Morgan Library. MS M.721.

Figure 24, Detail of Noah's Arc, M.721 16r. Pierpont Morgan Library. MS M.721.

Figure 25, Illustration of Jerusalem and Saint Catherine's monastery, M.721 21v. Pierpont Morgan Library. MS M.721.

Figure 26, Illustration of Rodi and Troy, M.721 24r. Pierpont Morgan Library. MS M.721.

Figure 27, Example of portolan map influence, Alexandria and Cairo, M.721 21r. Pierpont Morgan Library. MS M.721.

Figure 28, Johann Helffrich's 1566 map of Alexandria.

Figure 29, Piri Reis's 1513 map of Alexandria. Library of the Topkapı Palace in Istanbul.

Figure 30, Detail of Fez and Morocco. Pierpont Morgan Library. MS M.721.

Figure 31, Illustration of Jerusalem and Saint Catherine's monastery, M.721 21v. Pierpont Morgan Library. MS M.721.

Figure 32, Hartman Schedel's 1493 map of Jerusalem from the *Liber Cronicarum*. University of Cambridge Library (Inc.0.A.7.2[888]).

Figure 33, Konrad Grunenberg's 1487 map of Jerusalem from the *Beschreibung der Reise von Konstanz nach Jerusalem*. Badische Landesbibliothek in Karlsruhe.

Figure 34, Monastery of St. Catherine, Georgian Academy of Sciences, Psalter H-182, f. 227.

Figure 35, Tower of Babel, M.721 17r. Pierpont Morgan Library. MS M.721.

Figure 36, NYPL MS 198: Tower of Babel.

Figure 37, NYPL MS Col 2557 MA 110: Tower of Babel.

Figure 38, NYPL MS Col 2557 MA 109: Tower of Babel.

Figure 39, Beinecke Library MS 328: Tower of Babel.

Figure 40, Vatican Urb. Lat. 752: Tower of Babel.

Figure 41: Boston Public Library MS f Med 125: Tower of Babel.

Figure 42, Library of Congress PQ 4621. D17 54 1475: Tower of Babel.

## Introduction

This thesis explores a manuscript copy of the fifteenth century text *Sfera* that is housed at the Pierpont Morgan Library and Museum. *Sfera* is a rhyming Italian treatise, written by Gregorio Dati, that gives an introduction to geography, astrology, and cosmology, as well as a listing of important ports in the Mediterranean. It is heavily illustrated throughout, and it includes a staggering diversity of maps from the late medieval and early Renaissance period. Many of the maps of the Mediterranean include illustrations of important cities or biblical sites. As a text, *Sfera* is mentioned tangentially in several articles about late medieval maps, as well as articles about Florentine merchant writers, but as an individual manuscript it has not received the scholarly attention it deserves. Part of this may be due to the fact that *Sfera* is only one of several works by Gregorio Dati, and is often overshadowed by his personal diary and his history of Florence. Another reason might be that *Sfera* falls outside of the scope of well-known genres, such as Books of Hours, travel accounts, or chronicles that provide a more structured body. While a few manuscript copies of *Sfera* have been featured in scholarly publications, most notably in Lucia Bertolini's survey "L'Attribuzione della Sfera del Dati," and Karen Cook's, "'Sfera': The Manuscript Copy in the Kenneth Spencer Research Library, University of Kansas," the Morgan manuscript copy, M.721, has never received scholarly attention. One reason for this might be that, given the breadth and depth of magnificent manuscripts at the Morgan, M.721 might pale in comparison to the many jewels available for study in that collection.

*Sfera* blurs the lines between genres of astronomy, cartography, religion, and travelogue, and was created in the transitional period between the medieval and the Renaissance. It is difficult to ascertain what role it played for contemporary readers, who could have reached for *Sfera* to fulfill recreational, educational, or spiritual needs. But it is precisely because of *Sfera's*



in-between and hard-to-define qualities that it is worth of further study. It provides insight into the social and cultural concerns during this period of upheaval. What's more, the relatively large body of scholarship on supporting subjects, for example studies on *Sfera*'s author, Gregorio Dati, medieval maps, and nautical charts, provides rich context for further examination.

This thesis will view M.721 through four distinct lenses. The first chapter will explore the literary origins of *Sfera* as a text, the cultural context within which it was created, its reception and function in the late medieval world, and its subsequent publication history. The first chapter concludes that *Sfera* was created as an educational text but was probably intended as a deluxe copy for a merchant, in order to fulfill his educational and cultural aspirations.<sup>1</sup> The second chapter will describe the Morgan Library's copy of *Sfera*, M.721, giving a formal analysis and description, using the manuscript's physical evidence to draw conclusions about its patronage, creation, and function, and attempting to trace its provenance from Renaissance Italy to the Morgan Library. Although the specific provenance of M.721 cannot be definitively traced, considering its movement as part of a flow of Humanist texts during the Renaissance is a worthy exercise.

The third chapter will give an inventory of the different kinds of illustrated maps in M.721 and their functions, noting that in terms of style M.721 falls between medieval mappamundi and Renaissance portolan charts. The function of these maps is also somewhere between medieval cosmological images and the Renaissance navigational images, and their ultimate purpose is to situate the reader in the world and reinforce a Christian spirituality. Biblical locations and events are projected onto the maps, and the geography of the commercial world becomes the organizing structure for Christian history. The fourth and final chapter will

---

<sup>1</sup> Two of Dati's other works, his diary and the *Libro Segreto*, were never meant to be published and read by the public. His third work, *Istoria di Firenze dal 1380-1405*, was a history of the Milanese-Florentine wars.

focus on architecture in M.721, exploring the architectural characteristics of the cities on the maps, comparing the iconography of an illustration of the tower of Babel in M.721 with eight other manuscript copies of *La Sfera*, arguing that the collective effect of the depiction of the cities and the tower in M.721 works to reinforce the idea of God as the master architect, and to Christianize the world by erasing the presence of Islam in some of the cities illustrated.

## Chapter 1: Authorship and Function of *Sfera*

At the beginning of the fifteenth century a new text began to circulate in Florence. Over the following decades it would be copied and then copied again, the number of manuscripts multiplying many times over. In the 1470s, when the printing press slowly began eclipsing the manuscript trade, editions were printed in Florence, Rome, and Milan. Despite being widely distributed and read in the many humanist centers of Italy during the Renaissance, this text has received relatively little scholarly attention. Perhaps this is due to an early confusion over authorship, or to the fact that the text's subject matter and function defy easy categorization within the existing canon of manuscript studies. This chapter will dive into the questions and contradictions that make this text so rich, exploring the literary origins of the text, the cultural context within which it was created, its reception and function in the late medieval world, and its subsequent publication history.

The title of the text is *La Sfera*, and its authorship, for many years, was attributed jointly to Leonardo Dati (1365-1425) and his brother, Gregorio (Goro) Dati (1362-1435).<sup>2</sup> Leonardo and Gregorio were sons of Stagio Dati, a wool merchant of humble origins. Stagio's own father was a purse-vendor, whose shop was adjacent to a fishmonger.<sup>3</sup> The brothers went in decidedly different directions: Leonardo, to the church, and Gregorio, to trade as a silk merchant. The confusion as to who wrote *Sfera* is due to the fact that there are copies extant that list both brothers as authors. The question of authorship was eventually settled, largely thanks to Lucia Bertolini's 1984 review of 148 manuscripts of *Sfera*. Bertolini found that twenty-five copies are

---

<sup>2</sup> Karen Severud Cook, "Dati's *Sfera*: The Manuscript Copy in the Kenneth Spender Research Library, University of Kansas," *Mediterranean Studies*, vol. 11 (2002), 45.

<sup>3</sup> Gregorio Dati, "The Diary of Gregorio Dati," in *Two Memoirs of Renaissance Florence: The Diaries of Buonaccorso Pitti and Gregorio Dati*, ed. by Gene A. Brucker and trans. by Julia Martines (Illinois: Waveland Press, 1991), 107.

attributed directly to Gregorio, while only six are attributed to Leonardo.<sup>4</sup> Additional scholars since Bertolini have agreed that Gregorio, being a silk merchant and having had first-hand experience with the subject matter of *Sfera*, is the sole author.

*Sfera* was written before Dati's death in 1435, but exactly when is unknown. The only evidence that suggests the text was written earlier in the century is a manuscript copy of *Sfera* in the Biblioteca Universita' di Pavia, which is dated 1403, but the scholar Filiberto Segatto has argued there is reason to question that date's accuracy.<sup>5</sup> There is a stronger argument to be made that *Sfera* was written closer to the end of Dati's life. There is evidence to suggest that Dati left *Sfera*; Karen Severund Cook notes in her work that there is a marginal note in a manuscript copy at the Biblioteca Laurenziana that claims the that, "the dying author was unable to continue along the manuscript and complete the geographical account."<sup>6</sup> Indeed, a supplement to *Sfera* covering additional port cities in Africa and Europe was published in 1514 by Giovanni Maria Tolosani, purportedly finishing what Dati left incomplete.<sup>7</sup>

The subject matter of *Sfera* is ostensibly geographical and navigational. It is divided into four books. The first book focuses on the heavens, exploring cosmology and astrology. The second book explores the elements and forces such as tides and weather, which govern travel by sea. The third book is an overview of navigational technology, explaining compassing and how to read nautical charts. The fourth and final book lists the important ports in the Mediterranean, where they are located in relationship to each other, and what one can purchase once one arrives. Notable holy sites along the way are also described. The text of *Sfera* is written in *ottavo rima*, a form of poetry with stanzas of eight lines that each have ten to eleven syllables. The rhyming

---

<sup>4</sup> Cook, "Dati's *Sfera*," 48.

<sup>5</sup> Ibid.

<sup>6</sup> Cook, "Dati's *Sfera*," 49.

<sup>7</sup> Ibid.

scheme follows a-b-a-b-a-b-c-c.<sup>8</sup> As Cook notes in her study of *Sfera*, the combination of subject matter and rhyme scheme make *Sfera* “an important early example of an Italian tradition of vernacular geographical poetry, known as *geografie metriche*.”<sup>9</sup> A key feature of almost all known manuscript copies of *Sfera* is the inclusion of map illustrations. While there is quite a bit of variance among the cities represented on the maps of the Mediterranean in Book IV in the various copies, the presence of the cities is a constant.

The subject matter of *Sfera* was deeply informed by Gregorio Dati’s own lived experiences as a merchant. As stated earlier, *Sfera* is not the only work that Dati wrote during his lifetime. In fact, he left behind a rich body of work, including four books: his diary, essentially a business ledger; his *Libro Segreto*, or a more personal diary; his best known work, *Istoria Di Firenze dal 1380-1405*, a history of Florence as seen through Dati’s eyes; and *Sfera*.<sup>10</sup> Dati enjoyed success as a merchant, and he died having risen far above his modest background.<sup>11</sup> He received a commercial education, presumably in the vernacular, and apprenticed with a silk merchant at the age of thirteen. He borrowed money for his first business venture, and went on to make significant profits as well as declare bankruptcy, at least once, over the course of his career. He traveled the Mediterranean extensively, especially around Spain, surviving robberies and pirate raids.<sup>12</sup> He was active in the guild of Por S. Maria, and eventually held elected office as the Standard-bearer of Justice.<sup>13</sup> By his own records, Dati fathered twenty children with four

---

<sup>8</sup> Joseph F. Stanley, “Negotiating Trade: Merchant Manuals and Cross-Cultural Exchange in the Medieval Mediterranean,” *Frontiers: The Interdisciplinary Journal of Study Abroad* 30 (2018), 107.

<sup>9</sup> Cook, “Dati’s *Sfera*,” 50.

<sup>10</sup> Raymond Clemens, “Medieval Maps in a Renaissance Context: Gregorio Dati and the Teaching of Geography in Fifteenth-century Florence,” (Boston: Brill, 2008), 237.

<sup>11</sup> J. K. Hyde, “Some Uses of Literacy in Venice and Florence in the Thirteenth and Fourteenth Centuries,” *Transactions of the Royal Historical Society* 29 (1979): 117.

<sup>12</sup> Stanley, “Negotiating Trade,” 107.

<sup>13</sup> Ionuț Epurescu-Pascovici. 2006. “Gregorio Dati (1362–1435) and the Limits of Individual Agency.” *The Medieval History Journal* 9 (2006): 297.

wives and at least one Tartar slave whom he had owned.<sup>14</sup> He outlived all of his wives and many of his children.

Dati's writing was informed by three very different but notably powerful forces at work in fifteenth century Florence: commerce, culture, and faith. Burgeoning commerce and trade were remaking civic relations, humanism was an emerging intellectual factor, and the steady influence of the Catholic church remained as strong as ever. Dati participated actively in all three of these sectors of public life. At the turn of the century Florence was prospering. Having conquered Pisa in 1406 Florence enjoyed renewed access to sea ports and was becoming a naval power.<sup>15</sup> As a result, the silk industry exploded during the first half of the fifteenth century.<sup>16</sup> Trade relationships and patterns of commerce had been developing since the eleventh century, but as Joseph Stanley notes in "Negotiating Trade," "The increase of trans-Mediterranean mobility...initiated a permanent state of war and competition between Muslim, Byzantine, and European regional powers over control of the Mediterranean's sacred lands and maritime routes."<sup>17</sup> The subject matter of *Sfera*, especially its keen interest in Mediterranean sea routes, spoke directly to the key commercial issues of the day. Local commercial interests might also have played a role in motivating Dati to write *Sfera* in the first place. Writing on Dati's borrowing and lending habits, Ionuț Epurescu-Pascovici points out that, "Good reputation brought financial credit, which in the fast-developing Florentine economy, as in modern

---

<sup>14</sup> Dati, "The Diary of Gregorio Dati," 112. Slavery was present in Florence throughout Dati's lifetime. A papal pronouncement prohibited Christian merchants from purchasing Christian slaves, but non-Christian slaves were valuable commodities and frequently purchased and sold by Christian merchants such as Dati.

<sup>15</sup> Larry A. Silver, Blake Ehrlich and Others, "Florence," Encyclopedia Britannica, published September 20, 2017, <https://www.britannica.com/place/Florence/History>

<sup>16</sup> Cook, "Dati's *Sfera*," 50.

<sup>17</sup> Stanley, "Negotiating Trade," 102-103.

economics, was more important than cash or property.”<sup>18</sup> It is possible that Dati was motivated to write *Sfera* in part to bolster his reputation as a merchant who had traveled widely and, more importantly, was familiar with the peoples of foreign lands and how to conduct trade with them.

Growing wealth combined with the activities of early humanists marked the beginning of a new age in Florence. A literate laity emerged, thanks in part to the humanist educational movement as well as the growing number of new professions that required a lay education. One result of these trends was the creation of “a new class of professionally literate merchants,” the class to which Dati belonged and for whom he wrote.<sup>19</sup> That *Sfera* even exists is a result of this new merchant class, members of which were both consumers and producers of humanist culture.<sup>20</sup> The subject matter of *Sfera* both supports and reflects this shift away from ecclesiastical education towards a lay education. As the number of individuals with the ability to read and write grew there was a transition from a reliance on memory and oral history to written records in government. This, combined with the Medici’s early patronage of arts and literature, gave way to an increasing demand for manuscripts.<sup>21</sup>

Another influence on Dati that is evident in *Sfera*, despite the new humanist trend, is the persistence of the importance of the Catholic Church. The church was still a powerful aspect of life in fourteenth century Florence, and Dati was a deeply religious man. Part of this may have been his connection to the church through his brother, Leonardo, who entered the Dominican monastery of S. Maria Novella in Florence in 1375, and who was later placed in charge of the monastery school, ultimately becoming the Master General of the Dominican Order.<sup>22</sup> As Cook points out, “The Dominicans were a preaching order who aimed their sermons at a middle-class,

---

<sup>18</sup> Epurescu-Pascovici, “Gregorio Dati,” 305.

<sup>19</sup> Hyde, “Some Uses of Literacy in Venice and Florence,” 113.

<sup>20</sup> Clemens, “Medieval Maps in a Renaissance Context,” 237.

<sup>21</sup> Silver, “Florence,” 2017.

<sup>22</sup> Cook, “Dati’s *Sfera*,” 48.

educated audience, largely merchants.”<sup>23</sup> Not only did the church permeate all aspects of social life in Florence, it seems that Dati in particular would have had increased exposure through his brother.

In his personal diaries Dati’s commitment to living a Christian life (despite his frequent shortcomings) is clearly articulated. On January first of 1404, Dati wrote in his diary: “I know that in this wretched life our sins expose us to many tribulations of soul and passions of the body, that without God’s grace and mercy which strengthens our weakness, enlightens our mind and supports our will, we would perish daily. I also see that since my birth forty years ago, I have given little heed to God’s commandments.”<sup>24</sup> Dati went on to make a series of resolutions, including vows of almsgiving, of refraining from working on Church holidays, and of observing chastity on Fridays.<sup>25</sup>

In “Gregorio Dati (1362–1435) and the Limits of Individual Agency,” Ionuț Epurescu-Pascovici eloquently argues that Dati employed a kind of renunciation of agency in his approach to conflict and political advancement, choosing to let matters unfold as they would rather than trying to influence them directly. Epurescu-Pascovici writes that one of Dati’s main aims was “to follow the designs that God had for him,” and that Dati placed tremendous faith in divine agency.<sup>26</sup> While an understanding of God’s omnipotence was certainly typical of the time, Dati’s somewhat passive approach seems to be unique. Dati’s sense of divine power and intervention is illustrated again in his diary, in the language he uses when listing his children’s births and deaths. Writing of his son, Stagio’s, death, Dati recounts that a second son was soon called to join Stagio in heaven: “On 22 August of the same year, the Divine bounty was pleased to desire

---

<sup>23</sup> Cook, “Dati’s *Sfera*,” 48.

<sup>24</sup> Dati, “The Diary of Gregorio Dati,” 124.

<sup>25</sup> Epurescu-Pascovici, “Gregorio Dati,” 317.

<sup>26</sup> Epurescu-Pascovici, “Gregorio Dati,” 312.



a companion for the beloved soul. God called our son Mari to Himself and he died at eleven o'clock on Sunday, of the plague. God grant us the grace to find favor with him and to bless and thank Him for all things."<sup>27</sup> The following year, after Betta birthed another male (also named Stagio), Dati writes that, "Divine providence was pleased to take him back and for this too may He be thanked and praised."<sup>28</sup> Even in the midst of life's most crushing blows, Dati believed that, "It is fitting to give praise to God for all things."<sup>29</sup>

It is this faith in divine intervention and agency that is most manifest in *Sfera*. Although the text concerns itself primarily with geography, the first folio of Book I is entirely an invocation to readers of *La Sfera* to "read the following verses / invoking God with an attentive mind."<sup>30</sup> Dati goes on to write: "Sweet Lord open my lips / light up my heart with your light / and let my mouth announce your ways / full of praise, and [let be] you always my lead."<sup>31</sup> In his writing as in his life Dati calls on God to guide him and the narrative of *Sfera*. The opening line of Dati's work also evokes the opening of prayers in Books of Hours. While the overarching subject matter and the illustrations of *Sfera* are dependent on a presentation of scientific knowledge, the inclusion and attention to religion, and the depiction of biblical sites in the map illustrations, underscore the role that religion played in the text.<sup>32</sup> Science is ultimately presented as being in the service of religious devotion, and one of many tools used to contemplate the grandeur of God's designs. Epurescu-Pascovici writes that, "To be sure, Dati lived at a time when the humanist circles of Florence were re-examining the relation between human and non-human, in particularly divine, agency. The late 14th century had witnessed a proliferation of

---

<sup>27</sup> Dati, "The Diary of Gregorio Dati," 116.

<sup>28</sup> Ibid.

<sup>29</sup> Dati, "The Diary of Gregorio Dati," 111.

<sup>30</sup> New York, Pierpont Morgan Library, MS M.721, fol. 1r: "...Di quei che legghano e' uersi seghuenti / Chiamando Iddio coll'animo attenti."

<sup>31</sup> Ibid.: "...Dolce signore apri le labbra mie / Illumina il quor mio colla tua luce."

<sup>32</sup> Cook, "Dati's *Sfera*," 59.

writings on the relation between fate, human virtue and reason, divine providence, and free will-- by such influential figures as Petrarch and Salutati.”<sup>33</sup> Much as this debate might have occurred around Dati, he remained of the mind that when it came to divine agency, “I shall let things take their course without interfering.”<sup>34</sup>

In the scholarship that exists around *Sfera* there tends to be two main understandings of *Sfera*’s intended purpose and function in the late medieval/early Renaissance world. One of these theories is that *Sfera* was primarily an educational textbook for students studying to be merchants or seafarers; the other is that *Sfera*’s early use of portolan maps makes it a kind of pilot-book meant for use by active merchants.<sup>35</sup> This chapter argues that *Sfera* can most plausibly be situated in the canon of *pratiche della mercatura*, or merchant’s handbooks. In a sense, this category encompasses and justifies both of the previous theories, as merchant handbooks were often used as educational texts as well as by active merchants (albeit not for piloting).

*Pratiche della mercatura* were manuscripts popular between the late thirteenth and fifteenth century that covered a wide range of subjects that would have had practical application for a northern Italian merchant navigating the Mediterranean. Of their subject matter, Joseph Stanley writes that, “these hand books comprised important ‘data about weights and measures, moneys and exchange, commodities and techniques, markets and fairs, customs, transportation, and other details a merchant should keep at hand.’”<sup>36</sup> While these manuscripts did often contain maps, the illustrations tended to be geared towards a general understanding of the region and were not detailed enough to function as a navigational tool. As Raymond Clemens notes of the likely merchant patrons of these manuscripts, “Because they were not navigating the ships, the

---

<sup>33</sup> Epurescu-Pascovici, “Gregorio Dati,” 313.

<sup>34</sup> Dati, “The Diary of Gregorio Dati,” 125.

<sup>35</sup> Cook, “Dati’s *Sfera*,” 52.

<sup>36</sup> Stanley, “Negotiating Trade,” 103.

level of detail did not need to be precise, but a general familiarity with the Mediterranean would have been extremely useful for merchants shipping goods overseas.”<sup>37</sup> This fits with the relatively crude illustrations found in the majority of manuscript copies of *Sfera*, which lack rhumb lines<sup>38</sup> and would not have been able to serve as a practical navigational tool.

More important than the maps in these works were the accounts of cross-cultural interactions, histories, and descriptions of the places that merchants were likely to encounter in the course of their business. J. K. Hyde explains how the contents of such a merchant handbook tended to be “remarkably broad in its subject matter, as almost anything--a war, a shipwreck, a political revolution or an outbreak of plague might have a decisive influence on the market.”<sup>39</sup> An especially important element of this sort of content meant preparing Italian merchants for interactions with peoples of different ethnicities and religions.<sup>40</sup> Dati’s *Sfera* certainly fulfills this function. In the midst of explaining the geography of Egypt up into Turkey, Dati writes that “From tramontana<sup>41</sup> of this great Asia / there are the Tartars, under the cold zone, / people who are bestial in their laws and their food”<sup>4243</sup> This descriptive information about the Tartars would help prepare merchants for their interactions with the Tartars, who are depicted as “other.”

Viewing *Sfera* through the lens of the merchant’s handbook is also useful in understanding why Dati included information on astrology. As Hyde explains, “To the disruptions of nature were added the interventions of man in the form of piracy, banditry, wars

---

<sup>37</sup> Clemens, “Medieval Maps in a Renaissance Context,” 253.

<sup>38</sup> A line on the surface of the earth that follows a single compass bearing and makes equal oblique angles with all meridians (Merriam-Webster.com, 2019).

<sup>39</sup> Hyde, “Some Uses of Literacy in Venice and Florence,” 114.

<sup>40</sup> Stanley, “Negotiating Trade,” 103.

<sup>41</sup> A wind that comes from the north.

<sup>42</sup> Pierpont Morgan Library, MS M.721, f. 16r: “Da tramontana di questa Asya grande / Tartari sono sotto la fredda çona / Giente bestiale di leggie et di uiuande.”

<sup>43</sup> All translation, unless otherwise noted, are by Stefano Mula, Professor of Italian at Middlebury College. I am deeply grateful to Stefano, who translated M.721 for this paper. Without his expertise and generosity the majority of original research in this thesis would have been beyond my reach.

and embargoes, through which fortunes could be won or lost; in view of the prevailing insecurity, it is not surprising that some of the handbooks contain sections on astrology, prognostications and omens.”<sup>44</sup> In short, when one lived a life as dependent on the whims of nature and man as fifteenth century merchants did, it became easy to feel that the fate of one’s fortunes was out of one’s hands, making it easier, perhaps, to understand Dati’s eagerness to accept God’s will and acknowledge his own lack of control over his destiny.

Stanley is of the opinion that, “It is unlikely that these compendiums [merchant handbooks]...were part of an organized curriculum. We know, for example, that aspiring tradesmen typically pursued a full-time apprenticeship in their early teens following the successful completion of the *abbaco*, or ‘arithmetic’ school.”<sup>45</sup> Indeed, Dati writes of his own education that, “On 15 April, when I had learned enough arithmetic, I went to work in the silk merchant’s shop belonging to Giovanni di Giani and his partners. I was thirteen years old and I won their esteem.”<sup>46</sup> But it is not implausible that Dati’s *Sfera* was an exception to the rule and was made use of in schools.

During the beginning of the fifteenth century Florence’s educational system was divided between Latin schools and vernacular schools. A vernacular education was designed to prepare students to participate in commerce and succeed in business.<sup>47</sup> To facilitate their study of reading and writing students often read both religious texts and “secular tales of adventure.”<sup>48</sup> These tales were often written in *octavo rima*, “an extremely popular form for vernacular didactic literature perhaps because its simple cadence facilitated memorization.”<sup>49</sup> *Sfera*, of course, is written in

---

<sup>44</sup> Hyde, “Some Uses of Literacy in Venice and Florence,” 114.

<sup>45</sup> Stanley, “Negotiating Trade,” 107.

<sup>46</sup> Dati, “The Diary of Gregorio Dati,” 108.

<sup>47</sup> Cook, “Dati’s *Sfera*,” 50.

<sup>48</sup> Clemens, “Medieval Maps in a Renaissance Context,” 249.

<sup>49</sup> Clemens, “Medieval Maps in a Renaissance Context,” 249.

*octavo rima*, evidence of its intended function of aiding in memorization. Further, the use of marginal illustrations in *Sfera* would serve as an additional aid to understanding and memorizing the text.<sup>50</sup> While Dati might not have written *Sfera* specifically as a textbook for vernacular students he certainly drew on the prevailing forms of vernacular textbooks of the time. *Sfera* is an early example of a merchant handbook, and its writing coincides with the rise of vernacular education. It is quite likely that *Sfera* was a genre crossing work, with appeal to both merchants and students.

This would help explain what appears to be the high demand for *Sfera* throughout the fifteenth century. Over one-hundred and fifty fifteenth and sixteenth century copies of *Sfera* are extant, making it one of the most copied works in fifteenth century Florence and indicating that *Sfera* was something of a bestseller.<sup>51</sup> Copies were produced both by scribes for pay and by individuals for personal use.<sup>52</sup> Clemens posits that *Sfera*'s appeal extended even beyond its function as a merchant handbook and textbook, hypothesizing that the book could even be enjoyed by illiterates, in that the images allowed the book to be read without the text, functioning like a medieval block-book.<sup>53</sup> Indeed, it seems likely that certain aspects of *Sfera* would have appealed to any educated or semi-educated layperson. The descriptions of distant lands and exotic peoples, coupled with the inclusion of important Christian religious sites in both text and illustration, would have satisfied the curiosity of the many northern Italians who would never get the chance to travel beyond their city walls. *Sfera* successfully combined instruction, entertainment, literature and religion. Clemens sums up this appeal succinctly, writing, "The illustrations in both books served several purposes: they allowed the reader to travel in their

---

<sup>50</sup> Clemens, "Medieval Maps in a Renaissance Context," 238.

<sup>51</sup> Stanley, "Negotiating Trade," 107.

<sup>52</sup> Cook, "Dati's *Sfera*," 55.

<sup>53</sup> Clemens, "Medieval Maps in a Renaissance Context," 253.

imaginations to exotic places across the Mediterranean, to explore the ancient and Biblical history of the region, and even to satisfy their curiosity about the physical world around them.”<sup>54</sup>

Despite its enormous popularity during the fifteenth and early sixteenth century, *Sfera* all but ceased to be published by the end of the sixteenth century. It was a text created by a fifteenth century Florentine for fifteenth-century Northern Italians, and neither its popularity nor publication ever moved beyond that sphere. Italians continued printing copies of *Sfera* through the beginning of the sixteenth century, most likely due to an interest in Dati’s observations on faraway places and peoples as opposed to his instructions on navigation and maritime technology. The majority of copies that survive are in Italy. Given the wide range of circumstances under which *Sfera* was produced and the many possible roles it filled in quattrocento readership, examining individual surviving manuscripts is an exciting undertaking, as the possibilities of patronage and use are so varied. The following chapter will situate one copy of *Sfera* from the Morgan Library’s collection within this rich and varied history.

---

<sup>54</sup> Clemens, “Medieval Maps in a Renaissance Context,” 253.

## Chapter 2: The Copy of *Sfera* at the Morgan Library and Museum

M.721 is held in the manuscript collection at the Morgan Library and Museum. It is made of two gatherings of twelve leaves of vellum, constituting 24 leaves all together. There are notes left by the scribe to indicate binding order on the bottom right hand corner starting with the second leaf, which is marked as a2 (the first leaf, [a1], is left unmarked, as was typical). a2 through a6 are unmarked, although the numeral on what would be a4 and a6 have been torn or broken off, and reads only as 'a.' The following six pages are unmarked, as they are the conjoint leaves of [a1] through a6. The second gathering is noted as b1, b2, b[3], b4, b[5], and then blank, as the entire corner has been torn off on [b6]. The following six leaves in the second quire are again unmarked. Throughout the manuscript each flesh side faces flesh side and hair side faces hair side, although, notably, the flesh side openings are not always reserved for the largest illuminations.

These gatherings are bound in a limp vellum binding with two leather thongs sewn in on each side so the manuscript can be tied closed (Figure 1). The spine is decorated with a motif of three leaves and is labeled "D. Dati - La Sfera - ?od. Ms. memb2. Del xv secolo" (Figure 2). Each gathering is attached to the binding through six sewing stations, and they appear to be the original stations, as no other holes are visible. The binding is not contemporary to the manuscript; the endpapers and flyleaves are made of woven paper, which was not invented until the eighteenth century. Furthermore, the watermark on one of the flyleaves is the letters E N R in a decidedly contemporary typeface.

The folio dimensions are 11 ⅛ inches by 7 ¾ inches. Given the size, it is likely that the gatherings are made up of three skins each, each sheet being folded twice to create a quire in quarto format, then two of the quires being nestled within the third for a gathering with a total of

twelve sheets. The dimensions of the text itself are only 5  $\frac{3}{4}$  inches by 3  $\frac{3}{4}$  inches, taking up less than half of the page and leaving the very generous margins typical of Florentine humanist manuscripts (Figure 3). The text is laid out in a single column, as is common to almost all manuscript copies of *Sfera*.<sup>55</sup> This line by line textual arrangement is in keeping with the humanist movements' shift away from the common medieval practice of arranging poetry in prose fashion and indicating line breaks with a period or slash.<sup>56</sup> There are three stanzas on each page. Each stanza consists of eight lines, and the stanzas are separated by a space the same size as a line of text.

The margin dimensions are 1  $\frac{1}{4}$  inches for the gutter; 1  $\frac{1}{3}$  inches for the upper margin; 2  $\frac{3}{4}$  inches for the outer margin; and a whopping 4 inches for the bottom margin, over twice as large as the top margin. The text sits in the upper inner corner of the leaf. The effect is a very open and pleasing page, with plenty of blank vellum framing the text. This style is typical of humanist works, which have an airy and light feel (especially as compared to their Gothic contemporaries to the north).<sup>57</sup> In addition to giving the pages of M.721 a geometrically pleasant appearance the wide margins indicate that the owner of M.721 had some money to spare. Vellum was expensive (especially when compared to paper, which would have been readily available in quattrocento Florence) but remained the preferred option for luxury books.<sup>58</sup> Utilizing as much of the vellum as possible for text would have cut down on the cost of M.721 significantly; that the margins are so large is a statement that the architecture of the open book was valued and that the patron was willing to pay for it.

---

<sup>55</sup> Dario Del Puppo, "Where 'High' and 'Low' Meet: Text and Document in a Humanist Manuscript of Burchiello's Poetry," *Text* 11, (1998), 216.

<sup>56</sup> Del Puppo, "Where 'High' and 'Low' Meet," 217.

<sup>57</sup> Del Puppo, "Where 'High' and 'Low' Meet," 216.

<sup>58</sup> Jonathan J. G. Alexander, *Medieval Illuminators and Their Methods of Work*, (New Haven: Yale University Press, 1992), 35.



The leaves have hard point ruling, with horizontal lines for the text and two vertical lines for the first letter of each line. There is no evidence of pricking. As was common, the scribe of M.721 wrote just above, not on, the horizontal rule lines.<sup>59</sup> The text of M.721 is written in a humanist miniscule, a clean and easily legible type of script that was created by a group of humanists in Florence.<sup>60</sup> Humanist miniscule was popular from the beginning of the quattrocento, and is a distinctive feature of early Renaissance Italian works. It stands in stark contrast to the Gothic script used in Northern Europe at the time, which was highly ornamental and, due to its many ligatures and analogous lowercase letters, somewhat convoluted on the page. It appears that only one scribe worked on M.721, as evidenced by the likeness of letter forms, as well as the continuity of quality, throughout.<sup>61</sup> There were a plethora of scribes working in Florence during the fifteenth century, many of whom were highly regarded and sought after. However, it is unlikely that the scribe who copied M.721 was famous in his own day, as it was the practice of well known (and highly paid) scribes to sign and date their work, often with a note proclaiming their skill, and no such signatures or notes exist in M.721.<sup>62</sup> Despite the fact that he does not claim credit, the scribe was quite capable: only two corrections to the text are visible: the first line of the second stanza on 8v, where last word “valloni” is on top of a scratch, and on 18v, where the last line of first stanza is written over of a section of text that has been almost entirely scraped out.

---

<sup>59</sup> Del Puppo, “Where ‘High’ and ‘Low’ Meet,” 218.

<sup>60</sup> Jonathan J. G. Alexander, “Patrons, Libraries and Illuminators in the Italian Renaissance,” in *The Painted Page: Italian Renaissance Book Illumination 1450-1550*. Edited by Jonathan J. G. Alexander. London: (Royal Academy of Arts, 1994), 15.

<sup>61</sup> The exception to this is are the glosses, the first letters of each stanza, and the illustration labels, which are written in red, and appear to be written by a different hand, as evidenced by the differences in several letterforms, among them the lower case ‘n,’ which is more open at the bottom, and the capital ‘E,’ the overhang of which extends further and curls less.

<sup>62</sup> Alexander, “Patrons, Libraries and Illuminators in the Italian Renaissance,” 15.

In addition to being written in humanist miniscule, M.721 was written in the vernacular, another hallmark of Italian quattrocento manuscripts. While many classics were copied and read in Latin, laymen and scholars alike read in the vernacular.<sup>63</sup> Indeed, vernacular was the primary language of communication. Humanists read texts in both Latin and the vernacular, and “vernacular enjoyed a resurgence of interest in Florence after the mid-fifteenth century.”<sup>64</sup> M.721 was written in a Tuscan dialect, evidence that it was indeed created in Florence.<sup>65</sup>

The title of each chapter is written in red as “Libro [primo/secondo/terco/quarto] della sfera.” The first initial of the second, third, and fourth chapters are illuminated in gold and decorated with a simple box design of red and green (Figure 4). No guide letters are evident. The first letter of every stanza throughout the book is written in red. Glosses along the right-hand side of the text are sporadic, and are also in red. These initials would have been added after the text was written and, again, are in a different hand than the scribe who wrote the primary text.

Only one initial, the first letter of the first book, is decorated beyond the simple rubrication and block coloring. The first initial in the book is decorated in the white-vine, or ‘bianchi-girari,’ style that was developed in Florence during the 1430s and quickly became widespread (Figure 5).<sup>66</sup> White-vine was a historicizing style, as the humanists believed it referenced early Christian designs (in fact, the model for the white-vine was developed from a twelfth-century Tuscan model).<sup>67</sup> The white-vine design is a white scroll motif, which often extended out into the border of the page to form a frame. The vegetal scroll was usually

---

<sup>63</sup> Andrea Rizzi and Eva Del Soldato, “Latin and Vernacular in Quattrocento Florence and Beyond: An Introduction,” *I Tatti Studies in the Italian Renaissance* 16 (2013), 240.

<sup>64</sup> Brian Jeffrey Maxson, “‘This Sort of Men’: The Vernacular and the Humanist Movement in Fifteenth-Century Florence,” *I Tatti Studies in the Italian Renaissance* 16 (2013), 258.

<sup>65</sup> Catalog Record, New York, Pierpont Morgan Library, MS M.721, fol. 1r.

<sup>66</sup> Jonathan J. G. Alexander, *The Painted Book in Renaissance Italy: 1450-1600*, (New Haven: Yale University Press, 2016), 8.

<sup>67</sup> Alexander, “Patrons, Libraries and Illuminators in the Italian Renaissance,” 15.

highlighted by reds, blues, and yellows.<sup>68</sup> Initially, the scroll motif stood alone; increasingly after the 1430s there were additional embellishments of either animals or putti.<sup>69</sup> As quickly as it became popular, white-vine fell out of fashion and had all but disappeared by the 1470s.<sup>70</sup> In M.721, the ‘A’ on 1r is illuminated in gold. The majority of the gold has worn off, leaving a yellowish brown beneath it visible. The white-vine that surrounds the A, which is left uncolored and thus takes on the white color of the parchment, stands out against green, red, and blue. The border is blue. Small white dots decorate the design. The vines culminate in flowers near the border, which is also blue. Compared to examples of contemporary white-vine decorations, the white-vine decoration in *Sfera* is rather humble. It does not include any of the animal or putti adornments, and would likely not have taken great skill to execute. The fact that it doesn’t extend to the borders could be further evidence of moderate cost-cutting.

M.721 is illustrated throughout with pencil drawings that are finished with simple color washes. This style of illustration was generally associated with a more affordable commission.<sup>71</sup> Generally the illustrations in M.721 correspond directly to the text on the same page, which was certainly not always a given in the late medieval period as illuminators typically could not read, and thus could not reference the text as they illustrated it.<sup>72</sup> Space would be left blank by scribes and a contract drawn up with the illuminator which would indicate where, and what, to illustrate.<sup>73</sup> The resulting illustrations would be products of both the “patron’s ability to pay, the kind of message he or she wished the work to convey, the artist’s training and ability to paint, the

---

<sup>68</sup> Alexander, *The Painted Book in Renaissance Italy*, 8.

<sup>69</sup> Ibid.

<sup>70</sup> Alexander, *The Painted Book in Renaissance Italy*, 16.

<sup>71</sup> Alexander, *The Painted Book in Renaissance Italy*, 31.

<sup>72</sup> Alexander, *Medieval Illuminators and Their Methods of Work*, 148.

<sup>73</sup> Alexander, “Patrons, Libraries and Illuminators in the Italian Renaissance,” 18.

availability of materials, and the accessibility of models to copy.”<sup>74</sup> Most likely the illustrator of M.721 had another manuscript copy of *Sfera* upon which to base the maps and drawings. There is a great deal of continuity in the illustrations of extant copies of *Sfera*, and a future study could trace the gradual changes in the illustrations and map designs across several decades of *Sfera* production.

This chapter will give an overview of the illustrations included in M.721, and the map illustrations will be explored in greater detail in Chapter 3. Book I contains eight illustrations, all of them maps relating to the heavens or the atmospheric zones of the earth. The illustrations are filled in with a blue wash. Gold illumination is added for stars, the sun, and the moon. Red and green is used sparingly in the zonal map on 2r and the *mappamundi* on 2v (Figures 6 and 7).

Book II has two illustrations. The first is a *mappamundi* showing the elements of the earth on 7v that uses the bright blue wash, green, brown, and red (Figure 8). The second is a diagram of night and day on 9v, done in pencil, with an illustrated and personified sun smiling down and a blue wash indicating night on the dark side of the earth.

Book III contains both small diagram illustrations and the first large scale map in the book. Three illustrations on 15r show the temporal zones of the earth in red and blue; a wind map shows the four winds, personified as putti, drawn in pencil and with a red and blue wash to indicate the eastern and western winds; and a diagram of specific winds written in red, inside a pencil drawn wheel (Figure 9). 14v contains two *mappamundi*, with green, red and brown washes (Figure 10). 15v and 16r contain the first bi-folio map in the book, showing a map of the Mediterranean (Figure 11).<sup>75</sup> Oceans, rivers, mountains, and cities are outlined in pencil and

---

<sup>74</sup> Alexander, *Medieval Illuminators and Their Methods of Work*, 52.

<sup>75</sup> This map is particularly impressive from a technical standpoint as it meets in the middle. Since books were typically illustrated before being bound the artist and the binder would have had to take care to align the quires so the drawing matched up.

filled in with wash. The waters are in a green wash with a darker green swirl motif, with the exception of the Red Sea, which is red. The mountains are in a yellow wash with highlights of brown. The towns are washed with shades of purple, pink, red, and yellow. 17r contains the largest illustration in the book, an illustration of the tower of Babel that will be examined at length in chapter 4 (Figure 12).

Finally, there are map illustrations on every page of Book IV. Again, green wash is used for the water, islands are done in varying colors, and the towns in yellows, pinks, purple, green. Interestingly, on 19r, 19v, 20r, 20v, 21r, and 23v the green wash of the ocean overlaps with the text (Figure 13). Looking at the letters with a magnifying glass shows that the light wash of green covers the letters; as was the custom, the manuscript was written by the scribe before being sent to be illustrated. The illuminator was the one to illustrate over the scribe's work. The place names in red on the maps, however, were clearly added after the wash was applied, so the book was returned for work by the rubricator.

As already described, M.721 contains a wide array of colors, primarily green, some blue, and red, shades of pink, purple, yellow and brown. In the first two books the blue used for the atmosphere was most likely derived from lapis lazuli, an expensive color as the pigment source was located in modern-day Afghanistan.<sup>76</sup> When used on the oceans and mountains, the colors are applied with broad brushstrokes that often go outside the lines of the drawing, but more care is taken to stay within the lines of the pencil outlines of the towns. Darker shades on the ocean and other geographic features indicate highlights and shades. The green used throughout for the ocean is typical of *mappamundi* at this time, when oceans were depicted as either blue or green.<sup>77</sup>

The green used in M.721 could come from several pigments commonly available during the late

---

<sup>76</sup> Alexander, *Medieval Illuminators and Their Methods of Work*, 40.

<sup>77</sup> The sole exception to this is the red sea, which is almost always depicted with red on late medieval maps. M.721 adheres to this norm.

medieval period, although it is impossible to tell without testing. Most likely, however, the green pigment was derived from an azurite mixture, which was “...the preferred way to obtain bright green hues for late 14th and early 15th century Florentine illuminators.”<sup>78</sup>

Signs of use, for example marginal notes, worn corners on pages, or spilled food or water, in M.721 are scarce. There are a few marginal notes: on leaf 13 r a cursive hand has written “Pomo Poimo Salaoio” in the upper left hand corner. The same hand writes again on leaf 24v, “Stanza 150.” A different hand, in humanist script, wrote “at vergogna,” on the upper left-hand margin of 15r. There is a stain on 14v, and a few smaller, splatter-like stains on 17v and 18r. Overall, however, M.721 is in excellent shape and hardly looks its five-hundred years. There is one notable exception on 1r, the coat of arms that presumably belonged to the patron (Figure 14). Inside a circular red border with a wreath motif is a green ground, with what looks to have been a gold illuminated scroll motif but is now a dull yellow brown. Against this green ground is an outline of a shield in pencil. The majority of the shield has been scratched off, implying that the heraldry was intentionally removed when the manuscript changes hands, but the decoration that remains is blue. What appears to be a blue ribbon or a stylized river winds across the top of the red wreath; the same design is repeated on the bottom of the wreath.

There is evidence that M.721 was left unfinished. Both leaves 23v and 24r have a number of cities labeled in red, but not a single one is illustrated, an anomaly of the illustrations in Book IV, implying that the second scribe and rubricator had access to the model as did the illuminator (Figure 15). Additionally, there is an island outlined in pencil on 23v which has not been filled in with a wash (Figure 16). On 24v the waters are green and there is an illustration of a city, but neither the city nor a single other site on the map are labeled in red (Figure 17). All of this together indicates that further illustration of M.721 was planned but never executed. As J. G.

---

<sup>78</sup> Ricciardi, “It’s Not Easy Being Green,” 3823.

Alexander has noted, patrons were “...evidently often willing to own manuscripts with unfinished illustration or decoration, which it might have been relatively easy to have completed.”<sup>79</sup> One possibility is that the patron of M.721 either couldn’t pay for the remaining illustrations and decided to settle up for what he could afford, planning to have the final illumination done during flusher times. Since the manuscript was returned to the rubricator to have the labels filled in, it does seem likely that leaving the illustrations unfinished was decision.

In the catalog record for M.721 the Morgan Library gives the manuscript’s date of creation to be between 1450 and 1500. The style of white-vine decoration in M.721 suggests that it was created much closer to 1450. Knowing the white-vine motifs had all but disappeared by 1470, and was on its way out of fashion before then, it seems prudent to narrow the date of creation to between 1450 and 1460. This would also fit nicely with the rise of printing in Italy; the printing press arrived in Rome in 1465 and Florence in 1471. Shortly thereafter, Johannes Petri printed an edition of *Sfera* in 1472.<sup>80</sup> Additional editions were printed in Venice in 1475,<sup>81</sup> Rome in 1478,<sup>82</sup> and again in Florence in 1482.<sup>83</sup> While manuscript and print certainly coexisted for a period it is a reasonable assumption that manuscript production of *Sfera* dropped significantly after print copies became readily available.

As discussed in the previous chapter, M.721 could have been created under a wide range of circumstance for any number of patrons. The humanist movement in Florence included hyper-educated humanists reading the classics in Latin at one end of the spectrum and barely literate individuals reading translations and new works in the vernacular at the other end. Of course, a range of readers fall somewhere in between these two extremes, collecting books to fulfill a

---

<sup>79</sup> Alexander, *Medieval Illuminators and Their Methods of Work*, 47.

<sup>80</sup> Gregorio Dati, *La Sfera*, (Florence: Johannes Petri, 1472).

<sup>81</sup> Gregorio Dati, *La Sfera*, (Venice: Gabriele di Pietro, 1475).

<sup>82</sup> Gregorio Dati, *La Sfera*, (Rome: Bartholomaeus Guldinbeck, 1478).

<sup>83</sup> Gregorio Dati, *La Sfera*, (Florence: Bartolommei di Libri, 1482).

range of “...professional, educational and recreational needs.”<sup>84</sup> It is also important to note that the patron who commissioned M.721 was but one of many owners over M.721’s lifetime.

Following the movement of M.721 from Florence to its eventual resting place at the Morgan is a study in the factors that influenced the movement of manuscripts between the sixteenth and early twentieth centuries.

Three main candidates might be suggested as parties who would have been interested in a manuscript copy of *Sfera*: a wealthy patron, such as one of the Medici, who commissioned many manuscripts in the Quattrocento, and could have been interested in *Sfera* as a recreational read; a merchant, who would have been interested in *Sfera* mainly for professional reasons; or finally, a student in a vernacular school, preparing for a career in trade, who would have used *Sfera* primarily as an educational document.

It is highly unlikely that M.721 was commissioned by one of the great merchant families who commissioned manuscripts on a large scale. In the first place, M.721 lacks the trappings of luxury such a wealthy client would have required. Alain Lemaitre describes this tendency towards visual displays of wealth succinctly: “Whether a prince or a merchant, the Quattrocento patron of the arts displayed his wealth by paying for great talent, to the detriment of gold and expensive materials, even though only a handful of artists and connoisseurs were in a position to judge the relative merits of each through their works.”<sup>85</sup> In other words, wealthy patrons would commission the most sought after artist and request the most expensive materials without regard to cost, even for a lesser title. As described earlier in this chapter, M.721 was not executed by either a great scribe nor a great illuminator. There is little gold, and the most expensive colors (blue, red) are used sparingly. Another indication is the removal of the coat of arms in M.721.

---

<sup>84</sup> Alexander, “Patrons, Libraries and Illuminators in the Italian Renaissance,” 13.

<sup>85</sup> Alain J. Lemaitre, *Florence and the Renaissance: The Quattrocento*, (Paris: Terrail, 1993), 22.



Manuscripts in the fifteenth century almost always bore the coat of arms of the patron.<sup>86</sup> If a great family's coat of arms had graced M.721 this would have been value added for subsequent collectors; the fact that the coat of arms was removed indicates that the family represented was not one that was thought to be worth knowing or collecting, or that it was purchased by someone who planned on inserting their own arms but never did.

It is equally unlikely that M.721 was commissioned for a student. Perhaps the foremost argument against a student patron is that M.721 exists at all: textbooks tend not to survive because of their heavy use.<sup>87</sup> Textbooks from the quattrocento are extremely rare, let alone one in as good condition as M.721. Further evidence against a student are the expenses of parchment and the wide margins which lend to the not-quite-deluxe-but-certainly-elegant aesthetic of so many humanist manuscripts. While M.721 is not a luxury book, it would not have been cheap to produce, either. In the fifteenth century a manuscript was a major expense and the factors that most affected price were format and material: "Copying constituted between three-fifths and two-thirds of total expenditure in the production of books; parchment would have made up between a quarter and a third of the total."<sup>88</sup> Paper was readily available in the fifteenth century and could have cut the cost of production significantly. Especially for a textbook that would not have been expected to last long, parchment would not have made sense. Finally, one would expect a student's book to contain glosses or other marginal notes that reflect use and active study, which are conspicuously absent from M.721.

Thus, the most fitting patron of M.721 would have been a middle class merchant. A merchant would be interested in *Sfera* for professional reasons, to learn about the places and

---

<sup>86</sup> Alexander, "Patrons, Libraries and Illuminators in the Italian Renaissance," 11.

<sup>87</sup> Raymond Clemens, "Medieval Maps in a Renaissance Context: Gregorio Dati and the Teaching of Geography in Fifteenth-century Florence," (Boston: Brill, 2008), 238.

<sup>88</sup> Del Puppo, "Where 'High' and 'Low' Meet," 220.

peoples in the Mediterranean that they would likely encounter through trade, and to have simple maps to reference when planning a route. A merchant patron with modest means would explain the choice of parchment over paper and the touches of gold; M.721 likely represents the best that the patron could afford and not a bit beyond that. Merchants also experienced huge fluctuations in wealth depending on their credit and the status of the voyage carrying their goods. M.721 could have been commissioned when the merchant patron was in good standing and then been scaled back after a loss. This would explain the unfinished final maps in M.721. The patron could very well have paid the illuminator for the work completed thus far and then taken the manuscript in an unfinished state. Given all of the above, M.721 was most likely commissioned by a Florentine merchant between 1450 and 1460.

That M.721 exists today is, in many respects, a miracle unto itself. It is a modest book, devoid of many of the trappings associated with luxury books of the Renaissance period. Raymond Clemens has posited that for manuscript copies of *Sfera*, “The marginal illustrations...may also have saved the *Sfera* from destruction when its content was made obsolete by later discoveries.”<sup>89</sup> It is true that bright palettes and rich uses of gold are what typically ensured the survival of luxury books, even after their contents had become outdated. But while there are extant copies of *Sfera* with rich and detailed illuminations, overflowing with gilding and decorated borders, M.721 has very few of these lavish characteristics to recommend it for continued preservation. Further complicating Clemens’ assertion is the fact that the contents of *Sfera* continued to be circulated long after the marginal illustrations that accompanied manuscript copies became outmoded: copies of *Sfera* continued to be published in print long after later discoveries would have rendered the information obsolete, and these later

---

<sup>89</sup> Clemens, “Medieval Maps in a Renaissance Context: Gregorio Dati and the Teaching of Geography in Fifteenth-century Florence,” 238.

printed publications were almost never accompanied by illustrations, implying that the cultural content of M.721, as opposed to the technical instruction and place finding it offered, might have been the reason for M.721's survival

M.71 is in many ways an enigma in the manuscript world. Against the odds it has survived long after its useful life despite not having the typical trappings of luxury. More than survived, it has found its way, through what must have been a long journey filled with many twists of fate, into the manuscript collection at the Morgan Library and Museum. M.721's provenance is documented back to 1913. But previous to 1913 there is a likely path that M.721 could have followed, carried along by the manuscript trade and the habits of collectors like a leaf carried downstream. Early in its journey M.721 was taken out of Italy. At the end of its journey the Morgan Library purchased M.721 from the antiquarian and bibliophile Wilfrid Voynich in 1927. Voynich had purchased the book from Bernard Quaritch Ltd. sometime after 1913, when Quaritch purchased the manuscript at Sotheby's auction of George Dunn's collection in London. Although what happened during the middle of the journey is unknown, there are tantalizing details and evidence that illustrate, if not M.721's exact journey, a possible history of acquisition by royals, thieves, and some of the 19<sup>th</sup> centuries greatest collectors.

George Dunn (1865-1912), while not exactly a giant of the rare book world, had amassed quite a collection at his home Woolley Hall, in Maidenhead by the time of his death. Though his focus was incunabula he also collected medieval manuscripts. In the auction catalog from the sale of Dunn's manuscripts in 1913, M.721(no. 455) is misidentified as "Spera," by "Giuliano Dati," and described as "Italian manuscript on vellum (24 ll. 11 ½ by 8 in.) well written in roman letters, long lines, 24 to a page, with marginal rubrics in red, 30 singular colored drawings of planetary spheres and geographical situations Mediterranean and Asiatic cities, bays, etc.,

including the Tower of Babel...’’<sup>90</sup> Previous to this auction catalog the provenance of M.721 cannot be definitively proven, but there are many clues as to how M.721 might have gotten from Italy to England, and whose hands it might have passed through.

Dunn’s manuscript collection was chiefly formed from the Phillips and Ashburnham sales.<sup>91</sup> There is one copy of *Sfera* noted in the Phillips manuscript catalog.<sup>92</sup> Further, there was a sale of Phillips manuscripts in 1908, the year Dunn acquired M.721, albeit in June and not November.<sup>93</sup> The catalog of manuscripts at Ashburnham place includes six different copies of *Sfera*, all attributed to Gregorio Dati and dated the fifteenth century. The descriptions of two vellum manuscripts in particular, lots 556 and 1106, both fit M.721.<sup>94</sup> While there is not enough descriptive information in the catalog to identify either of the Phillips *Sfera* as M.721, and although the timing of Dunn’s purchase of M.721 does not fit with the sale of the Ashburnham collection (the majority of Ashburnham’s collection was sold in the 1880s and 1890s) it is possible that one of these lots is M.721. In any event, copies of *Sfera* were well represented in libraries of nineteenth century British collectors.

The Ashburnham collection was built by the fourth earl of Ashburnham, Bertram, (1797-1878), one of the great collectors of his time.<sup>95</sup> At the time of his death in 1878, when the collection was being prepared for auction, the French government lodged a complaint,

---

<sup>90</sup> George Dunn, *Catalogue of the valuable & extensive library formed by George Dunn*, (London: Dryden Press, 1913-1917), 87.

<sup>91</sup> Seymour De Ricci, *English Collectors of Books and Manuscripts (1530-1930) and their Marks of Ownership*, (Bloomington: Indiana University Press, 1960), 182-183.

<sup>92</sup> Thomas Phillips, *Catalogus Librorum Manuscriptorum in Bibliotheca d. Thomæ Phillipps, Bart*, (Middle Hill: Impressus Typis Medio-Montanis Mense Maio, 1837).

<sup>93</sup> *Bibliotheca Phillippica: Catalogue of a Further Portion of the Classical, Historical, Topographical, Genealogical and Other Manuscripts & Autograph Letters &c. of the late Sir Thomas Phillipps*, (London: Dryden Press, 1908).

<sup>94</sup> *Catalogue of the Manuscripts at Ashburnham Place: Part the First Comprising a Collection Formed by Professor Libri*, (London: Charles Francis Hodgson, 1853), 78 and 138.

<sup>95</sup> Peter H. Reid, “The Decline and Fall of the British Country House Library,” (*Libraries & Culture* 36, 2001), 345-366.

“...claiming that between 160 and 170 of the manuscripts in the Libri and Barrois collections had been stolen and illegally removed from France.”<sup>96</sup> Indeed, it came to light that the foundation of Ashburnham’s collection, a body of 1,900 manuscripts, had been purchased from Guglielmo Libri Carucci, the notorious book thief.<sup>97</sup> During a protracted negotiation with the French government over the manuscript collection it came to light that the majority of the books the earl purchased from both Libri and Joseph Barrois had been stolen from French public libraries during the 1840s.<sup>98</sup> Phillips also purchased manuscripts from several sales of the Libri library.<sup>99</sup> If indeed M.721 came to Ashburnham or Phillips through Libri then it can be assumed that M.721 resided, at some point, in a French public library.

It is easy to imagine M.721 being swept along with the steady flow of books from Italy to France during the sixteenth century. The manuscript collection at the Bibliothèque nationale de France is built upon the royal library established by François I (1494-1547) at Fontainebleau.<sup>100</sup> François was heavily influenced by the humanists, and M.721 might well have been purchased by Guillaume Budé, who purchased manuscripts on François’s behalf and was known to have traveled to Rome. Perhaps a more likely point of entrance for M.721 would have been through Catherine de Médicis (1519-1589), whose collection also found its ultimate home at the Bibliothèque nationale (incidentally, it is known that the Phillips collection contained manuscripts executed for the Medici).<sup>101</sup> Catherine was the daughter of Lorenzo di Piero de’ Medici, the duke of Urbino, and was educated in Florence by nuns, surrounded by humanism and Renaissance culture. She was ultimately married to the duc d’Orleans, who succeeded his father,

---

<sup>96</sup> Reid, “The Decline and Fall of the British Country House Library,” 349.

<sup>97</sup> Barbara McCrimmon, “The Libri Case,” (*The Journal of Library History* 1, 1966), 7.

<sup>98</sup> De Ricci, *English Collectors of Books and Manuscripts*, 133.

<sup>99</sup> De Ricci, *English Collectors of Books and Manuscripts*, 125.

<sup>100</sup> Bibliothèque Nationale de France, “Manuscripts Department.” Last modified Friday, October 10, 2014, [http://www.bnf.fr/en/bnf/dpt\\_mss\\_eng.html](http://www.bnf.fr/en/bnf/dpt_mss_eng.html).

<sup>101</sup> Ibid.

Francois I, as king of France in 1547.<sup>102</sup> Catherine brought her humanist background to court, and “Once in control of the royal purse, she launched a programme of artistic patronage that lasted for three decades.”<sup>103</sup> M.721 could easily have been included in the many manuscripts Catherine had imported from Italy to her new home in France.

When viewed through this lens, it seems that M.721 survived not in spite of its obscurity but because of it. Too humble to be plucked out for individual sale, M.721 was fated to move through countries and centuries as part of a larger collection. The Morgan purchased M.721 in 1927, three years after the library became public and Belle de Costa Green was named director. While the motivating factors behind that purchase remain a mystery, Meta Harrsen, the Morgan’s Keeper of Manuscripts from 1948 to 1958, offers a description in the sole publication of M.721 that is telling in more ways than one: “Book III discusses navigation, and leads into a description of foreign countries, cities and their famous buildings, in the manner of a Baedeker.”<sup>104</sup> Indeed, M.721 can be read as a guidebook in two senses: as a guide to the late medieval Mediterranean and as a roadmap of the spread of manuscripts and humanist culture from Florence to New York, over the course of five centuries of collecting.

---

<sup>102</sup> New World Encyclopedia, “Catherine de Medici,” accessed January 19, 2019.

<sup>103</sup> Ibid.

<sup>104</sup> Meta Harrsen, *Italian Manuscripts in the Pierpont Morgan Library: Descriptive Survey of the Principal Illuminated Manuscripts of the Sixth to Sixteenth Centuries, With a Selection of Important Letters and Documents*, (New York: Pierpont Morgan Library, 1953), 37.

### Chapter 3: Maps in M.721

Almost all extant manuscript copies of *Sfera* are heavily illustrated, and M.721 is no exception. As discussed in earlier chapters, *Sfera* served several functions, fulfilling the educational, recreational, and commercial needs of fifteenth century Florentine life.<sup>105</sup> This chapter will argue that, in addition to these purposes, the maps in *Sfera* functioned as a reminder of God's omnipotence and helped readers situate themselves spatially and temporally within Christianity. The interplay between text and image in M.721 underscores the tension in the humanist movement between man's desire to understand the known world and his inability to truly grasp the inner workings of the universe. The result are maps that function by teaching the viewer about their world as well as reminding the viewer that there are times and places where man's understanding necessarily falls short and faith takes over.

The maps in M.721 are also especially interesting because they were created during a period of transition from medieval to Renaissance mapmaking. Medieval maps were created for a specific purpose and tended to fall into one of several cartographic traditions.<sup>106</sup> The majority of medieval maps were *mappaemundi*, or maps of the world, that served to teach the viewer something about the world rather than how one might navigate the world. *Mappaemundi* can broadly be categorized as zonal, schematic, and elemental. What all medieval *mappaemundi* share, however, is the implicit and omnipresent hand of God in shaping both the world and the life of the viewer. Their primary purpose was "to instruct the faithful about the significant events in Christian history rather than to record their precise locations."<sup>107</sup>

---

<sup>105</sup> Raymond Clemens, "Medieval Maps in a Renaissance Context: Gregorio Dati and the Teaching of Geography in Fifteenth-century Florence," (Boston: Brill, 2008), 188.

<sup>106</sup> P. D. A. Harvey, "Medieval Maps: An Introduction." (*The History of Cartography* I, 1987), 284.

<sup>107</sup> David Woodard, "Medieval Mappamundi," (*The History of Cartography* 1, 1987), 286.

Renaissance maps, on the other hand, tend to be navigational and drew on scientific measurement. The arrival of Arabic and Greek manuscripts during the twelfth and thirteenth centuries, especially the rediscovery of the Ptolemaic map, paved the way for more detailed and accurate map making.<sup>108</sup> In the fifteenth century technical advances in cartography led to the portolan chart (nautical charts of the Mediterranean that were highly accurate) using a center compass and rhumb lines to pilot ships from one port to another. At the same time, humanist desire to understand not only the earth but the entire universe led to a growing interest in cosmography and astrology, resulting in celestial maps. This shift from a medieval tradition, where “...external forces beyond the control of humanity exert their power upon the world,” to a Renaissance tradition in which these forces were understood through a scientific framework was hardly a hard and fast change.<sup>109</sup> Rather, it unfolded slowly with many maps reflecting both traditions.

The current sentiment among cartographic scholars is that “...the persistent assumption that *mappaemundi* are essentially medieval and Ptolemaic maps are essentially Renaissance results in a false and misleading dichotomy. This dichotomy is being corrected by the more complex picture of cartography now emerging about the transitional period from 1300 to 1460.”<sup>110</sup> During this transitional period maps have both medieval and Renaissance characteristics, and *mappaemundi*, portolan charts, and celestial maps sit side by side.<sup>111</sup> It is precisely this transitional period that *Sfera* occupies. M.721 contains zonal, schematic, elemental, celestial, and nautical maps. These maps offer an opportunity to witness “...a convergence of

---

<sup>108</sup> Woodward, “Medieval Mappaemundi,” 318.

<sup>109</sup> Sandra Sider, “Manneristic Style in Portuguese and Italian Compass Roses,” 128.

<sup>110</sup> Pauline Moffitt Watts, “The European Religious Worldview and Its Influence on Mapping,” (*The History of Cartography* 1, 1987), 382.

<sup>111</sup> Woodward, “Medieval Mappaemundi,” 299.



three conceptual frameworks of world maps represented by the traditional, confined *mappamundi*, the expanding portolan chart, and the Ptolemaic coordinate system.”<sup>112</sup>

The *mappaemundi* in the first two books of *Sfera* are the product of cosmology, the study of the rules that govern the universe and provide balance between the earth and the heavens. These maps drew heavily on the Ptolemaic system and the Christian church. Blending art, science, and spirituality, cosmology flourished in the late medieval and early Renaissance period.<sup>113</sup> The field progressed during the Renaissance, with advances in technology between 1450 and 1650; writing in the early fifteenth century, Dati would have still been drawing heavily on medieval cosmological thought and practice.<sup>114</sup> In many ways cosmology is the perfect lens through which to view all of Dati’s writings: it is a field that held the tension between religious doctrine and human intellect and exploration. As Denis Cosgrove writes, “The world machine was readily allied to the idea of cosmic vitality, of a physical creation imbued with spiritual forces passing between spheres, planets, elements, and humans. Speculative aspects of metaphysics—astrological influence, various forms of magic, alchemy, and Neo-platonic contemplation—drift across cosmography.”<sup>115</sup>

In placing the earth (and its inhabitants) within its cosmological context, Dati relied heavily on images. Not only do the marginal illustrations in M.721 help illustrate difficult concepts and facilitate memorization, they are also reflective of a larger trend:

Cosmography’s probing of the world machine for invariant structures below the accidental nature of the sensible world was conducted in large measure through images: measured and mathematical, iconic and emblematic. Representing an expanding *oikoumene* and deepening heavens itself prompted critical reflection on

---

<sup>112</sup> Woodward, “Medieval Mappaemundi,” 314.

<sup>113</sup> Denis E. Cosgrove, “Images of Renaissance Cosmography, 1450-1650,” (*The History of Cartography* 1, 1987), 56.

<sup>114</sup> Cosgrove, “Images of Renaissance Cosmography,” 55.

<sup>115</sup> Cosgrove, “Images of Renaissance Cosmography,” 78.

the means and meanings of vision and illumination at a time before art and science disengaged and parted ways.<sup>116</sup>

The first illustration in M.721 is, in fact, a celestial map on folio 1v (Figure 18). A blue sphere takes up the bottom margin. At the top of the circle, there is a golden sun, and to its right is a black moon. The sun and moon appear to orbit a central star. Other smaller stars dot the remaining space. It is the night sky, or rather, the firmament, or the sphere of fixed stars.

The text of folio 1r begins with an invocation to God. The first stanza is essentially praise and gratitude for God's creation of the universe. In the second stanza Dati describes the night sky:

In the highest sky with stable essence  
You command, you rotate, and you rule over the firmament  
Which shows us your great power  
Because of its infinite size  
Your infinite wisdom can be understood  
By looking at all the great decoration  
You made such a splendor for us in the sky  
And here you can see the infinite light.<sup>117</sup>

It is telling that the first illustration in *Sfera*, which will go on to describe and illustrate many practical applications for travel, measurement, and understanding of the universe, appears to be purely for visual enjoyment. Before moving on to direct readers to use the north star for direction, or to explain the elements of the world, Dati starts by reminding readers that there is a limit to what can be learned, or even understood. God is infinite in his wisdom, and man is dwarfed by the size and splendor of the sky. In the third stanza, Dati goes on to describe how

---

<sup>116</sup> Cosgrove, "Images of Renaissance Cosmography," 98.

<sup>117</sup> New York, Pierpont Morgan Library, MS M.721, fol. 1v: "Nell'alto impirio ciel con ferma essenza / Comandi, uolgi et reggi il firmamento / Lo qual ci mostra la tua gran potenza / Per lo suo ismisurato abbracciamento / Cognoscesi infinita sapienza / Ad risguardare el grande adornamento / Per noi creasti a' cieli tanto splendore / Et qui s'intende lo infinito amore."

“his soul takes fire / with a desire to climb those / noble creatures and clear stars.”<sup>118</sup> Dati is inspired and awed.

The next illustration in M.721 is perhaps the one that most represents the medieval tradition: a zonal map. Zonal maps, also known as Macrobian maps, are *mappaemundi* “derived from the cosmographic section of Macrobius's early fifth-century commentary on Cicero's Dream of Scipio (51 B.C.).”<sup>119</sup> These maps show the entire earth represented as a sphere, usually with a north/south orientation, and divide it by temperature into five parallel climate zones.<sup>120</sup> Of these, two polar zones on the outer edges of the earth are cold and uninhabited. The center zone, the equator, is hot and also uninhabited. Between the polar and equatorial zones are two temperate and habitable zones.<sup>121</sup> Although both temperature zones were believed to be habitable, only one, the northern hemisphere, was believed to actually be inhabited (the equator zone being too hot for humans to cross to the southern hemisphere).<sup>122</sup>

The zonal map in M.721 is on the recto of folio two (Figure 19). It shows the earth as a sphere, evenly divided into five vertical zones. The polar zones are green, and labeled “fredda zona” (cold zone). The habitable zones are uncolored and labeled “temperata zona” (temperate zone). The equator zone is colored in red and labeled “torrida zona” (hot zone). The earth is surrounded by a blue ring, representing the atmosphere, with a spray of gold stars on the left hand side. Unlike the majority of zonal maps, Dati's map is tilted on its side with east (labeled as “oriente”) at the top. In fact, all of the maps in M.721 are oriented this way, and Clemens has posited that “Dati's Sfera may be the first European proto-atlas since Ptolemy to have a

---

<sup>118</sup> New York, Pierpont Morgan Library, MS M.721, fol. 1r: “L'alma gentile d'amor tutta s'accende / Disiando poter salire ad quelle / Nobili creature et chiare stelle.”

<sup>119</sup> Woodward, “Medieval Mappaemundi,” 300.

<sup>120</sup> Victoria Morse, “The Role of Maps in Later Medieval Society: Twelfth to Fourteenth Century.” (*The History of Cartography* 1, 1987), 28.

<sup>121</sup> Woodward, “Medieval Mappaemundi,” 300.

<sup>122</sup> Cosgrove, “Images of Renaissance Cosmography,” 98.

consistent orientation, with East always at the top.”<sup>123</sup> This could be a reflection of a spiritual connect to the east, as the sun rises in the east.

This zonal map is the perfect embodiment of the text on folio 2r, synthesizing Dati’s navigational, zonal, celestial, and ultimately spiritual direction. In the first stanza on folio 2r Dati writes of the north pole:

I see the star that is high up and rotates around the pole  
With the other seven and two that go around  
That star, out of necessity, is often watched  
by the sailors at night  
Whoever will look for it and desires  
to find it should turn his eye from the mouth of a horn [a visual instrument]  
Whoever is the closest [to the star]  
are those who feel cold and ice.<sup>124</sup>

Dati describes the north star, its position in the night sky and how to find it, and draws the connection between travelling north and becoming colder. He goes on, in the second stanza, to describe the southern pole, writing, “From the opposite part there is another pole / that is similar and is called by its nature / And no one can see it from our land / Because between us and that pole there is a great heat.”<sup>125</sup> This passage is reflective of both the widespread understanding that the equator was too hot to traverse, as well as a belief that the other pole, out of necessity, did exist. No one had been there, but logic and faith assured Dati of its presence. One function zonal map served was to illustrate the earth’s place in the greater astrological system: “The details of

---

<sup>123</sup> Clemens, “Medieval Maps in a Renaissance Context,” 243.

<sup>124</sup> New York, Pierpont Morgan Library, MS M.721, fol. 2r: “Veggio la stella in su ch’el polo gira / Con quelle sette et due che uanno intorno / La qual per nicistà molto si mira / Da’ nauicanti quando manca il giorno / Chi la cerchasse et trouar la disira / L’occhio suo guardi la bocca d’un corno / Chi più s’appressa ad hauerle suppine / Più freddo sente et ghiacciato confine.”

<sup>125</sup> New York, Pierpont Morgan Library, MS M.721, fol. 2r: “Dall’opposita parte è l’altro polo / Simile ad questo freddo di natura / Che non si può mirare dal nostro suolo / Perché tra noi et quello ha grande arsura.”

the earth itself (*terra*, both the planet and the element earth) were of less interest to them than the grand mechanism of the world (*mundus*).”<sup>126</sup>

In the third and final stanza on folio 2r Dati further develops this astrological and spiritual theme:

Inside such a huge circumference  
there are an infinite number of stars  
and each one produces an influence on human bodies  
and on the earth  
even if we have knowledge of a few of them  
very often those who talk  
and give judgement about things of the future  
get lost because they don't know their real nature.<sup>127</sup>

The stars, then, are what work to create these climate zones, along with many other physical earthly elements. The earth exists in a larger system of stars that exert their forces on those below.<sup>128</sup> But Dati is also able to use the zonal map to illustrate his spirituality, pointing to the limits of man to understand and read these stars. While Dati directs the reader to use the stars for directional purposes (finding north), he also cautions against using the stars to try and peer into the future. Implicit in this message is God's role as master designer of the universe and all the astral forces that hold it together; he alone knows their real nature.

Another common *mappaemundi* in the medieval tradition represented in M.721 is the T-O map, a schematic rendering of the earth divided by three major waterways: the Tanais, the Nile, and the Mediterranean Sea.<sup>129</sup> These waterways divide the earth into three regions or

---

<sup>126</sup> Morse, “The Role of Maps in Later Medieval Society,” 31.

<sup>127</sup> New York, Pierpont Morgan Library, MS M.721, fol. 2r: “Dentro ad sì grande et tal circonferença / Di stelle sono un numero infinito / Et ciascuna produce sua influença / Ne' corpi humani e nel terrestre sito / Benché di poche se n'abbi sciença / Perché souente rimane smarrito / Chi da' giuditio di cose future / Perché di tutte non sa lor nature.”

<sup>128</sup> Morse, “The Role of Maps in Later Medieval Society,” 29.

<sup>129</sup> Woodward, “Medieval Mappaemundi,” 296.

continents (Europe, Africa, and Asia), which were believed to encompass the inhabited world.<sup>130</sup>

The purpose was didactic. Not only did T-O maps teach their viewers about the world, they served to enforce clear divisions amongst the peoples of the earth and were a reminder of the viewer's relationship with God; the T formed by the rivers can be viewed as a symbol of the Passion of the Christ, "a cross, but of the tau variety (the *crux commissa*)."<sup>131</sup>

The T-O map in M.721 is on folio 14v (Figure 20). It shows the earth as a sphere, surrounded by a ring of green ocean. The sphere is divided by a schematic T. There is pictorial effort to depict the rivers as bodies of water. The top of the T crosses the earth at its widest point, making Asia twice the size of both Europe and Africa. Asia is written in red, while Europe and Africa are labeled in black. A small section that traverses the bottom corner of Asia and the top corner of Africa is painted red, to represent the hot equatorial zone that cannot be crossed.

Dati describes the map, writing in the second stanza of 13r that "There is a T inside of an O as the drawing shows / And the drawing shows how it is divided into three parts, the world."<sup>132</sup> In his writing on the history of *mappaemundi*, Woodward has posited that this is the first time the name T-O was used to describe this schematic map, writing that Dati "coined" the phrase in *Sfera*.<sup>133</sup> But what seems most to interest Dati is not the T, nor the continents of the world, but the O, the ring of sea that purportedly surrounded the inhabited world. In the third stanza of 14r Dati write that

The circle is not half the sphere but is much less than that  
And all the rest is the sea  
Not all of the face is dry earth but places one can go with a ship  
In some places you can find big rivers

---

<sup>130</sup> Evelyn Edson, "Maps in Context: Isidore, Orosius, and the Medieval Image of the World," (Boston: Brill, 2008), 226.

<sup>131</sup> Woodward, "Medieval Mappaemundi," 334.

<sup>132</sup> New York, Pierpont Morgan Library, MS M.721, fol. 13r: "Un T dentro ad uno O mostra 'l disegno / Come in tre parti fu diuiso il mondo."

<sup>133</sup> Woodward, "Medieval Mappaemundi," 301.

that you can cross in a ship  
And more than a third is made wet from salted water  
that comes from the great circle  
that covers the remainder of the earth.<sup>134</sup>

Much like the stars that create the zones of the earth, Dati points out that the percentage of the world that humans know and understand is not even half, indeed it is “much less than that.” Dati is humble in his assertion that rivers may be crossed and ships can travel far, but “the great” circle of salt water remains beyond the reach of man. Dati’s T-O map is another reminder that for all of his thirst for knowledge, travel, and understanding he held deep reverence for what he perceived to be mysteries beyond his ken.

Elemental maps were another common form of *mappaemundi*, used to educate viewers on medieval cosmological thought. These maps show the classical elements of earth, water, air, and fire. Sacrobosco’s *De Sphaera Mundi*, written in 1230, was an astronomical work that was hugely influential. The elemental map in M.721, on folio 7v, adheres closely to the Sacrobosco model, showing a central earth, labeled “terra,” ringed by a green ocean, “acqua” (Figure 21).<sup>135</sup> The next ring, “aria,” is blue, and fire, “fucco,” is red. The final ring, “celo de la luna,” is blue with a white moon. But here, too, the map has more than one message to convey. The colors were not a unique choice on the part of the illuminator: “color inheres in the property of elemental objects and is governed by the same mathematical harmonies as physical phenomena. Each element thus was illustrated in cosmographies by a specific color: air was blue, water green, fire red or golden-yellow, and earth ash-black or ‘dyed’ with different colors.”<sup>136</sup>

---

<sup>134</sup> New York, Pierpont Morgan Library, MS M.721, fol. 14v: “Questo tondo non è meça la spera / Ma molto meno et tucto l'altro è mare / E non è tucta questa faccia intera / Arrida terra ma da nauichare / Si troua in certe parti gran riuera / Che ben la terza parte de' bagnare / D'acqua insalata che uien da gran cerchio / Che ad tutta l'altra terra fa coperchio.”

<sup>135</sup> Cosgrove, “Images of Renaissance Cosmography,” 98.

<sup>136</sup> Cosgrove, “Images of Renaissance Cosmography,” 89.

The human body was often viewed as a microcosm of the universe itself, an encapsulation in which “...the elements, humors, and organs of the body (the microcosm) were directly related to and controlled by the universe (the macrocosm). It was the central purpose of astrology to explain these connections.”<sup>137</sup> In the case of the elemental map, the connection between the human body and the celestial body is played out “...by the correspondence of the four peripatetic elements-fire, water, air, and earth-with the four humors of the human body.”<sup>138</sup> In all likelihood, the title *Sfera* refers not to the earth but to the sphere of the heavens. So much of Dati’s message directs the reader to look up and to observe their surroundings, to view the world and ponder its grandiose designs. But the elemental map is a reminder to the reader that they, too, are a part of this intricate system; indeed, that they hold the elements of the world within their very bodies. This perspective, typical of the medieval period, was slowly falling out of favor by the 15<sup>th</sup> century, so Dati’s persistence in including the elemental map is significant.

In the fifteenth century a new cartographic tool came onto the scene: the portolan chart. Unlike their medieval predecessors, portolan charts were designed for navigation first and foremost. The name comes from the Italian portolano, “for a collection of written sailing directions.”<sup>139</sup> Portolan maps were nautical charts of the Mediterranean meant to help navigate sailing ships. They did this by showing coastlines and the rough location of port cities, identified by name and not always illustrated.<sup>140</sup> Other defining features of portolan charts are rhumb lines and scale bars, which were necessary for showing the distances between ports.<sup>141</sup> In short,

---

<sup>137</sup> Woodward, “Medieval Mappaemundi,” 340.

<sup>138</sup> Woodward, “Medieval Mappaemundi,” 335.

<sup>139</sup> Tony Campbell, “Portolan Charts from the Late Thirteenth Century to 1500,” (*The History of Cartography* 1, 1987), 375.

<sup>140</sup> Campbell, “Portolan Charts,” 376.

<sup>141</sup> Sider, “Manneristic Style in Portuguese and Italian Compass Roses,” 126.



portolan charts were scale maps that showed places and the distances between them with a high degree of accuracy.

The coastal charts in M.721 represent a transitional point between medieval *mappaemundi*, the content and purpose of which was largely theological, and portolan charts, the content and purpose of which were navigational.<sup>142</sup> Throughout books three and four Dati describes the major port cities (as well as several biblical and historical cities) of the Mediterranean and their distances from each other. The descriptions are accompanied by illustrations of coastlines with the water represented in green. The inland is left uncolored, with the exception of cities and certain geographic features such as mountains and rivers. While some cities are illustrated, the majority of cities are not, and are marked only by a name written in red.

Folio 21r is a good example to consider (Figure 22). The illustration clearly shows the influence of portolan charts; the outline of the sea, the place names, and the lines with numbers connecting different locations on the map, meant to measure distance. But conspicuously absent are rhumb lines, scale bars, or a compass rose. The map on folio 21r is helpful as an illustration in that it helps the reader to visualize the landscape and provides a basic understanding of geography. Clemens believes that, “These maps may have fulfilled an essential and new demand among Florentines for geographic knowledge about the world around them during a time of immense social and economic change and expansion.”<sup>143</sup> While it is certainly true that the illustrations fulfilled reader’s need for geographic information the maps in M.721 could never have been used for actual navigation, and while their stylistic choices shows a strong influence of portolan charts their function remains tightly bound up with the theological purpose of medieval maps.

---

<sup>142</sup> Campbell, “Portolan Charts,” 372.

<sup>143</sup> Clemens, “Medieval Maps in a Renaissance Context,” 249.

The illustration on folios 15v and 16r is a map spread across two facing folios inscribed “Asia Minor” (Figure 23). It shows a range of cities, bodies of water, and mountains. And on the far-left side of folio 16r, in the centermost position of the two-folio spread, is the “Arca Noe” (Figure 24). Noah’s Arc is depicted as resting atop two mountain points (most likely the Armenian mountains, as Noah’s Arc was widely believed to have landed there).<sup>144</sup> Dati describes the Ark’s location briefly in the text, writing, “A little further beyond, where the river lowers / is now Baldaccha, and further away, where it ends / in the sea, the river sees the high peak / of the great tower that Nimrod made / After the flood of Noah's Ark.”<sup>145</sup> On folio 21v, several locations are labeled but only two are illustrated: Jerusalem and Sca Kterina (the monastery of Saint Catherine at the foot of Mount Sinai, a popular pilgrimage site) (Figure 25). And on folio 24r the city of Troy is illustrated, burning, and the accompanying text reads, “and then almost at the end there was the big city / of Troy, where it happened the great ruin / of the proud Ylion, that was burned, / and from which came then the progeny of Augustus” (Figure 26).<sup>146</sup>

The inclusion of these biblically and historically significant locations situates M.712 firmly within the tradition of transitional Italian cartography, a tradition that grew during the thirteenth century and that was “strongly marked graphically by the portolan charts and also seriously concerned with exploring the ways in which maps could help contemporaries to know and understand their world--past, present...”<sup>147</sup> It was widely believed at the time that, “Understanding the names, places, and history described in the Bible was seen as the necessary

---

<sup>144</sup> Clemens, “Medieval Maps in a Renaissance Context,” 246.

<sup>145</sup> New York, Pierpont Morgan Library, MS M.721, fol. 17r: “Poco più oltre doue il fiume adima / Sta hor Baldaccha et più là oue chade / In mare il fiume uede l'alta cima / Della gran torre che Nembrotto fe' / Doppo il diluuiio dell'arca Noé.” FIX SPACE BETWEEN NOTES

<sup>146</sup> New York, Pierpont Morgan Library, MS M.721, fol. 23r: “Poi quasi al fine fu la gran città / Di Troya dove fu la gran ruina / Del superbo Ylion che fu combusto / Vnde fu poi la progenie da Ghusto. [sic, per "d'Aghusto"].”

<sup>147</sup> Morse, “The Role of Maps in Later Medieval Society,” 48.

foundation for examining other meanings (moral, Christological, or eschatological).”<sup>148</sup> In a way this is an echo of the astrological maps included in *Sfera*: the earth, the heavens, and all of humanity are connected and governed by the same forces. Everything is held in tension, and to understand any one aspect one must understand the interconnectedness of all aspects. In addition to satisfying reader’s curiosity about the world around them, then, *Sfera* also “satisfied the reader’s need for placing the events of the bible in a spatial context, a need only imperfectly addressed in display portolans.”<sup>149</sup>

In this way the maps in M.721 captures not just space but also time. This practice comes from narrative medieval pictures that often depicted temporally disparate events in the same illustration.<sup>150</sup> This was typical of the period, according to Morse, and it was “common to find, rubbing shoulders with world maps, what one author has called ‘landmarks of the six ages [of the world]: ancient cities like Troy and Rome, biblical events like the Hebrews crossing the Red Sea and the landing of Noah’s ark on Mount Ararat, and contemporary pilgrimage sites like Santiago de Compostela.”<sup>151</sup> History is projected onto the maps, and the geography of the commercial world becomes the organizing structure for Christian history.<sup>152</sup> Even though the maps in books three and four have more in common with portolan charts aesthetically they have much more in common functionally with the *mappaemundi* illustrated in books one and two: “Although the messages these maps present are inescapably historically bound, their ultimate source—God—transcends and eclipses history. His eternity and omnipresence is signed but not contained in the *figurae*, places, people, and events that ornament them.”<sup>153</sup> The maps in M.721 illustrate the

---

<sup>148</sup> Morse, “The Role of Maps in Later Medieval Society,” 34.

<sup>149</sup> Clemens, “Medieval Maps in a Renaissance Context,” 246.

<sup>150</sup> Woodward, “Medieval Mappaemundi,” 290.

<sup>151</sup> Morse, “The Role of Maps in Later Medieval Society,” 31.

<sup>152</sup> Morse, “The Role of Maps in Later Medieval Society,” 30.

<sup>153</sup> Watts, “The European Religious Worldview,” 400.

concepts and places described in the text but also function as a coded reminder of God's eternity and ultimately unknowable design.

## Chapter 4: Architecture in M.721

If being able to situate biblical landmarks geographically was seen as necessary for a full understanding of the narrative of the Bible, so too was the ability to visualize the places themselves. By providing a visualization of the layout of a city and the architectural details used to depict landmark buildings, the illuminations in *Sfera* allowed readers to come as close to the experience of visiting a site as possible. Holy Land pilgrimage exploded in the thirteenth century, after the Latin conquest of Jerusalem when many itineraries and diaries were written.<sup>154</sup>

Describing the genre's primary features, Moore writes that these manuscripts "include the adoption of the vernacular, the narrativization of the journey as told from the first-person perspective, detailed descriptions resulting from eyewitness encounters rather than from copying previous accounts, and (often but not always) the incorporation from the outset of pictorial illustrations."<sup>155</sup> These features could all be applied to *Sfera*, and while *Sfera* is not a pilgrimage account, one function that *Sfera* served was to allow readers to visualize the popular pilgrimage cities. Pauline Watts includes a quote by Francis Bacon in *The European Religious World View* to illustrate the role the pilgrimage played in spiritual fulfillment: "Nobody can doubt that material paths point to journeys of the spirit, or that earthly cities hint at the goals of spiritual roads to parallel spiritual cities."<sup>156</sup> In a sense, the maps of M.721 allowed readers to experience travel vicariously, and the illustrations of cities and specific buildings allowed readers to participate in a pilgrimage without ever leaving home.

---

<sup>154</sup> Kathryn Blair Moore, "The Disappearance of an Author and the Emergence of a Genre: Niccolò da Poggibonsi and Pilgrimage Guidebooks between Manuscript and Print," (*Renaissance Quarterly* 66, 2013), 358.

<sup>155</sup> Moore, "The Disappearance of an Author," 358.

<sup>156</sup> Pauline Moffitt Watts, "The European Religious Worldview and Its Influence on Mapping," (*The History of Cartography* 1), 384.

During the Middle Ages cities were understood to be a microcosm of the world, a small scale world itself.<sup>157</sup> As such, cities were understood as a link between the earthly and heavenly bodies, a place where the two realms touched.<sup>158</sup> Not only did cities serve as a representation of the cosmos, but “the religious architecture of the Middle Ages conveyed both literal and mystical meanings, allowing the ‘divine mysteries to be conveyed to an uncultured people.’”<sup>159</sup> Medieval minds were attuned to the Christian symbolism conveyed by the layout of a city, or the architecture of its buildings. In the same way a medieval viewer would be able to read a physical building’s Christian symbolism, they would be able to read the same symbolism when depicted in a manuscript illustration. Further, the architecture of the cities in M.721 is used to create a distinct aesthetic for each city, allowing the reader to visualize each different place in their mind’s eye, thus also serving as a memory aid.

In medieval maps and illuminations cities and towns were typically depicted as buildings seen in elevation, as if approaching from far away.<sup>160</sup> The cities in M.721 adhere to this stylistic norm. Cities are projected as rising up from the surface of the map, and typically are reduced to an ideogram—consisting of only a few buildings, usually one particular distinguishing feature, such as a tower or minaret, with the whole enclosed within a wall. The colors used for the cities in M.721 range from soft pinks, purples, yellows, and browns. The cities of Alexandria and Cairo on folio 21r are good examples of the stylistic variations the illuminator employed to make each city distinct (Figure 27). Alexandria is represented as compact and sprawling, a series of buildings that appear to be relatively low and display wide angles, perhaps implying octagonal buildings. The buildings overlap with one another, giving the impression of an organic layout

---

<sup>157</sup> Keith D. Lilley, “Cities of God? Medieval Urban Forms and Their Christian Symbolism,” (*Transactions of the Institute of British Geographers* 29, 2004), 297.

<sup>158</sup> Lilley, “Cities of God?” 302.

<sup>159</sup> Lilley, “Cities of God?” 299.

<sup>160</sup> David Woodward, “Medieval Mappamundi,” (*The History of Cartography* 1, 1987), 326.

with twisting roads, and is surrounded by a crenellated wall, which itself gives the impression of a circular or octagonal city. Other maps of Alexandria, for example Johann Helffrich's 1566 map (Figure 28) and Piri Reis's 1513 map (Figure 29), echo this low, sprawling layout.

On the other hand, Cairo is shown as two nested walls, one encircling the other, with a tall central tower inside. Possibly the tower is meant to depict the caliphal palace in the middle of this walled city, but there are no architectural features that would definitely identify it as such.<sup>161</sup> Whereas Alexandria gives the impression of an organic layout and twisting roads, Cairo is all straight lines and clean angles. But the clean and uncluttered depiction of Cairo is at odds with the descriptions other fifteenth century travelers gave of Cairo. The traveler Arnold von Harff recorded during his 1496 pilgrimage that, "In Cairo there are 24,000 lanes or streets, among them twenty-four chief streets."<sup>162</sup> Another fifteenth century traveler wrote that, "Three main streets cross the city; they are beautiful by comparison with the others which are narrow and winding...the most important one of these three longest streets crosses the length of the city."<sup>163</sup> Contemporary travel literature describes Cairo as a city defined by many winding and complicated streets, whereas the image in M.721 portrays a simple and uncomplicated city.

The cities Fessa (Fez) and Morocco serve as further examples of cities that are depicted as being architecturally distinct but whose distinctions do not seem to correspond directly to the cities' actual architectural layouts or features (Figure 30). Fez is anchored by a sturdy crenelated tower in the background; a square building whose symmetry, string course, and entablature reflect the Renaissance; and a low roof in the foreground. Morocco is identified simply as a minaret surrounded by a wall. The distinct features give the viewer a sense of having visited two

---

<sup>161</sup> Heba Ahmed, "Cairo: Three Cities, Three Periods, Three Maidans," *Built Environment*, 1996, 106.

<sup>162</sup> Albrecht Classen, "Constructed Spaces in the Late Middle Ages," *German Studies Review*, 27, 2010, 380.

<sup>163</sup> Gaston Wiet, *Cairo, City of Art and Commerce*, (Norman: University of Oklahoma Press 1964), 76-77.

cities, each with their own character and separate identity. It was common in medieval maps that cities were presented as idealized symbols rather than as accurate visual representations. At the same time, however, distinct representations of separate spaces and “Brightly colored, evocative images would stimulate the imagination and serve as an aide-memoire, for meditation, as tools for thinking and composing.”<sup>164</sup> Having visually distinct representations of locations was essential for readers to attain the experience of travel and to remember where they had been, but an accurate representation was not necessary.

It is also the case that even before a pilgrim reached a pilgrimage site, “...his or her expectations would have been molded by scripture and by the oral or written accounts of other pious travelers.”<sup>165</sup> M.721 does illustrate two Christian pilgrimage sites, Jerusalem and the monastery of Saint Catherine. Dati’s readers likely already had images in their minds of what these sites looked like and, perhaps more importantly, what they *should* look like. In this way the illustrations’ lack of detail allows the reader to project their preconceived notions onto the cities depicted, while a few distinguishing characteristics allow the viewer to hold these sites separate and distinct in their minds. As Robert Ousterhout notes, “This distinction might help us to understand the process of visualizing Jerusalem as well, specifically, how to account for the lack of specificity in many representations of Jerusalem in art and architecture.”<sup>166</sup>

Both Jerusalem and Saint Katherine’s are illustrated on folio 21v (Figure 31). Jerusalem adheres to the typical style of M.721, with one important exception. The mountain Golgotha rises within the city walls, and a large cross sits atop the mountain, occupying the highest point in the city. Notably, the Dome of the Rock, the defining architectural feature of Jerusalem, is

---

<sup>164</sup> Robert Ousterhouse, “Sweetly Refreshed in Imagination’: Remembering Jerusalem” (*Gesta* 48, 2009) 162.

<sup>165</sup> Simon Coleman, “The Pilgrim’s Progress: Art, Architecture and Ritual Movement at Sinai,” (*World Archaeology*, 1994), 75.

<sup>166</sup> Ousterhout, “Sweetly Refreshed in Imagination,” 160.



absent. Given that the Dome of the Rock was one of the only buildings with an octagonal shape in the Islamic world during the late medieval ages, it features prominently in many illustrations of Jerusalem, for example Hartman Schedel's 1493 map of Jerusalem and Konrad Grunenberg's map of 1487, making it odd that the artist of M.721 would leave it out (Figures 32 and 33).<sup>167</sup> The illustration of Jerusalem has faded and the pigment has cracked and flaked off in some places; it certainly looks worse for the wear than the other cities in M.721. This could be the result of M.721's owner repeatedly touching or kissing Jerusalem, making a small pilgrimage to this holy site with each physical connection.

The monastery of Saint Catherine is the only location illustrated in M.721 that is not surrounded by a wall, and is represented by only one building. By the fourteenth century the monastery was already a cluster of buildings, including a cathedral, a mosque, and stables for livestock along with several other one- to three-story buildings. One of its most distinguishing features were the fortress-like walls that surround the monastery, fortified with iron plates and nails.<sup>168</sup> But the neither walls nor any of the other buildings are pictured in M.721. Instead, Saint Catherine's is presented as a two-toned monastery with a terracotta roof and a church belfry rising sharply out of the building's center. In other words, the entire pilgrimage site is depicted as a single church building, rather than a compound surrounded by walls (as it is, for example, in a late Georgian manuscript) (Figure 34). The implicit message is that Saint Catherine's is the church, and the church is Saint Catherine's.

In both the depiction of Jerusalem and Saint Catherine's the defining features of the actual locations (Jerusalem's Dome of the Rock and Saint Catherine's fortress walls and

---

<sup>167</sup> Rina Avner, "The Dome of the Rock in Light of the Development of Concentric Martyria in Jerusalem," *Muqarnas*, 2012, 31.

<sup>168</sup> Aziz Atiya, "The Monastery of St. Catherine," *Proceedings of the American Philosophical Society* 96, 1952, 579.

additional structures, including the mosque) have been left out, and in both cases the effect is to emphasize the sites' Christian significance and erase the representation of Islamic presence in these spaces. Due to the space constrictions of the maps the artist had to leave out a certain level of detail, but the fact that the details left out are the details that would have painted a picture of these pilgrimage sites as multi-cultural and as being important in the history of multiple religions is significant. The strong message of Christianity in Dati's text is thus borne out through the illuminations as well. Furthermore, both sites are depicted as stretching upwards. The cross occupies the highest point in Jerusalem. Although Saint Catherine's was in the mountains, the monastery is placed perilously at the very top of mountain, and the tower seems to reach towards heaven. If the cities in M.721 are depicted as microcosms of the heaven and the earth, the monastery and the cross seems to be depicted as the nearest points to heaven, a portal between the physical and spiritual world. But towers rising towards heaven can be imprudent, as another illumination in M.721 makes clear.

The most architecturally detailed building in M.721 is a large scale illustration of the tower of Babel (or the Tower of Nimrod, as it is described in the text). The inclusion of the Tower of Babel in manuscript copies of *Sfera* is universal. Even in sparsely illustrated printed copies of *Sfera* the Tower is usually included. The text in M.721 reads

I can see where the ancient and great city  
of Ninive was on the Tygris, which was the first  
Lady of power of many countries.  
A little further beyond, where the river lowers,  
is now Baldaccha, and further away, where it ends  
in the sea, the river sees the high peak  
of the great tower that Nimrod was made  
after the flood of Noah's Ark.

The site of the Indian Sea is on the left,  
coming down towards the East,

with the coast of Egypt on the right,  
in a straight line, or almost.  
Close to that coast was the great training place  
for the proud giants, because of whom people  
speak many languages, and you can still see  
said tower which is still standing upright.<sup>169</sup>

In the first stanza, the text describes the physical location of the tower, and situates it temporally within biblical history. In the second stanza, Dati alludes to the ancient peoples who built the tower, whose pride caused God to scatter peoples across the world and divide what had been one language into many. Interestingly, Dati notes that the tower is still standing. While there is no mention in the bible of the tower being destroyed (the people are simply scattered and thus stop building the tower), other sources allude to the tower being toppled by wind, and the Midrash says that the top of the tower was burned.

Conspicuously absent from Dati's description is any kind of detail about the building itself. One would imagine that readers would be eager for some kind of description of this fabled tower so tall it could have reached heaven, but Dati leaves the architectural elements to the imagination of the illuminator. Illuminators usually copied their illustrations directly from another manuscript of the same text, so it is likely the tower in M.721 was based on another manuscript copy. Of course, this does not mean that all manuscript copies would be exactly the same; as with any illumination, subtle changes would occur over time as individual artists added their own embellishments and as popular tastes changed. There are enough extant manuscripts

---

<sup>169</sup> New York, Pierpont Morgan Library, MS M.721, fol. 17r: "Vede oue fu l'anticha et gran cittade / Di Niniue sul Tygris che fu prima / Donna d'imperio di molte contrade / Poco più / oltre doue il fiume adima / Sta hor Baldaccha et più là oue chade / In mare il fiume uede l'alta cima / Della gran torre che Nembrotto fe' / Doppo il diluuio dell'arca Noé. Il sito del mar d'India ad man sinistra / Venendo in giù diuerso l'oriente / Co'llito dello / Egypto da man destra / Sono in un filo diricto o quasimente. / Presso da quel lito fu la gran palestra / De' superbi gioghanti unde la gente / Tanti linguaggi parla et se ne uede / Ancor la detta torre è ritta impiede."

that it would be possible to arrange the illuminations in approximate order of copy and dissemination, reconstructing the game of telephone that would have played over the course of the fifteenth century. As viewing that many copies is beyond the scope of this paper, I will situate the Morgan manuscript illumination of the tower of Babel within the context of Sandra Sider's "Iconography of the Tower of Babel in Dati's Cosmographic Treatise *La Sfera*," and then compare it to several other towers of Babel in copies of *Sfera* not published in Sider's article.

Sider observes that the towers of Babel in *Sfera* were most likely originally copied from chronicles, bibles, and mosaics. She notes that, "While revealing the diversity of artistic styles in Florentine circles of the mid-fifteenth century, the Towers of Babel nevertheless follow the medieval conventions of emphasizing the tower's imposing height and foreshadowing its ultimate destruction."<sup>170</sup> The tower in M.721 is certainly imposing; it takes up almost the entire side of the leaf, with the base starting far below the bottom line of text and the top of the tower reaching just past the first line of text (Figure 35). It is by far the largest illumination in the book. This sits nicely with Sider's assertion that, "In *La Sfera* manuscripts of the mid-fifteenth century, the Tower of Babel, or of Nebroth, completely fills the available space, often projecting through its ornamentation the sin of pride that caused the destruction of the original."<sup>171</sup> Later on, when the text is printed, the illuminations of the tower shrink down in relation to the text. As discussed in previous chapters there is ample evidence that dates M.721 to the mid-fifteenth century, but this is further confirmation.

Another commonality Sider identifies is the inclusion of an indication of the destruction of the tower—typically the tower's apex is represented as crumbling and jagged or in flames.<sup>172</sup>

---

<sup>170</sup> Sandra Sider, "Iconography of the Tower of Babel in Dati's *Sfera*," *Journal of Early Book Society* 2, 1999, 77.

<sup>171</sup> Sider, "Iconography of the Tower of Babel," 78.

<sup>172</sup> Sider, "Iconography of the Tower of Babel," 78.

In M.721, the top is depicted as being lopped off and crumbling at the top, foreshadowing its ultimate destruction. The inside of the tower, now revealed, is red. While not actively depicted as flames, the color red, used sparingly throughout the illuminations in M.721 and typically reserved for the rubrics, indicates the burning of the tower and dramatizes its ultimate destruction. This is, of course, somewhat at odds with the text, which notes that the tower is still standing and makes no mention of fire.

Much like the towers depicted in the illustrations of cities in M.721, the artist has depicted the tower of Babel as a quadrilateral, crenelated tower. This is in keeping with what Sider observes in her survey of sixty *Sfera* manuscripts, that “Italian Renaissance artists, however, favored a style for the Tower of Babel that was quadrilateral in structure, not unlike the fifteenth-century towers seen today by visitors to Florence, Milan, and other centers of Italian Renaissance architectural patronage.”<sup>173</sup> Interestingly, however, the M.721 tower sits on top of an arch, a feature not mentioned in Sider’s survey. In conducting a mini-survey of six illuminations of the Tower of Babel, however, it becomes apparent that the arch is not an atypical architectural feature in *Sfera*.

Three of the seven manuscripts considered in this portion of the essay are housed in the New York Public Library (MS 198, MS Col 2557 MA 110, and MS Col 2557 MA 109), one in the Beineke (MS 328), one in the Vatican (Urb.Lat.752) and one in the Boston Public Library (MS f Med 125) (Figures 36-41).<sup>174</sup> One printed volume from the Library of Congress is also considered (PQ 4621. D17 54 1475) (Figure 42). None of these towers sit on top of a single arch, but two of them (Beineke 328 and NYPL MA 109) have quadrilateral arches. Stylistically, the towers in Beineke 328 and NYPL MA 109 have the most in common with Morgan M.721. All

---

<sup>173</sup> Sider, “Iconography of the Tower of Babel,” 78.

<sup>174</sup> Images of the manuscripts can be found online at their respective institutions’ digital collections (URLs for each are cited in the appendix).

three are composed of three levels sitting one on top of another over a bottom arch support. All three have the crumbling top tower noted by Sider. Perhaps most striking is the commonality in color; all three alternate the color of the levels of the tower between a pink, green, and yellow/brown. Although the tone and vibrancy of the colors vary considerably, the similarity is striking.

By contrast, the printed *Sfera* from Library of Congress lacks the three carefully delineated levels of the tower. It has only a pink wash for coloring, and the architecture is lighter and airier, with columns creating an open floor in the tower. While the top level does not look completed, it doesn't look particularly perilous and crumbly, either. The sense of foreshadowing is gone, as is the imposing height and scale. If one did not know that this was the tower of Babel from the text, one probably would not be able to guess.

The latest dated illumination of the tower, from 1484, housed at the Boston Public Library, MS f Med 125, is even sturdier. While all of the other towers are seen from a three-quarters angle, the Boston Public is seen straight on. A further survey might trace the angle of the tower through the fifteenth century. Again, it lacks the sense of scale of the earlier towers, has only two levels, and shows no signs of deterioration. The Vatican copy stands alone in its illumination. The tower of Babel in Urb.Lat.752 has a level of detail and delicacy unmatched by any of the other manuscript or print copies. Interestingly, it is seen head on, but still features the crumbling top tower. It is colorful, and the architecture is a Renaissance style, similar to the Library of Congress copy. Perhaps this represents a transitional (albeit luxury) style.

Viewing M.721 alongside these other towers indicates that M.721 was created earlier in the sequence of illustrations (1450-1475) as the iconography is in keeping with manuscripts created before the earliest printed copies came out. The artist who illuminated M.721 clearly still

had a vested interest in telling the story of the tower of Babel through the illumination, communicating the pride of the Babylonians and their ultimate downfall in a way that the accompanying text, which focuses solely on the location of the tower, does not. As discussed in chapter three, the maps in *Sfera* played an important role not only in allowing the viewer to understand their geographic surroundings but also in understanding their place in the world, its history, and the larger biblical context that continued to shape life in the fifteenth century. The illumination of the tower of Babel functions in just this way.

Dati's life as a merchant was marked by travel to faraway places and interactions with a wide range of "others," people who spoke different languages, observed different customs, and looked very different from his fellow Florentines. A familiarity with the Tower of Babel would have been of tremendous importance to Dati and subsequent readers of *Sfera* because it provides background and context for the jumble of peoples and languages Italians were encountering as they entered the Age of Exploration. Perhaps the depiction of the tower in an architecturally contemporary style is an indication of the immediacy of the tower's role in contemporary life. While the tower was built and struck down long ago, its legacy was still reverberating through the quattrocento. The outsized illustrations of the tower indicate the significance of this legacy on fifteenth century Florentines' lives and as served as a reminder of the power of God.

## Conclusion

This thesis has focused on a specific manuscript copy of *Sfera*, situating it within the context of fifteenth century Florence, medieval cartographic developments, and the architectural elements presented in other extant manuscript copies of *Sfera*. *Sfera* as a text fulfilled several functions, serving as an educational tool, a way to experience the world and its cultures without ever leaving home, and as a vehicle for the religious and spiritual worldview of its author, Gregorio Dati. Physical elements of M.721, such as the use of parchment instead of paper, points to a middle class merchant as the most likely of patrons for M.721. Stylistic details, such as the inclusion of the white-vine motif, date M.721 to between 1450 and 1475. How M.721 made it to the Morgan will never be known, but it's ultimate arrival in New York makes sense given the movement of books from Italy to France during the sixteenth century, from France to England during the nineteenth century, and from Europe to America during the twentieth.

Stylistically, M.721 straddles the medieval and the Renaissance cartographic tradition. But in terms of cartographic content and function M.721 is decidedly more medieval. The vast majority of maps in M.721 teach the viewer something about the world, but not how to navigate it. Even when it comes to the maps that most resemble portolan charts, the inclusion of cities and pilgrimage sites serve primarily to teach the viewer about biblical history. Indeed, all of the illustrations, and much of the text, work together to establish God as the one entity that holds together all of the mysterious forces and physical spaces in the world. One way of reading M.721 might be as a devotional text, an opportunity to wonder at the world God has created. In addition to allowing readers to understand where an important port city is, M.721 provided readers with the opportunity to make small pilgrimages to the illustrated holy sites that loomed so large in a spiritual conception of the world. Dati was an intensely spiritual man, and readers of *Sfera* would



have recognized the way text and image constantly point back to religion. During a period of history where Florentines' access to the world was rapidly expanding, *Sfera* transported readers to faraway places, all the while reminding them that wherever one might travel one was still within the kingdom of God.

## Bibliography

Alexander, Jonathan J. G. *Medieval Illuminators and Their Methods of Work*. New Haven: Yale University Press, 1992.

---. "Patrons, Libraries and Illuminators in the Italian Renaissance," in *The Painted Page: Italian Renaissance Book Illumination 1450-1550*. Edited by Jonathan J. G. Alexander. London: Royal Academy of Arts, 1994.

---. *The Painted Book in Renaissance Italy: 1450-1600*. New Haven: Yale University Press, 2016.

Atiya, Aziz. "The Monastery of St. Catherine and the Mount Sinai Expedition." *Proceedings of the American Philosophical Society* 96 (1952), 578-586.

Avner, Rina. "The Dome of the Rock in Light of the Development of Concentric Maryria in Jerusalem: Architecture and Architectural Iconography." *Muqarnas* 27 (2010), 31-49.

Baca, Murtha, Vittore Branca, and ProQuest Ebooks. *Merchant Writers: Florentine Memoirs from the Middle Ages and Renaissance*. Toronto: University of Toronto Press, 2015.

*Bibliotheca Phillippica: Catalogue of a Further Portion of the Classical, Historical, Topographical, Genealogical and Other Manuscripts & Autograph Letters &c. of the late Sir Thomas Phillipps*. London: Dryden Press, 1908.

Boehm, Barbara. "The Books of the Florentine Illuminators." In *Painting and Illumination in Early Renaissance Florence 1300-1450*. New York: Metropolitan Museum of Art, 1994.

Brucker, Gene A. "Introduction: Florentine Diaries and Diarists." In *Two Memoirs of Renaissance Florence: The Diaries of Buonaccorso Pitti and Gregorio Dati*, edited by Gene A. Brucker and translated by Julia Martines, 9-18. Illinois: Waveland Press, 1991.

Cachey Jr., Theodore J. "Maps and Literature in Renaissance Italy." *The History of Cartography* 1 (1987), 450-460.

Campbell, Tony. "Portolan Charts from the Late Thirteenth Century to 1500." *The History of Cartography* 1 (1987), 371-463.

Carlton, Genevieve. "Worldly Consumers: The Demand for Maps in Renaissance Italy." *Imago Mundi* 63 (2011), 123-125.

Carruthers, Mary J. *The Book of Memory: A Study of Memory in Medieval Culture*. Cambridge University Press, 2008.

Cassidy-Welch, Megan. "Space and Place in Medieval Contexts." *Parergon* 27 (2010): pp. 1-12.

*Catalogue of the Manuscripts at Ashburnham Place: Part the First Comprising a Collection Formed by Professor Libri.* London: Charles Francis Hodgson, 1853.

Classon, Albrecht. "Constructed Space in the Late Middle Ages: Arnold von Harff's Incidental Discovery of a New Paradigm of Urban Space in Cairo." *German Studies Review* 33, (2010), pp. 375-388.

Clemens, Raymond. "Medieval Maps in a Renaissance Context: Gregorio Dati and the Teaching of Geography in Fifteenth-Century Florence." In *Cartography in Antiquity and the Middle Ages: Fresh Perspectives, New Methods*, edited by Richard Talbert and Richard J Unger, 237-256. Boston: Brill, 2008.

Coleman, Simon and John Elsner. "The Pilgrim's Progress: Art, Architecture and Ritual Movement at Sinai." *World Archaeology* 26 (1994), 73-89.

Cosgrove, Denis E. "Images of Renaissance Cosmography, 1450-1650." *The History of Cartography* 1 (1987), 55-98.

Cook, K. Dati's "'Sfera': The Manuscript Copy in the Kenneth Spencer Research Library, University of Kansas." *Mediterranean Studies* 11 (2002), 45-69.

Dati, Gregorio. "The Diary of Gregorio Dati." In *Two Memoirs of Renaissance Florence: The Diaries of Buonaccorso Pitti and Gregorio Dati*, edited by Gene A. Brucker and translated by Julia Martinez, 107-141. Illinois: Waveland Press, 1991.

De Ricci, Seymour. *English Collectors of Books and Manuscripts 1530-1930*. Bloomington: Indiana University Press, 1960.

Del Puppo, Dario. "Where 'High' and 'Low' Meet: Text and Document in a Humanist Manuscript of Burchiello's Poetry." *Text* 11, (1998): 207-223.

Donkin, Lucy. "Space in the Medieval West: Places, Territories, and Imagines Geographies." *The English Historical Review*, vol. 131, no. 548, pp. 138-140.

Dunn, George. *Catalogue of the valuable & extensive library formed by George Dunn*. London: Dryden Press, 1913-1917.

Edson, Evelyn. "Maps in Context: Isidore, Orosius, and the Medieval Image of the World." In *Cartography in Antiquity and the Middle Ages: Fresh Perspectives, New Methods*, edited by Richard Talbert and Richard J Unger, 237-256. Boston: Brill, 2008.

Evelyn Edson, *Mapping Time and Space: How Medieval Mapmakers Viewed Their World* (London: British Library, 1997).

Epurescu-Pascovici, Ionuț. "Gregorio dati (1362–1435) and the Limits of Individual Agency." *The Medieval History Journal* 9 (2006): 297-325.

Goehring, Margaret. *Space, Place, and Ornament: the Function of Landscape in Medieval Manuscript Illumination*. Turnhout: Brepols, 2013.

Harrsen, Meta and George K. Boyce. *Italian Manuscripts in the Pierpont Morgan Library: Descriptive Survey of the Principal Illuminated Manuscripts of the Sixth to Sixteenth Centuries, With a Selection of Important Letters and Documents*. New York: Pierpont Morgan Library, 1953.

Harvey, P. D. A. "Medieval Maps: An Introduction." *The History of Cartography* I (1987), 283-285.

Hayes, Dawn Marie. *Body and Sacred Place in Medieval Europe, 1100-1389*. Routledge, 2003.

Hyde, J. K. "Some Uses of Literacy in Venice and Florence in the Thirteenth and Fourteenth Centuries." *Transactions of the Royal Historical Society* 29 (1979): 109-128.

Kelly, Molly Robinson. *The Hero's Place: Medieval Literary Traditions of Space and Belonging*. Catholic University of America Press, 2009.

Lemaitre, Alain J. *Florence and the Renaissance: The Quattrocento*. Paris: Terrail, 1993.

Lilley, Keith D. "Cities of God? Medieval Urban Forms and Their Christian Symbolism." *Transactions of the Institute of British Geographers*, vol. 29, no. 3, 2004, pp. 296–313.

"Manuscripts Department," Bibliothèque Nationale de France, last modified Friday, October 10, 2014, [http://www.bnf.fr/en/bnf/dpt\\_mss\\_eng.html](http://www.bnf.fr/en/bnf/dpt_mss_eng.html).

Maxson, Brian Jeffrey. "'This Sort of Men': The Vernacular and the Humanist Movement in Fifteenth-Century Florence." *I Tatti Studies in the Italian Renaissance* 16 (2013), 257-271.

McCrimmon, Barbara. "The Libri Case." *The Journal of Library History* 1 (1966), 7-32.

Moore, Kathryn Blair. "The Disappearance of an Author and the Emergence of a Genre: Niccolò da Poggibonsi and Pilgrimage Guidebooks between Manuscript and Print." *Renaissance Quarterly* 66 (2013), 357-411.

Morse, Victorial. "The Role of Maps in Later Medieval Society: Twelfth to Fourteenth Century." *The History of Cartography* 1 (1987), 25-52.

New World Encyclopedia contributors, "Catherine de' Medici," *New World Encyclopedia*, [http://www.newworldencyclopedia.org/p/index.php?title=Catherine\\_de%27\\_Medici&oldid=1002828](http://www.newworldencyclopedia.org/p/index.php?title=Catherine_de%27_Medici&oldid=1002828) (accessed January 19, 2019).

New York. Pierpont Morgan Library. MS M.721.

Okhrimenko, Alexander. "Noah's Ark in Medieval Imagination: The Flood, Salvation, and Beginning of New World." His Master's Voice 4<sup>th</sup> Annual Symposia-Utopias, Dystopias, and Ecotopias, March 13-15, 2017, Krakow, Poland.

Oltrogge, Doris. "Illuminating the Print: The Use of Color in Fifteenth-Century Prints and Book Illumination," *Studies in the History of Art* 75, (2009): 298-315.

Ousterhout, Robert. "'Sweetly Refreshed in Imagination': Remembering Jerusalem in Words and Images." *Gesta* 48, (2009): 153-168.

Phillips, Thomas. *Catalogus Librorum Manuscriptorum in Bibliotheca d. Thomæ Phillipps, Bart.* Middle Hill: Impressus Typis Medio-Montanis Mense Maio, 1837.

Ricciardi, Paola, Anuradha Pallipurath and Kristine Rose. "'It's Not Easy Being Green': a Spectroscopic Study of Green Pigments Used in Illuminated Manuscripts." *Analytical Methods* 5, (2013), 3819-3842.

Rizzi, Andrea and Eva Del Soldato. "Latin and Vernacular in Quattrocento Florence and Beyond: An Introduction." *I Tatti Studies in the Italian Renaissance* 16 (2013), 231-242.

Sider, Sandra. "Iconography of the Tower of Babel in Dati's Sfera." *Journal of Early Book Society* 2 (1999), 73-88.

---. "Manneristic Style in Portuguese and Italian Compass Roses on Manuscript Portolan Charts." In Kate Lowe ed. *Cultural Links Between Portugal and Italy in the Renaissance*. Oxford: Oxford University Press, 2000, 125-138.

Silver, Larry A., Blake Ehrlich and others. "Florence." *Encyclopedia Britannica*, published September 20, 2017, <https://www.britannica.com/place/Florence/History>.

Stanley, Joseph F. "Negotiating Trade: Merchant Manuals and Cross-Cultural Exchange in the Medieval Mediterranean." *Frontiers: The Interdisciplinary Journal of Study Abroad* 30 (2018): 102-112.

Watts, Pauline Moffitt. "The European Religious Worldview and Its Influence on Mapping." *The History of Cartography* 1 (1987), 382-400.

Wiet, Gaston. *Cairo, City of Art and Commerce*. Norman: University of Oklahoma Press, 1964.

Woodard, David. "Medieval Mappamundi." *The History of Cartography* 1 (1987), 286-368.

---. "Reality, Symbolism, Time, and Space in Medieval World Maps." *Annals of the Association of American Geographers*, Vol. 75, No. 4, 1985, pp. 510-521.

## Illustrations

Figure 1, Binding of M.721. Pierpont Morgan Library. MS M.721.

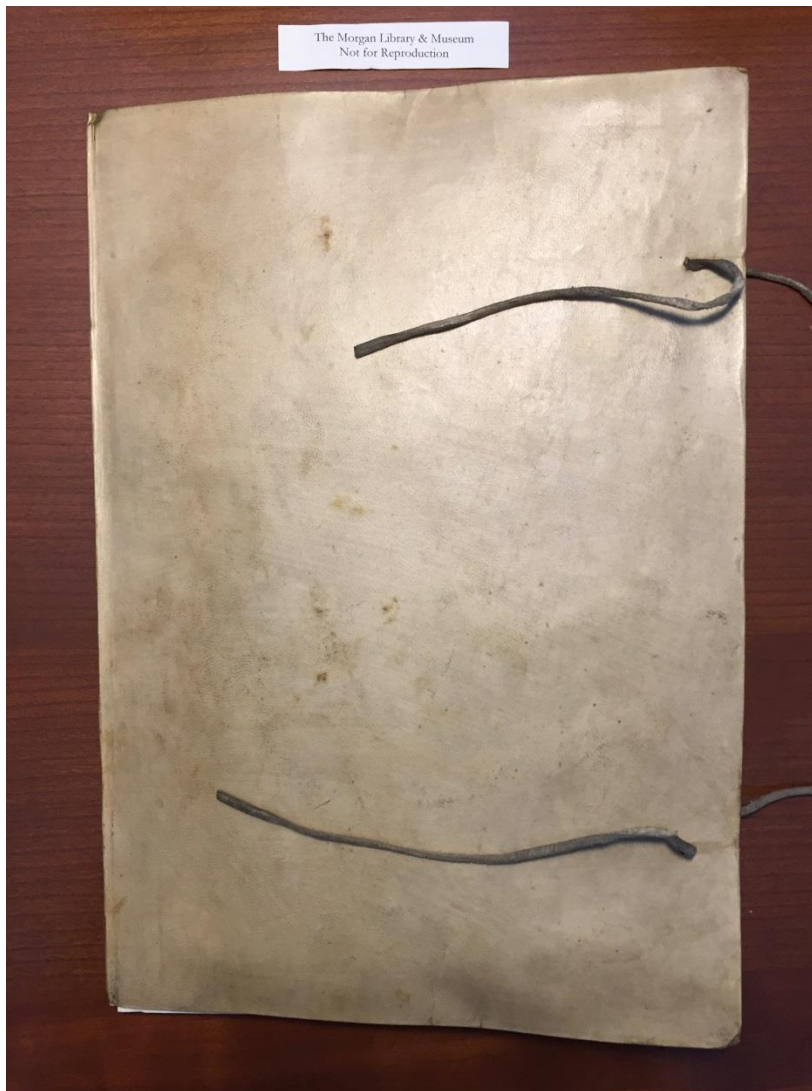


Figure 2, Detail of spine of M.721. Pierpont Morgan Library. MS M.721.





Figure 3, Example of page layout, M.721 3r. Pierpont Morgan Library. MS M.721.

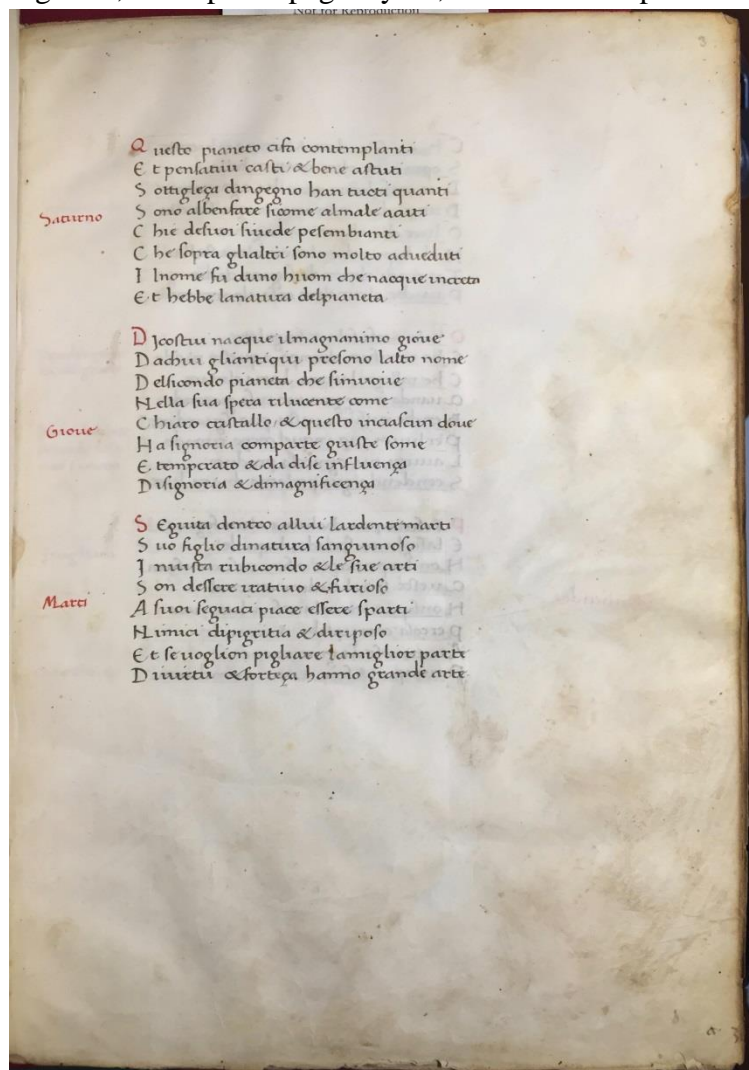


Figure 4, Detail of illuminated initial, M.721 7r. Pierpont Morgan Library. MS M.721.

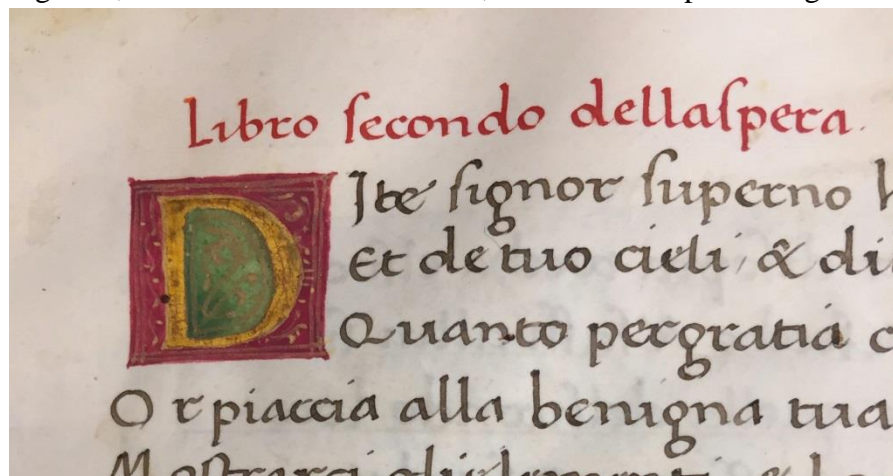


Figure 5, Detail of initial illuminated in white vine style, M.721 1r. Pierpont Morgan Library. MS M.721.



Figure 6, Detail of zonal map, M.721 2r. Pierpont Morgan Library. MS M.721.





Figure 7, Detail of mappamundi, M.721 2v. Pierpont Morgan Library. MS M.721.



Figure 8, Detail of mappamundi with elements, M.721 7v. Pierpont Morgan Library. MS M.721.



Figure 9, Three illustrations of temporal zones and winds, M.721 15v. Pierpont Morgan Library. MS M.721.

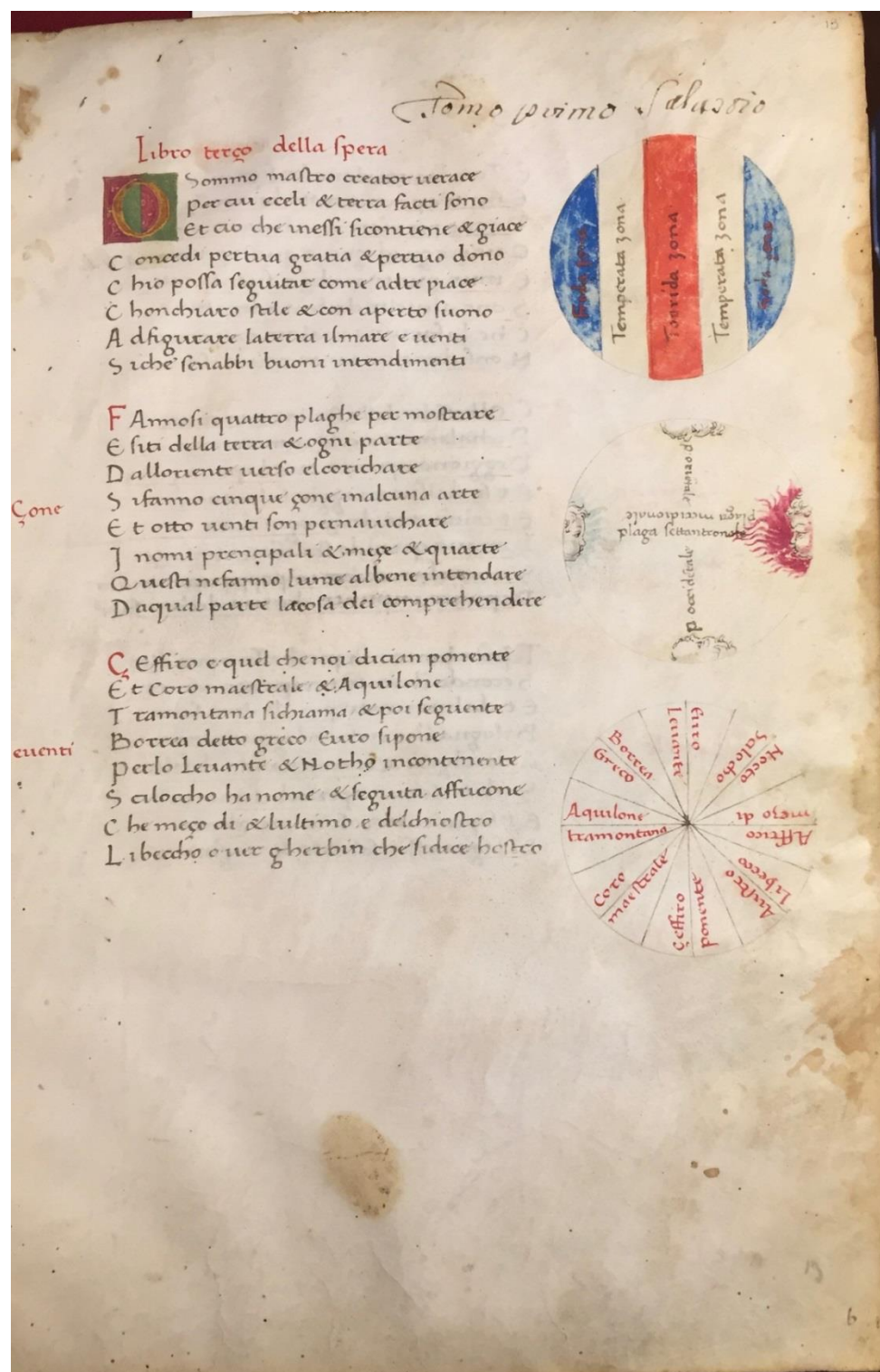
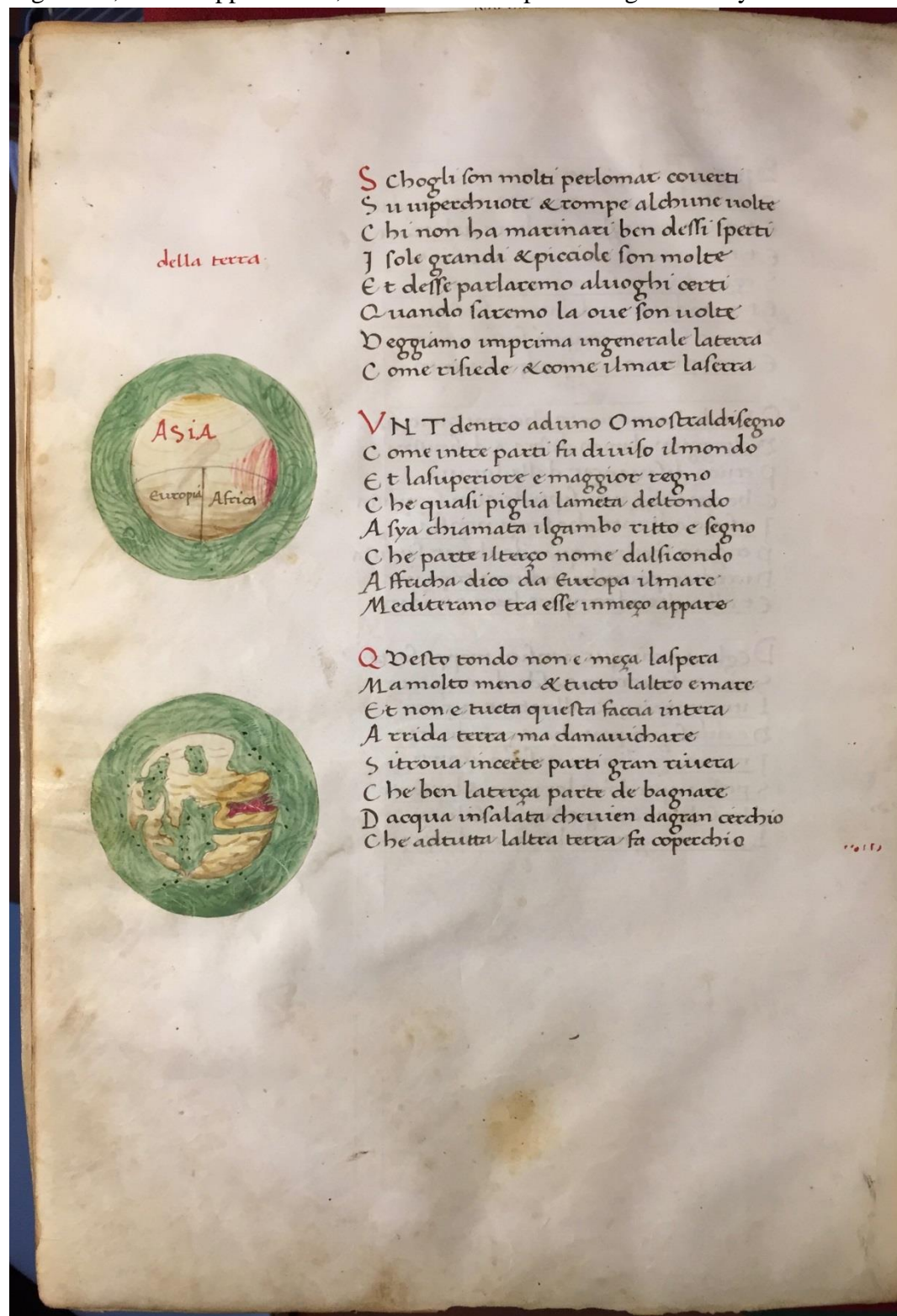




Figure 10, Two mappaemundi, M.721 14v. Pierpont Morgan Library. MS M.721.



[illegible]



Figure 12, Tower of Babel, M.721 17r. Pierpont Morgan Library. MS M.721.



Figure 13, Detail of overlap between illustration and text, M.721 19r. Pierpont Morgan Library. MS M.721.





Figure 14, Detail of coat of arms, M.721 1r. Pierpont Morgan Library. MS M.721.



Figure 15, Unlabeled map, M.721 23v. Pierpont Morgan Library. MS M.721.

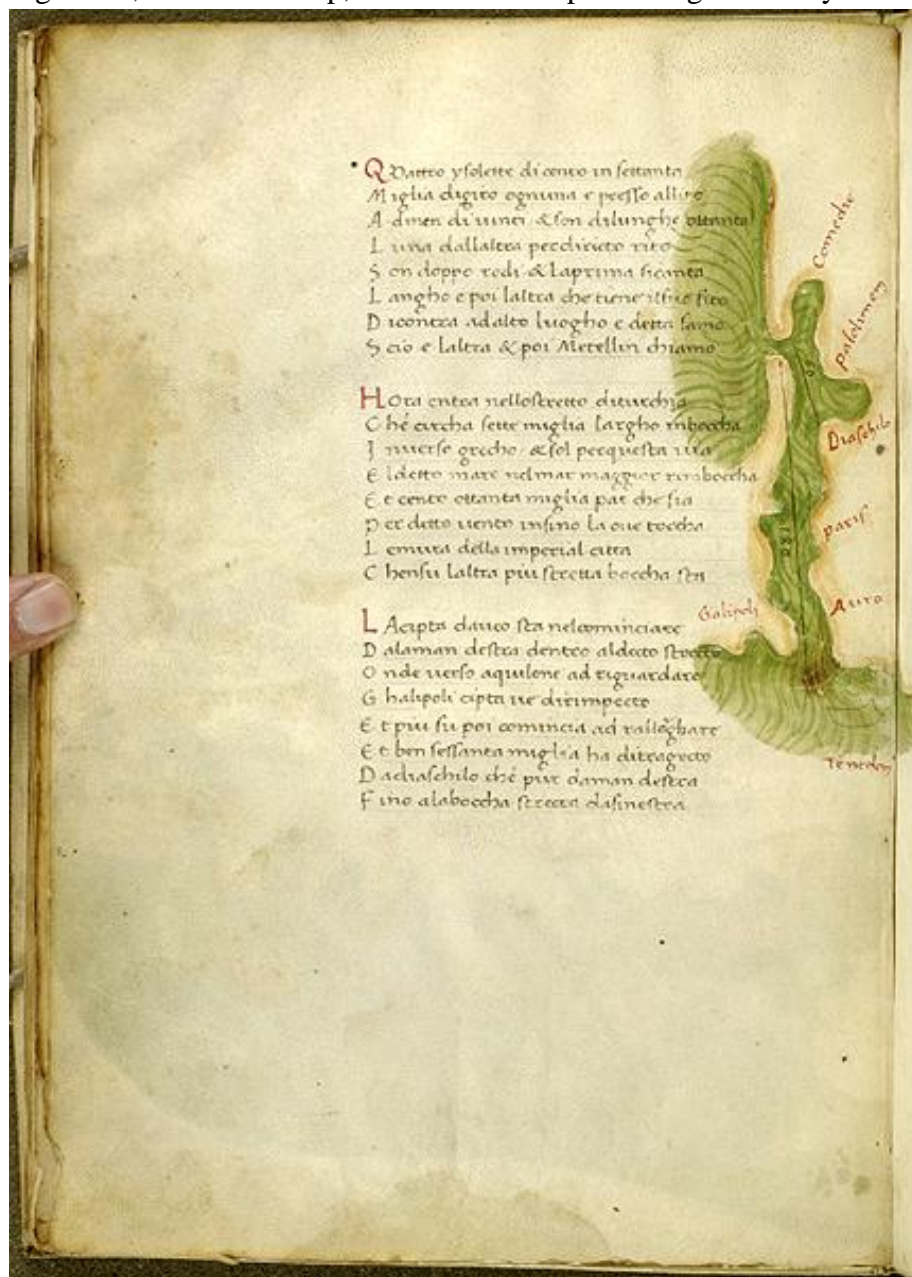




Figure 16, Detail of uncolored island, M.721 23v. Pierpont Morgan Library. MS M.721.



Figure 17, Unfinished map, M.721 24v. Pierpont Morgan Library. MS M.721.

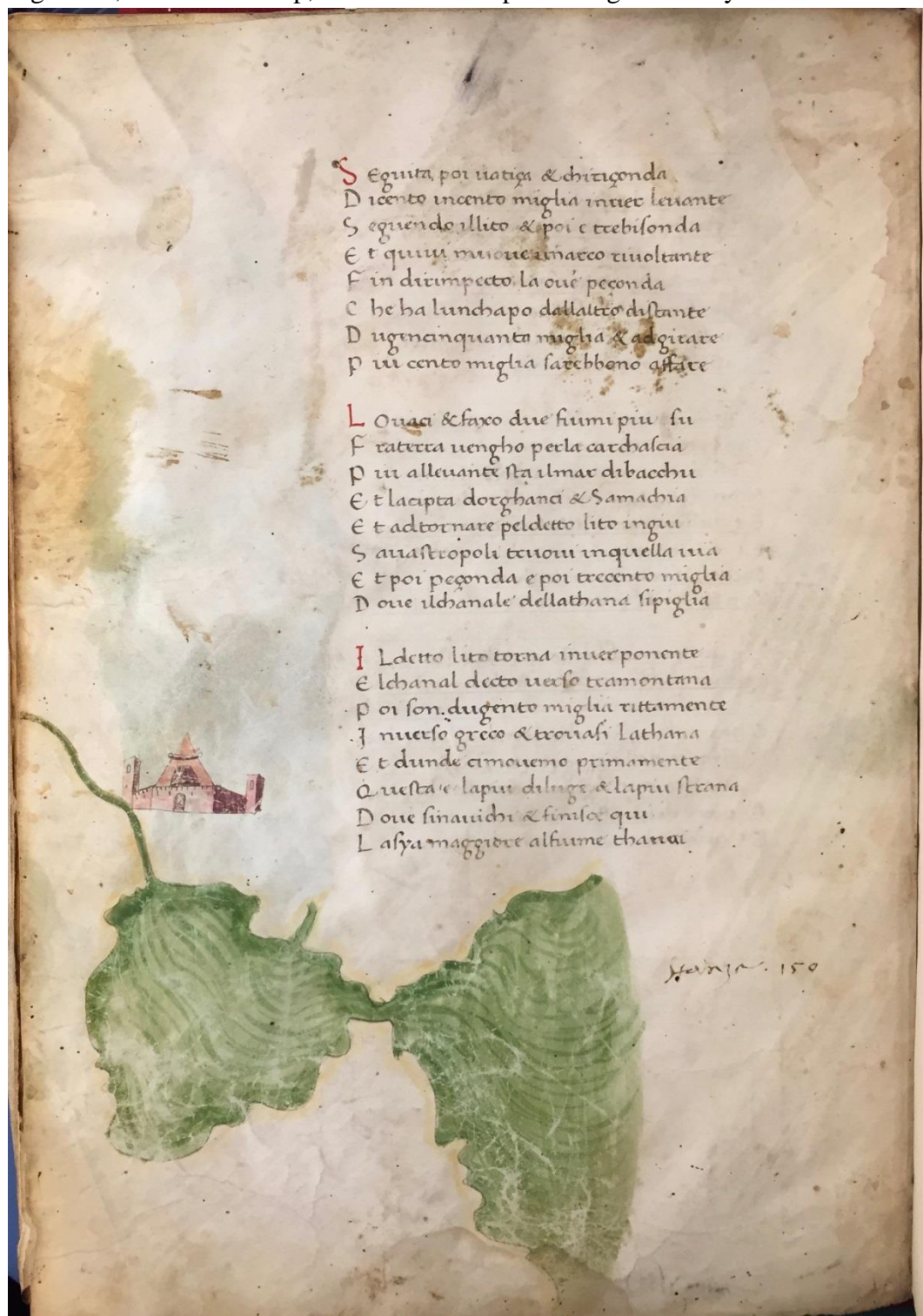




Figure 18, Detail of celestial map, M.721 1v. Pierpont Morgan Library. MS M.721.



S chogli son molti peccolati conuerti  
 S u upeccatori & rompe alchune uirtu  
 C hi non ha marinati ben delli sperti  
 I sole grandi & piccioli son molter  
 E delli paesi lacorno aluoghi certi  
 C uando facemo la pace son uolter  
 Degna impenna ingenerale larecci  
 C ome risiede & come istate lasciatu

V N T dento aduno Omoftealdifegno  
 C ome inter parti fu diuiso il mondo  
 E t l'olispicore & maggior regno  
 C he quali piglia l'antea del mondo  
 A sua chiamata ilgambie tutto & segno  
 C he parte iluogo nome di bagnare  
 A fructu dico da europa ilmare  
 Meditirano tra esse innio appare

Q Delle tondo non e mega l'aspect  
 Ma molto meno & tueto l'altre cinare  
 E non e tueta questa tueta intera  
 A trida terra ma danauadare  
 S itroua inuete parti gran raitera  
 C he ben latera parte de bagnare  
 D acqua insilam deuenit fagn crechio  
 C he adunim latera tera fu copectio

Figure 21, Detail of mappamundi with elements, M.721 7v. Pierpont Morgan Library. MS M.721.





Figure 22, Example of portolan map influence, Alexandria and Cairo, M.721 21r. Pierpont Morgan Library. MS M.721.

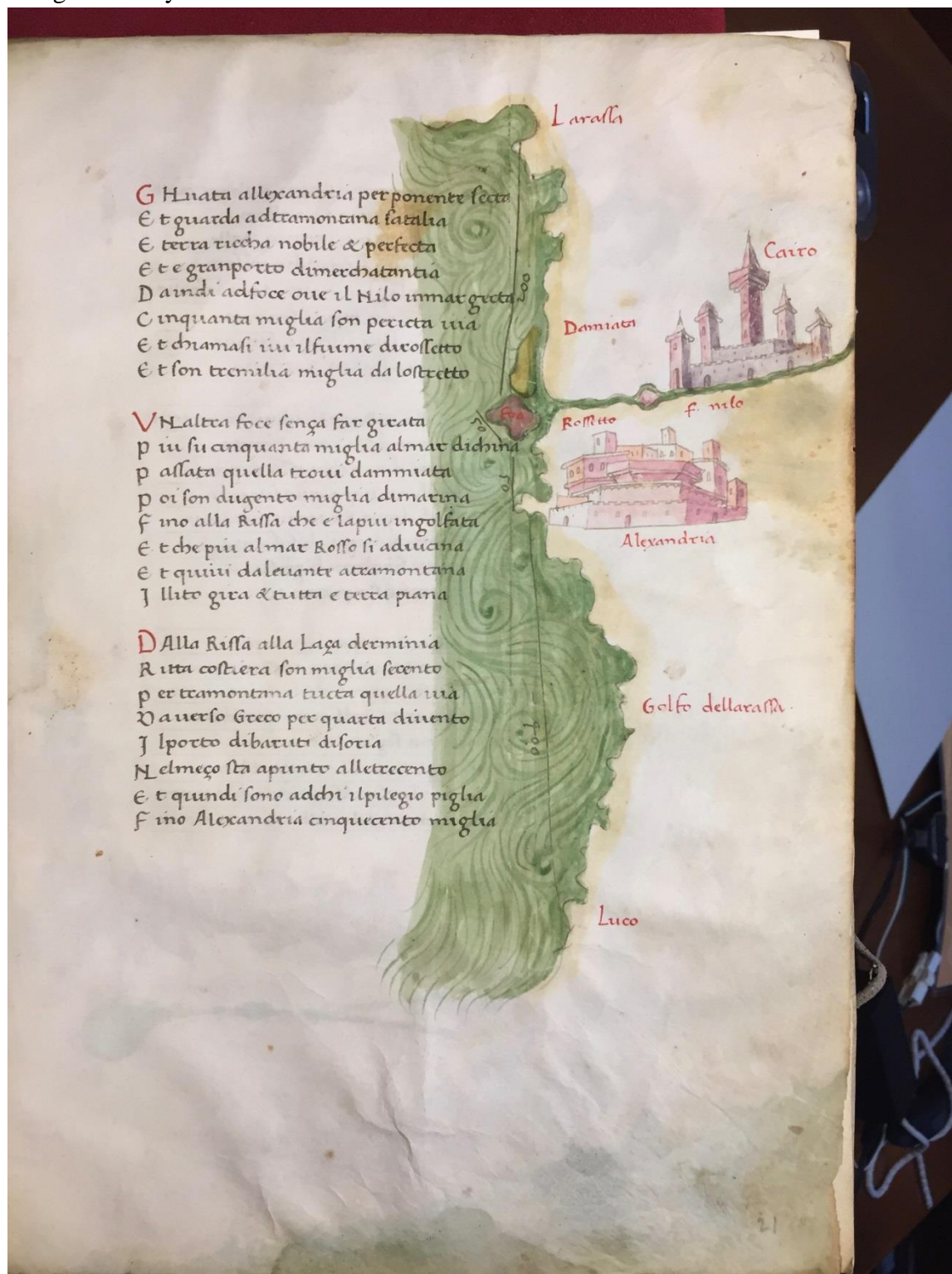


Figure 23, Map of Mediterranean, M.721 15v and 16r. Pierpont Morgan Library. MS M.721.





Figure 24, Detail of Noah's Arc, M.721 16r. Pierpont Morgan Library. MS M.721.





**L** Arissa ha intorno itagna & almat gralle  
 Et fea terra diserta infino alloco  
 Doue Latrista & ben punita ualle  
 Che giuchidava fu daddio colfoco  
 A uiri e unlagho morto. apoi lespalle  
 Del monte Synai piu la son poco  
 Sulqual fudata laleggie diuina  
 Doue e sepolta sancta Katerina

**T** Ra La Billa & Barui adpunto in medio  
 E Joppen porto della terra Sancta.  
 Che diuolui douarebbe esser predio  
 Che capo de cristiani esser fuaanta  
 Doue quel degno Re tenne suo sedio  
 Che fece lopra chogni di fuchanta  
 O uellanto sipoleco di giesu  
 La doue crocifisso per noi fu

**S** yon e questa capo di giuden  
 Verso leuante un poco a destra mano  
 Et da sinistra mano e Ghalilea  
 Et dalleuante stal fiume giordano  
 Et amarina segue Cesarea  
 Et Acri & Sue & Baretta & Libano  
 Monte unde esce il fiume di duo fonti  
 A uiri e charmeli & altri sancti monti

The map is a hand-drawn geographical representation of the Holy Land. It is oriented with Jerusalem at the bottom center. The Mediterranean Sea is depicted to the west, with several coastal cities labeled: Alexandretta, Soldino, Laleca, Tortosa, and Tripoli. To the east, the Red Sea (M. Rosso) is shown. The interior of the land is divided into regions like Galilee, Samaria, and Judea. The Jordan River (f. giordano) is shown flowing from the north (Lake Tiberias, Lago d'asidone) to the south. Key locations include Galilee, Samaria, Sion, Nazareth, Betlem, and Jerusalem (Gerusalem). The map is drawn in a simple, illustrative style with green for land and blue for water.

Figure 26, Illustration of Rodi and Troy, M.721 24r. Pierpont Morgan Library. MS M.721.

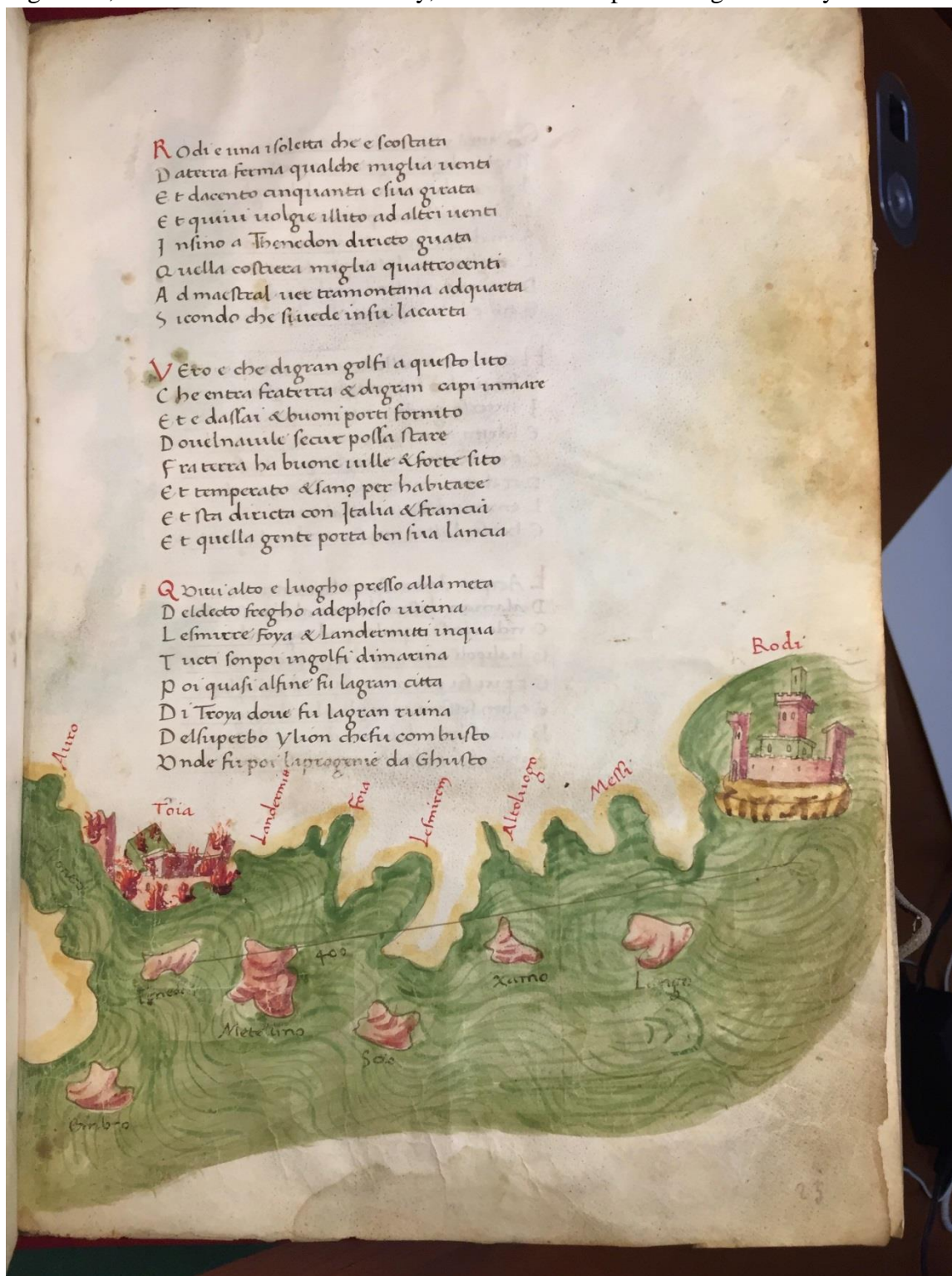




Figure 27, Example of portolan map influence, Alexandria and Cairo, M.721 21r. Pierpont Morgan Library. MS M.721.

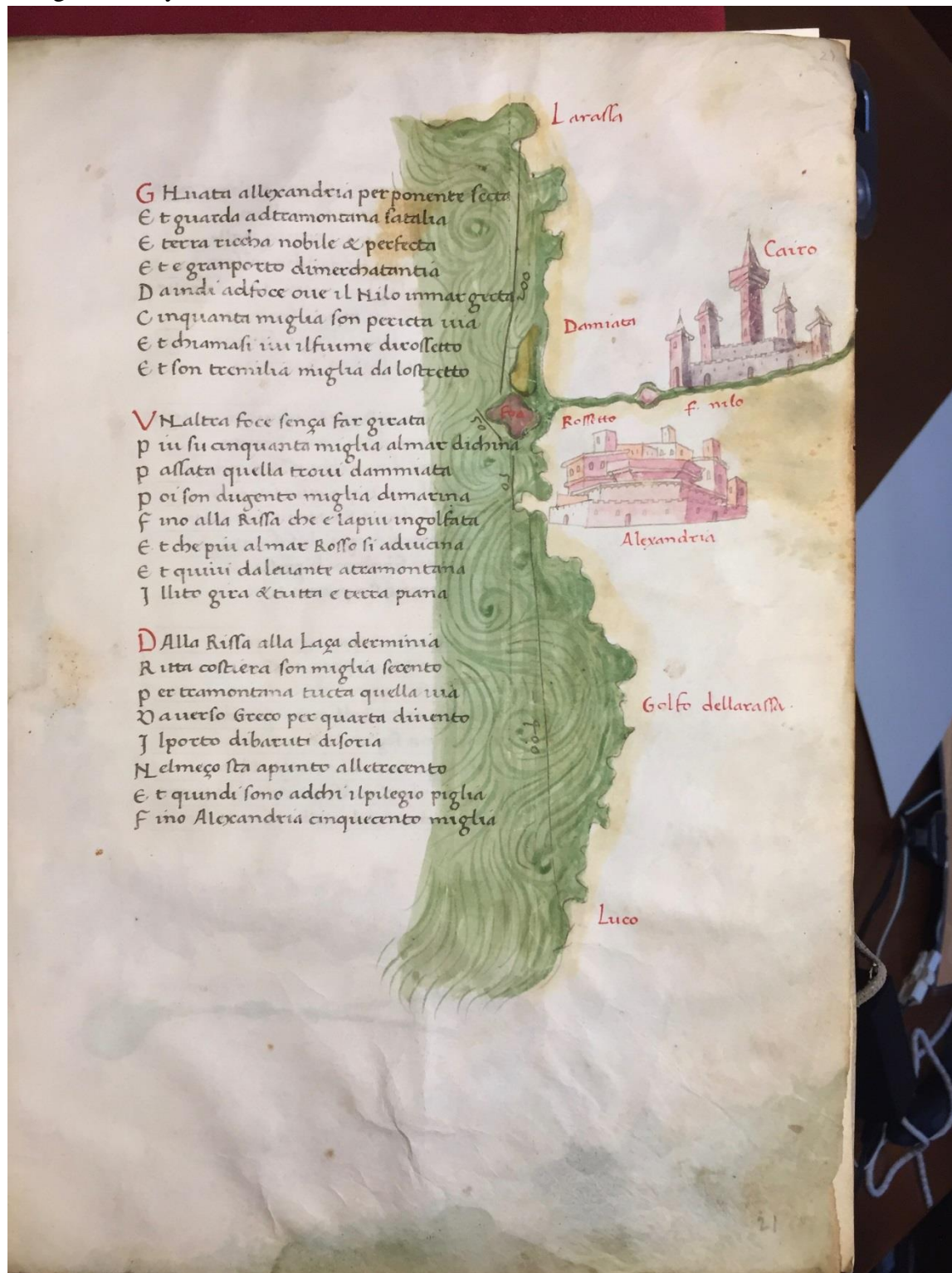




Figure 28, Johann Helffrich's 1566 map of Alexandria.



Figure 29, Piri Reis's 1513 map of Alexandria. Library of the Topkapı Palace in Istanbul.

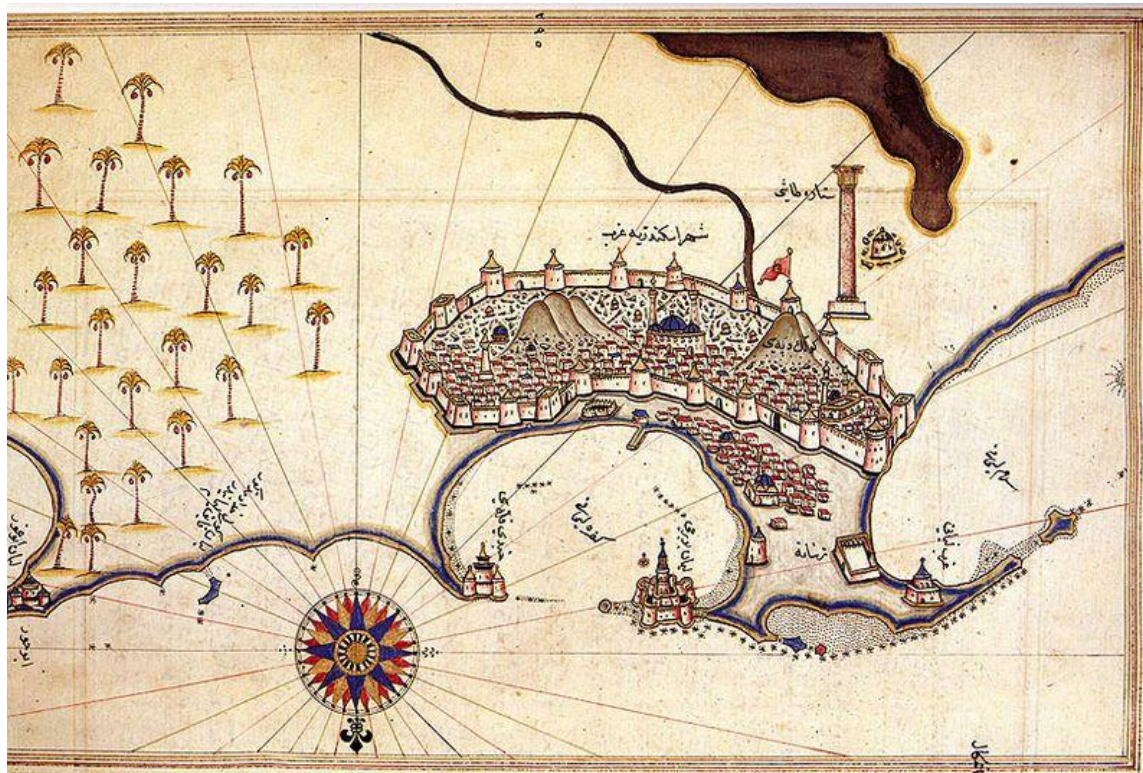




Figure 30, Detail of Fez and Morocco. Pierpont Morgan Library. MS M.721.



Figure 31, Illustration of Jerusalem and Saint Catherine's monastery, M.721 21v. Pierpont Morgan Library. MS M.721.

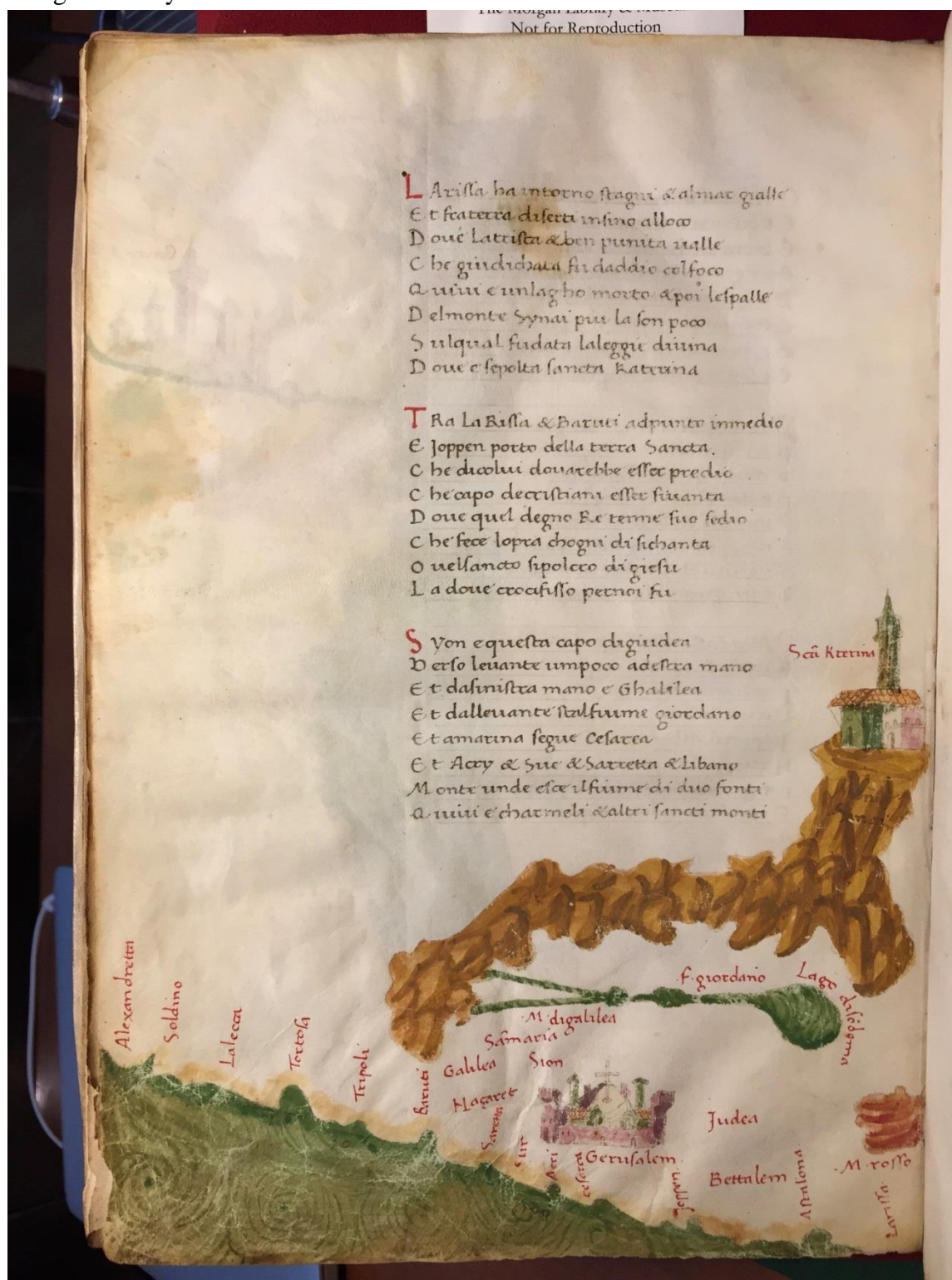




Figure 32, Hartman Schedel's 1493 map of Jerusalem from the *Liber Cronicarum*. University of Cambridge Library (Inc.0.A.7.2[888]).

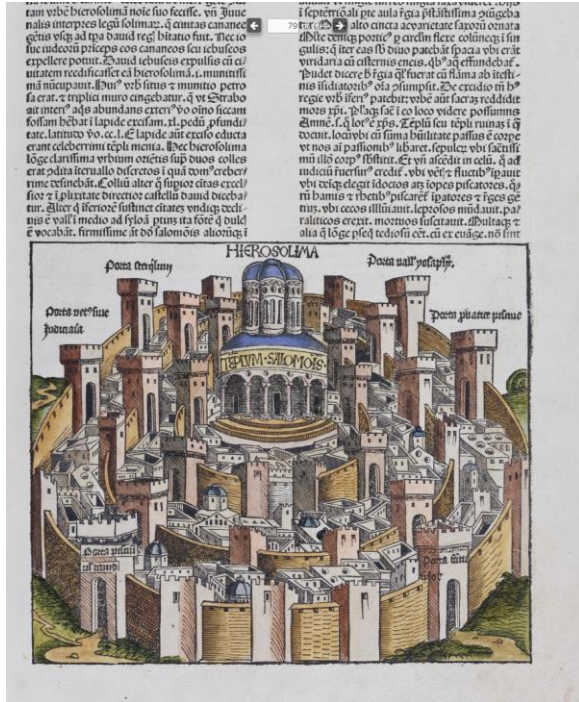


Figure 33, Konrad Grunenberg's 1487 map of Jerusalem from the *Beschreibung der Reise von Konstanz nach Jerusalem*. Badische Landesbibliothek in Karlsruhe.

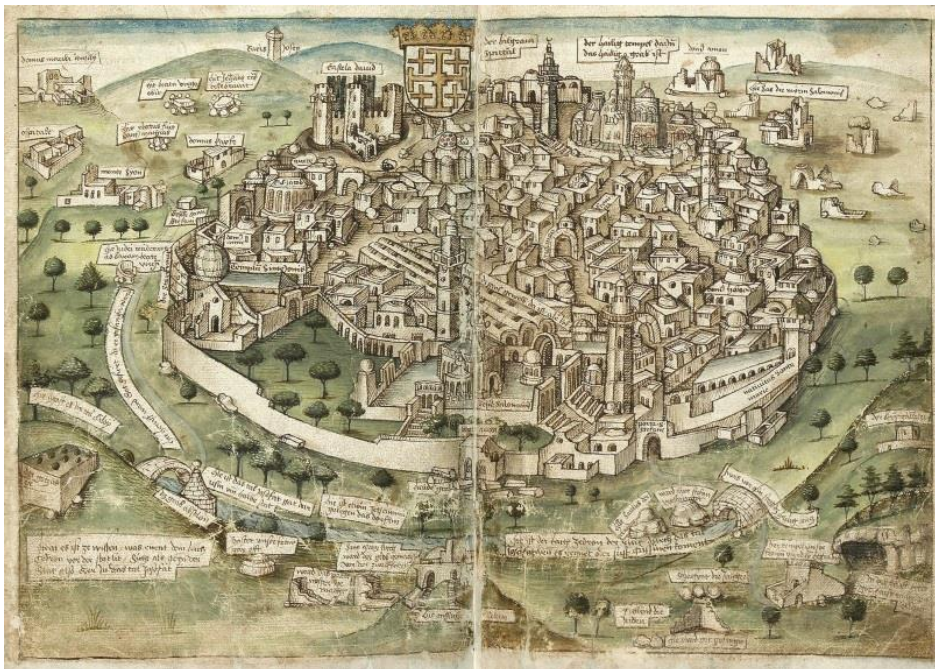


Figure 34, Monastery of St. Catherine, Georgian Academy of Sciences, Psalter H-182, f. 227.





Figure 35, Tower of Babel, M.721 17r. Pierpont Morgan Library. MS M.721.



Figure 36, NYPL MS 198: Tower of Babel. <https://digitalcollections.nypl.org/items/510d47da-edcb-a3d9-e040-e00a18064a99>



Figure 37, NYPL MS Col 2557 MA 110: Tower of Babel. <https://digitalcollections.nypl.org/items/510d47da-e7c0-a3d9-e040-e00a18064a99>

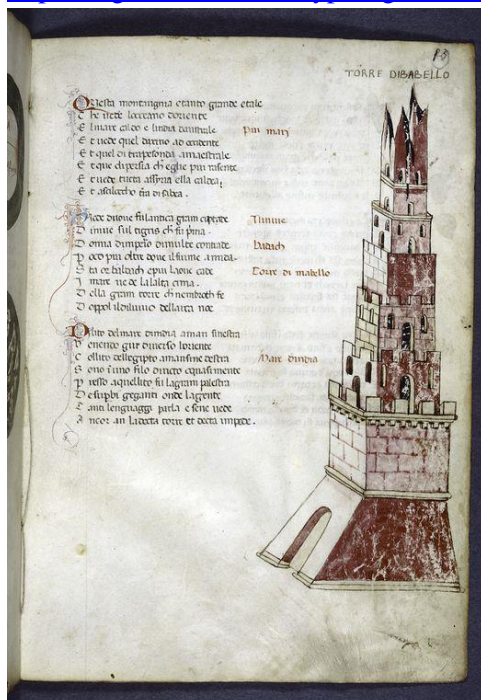




Figure 38, NYPL MS Col 2557 MA 109: Tower of Babel.

<https://digitalcollections.nypl.org/items/510d47da-e79d-a3d9-e040-e00a18064a99>



Figure 39, Beinecke Library MS 328: Tower of Babel. [http://brbl-](http://brbl-dl.library.yale.edu/vufind/Record/3592273)

[dl.library.yale.edu/vufind/Record/3592273](http://brbl-dl.library.yale.edu/vufind/Record/3592273)



Figure 40, Vatican Urb. Lat. 752: Tower of Babel.

[http://www.mss.vatlib.it/gui/console?service=present&term=@5Urb.lat.752\\_ms&item=1&add=0&search=1&filter=&relation=3&operator=&attribute=3040](http://www.mss.vatlib.it/gui/console?service=present&term=@5Urb.lat.752_ms&item=1&add=0&search=1&filter=&relation=3&operator=&attribute=3040)



Figure 41, Figure 19: Boston Public Library MS f Med 125: Tower of Babel.

<https://archive.org/details/lasfera00dati>

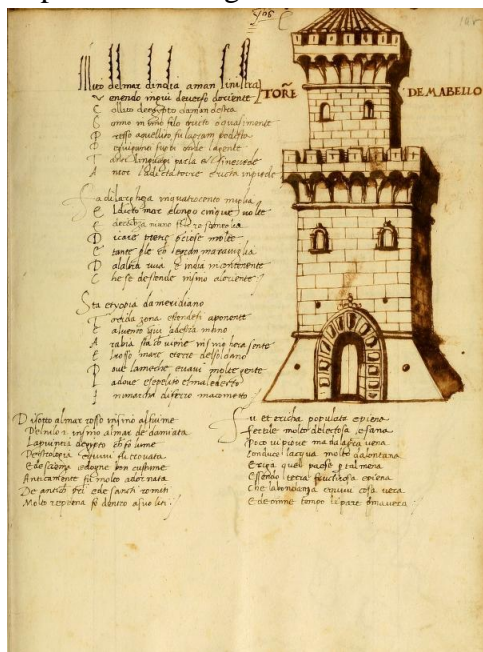


Figure 42, Library of Congress PQ 4621. D17 54 1475: Tower of Babel.

<https://www.loc.gov/item/70277411/>

