

Apocalyptic Cartography

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*Thematic Maps and the End of the World
in a Fifteenth-Century Manuscript*

By

Chet Van Duzer and Ilya Dines



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Cover illustration: Huntington HM 83, f. 10v. A prophesy map of the world from 1600 to 1606 [Fig. 25].
Courtesy of the Huntington Library.

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One of the authors (Van Duzer) had had digital images of the curious maps from Huntington Library HM 83 on his computer for some years, meaning to find an opportunity to study them, when in late 2011 he received an announcement of the conference “Charting the Future and the Unknown in the Middle Ages and Renaissance,” to be held at Barnard College in New York in December of 2012. A proposal to present a paper titled “Mapping the End of the Earth: Apocalyptic *Mappaemundi* in a Fifteenth-Century Manuscript” at the conference was accepted, and it was the research done in preparation for giving that paper, and the positive reception of the paper at the conference, that made him appreciate just how rich and important the Huntington manuscript is. Our thanks to Phillip John Usher for organizing the conference at Barnard.

Our subsequent work together in transcribing and understanding the texts in the manuscript—conducted during long Skype calls between California and Jerusalem—went very smoothly, though it was laced with some choice remarks about the handwriting of the scribes who wrote HM 83. We wish other authors working together as positive and enjoyable a collaborative relationship.

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Chet Van Duzer

Los Altos Hills, CA, 2015

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Washington, DC, 2015

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Introduction

In this book we offer a detailed analysis of the maps and some of the text in an unusual and unstudied fifteenth-century manuscript, San Marino, Huntington Library MS HM 83, which contains interrelated texts composed in 1486–88, almost certainly in Lübeck, Germany. The manuscript consists of four parts: a brief geographical treatise illustrated with maps (ff. 1r–8r); a concise account of the Apocalypse, also illustrated with maps (ff. 8v–12v); a somewhat heterogeneous section with material on astronomy and geography, also illustrated with maps (ff. 13r–18r); and a collection of texts on astrological medicine (ff. 19r–25v).

The manuscript is of significance both for the history of cartography and for the history of Apocalypticism. It contains what is by far the largest collection of *mappaemundi* in any one manuscript, and also the earliest sets of thematic maps, or maps that focus on a specific theme. Every study of thematic maps that we have consulted indicates that this genre did not exist before the seventeenth century, but in fact maps that can and should be identified as thematic were produced hundreds of years before that period, as we will show below. The maps in the Huntington manuscript are not the earliest thematic maps, but the manuscript contains the earliest sets of such maps that seem to have been produced in accordance with the modern understanding of the genre, and thus represent a remarkable achievement in the history of mapmaking, albeit one that had a very limited influence. The manuscript also contains a passage about the different functions of maps that is unique in fifteenth-century cartographical writings, and confirms that the anonymous author had an essentially modern understanding of thematic maps as a genre.

There are intriguing connections between the Huntington manuscript and another work produced in Lübeck a few years earlier: the *Rudimentum novitorium*, which was printed by Lucas Brandis in 1475. The *Rudimentum* contains a world map and a map of the Holy Land, both accompanied by extensive descriptive texts. There are many differences between the Huntington manuscript and the *Rudimentum*, most notably differences of purpose and tone, and there are also significant differences between the maps contained in the two works, but there are enough connections—which will be detailed below—to suggest some degree of influence of the printed work on the manuscript one.

The use of maps to illustrate what will happen to the earth during the Last Days in HM 83 not only creates a very distinctive, original, and striking

iconographical program for the Apocalypse,¹ but also involves an unusual melding of the symbolic and cartographic. The author boldly maps the future transformations the world will undergo, including two remarkable maps of the earth devoid of all physical features following the Apocalypse (ff. 11r and 12r). The manuscript is of signal interest for its innovative exploration of what can be done with maps in the fifteenth century. Study of the apocalyptic section of the manuscript reveals the mosaic of different sources that the anonymous author used, and one of his maps is a cartographic interpretation of a passage in the *Compendium theologiae* or *Compendium theologicæ veritatis* by Hugh Ripelin of Strasbourg (c. 1205 – c. 1270). There is a strong anti-Islamic strain in the apocalyptic section of the manuscript, and the anonymous author adopts a belief that goes back to John of Damascus (c. 645 or 676–749)² that Muhammad was a precursor of Antichrist. The author also invokes the legend of the Last Emperor, which was initially promulgated in the *Apocalypse* of pseudo-Methodius;³ although the author cites Methodius on f. 9r of the manuscript, he seems to have made little or no direct use of that text. We have not been able to determine the sources of all of the parts of the manuscript's unique chronology of the Apocalypse, but some parts are based on the author's interpretation of references to days in various passages in the Bible as indicating years, no doubt inspired, like so many other interpreters of biblical chronology, by a phrase in 2 Peter 3:8, "With the Lord a day is like a thousand years, and a thousand years are like a day." This book begins with a discussion of the manuscript and its historical context, which is followed by detailed discussion of the geographical sections, together with analysis of their maps.

1 For a detailed list of other manuscripts that contain illustrations of the Apocalypse see Richard Kenneth Emmerson and Suzanne Lewis, "Census and Bibliography of Medieval Manuscripts Containing Apocalypse Illustrations, ca. 800–1500," *Traditio* 40 (1984), pp. 337–379; 41 (1985), pp. 367–409; and 42 (1986), pp. 443–472. For chapters that together form a good discussion of art based on the Apocalypse see Richard K. Emmerson and Bernard McGinn, eds., *The Apocalypse in the Middle Ages* (Ithaca, NY: Cornell University Press, 1992), part 2, pp. 103–289.

2 See John W. Voor his, "John of Damascus on the Moslem Heresy," *The Muslim World* 24.4 (1934), pp. 391–398; Saint John of Damascus, *Writings: The Fount of Knowledge* (New York: Fathers of the Church, 1958) (= *The Fathers of the Church, A New Translation*, vol. 37), p. 153; and Daniel J. Sahas, *John of Damascus on Islam: The 'Heresy of the Ishmaelites'* (Leiden: Brill, 1972), pp. 68–69 and 131–141.

3 For discussion of this legend see Paul J. Alexander, "The Medieval Legend of the Last Roman Emperor and its Messianic Origin," *Journal of the Warburg and Courtauld Institutes* 41 (1978), pp. 1–15. For an edition and translation of Pseudo-Methodius see Pseudo-Methodius, *Apocalypse; An Alexandrian World Chronicle*, ed. and trans. Benjamin Garstad (Cambridge, MA: Harvard University Press, 2012).

Finally there is a full analysis of the apocalyptic treatise and its maps, including transcription, translation, and commentary on the full text of the apocalyptic section.

The authors' hope is that the present work will substantially enrich our understanding of fifteenth-century cartography and Apocalypticism, and also make known the work of a man who was one of the most original cartographers of the period. And perhaps this study will inspire and aid other scholars in undertaking a study of the last section of the manuscript, the collection of texts on astrological medicine.

Description of Huntington HM 83

Huntington Library HM 83 has been described twice before.¹ While relying on those earlier descriptions, we will add a number of details in our description; in particular, we will supply a much more thorough account of the manuscript's contents. The manuscript was bound by Rivière and Son sometime between 1880 and 1940² in blue morocco stamped with decorative ornaments in gold. Codicological analysis shows no evidence that the folios were ever bound with other works. It consists of 25 folios of yellowing paper, measuring 315 × 215 mm (text area 265 × 170 mm), preceded and followed by two flyleaves of modern paper (contemporary with the binding). The text is in one column, with up to 62 lines per page; the ink is dark brown to brown. The ruling, which is often very faint, consists of one and one vertical and one and one horizontal bounding lines. The sequence of the folios shows no discontinuities; the foliation, in pencil, is modern. The manuscript has red rubrics, and the capital letters are marked with red. There are numerous underlinings in blue pencil in the first sixteen folios that signal passages relating to the author, the year of the manuscript's creation, and passages of geographical interest, probably made by a dealer preparing a description of the manuscript. The paper has a watermark (a crown with a tall cross) similar to Briquet's 11807,³ which comes from a book published in Venice in 1487. The manuscript is in very good condition. According to Dutschke et al. in the *Guide to Medieval and Renaissance Manuscripts in the Huntington Library*, the text was written by three scribes, ff. 1–18, 20–21, and 22–25 by the first; ff. 19r–19v (the beginning of the section on

- 1 For previous descriptions of HM 83 see *Bibliotheca americana et philippina* (London: Maggs Bros., 1922–30), part IV (1925), n. 2588, pp. 1–3, with plate 1 following p. 32, which illustrates the map on ff. 6v–7r; and C. W. Dutschke et al., *Guide to Medieval and Renaissance Manuscripts in the Huntington Library* (San Marino, CA: The Library, 1989), vol. 1, pp. 141–143, and vol. 2, fig. 29.
- 2 For other bindings by this company see *Rare Books in Fine Bindings from Robert Rivière & Son of London* (New York: Anderson Galleries, 1916); and *Examples of Bookbinding Executed by Robt. Riviere & Son* (London: R. Riviere & Son, 1920). On the date of the binding implied by the exact name used for the company see Michael Riviere, “The Huguenot Family of Riviere in England,” *Proceedings of the Huguenot Society of London* 21 (1970), pp. 219–240, at 221.
- 3 See Charles-Moïse Briquet, *Les filigranes: dictionnaire historique des marques du papier dès leur apparition vers 1282 jusqu'en 1600; avec 39 figures dans le texte et 16,112 fac-similés de filigranes* (Leipzig: K. W. Hiersemann, 1923; New York: Hacker Art Books, 1985), in vol. 3.

astrological medicine) by the second; and ff. 21r–21v by the third.⁴ All of the text is in a scholarly cursive script; the manuscript is not a luxury production, but was laid out with care. There are no marginal glosses and the corners of the folios are clean, so there is no evidence of heavy use.

The evidence that the manuscript was made in Lübeck consists in the mentions of that city on ff. 4r (transcribed below), 6r (transcribed below), 6v (on a map), 14r (twice, transcribed below), and 15v (twice). The otherwise unexpected prominence of Lübeck in the manuscript makes it natural to conclude that the manuscript was made there. The evidence provided by the prominence of Lübeck on the map on f. 6v is diluted somewhat by the fact that *Brema* (Bremen) is also conspicuous, but nonetheless the aggregate of evidence in support of Lübeck as the place of composition is strong. It was a common practice for medieval cartographers to give prominence to their home cities or regions on their maps.⁵

The author speaks of himself in the first person on ff. 2v, 8v and 12v, passages that will be discussed below in the section on the author, but he does not name himself. With regard to the date of the manuscript, on f. 2v the text refers to *hoc anno Christi 1486*; on f. 9r there are three references to “this year 1486”; and on f. 16r to “this year 1488.” The presence of the hands of three scribes shows that the manuscript we have is a copy, rather than the autograph. The difference in the dates seems more likely due to delays in the composition of the text than in a protracted period of copying just twenty-five folios of text and maps. Thus the dates 1486 and 1488 seem to indicate when the text was composed; the scribes may well have written out HM 83 later, without altering the dates they found in the text, but we see no evidence for assigning the manuscript a date much later than 1488.

The contents of the manuscript are as follows.

4 Dutschke, *Guide to Medieval and Renaissance Manuscripts in the Huntington Library* (see note 1), vol. 1, pp. 141–143.

5 The eleventh-century St-Sever Beatus *mappamundi* (BnF ms lat. 8878, ff. 45 bisv–45 terr) gives a much greater prominence to France, and particularly to the abbey of Saint-Sever sur l'Adour in southwestern France where it was made, than the *mappaemundi* in Beatus manuscripts made in Spain: see François de Dainville, “La Gallia dans la mappemonde de Saint-Sever,” in *Actes du 93e Congrès National des Sociétés Savantes, Tours, 1968* (Paris: Bibliothèque Nationale, 1970), pp. 391–404, esp. 391. On the Ebstorf *mappamundi* of c. 1300 there is a vignette of the church and the graves of the martyrs of Ebstorf, see Hartmut Kugler, *Die Ebstorfer Weltkarte* (Berlin: Akademie Verlag, 2007), vol. 1, pp. 128–129, nos. 50.12 and 50.14, and vol. 2, p. 280, nos. 50.12 and 50.14. And the size of the British Isles is greatly exaggerated on the Evesham *mappamundi* of c. 1400, see Peter Barber, “The Evesham World Map: A Late Medieval English View of God and the World,” *Imago Mundi* 47 (1995), pp. 13–33, esp. 23–24.

1 ff. 1r–8v, The Brief Geographical Treatise

- f. 1r: The treatise opens with a discussion of the three Babylonias, and then addresses the three-fold division of the world among the sons of Noah, illustrated with a *mappamundi* that emphasizes the circumfluent ocean and the Mediterranean.

- f. 1v: Lists the provinces of Greater Asia, including Scythia, Magna Graecia, and Syria, with more detailed descriptions of Egypt and Ethiopia.

- f. 2r: The description of Ethiopia continues, followed by Arabia, Mesopotamia, Chaldea, Hyrcania, Armenia, Parthia, and India. Then follows a list of the oceanic islands that pertain to Greater Asia, and a list of the islands of the Mediterranean.

- f. 2v: A digression on Esther 1:1 which mentions 127 provinces between India and Ethiopia, and then a list of the provinces of Europe, beginning with the oceanic islands that pertain to Europe.⁶

- f. 3r: A map labeled *figura insularum maris oceani*, “map of the islands of the ocean,” with a large circumfluent ocean filled with circular islands whose size is exaggerated for clarity—except in the south, where the cartographer does not locate any islands. Below the map is a list of five of the islands in the Mediterranean that pertain to Europe, from Venice to the Balearics, with a note to see the following figure.

- f. 3v: Two overlapping *mappaemundi*, the upper one emphasizing the five European islands just listed (plus *portugalia*, probably an error for the *portus* said on f. 3r to belong to one of the islands); and the lower one of the Mediterranean islands that pertain to Greater Asia (see the list on f. 2r).

- f. 4r: A list of the provinces of mainland Europe, beginning with a detailed list of the provinces of Germany, then Italy, and then Spain.

- f. 4v: The list of the provinces of Spain continues, followed by those of France. Then there is a list of the provinces of mainland Africa. This is the end of the listing of the world's provinces.

- f. 5r: A generic view of some mountains, followed by a list of the mountains of the Holy Land, and then a list of mountains indicated as being on the edges of the Holy Land (*Montes qui sunt termini terre promissionis sunt hii*), though the list includes mountains as far west as the Pillars of Hercules.

- f. 5v: The list of mountains continues, followed by a short list of the lands of the kings of the Four Kingdoms of the Book of Daniel (Nebuchadnezzar,

⁶ The material about oceanic islands of Europe on f. 2v is transcribed by Axel Anthon Bjørnbo, “Adam af Bremens Nordensopfattelse,” *Aarbøger for Nordisk Oldkyndighed og Historie* 24.2 (1909), pp. 120–244, at 240–241.

Cyrus, Alexander the Great, and Octavian), and a list of the lands in which the twelve Apostles preached (there is a map that shows where the Apostles preached on f. 15r, some distance from this text).⁷

- f. 6r: The list of the lands in which the Apostles preached continues, followed by a map of the most important cities of the ancient world which is based on the discussion of the Four Kingdoms on the preceding folio.

- ff. 6v–7r: A large map labeled *Mappa mundi localis* that combines information from a few of the preceding sections, and thus shows many of the islands in the circumfluent ocean like the map on f. 3r, and also provides more detail about the mainland. The sphere of earth is shown off center in the sphere of water (see Fig. 4.14 below), in accordance with one explanation of how there was land above the waters, despite the fact that the sphere of earth was within the sphere of water.⁸

- ff. 7v–8r: A large map titled *Mappa de Aquis terram irrigantibus* or map of the waters that irrigate the land, which places great emphasis on the four rivers flowing from Paradise and the waters that make up the ‘T’ of a T-O map,⁹ but does not give information about other rivers.

7 A list of the places the Apostles preached also occurs in a context associated with both cartography and the Apocalypse in manuscripts of Beatus of Liébana’s *Commentary on the Apocalypse*, where the list introduces the world map. The list is edited in Beatus of Liébana, *Obras completas de Beato de Liébana*, ed. and trans. Joaquín González Echegaray, Alberto del Campo, and Leslie G. Freeman (Toledo: Estudio Teológico de San Ildefonso; and Madrid: Biblioteca de Autores Cristianos, 1995), pp. 135 and 137. But we do not detect any sign of influence of Beatus’s list in the Huntington manuscript.

8 This explanation goes back to Peter Abelard (1079–1142), *Expositio in Hexameron*, in *Patrologia Latina* 178:748; see W. G. L. Randles, “Classical Models of World Geography and their Transformation Following the Discovery of America,” in Wolfgang Haase and Meyer Reinhold, eds., *The Classical Tradition and the Americas* (Berlin and New York: W. de Gruyter, 1994-), vol. 1, *European Images of America and the Classical Tradition*, part 1, pp. 5–76, at 22, and also see the quotation on this same subject from Paul of Burgos (Pablo de Santa María) in his *Additiones* (written in 1429) to the *Postilla* of Nicholas of Lyra, cited on Randles’s p. 76. Randles’s essay is reprinted in his *Geography, Cartography and Nautical Science in the Renaissance: The Impact of the Great Discoveries* (Aldershot, Hampshire, Great Britain; and Burlington, VT: Ashgate/Variation, 2000). There is a dramatic illustration of this explanation in Lyon, Bibliothèque Municipale, MS 1351, f. 35r, a fourteenth-century manuscript of the *Breviari d’amor*.

9 A T-O map, the most typical medieval *mappamundi*, is so called from the ‘O’ of the circumfluent ocean that surrounds the circle of the lands, and the ‘T’ formed by the bodies of water that divide the land into Asia, Europe, and Africa. Usually the Mediterranean divides Europe and Africa, the Tanais or Don River divides Europe and Asia, and the Nile divides Asia and Africa. As we will see below, the cartographer of the map in ff. 7v–8r identifies the bodies of water that separate the continents differently.

- f. 8v: The geographical treatise ends with an account of the four different functions or themes that a *mappamundi* can have; the treatise on the Apocalypse begins on the lower part of the folio.

2 ff. 8v–12v, The Treatise on the Apocalypse

- f. 8v: The treatise on the Apocalypse begins with a simple map showing the world from the birth of Christ to the year 639, which is when the author holds that Muhammad began his career (though this is not the traditional date).

- f. 9r: A detailed map showing the world from 639 to 1514, particularly illustrating the spread of Islam, which is said to be in all parts of the world except Europe, and Europe is said to be very weak. In the text surrounding the map the author says that it is based on the Book of Revelation from chapter 12 to the beginning of chapter 19.

- f. 9v: A prophecy map showing the world from 1514 to 1570, when Sword of Islam has conquered Europe and reached all the way to the edges of the earth, but not to the islands in the ocean. The author says that the map is based on Revelation 19:5–11.

- f. 10r: A symbolic prophecy map showing the world from 1570 to 1600. The series of small-to-large triangles in the center represent the increase of Antichrist, and the author says that the other spikes that radiate to the edges of the earth represent the ten horns of the beast of Daniel 7—though there are actually eleven spikes depicted. Ten kings (*Rex Egipti*, *Rex indie*, etc.) are indicated at the edge of the map.

- f. 10v: A prophecy map of the world from 1600 to 1606. Antichrist is indicated at the center of the earth, in Jerusalem, and the four peninsulas that jut into the ocean are symbolic geographical representations of the four horns of Antichrist by which he will persuade people to join him (Deceit, Cunning, Cruelty, and Imitation of the Deity). The ten tribes of Israel are shown traveling from their island to Jerusalem to join Antichrist.

- f. 11r: A prophecy map of the world from 1606 to 1661 (though as we will see, the latter date is an error for 1651). The situation has changed completely: the center of the earth is now occupied by the flag and law of Christ, which will be raised and worshipped throughout the world. At the bottom of the folio there is a second map that shows the surface of the earth devoid of features and place names, and the circumfluent ocean empty as well. The text nearby explains that all of the features of the earth have been burned away.

- f. 11v: An illustration of the Last Judgment. The gates of Paradise are at the top, the elect in a curved band just below, then Jesus and the Apostles in the sky; below on the earth is the Mount of Olives, then the damned in a curved band standing above the abyss that leads to Hell. The center of the earth does not coincide with that of the water, as is also the case in the maps in ff. 6v–7r and 7v–8r.

- f. 12r: Description of the Last Judgment, Resurrection, and renewal of the earth. At the bottom of the page there is a map of a featureless earth which the text says represents the world after the Last Judgment.

- f. 12v: A diagram of the relative diameters of the earth and Hell. The text discusses their dimensions, and the crystallization of the earth following the Last Judgment and its role in separating the blessed and the damned. At the bottom of the page there is a passage about the three Babylonias very similar to that on f. 1r.

3 ff. 13r–18r, Heterogeneous Section on Astronomy and Geography

- f. 13r: The cosmos is depicted in a diagram of the spheres labeled *hec figura appellatur ffabrica mundi*, from the sphere of the earth out to the Empyrean.

- f. 13v: Above, a diagram showing the sphere of the earth eccentric with the sphere of water, with an indication of the course of the sun around the earth and discussion of their relative sizes. Below, a diagram of the relative sizes of a star, the earth, and the moon.

- f. 14r: A diagram of ten climatic zones overlaid on a copy of the map of the waters of the earth in ff. 7v–8r. The text lists various places and the climates in which they are located, and also the distances between a few places.

- f. 14v: A diagram of nine climatic zones, with a table supplying the elevation of the North Pole, the length of the longest day, and the width of each climate in German miles.¹⁰

- f. 15r: A map showing seven climatic zones and also the locations in which the Apostles preached (see the list of these places in f. 5v). Below the map,

10 Johannes de Sacrobosco in his *De sphaera*, book 3, supplies the elevation, *dies prolixior*, and measurement in *miliaria* of each climate, but for a seven-climate system, and thus his numbers are very different than those in the Huntington manuscript. It seems that such a table originally accompanied Roger Bacon's *Opus maius*: see Roger Bacon, *The 'Opus majus' of Roger Bacon*, ed. John Henry Bridges (London: Williams and Norgate, 1900), vol. 1, p. 296: *Ostendam etiam cum latitudine cujuslibet climatis quot miliaria quodlibet continet in se, & quot gradus in coelo cuilibet respondeant, & quot horas habet dies prolixior*.

under the heading *Occidens*, there is a list of several regions, islands, and cities, together with indications of which climates they are located in.

- f. 15v: The list of places with their climates continues, with a short discussion of Gog and Noah's Ark.
- f. 16r: A summary of world history, emphasizing the Last Days. History had three parts: the first ended with the Flood, the second coincided with Babylon, and the third with Rome. The birth of Muhammad coincides with the beginning of Rome's decline, and the global rule of Islam will be ended by the Last Roman Emperor and Jesus Christ. Then Antichrist will arise and come to power, gaining followers through Deceit, Cunning, Cruelty, and Imitation of the Deity (see f. 10v). He will rule for 1000 years—a very unusual duration for his reign in the Apocalyptic tradition—with only Enoch and Elias, who will return from Paradise, preaching against him; they then rise to Heaven again. Antichrist promises to do the same and rises above the Mount of Olives, but Jesus kills him and begins his reign.
- f. 16v: Two genealogical tables, one from Adam to Jesus (ignoring the lineage through Nathan), and one from Adam to David.
- f. 17r: Continuation of the second genealogical table, splitting now in two, and tracing on the left, the line from David through Nathan to Heli (and then we are to understand that Mary, who is listed on the right, was the daughter of Heli); and on the right, the line from David through Solomon to Jacob, ending with Jesus.
- ff. 17v–18r: Discussion of the Four Kingdoms of the world,¹¹ with details on symbols in the prophetic books of the Bible.
- f. 18v: blank.

4 ff. 19r–25v, Treatise on Astrological Medicine

- f. 19r: The beginning of the texts on astrological medicine. The section opens with two canons from Bartholomäus Mariensüss.¹² The first is headed *Canon primus de fleubotomia*, “First precept on phlebotomy,” and begins

11 See H. H. Rowley, *Darius the Mede and the Four Empires in the Book of Daniel: A Historical Study of Contemporary Theories* (Cardiff: University of Wales Press Board, 1935); Joseph Ward Swain, “The Theory of the Four Monarchies: Opposition History under the Roman Empire,” *Classical Philology* 35.1 (1940), pp. 1–21; and Janet L. R. Melnyk, “The Four Kingdoms in Daniel 2 and 7: Chapters in the History of Interpretation,” Ph.D. Dissertation, Emory University, 2001.

12 On these canons see David Juste, *Les manuscrits astrologiques latins conservés à la Bayerische Staatsbibliothek de München* (Paris: CNRS éditions, 2011), p. 161; they were printed in

*Notandum primo volens eligere dies aptos pro fleubotomia primo eligat signa ignea que sunt aries et sagittarius....*¹³ The second, which also begins on this folio, is headed *Canon zus de farmacia id est medicina*, and begins *Ypocrates ait Cecus medicus est qui astronomiam nescit nam si dabit medicinam*.¹⁴

- f. 19v: The text on medicine continues from the previous folio.
- ff. 20r–21r: The text begins *Incipit messehallach de coniunctionibus*, and comes from Messahallah's *Epistola Messahalae de rebus eclipsium, et de coniunctionibus planetarum*, translated by Joannes Hispalensis, which was later printed in *Liber quadripartiti Ptholemei* (Venice: Octavianus Scotus, Bonetus Locatellus, 1493), and edited by Joachim Heller in *Messahalae antiquissimi ac laudatissimi inter Arabes astrologi, libri tres* (Nuremberg: Apud Ioannem Montanum & Vlricum Neuberum, 1549), Fiii–Giii verso.¹⁵

Johannes Regiomontanus, *Ephemerides* (Venice: Ratdolt, 1481), on [a8v]–[a9v]. We thank David Juste for these references.

- 13 A text with essentially the same incipit (*Volens eligere dies...*) also appears in Augsburg, Staats- und Stadtbibliothek, 2^o Cod. 208, ff. 2r–10v: see *Handschriftenkataloge der Staat- und Stadtbibliothek Augsburg* (Wiesbaden: O. Harrassowitz, 1974–1993), vol. 3, pp. 209–216, at 211; Vienna, Österreichische Nationalbibliothek, MS 5184, ff. 8v–10r: see Grażyna Rosińska, *Scientific Writings and Astronomical Tables in Cracow: A Census of Manuscript Sources (xivth–xvth Centuries)* (Wrocław: Ossolineum, Polish Academy of Sciences Press, 1984), p. 455, no. 2373; and in Munich, Bayerische Staatsbibliothek, CLM 24865, ff. 25r–28v: see Lynn Thorndike and Pearl Kibre, *A Catalogue of Incipits of Mediaeval Scientific Writings in Latin* (London: Mediaeval Academy of America, 1963), col. 1707F. This manuscript is listed in *Catalogus codicum manu scriptorum Bibliothecae regiae monacensis* (Munich: sumptibus Bibliothecae, prostat in Libraria Palmiana, 1858–2000), vol. 4, part 4, p. 150, no. 1533, as a fifteenth-century manuscript, *Calendarium cum excerptis ex Johanne de Monte regali et aliunde (f. 29 Tabula facta a. 1466 ad meridianum Patauii)*.
- 14 This same text occurs in London, British Library, Harley MS 2269, an astrological compendium from the first half of the sixteenth century, on ff. 91r–91v.
- 15 On Messahallah see David Pingree, “Māshā’allāh,” in Charles Coulston Gillispie, ed., *Dictionary of Scientific Biography* (New York: Scribner, 1970–), vol. 9, pp. 159–162. On the *De rebus eclipsium* see F. J. Carmody, *Arabic Astronomical and Astrological Sciences in Latin Translation: A Critical Bibliography* (Berkeley and Los Angeles, 1956), pp. 30–32; and Lynn Thorndike, “The Latin Translation of Astrological Works by Messahala,” *Osiris* 12 (1956), pp. 49–72, at 62–66, including a list of manuscripts of the work. There is an English translation and discussion of the Hebrew version of the work in B. Goldstein, “The Book of Eclipses of Masha'allah,” *Physis* 6 (1964), pp. 205–213; and in Abraham Ibn Ezra, *The Book of the World: A Parallel Hebrew-English Critical Edition of the Two Versions of the Text*, ed. and trans. Shlomo Sela (Leiden and Boston: Brill, 2010), pp. 240–259. There is an English translation of the Latin version in Benjamin N. Dykes, *Astrology of the World* (Minneapolis: Cazimi Press, 2014), vol. 2, pp. 145–155.

• ff. 21r–21v: The text begins *Miliaria ptholomei de magnitudinibus corporum celestium et distantis orbium sunt hec redacta ad theutonica miliaria secundum quod 60 agri faciunt miliare*, and ends *utrum tam magne sint vel tam distent vide in passionale de ascensione domini Raby moyses dicit ibi et cetera. Sed oportet addiscentem credere*. We have not succeeded in determining the source. Ptolemy does supply the distances between the planetary spheres in his *Planetary Hypotheses*, but this work was unknown during the Middle Ages.¹⁶ The reference to *Raby moyses* is to Moses Maimonides (1135–1204), specifically to a passage about the distances between the planetary orbs in Jacobus de Voragine's *Legenda aurea* that Jacobus attributes to Maimonides.¹⁷ On f. 21r of HM 83 the circumference of the earth is given as *9100 miliaria theutonica*, but on f. 12v our author indicates that it is *8000 miliarium teutonicorum*, which indicates that he is using a different source than in the earlier passage (it is worth mentioning that the two passages were written by different scribes).

• f. 21v: A brief text *De virtute et proprietate planetarum*, “On the virtues and properties of the planets.” We have not been able to determine the source of the text on the first half of the folio; the text on the second half, which begins *Notandum quod 12 sunt signa*, is excerpted and paraphrased from Robert Grosseteste, *De impressionibus aeris seu de prognosticatione*.¹⁸

16 For the Greek text of Book 1 of the *Planetary Hypotheses* with a German translation, and a German translation of Book 2 (which does not exist in Greek, only in Arabic), see J. L. Heiberg, ed., *Claudii Ptolemaei opera quae exstant omnia* (Leipzig: Teubner, 1907), vol. 2, *Opera astronomica minora*, pp. 69–145. For discussion of the work see Noel M. Swerdlow, “Ptolemy’s Theory of the Distance and Sizes of the Planets: A Study of the Scientific Foundations of Medieval Cosmology,” Ph.D. Dissertation, Yale University, 1968; and Albert Van Helden, *Measuring the Universe: Cosmic Dimensions from Aristarchus to Halley* (Chicago: University of Chicago Press, 1985), pp. 21–25. The Arabic version of the text has been translated into English by Bernard R. Goldstein, “The Arabic Version of Ptolemy’s ‘Planetary Hypotheses,’” *Transactions of the American Philosophical Society* 54.4 (1967), pp. 3–55; and into French by Régis Morelon, “La version arabe du *Livre des Hypothèses* de Ptolémée,” *Mélanges Institut Dominicain d’Études Orientales du Caire* 21 (1993), pp. 7–85.

17 See Görg K. Hasselhoff, “Maimonides in the Latin Middle Ages: An Introductory Survey,” *Jewish Studies Quarterly* 9.1 (2002), pp. 1–20, at 11–13; Jacobus de Voragine, *Legenda aurea*, ed. Giovanni Paolo Maggioni (Florence: SISMEL and Edizioni del Galluzzo, 1998), sect. 67, pp. 483–484; and Jacobus de Voragine, *The Golden Legend or Lives of the Saints*, trans. William Caxton, ed. F. S. Ellis (New York: AMS Press, 1973), vol. 1, p. 111.

18 The text of Robert Grosseteste, *De impressionibus aeris seu de prognosticatione*, is supplied in *Die Philosophischen Werke des Robert Grosseteste Bischofs von Lincoln*, ed. Ludwig Baur (Münster: Aschendorff, 1912), pp. 41–51, with the passage in the Huntington manuscript at 42–43. For discussion of the work see Samuel Harrison Thomson, *The Writings of Robert Grosseteste, Bishop of Lincoln, 1235–1253* (Cambridge, England: The University Press, 1940),

• f. 22r: Text and two tables from Robert Grosseteste, *De impressionibus aeris seu de prognosticatione*,¹⁹ together with a circular diagram that indicates which signs of the zodiac correspond to which parts of the body—a diagrammatic rendering of the Zodiac Man.²⁰ This material does not come from this same work by Grosseteste.

• ff. 22v–24v: Text beginning *De divisione corporis humani secundum planetas in natura eorumdem propria et cum egritudinibus sibi propriis*, which consists of excerpts from William of Marseille, *De urina non visa* (1219).²¹

• f. 25r: Text under the heading *De diebus criticis* with a large square diagram for determining one's horoscope; source undetermined.

• f. 25v: Text ends: *...et tristicie nunc aspicit ascendens est quod locorum gaudii saturni, Saturnus enim gaudet in lamentacione planctu et tribulatione*. This text seems to be a paraphrase of a passage in the *De astronomia tractatus x* of Guido Bonatti, the celebrated thirteenth-century astronomer and astrologer.²²

pp. 103–104, which includes a list of manuscripts; to that list should be added Harvard University, Houghton Library, MS Lat 361, ff. 104r–105r, thirteenth century. Also see Ezio Franceschini, “Sulla presunta datazione del ‘De impressionibus aeris’ di Roberto Grossetesta,” *Rivista di filosofia neo-scolastica* 44 (1952), pp. 22–23.

19 This text from Grosseteste's *De impressionibus aeris* is supplied in *Die Philosophischen Werke des Robert Grosseteste Bischofs von Lincoln* (see Ch. 1, n. 18), pp. 43–44.

20 See Charles West Clark, “The Zodiac Man in Medieval Medical Astrology,” Ph.D. Dissertation, University of Colorado at Boulder, 1979; and the same author's “The Zodiac Man in Medieval Medical Astrology,” *Journal of the Rocky Mountain Medieval and Renaissance Association* 3 (1982), pp. 13–38.

21 See William of Marseille, *Guillaume l'Anglais, le frondeur de l'uroscopie médiévale (XIII^e siècle): édition commentée et traduction du ‘De urina non visa’*, ed. and trans. Laurence Moulinier-Brogi (Geneva: Librairie Droz, 2011), pp. 144–148 and 254. The text of this chapter is also supplied in Graziela Frederici Vescovini, “I programmi degli insegnamenti del collegio di medicina, filosofia e astrologia, dello statuto dell'Università di Bologna del 1405,” in Jacqueline Hamesse, ed., *Roma, magistra mundi: itineraria culturae medievalis: mélanges offerts au Père L.E. Boyle à l'occasion de son 75^e anniversaire* (Louvain-la-Neuve: Fédération des Instituts d'Etudes Médiévales, 1998), vol. 3, pp. 193–223, esp. 213–214. For discussions of the work beside the very thorough one offered by Moulinier-Brogi in his introduction see Lynn Thorndike, *A History of Magic and Experimental Science* (New York: Macmillan, 1923–58), vol. 2, pp. 485–487; and Roger French, “Astrology in Medical Practice,” in Luis García Ballester et al., eds., *Practical Medicine from Salerno to the Black Death* (Cambridge and New York: Cambridge University Press, 1994), pp. 30–59, esp. 44–48.

22 See *Guidonis Bonati forliviensis mathematici De astronomia tractatus x. universam quod ad iudiciariam rationem Nativitatum, Aëris, Tempestatum, attinet, comprehendentes* (Basel, 1550), Pars prima, cols. 92–93, “In quibus domibus Planetæ gaudent Cap. xi”; translated

Some aspects of the arrangement of material in the manuscript are difficult to understand. The manuscript has three well-defined parts: the geographical material on ff. 1r–8v, which ends with a discussion of the four different functions of *mappaemundi*; the treatise on the Apocalypse on ff. 8v–12v; and the material on astrological medicine on ff. 19r–25v. The geographical material on ff. 1r–8v may be taken as a sort of preface to the apocalyptic section, describing the world's geography before it underwent dramatic changes in the Last Days, and reviewing the Four Kingdoms of the world (f. 5v) and also the missions of the Apostles (ff. 5v–6r). The role of the heterogeneous section on astronomy and geography on ff. 13r–18r is less clear. On the one hand, the astronomical material makes the section a good transition to the material on astrological medicine, but on the other, there are strong connections between the geographical material in this section and that in ff. 1r–8v: for example, the map of the Ptolemaic climatic zones on f. 14r (see Fig. 4.16) is clearly based on the map of the world's waters on ff. 7v–8r (see Fig. 4.15 below), and the map of the locations where the Apostles preached on f. 15r is closely related to the list of the places that the Apostles preached on ff. 5v–6r. For convenience, in what follows, the geographical material in these two sections will be treated together.

into English in Benjamin N. Dykes, *The Book of Astronomy* (Golden Valley, MN: Cazimi Press, 2007), vol. 1, pp. 140–141. On Bonatti see Cesare Vasoli, “L’astrologo forlivese Guido Bonatti,” *Atti del convegno internazionale di studi danteschi* (Ravenna, 10–12 settembre 1971) (Ravenna: Longo, 1979), pp. 239–260; and Bernhard Dietrich Haage, “Bonatti, Guido,” in Wolfgang Stämmler and Karl Langosch, eds., *Die deutsche Literatur des Mittelalters: Verfasserlexikon* (Berlin and New York: de Gruyter, 1978–), vol. 11, cols. 269–270.

The Historical Context: Lübeck in the Fifteenth Century

The city of Lübeck was founded on an island in the river Trave by Adolf II, Count of Schauenburg and Holstein, in 1143. Its position on the Trave, with easy access to the Baltic, gave it great potential as a center of trade, and that potential was realized through its leadership of the Hanseatic League beginning in the fourteenth century, and its role as a node in the Baltic trade network that stretched from Novgorod in the east to London and Flanders in the west, and included Norway and Sweden to the north. Timber, fur, honey, and grain flowed from east to west, while cloth and manufactured goods flowed east, and copper ore, iron ore, and fish came south.¹

Lübeck was at the peak of its power during the fifteenth century, in the latter part of which (1486–88) the texts in Huntington HM 83 were composed. The city's politicians were widely respected and helped resolve a number of international disputes, and the city's dynamic mayor, Hinrich Castrop (1419–1488), strengthened the city's walls, improved its harbor, and in 1478 organized what was perhaps the most spectacular pageant the city had ever seen to honor the arrival of Albert, Duke of Saxony.²

- 1 On the topography and growth of the city see Manfred Gläser, "The Emergence of Lübeck as a Medieval Metropolis," in Nils Engberg et al., eds., *Archaeology of Medieval Towns in the Baltic and North Sea Area* (Copenhagen: The National Museum, Danish Middle Ages & Renaissance; and Odense: University Press of Southern Denmark, 2009), pp. 79–92. There is a good discussion of the nature of the Hanseatic League and Lübeck's role as its head in Stuart Jenks, "A Capital without a State: Lübeck *caput totius hanze* (to 1474)," *Historical Research* 65.157 (1992), pp. 134–149; for brief discussion of Lübeck in the context of northern European trade see Michael Postan, "The Trade of Medieval Europe: The North," in Edward Miller, Cynthia Postan, and Michael M. Postan, eds., *The Cambridge Economic History of Europe*, vol. 2, *Trade and Industry in the Middle Ages* (Cambridge: Cambridge University Press, 1987), pp. 168–305 *passim* and esp. 237–239 and 277–279. There is an extensive account of Lübeck in the Middle Ages in Erich Hoffmann, "Lübeck in Hoch- und Spätmittelalter: Die große Zeit Lübecks," in Antjekathrin Grassmann, ed., *Lübeckische Geschichte* (3rd edn. Lübeck: Schmidt-Römhild, 1997), pp. 79–340.
- 2 Wilson King, *Chronicles of Three Free Cities, Hamburg, Bremen, Lübeck* (London: J. M. Dent & Sons; and New York: E. P. Dutton & Co., 1914), pp. 380–383; also see Gerhard Neumann, *Hinrich Castrop: Ein Lübecker Bürgermeister aus der zweiten Hälfte des 15. Jahrhunderts* (Lübeck: Staatsarchiv, 1932) (= Veröffentlichungen zur Geschichte der Freien und Hansestadt Lübeck,

A letter written in about 1453 or a little later by a doctor to a patron on the city council was preserved by the Councilman Simon Batz, who was active from 1457–1464, and offers a glowing description of the city, and it is worth citing the description in full:³

Set hercle unum scio, ut hic locus egregius a divina terrenaque imperiali maiestate plerisque dodatus est muneribus. Hic sunt fluenta limpidissima, aer serenissimus, terra opima, nemora iocundissima, pomeria florentissima, edificia pulcherrima, platee fecibus semper purgate, presul devotissimus, clerus disciplinatus, beneficia grassa, templa politissima, in quibus divine laudes perpetim summo cultu peraguntur, turres altissime que suis aureis fulgoribus intuencium oculis eminus choruscant, cenobia preclara omni religione fulgencia, bibliotece numero librorum ditissime, divini verbi precones disertissimi, mercatores in negociacionibus studiosissimi, cives omnium rerum opulentissimi: Et quod superest, policia reipublice ornatissima, civitas omnibus defensionibus munitissima, totaque gens apprime pacifica. Sed taceo de pulchro femineo sexu, cuius delectabilis intuitus lassata ingenia vires cogit recuperare. Venus enim ac Dyana nostras Lubicensis in pulchritudine antecedunt; illas enim vero morum venustas, personarum proceritas, melliflua eloquia, roseus lilialisque aspectus opulentissime decorant. Sagax quippe natura in earundem nobili creacione penitus in nullo erravit. Porro ut summarie proferam: quidquid boni ac pulchri est hic

11); Fritz Rörig, "Hinrich Castrop, Bürgermeister von Lübeck," in Peter Richard Rohden, ed., *Gestalter deutscher Vergangenheit* (Potsdam and Berlin: Sanssouci, 1937), pp. 215–216; and Antjekathrin Grassmann, "Castorp, Hinrich: geb. 1419 Dortmund (?), gest. 14. 4. 1488 Lübeck. – Kaufmann, Bürgermeister, Diplomat," *Biographisches Lexikon für Schleswig-Holstein und Lübeck* (Neumünster: Wachholtz, 1970–2011), vol. 13, pp. 96–99. For more detail on trade in Lübeck in the early fifteenth century see Michail Lesnikov, "Lübeck als Handelsplatz für ost-europäische Waren im 15. Jahrhundert," *Hansische Geschichtsblätter* 78 (1960), pp. 67–86; and Harm von Seggern, "Die führenden Kaufleute in Lübeck gegen Ende des 15. Jahrhunderts," in Gerhard Fouquet, ed., *Netzwerke im europäischen Handel des Mittelalters* (Ostfildern: Thorbecke, 2010), pp. 283–316.

3 The Latin text quoted here is supplied by V. Wattenbach, "Aus dem Briefbuche des Meister Simon von Homburg," *Anzeiger für Kunde der deutschen Vorzeit*, Neue folge, 20.2 (February, 1873), cols. 33–36, at 35–36; and Carl Friedrich Wehrmann, "Ein Urtheil über Lübeck aus der Mitte des fünfzehnten Jahrhunderts," *Zeitschrift des Vereins für Lübeckische Geschichte und Altertumskunde* 4 (1884), pp. 271–274, at 273; a German translation is supplied by Antjekathrin Grassmann, "Lübeck – 'Ein Zweites Paradies': Ein Blick auf die Reichs- und Hansestadt in der zweiten Hälfte des 15. Jahrhunderts," in *Bernt Notke. Das Triumphkreuz im Dom zu Lübeck* (Kiel: Ludwig, 2010), pp. 35–48, at 35–36. The English translation here is ours.

splendidus copiosiusque quam in ceteris invenitur locis. Alter quoque paradus non inmerito poterit appellari.

The one thing I know, by Hercules, is that this excellent place is provided by the divine and the earthly imperial majesty with many gifts. Here there are the clearest streams, the brightest air, the best soil, graceful groves, flourishing parks, beautiful buildings, streets always free of filth, a godly bishop, well-ordered clergy and rich benefices, beautiful churches where the praise of God is always sung in the most splendid manner, high towers, whose golden luster shines in the eyes of beholders from afar, and famous monasteries shining with religion, libraries very rich in books, and eloquent preachers of the divine word, merchants very zealous in their businesses, and citizens wealthy in all things. What is more, the state government is highly honored, the city is well protected by ramparts of all kinds, and the population is very peaceful. But I say nothing of the beautiful women, whose delectable appearance causes one's tired spirits to recover energy. Venus and Diana may exceed the women of Lübeck in beauty, but the city's women are abundantly endowed with charming manners, height, mellifluous eloquence, and the aspect of roses and lilies. Indeed, wise Nature made not the slightest error in their noble creation. To sum up: whatever is good and beautiful is present here more splendidly and copiously than in other cities, so that Lübeck can rightly be called a second paradise.

Of course texts praising cities, *laudes urbium*, were a well-established literary genre,⁴ but in the case of Lübeck in the second half of the fifteenth century, the city seems to have merited this praise: so concludes Antjekathrin Grassmann at the end of her article just cited. There is a somewhat less encomiastic, but still enthusiastic description of the city in Hartmann Schedel's *Liber*

4 See J. K. Hyde, "Medieval Descriptions of Cities," *Bulletin of the John Rylands Library* 48 (1965–1966), pp. 308–340; reprinted in J. K. Hyde, *Literacy and its Uses: Studies on Late Medieval Italy*, ed. Daniel Waley (Manchester and New York: Manchester University Press, 1993), pp. 1–32; Carl Joachim Classen, *Die Stadt im Spiegel der Descriptiones und Laudes urbium in der antiken und mittelalterlichen Literatur bis zum Ende des zwölften Jahrhunderts* (Hildesheim and New York: Olms, 1980); and Hartmut Kugler, *Die Vorstellung der Stadt in der Literatur des deutschen Mittelalters* (Munich: Artemis, 1986).

chronicarum of 1493,⁵ and Johannes Schöner in 1515 describes the city as *negociatorio locus celeberrimus*, “a place very well known to the businessman.”⁶

It is interesting that the author of HM 83 would write about the Apocalypse in a city that at the time was a “second paradise.” While plagues and other events such as the fall of Constantinople to the Turks could incline authors to thoughts of the end of time,⁷ authors are not merely the products of their surroundings: for example, although he lived in a time of “plague, famine, extreme weather, earthquakes, a violent civil war, and barbarian invasions,” Andrew of Caesarea (563–637) in his *Commentary on the Apocalypse* concluded that the end of the world was *not* approaching.⁸ It is also worth keeping in mind Bernard McGinn’s observation that “Apocalypticism has always been charac-

- 5 Hartmann Schedel, *Liber chronicarum* (Nuremberg: Anton Koberger, 1493), ff. 270v–271r (in the German edition the passage is on ff. 265v–266r); Hartmann Schedel, *Sarmatia, the Early Polish Kingdom: From the Original Nuremberg Chronicle, Printed by Anton Koberger in 1493*, trans. Bogdan Deresiewicz (Los Angeles: Plantin Press, 1976), pp. 37–40. On the descriptions and images of cities in the *Liber chronicarum* see Albrecht Classen, “Hans Sachs and his Encomia Songs on German Cities: Zooming Into and Out of Urban Space from a Poetic Perspective. With a Consideration of Hartmann Schedel’s *Liber Chronicarum* (1493),” in Albrecht Classen, ed., *Urban Space in the Middle Ages and Early Modern Age* (Berlin and New York: Walter de Gruyter, 2009), pp. 567–594. For Hans Sachs’s encomium of Lübeck, which was written in the second half of the sixteenth century, see Hans Sachs, *Hans Sachs*, ed. Adelbert von Keller and Edmund Goetze (Hildesheim: G. Olms, 1964), vol. 23, pp. 450–452. Volume 23 in this reprinting is vol. 207 of the Bibliothek des Literarischen Vereins in Stuttgart in the earlier edition (Tübingen: Literar. Verein, 1870–1908).
- 6 See Schöner’s *Luculentissima quaedam terrae totius descriptio* (Nuremberg: Ioannis Stuchssen, 1515), f. 31v. There is a mid-sixteenth-century account of the city in Münster’s *Cosmographia*: see Sebastian Münster, *Cosmographiae universalis Lib. 6* (Basel: Petri, 1552), Book 3, pp. 733–737.
- 7 See for example Laura Ackerman Smoller, “Of Earthquakes, Hail, Frogs, and Geography: Plague and the Investigation of the Apocalypse in the Later Middle Ages,” in Caroline Walker Bynum and Paul Freedman, eds., *Last Things: Eschatology and Apocalypse in the Middle Ages* (Philadelphia: University of Pennsylvania Press, 2000), pp. 156–187 and 316–337; Robert E. Lerner, “The Black Death and Western European Eschatological Mentalities,” *American Historical Review* 86.3 (1981), pp. 533–552; Wolfram Brandes, “Der Fall Konstantinopels als apokalyptisches Ereignis,” in Sebastian Kolditz and Ralf C. Müller, eds., *Geschehenes und Geschriebenes: Studien zu Ehren von Günther S. Henrich und Klaus-Peter Matschke* (Leipzig: Eudora-Verlag, 2005), pp. 453–470; and Kaya Şahin, “Constantinople and the End Time: The Ottoman Conquest as a Portent of the Last Hour,” *Journal of Early Modern History* 14.4 (2010), pp. 317–354.
- 8 Andrew of Caesarea, *Commentary on the Apocalypse*, trans. Eugenia Scarvelis Constantinou (Washington, DC: Catholic University of America Press, 2011), esp. pp. 12–15.

terized by an intricate mixture of optimism and pessimism.”⁹ The choice of subject by the author of HM 83 may reflect a pious thinker uninfluenced by his prosperous surroundings; it may also indicate a man with a different life experience than most other citizens of Lübeck, a possibility that will be explored below.

Lübeck did not have a university in the Middle Ages, but printing was established reasonably early in the city, in 1474, four years after the technology had reached Nuremberg, and two years before it reached Rostock and London, for example. One of the first books published in the city was the anonymous *Rudimentum novitiorum*, printed by Lucas Brandis, which contains maps, and which we will discuss in more detail below.¹⁰ The encomium of Lübeck cited above mentions the “rich libraries” of the city’s monasteries, and we do know that there were at least two extensive private libraries in the city. One belonged to Simon Batz, the councilman and humanist who preserved the letter containing the encomium;¹¹ and the other belonged to the vicar Conrad Stenhop: in the Universitätsbibliothek Rostock there are twenty-nine folio incunabula, all of them on juridical subjects, which Stenhop illuminated himself. Given that his library must have included theological works as well, Stenhop had an unusually large collection for the time.¹² Additional information about

- 9 Bernard McGinn, “The Apocalyptic Imagination in the Middle Ages,” in Jan A. Aertsen and Martin Pickavé, eds., *Ende und Vollendung: Eschatologische Perspektiven im Mittelalter* (Berlin: W. de Gruyter, 2002) (= *Miscellanea Mediaevalia* 29), pp. 79–94, at 84.
- 10 On early printing in Lübeck see Isaak Collijn, “Lübecker Frühdrucke in der Stadtbibliothek zu Lübeck,” *Zeitschrift des Vereins für Lübeckische Geschichte und Altertumskunde* 9 (1908), pp. 285–333; and Dieter Lohmeier, “Die Frühzeit des Buchdrucks in Lübeck,” in Alken Bruns and Dieter Lohmeier, eds., *Die Lübecker Buchdrucker im 15. und 16. Jahrhundert. Buchdruck für den Ostseeraum* (Heide in Holstein: Boyens, 1994), pp. 11–53. For discussion of the advent of the Renaissance in Lübeck see Theodore Hach, *Die Anfänge der Renaissance in Lübeck* (Lübeck: H. G. Rahtgens, 1889).
- 11 See Robert Schweitzer and Ulrich Simon, “‘Boeke, gude unde böse...’: Die Bibliothek des Lübecker Syndikus Simon Batz von Homburg; Rekonstruktionsversuch anhand seines Testaments und der Nachweis aus dem Bestand der ehemaligen Ratsbibliothek in der Stadtbibliothek Lübeck,” in Rolf Hammel-Kiesow and Michael Hundt, eds., *Das Gedächtnis der Hansestadt Lübeck: Festschrift für Antjekathrin Grassmann zum 65. Geburtstag* (Lübeck: Schmidt-Römhild 2005), pp. 127–158; for details on Batz see Gerhard Neumann, “Simon Batz, Lübecker Syndikus und Humanist,” *Zeitschrift des Vereins für Lübeckische Geschichte und Altertumskunde* 58 (1978), pp. 49–73.
- 12 G. Kohfeldt, “Der Lübecker Vikar Conrad Stenhop, ein mittelalterlicher Illuminator und Büchersammler,” *Centralblatt für Bibliothekswesen* 20 (1903), pp. 281–285; English summary in *The Literary Collector: A Monthly Magazine of Booklore and Bibliography* 6 (1903),

libraries in Lübeck in the fifteenth century would certainly be welcome, but it does seem that the author of НМ 83 would have had access to ample bibliographic resources for researching and composing his book.

p. 97. Also see Nilüfer Krüger, *Conradus Stenhop: Geistlicher – Gelehrter – Sammler; Inkunabeln der Universitätsbibliothek Rostock* (Rostock: Universität, 1998).

The Author

The author of the works in HM 83 does not indicate his name, but he does give some clues about his identity. As indicated above, the works in the manuscript seem to have been composed in Lübeck, so we can confine our attention to candidates from that city.¹ Of course the fact that HM 83 includes a substantial and apparently original section on the Apocalypse suggests that the author was a man of the cloth, and this likelihood seems confirmed by his indication of his purpose in writing his book (on f. 12v): *Arbitror ergo quod harum figurarum firma fides et frequens consideratio efficacius hominem retraherent a peccatis quam multa bona verba*, “I believe therefore that a firm faith in and frequent contemplation of these diagrams will more effectively restrain a man from sins than would many good words.” That is, the stated aim of the work is religious edification, while its implicit purpose is preparation for the Last Judgment.

On the same folio (f. 12v), which contains a diagram of the relative diameters of earth and of Hell, the author writes, *Hanc figuram calculavi secundum regulas geometrie ex supposita quantitate ambitus terre 8000 miliarium teutonicorum...*, “I calculated this diagram according to the rules of geometry from the supposed circumference of the earth, 8000 German miles...,” and this statement implies that he had at least some training in mathematics.

The author’s most interesting and revealing statements about himself are on f. 8v, in his discussion of the different purposes of *mappaemundi*. The following passage reveals that the author had experience making maps and had thought about the problems involved, particularly the lack of space for all of the place names; had traveled to the Holy Land; had read at least one travel book; and had studied other *mappaemundi*, including their sources. As the Latin is supplied below, we quote only our English translation here:

1 In our search for the author of the works in HM 83 we consulted Rhiman A. Rotz, “Profiles of Selected Lubeck Citizens, 1360–1450, for Investigations into Political and Social History,” type-written manuscript, on deposit in the Archiv der Hansestadt Lübeck, 1975, Bestand 9.1, Signatur L X III 12_1. Rotz’s work would offer a greater chance of including the author of the works in HM 83 if it extended later into the fifteenth century, but it does include information about the travels of the people listed. We did not find any good candidates among these profiles.

And even if the first painter of a map put the true distance of places, yet <his> successors, one after another, significantly transposed the places and distances, forced by the narrowness of space in the illustrated map, where even one place name written in full would force another to an incorrect location. Because of this I decided to write the whole names of places each opposite to the preceding <one?>, and in the map to write just the beginnings of the names, so that the narrowness in the map will not restrict the names and places because of their position, as may be seen in the map.... I have been in the land of pilgrimage in which there are no such gatherings of monstrous men as are depicted there in maps. Because of this, I argue that such men are only in all other parts of the world, and that consequently, the common *mappamundi* is in that part once again mistaken. However, in certain islands there are monstrous men whom I read in a travel book are born as follows. A woman gave birth to a monstrous female child whom she was ashamed to raise, and she wished to kill her, so she cast her away on a certain deserted island. In another place, another woman gave birth to a male monster, whom for the same reason, by an accident of fortune, she cast away on the same island. Through God's will and care, they were brought up, and when they were adults, they came together and thereupon they generated monstrous men in that island. And the painter of the first illustrated map thus painted monstrous men in that one island, or rather in many islands. To later map painters, such monstrous men and other things still more marvelous painted everywhere in all of the islands in the ocean <and> in the edge of the mainland appeared to be a <mere> decoration of maps. Thinking nothing of the falsehood, they painted them in common maps in the circuit of islands in the ocean.... From the beginning, *mappaemundi* were diversely painted from Holy Scripture, chronicles, and pagan cosmography.

This fascinating passage raises many interesting questions, for example: What were the *mappaemundi* that showed monstrous races in the Holy Land? And what is the travel book that gives this account of the generation of monsters on islands? These and other questions that the passage raises will be discussed below, but suffice it to say here that the passage establishes the author as a man with abundant experience studying *mappaemundi*. It is worth pointing out that the author says that he “was in the land of pilgrimage” (*eram in terra peregrinationis*), but not that he was a pilgrim—though he does not explicitly say that he was not a pilgrim, either.

With regard to the author's journey to the Holy Land, Lübeck was a common stopping point of northern European pilgrims going to Santiago de Compostela in Spain, and in fact a hostel for pilgrims, named for St. Gertrude of Nivelles, patron saint of travelers, was built in the city in 1360.² There was no similar building in Lübeck for pilgrims to the Holy Land, and the expense and difficulties of that voyage to the east entailed that the number of pilgrims traveling there from Germany was not high.³ But we do have records of several residents of Lübeck who made the journey at such a date that it is at least possible that HM 83 was composed by one of them (or by a man that one of them had sent to the Holy Land in his place).⁴ The standard route to the Holy Land from Germany was overland to Venice, and then by ship from Venice to Acre.⁵

- 2 See Herta Borgs, "Abenteurer, Söldner und Pilger fanden Unterkunft im Gasthaus zu Lübeck," *Lübeckische Blätter* 141 (1981), pp. 363–364 and 366–367; Wolfgang Erdmann, "Zur geplanten 'Sanierung' des Lübecker Gertrudenspitals (Gasthaus des Heiligen-Geist-Hospitals), Große Gröpelgrube 8," *Zeitschrift des Vereins für Lübeckische Geschichte und Altertumskunde* 70 (1990), pp. 61–69; and Manfred Eickhöler, "Das St. Gertrud-Gasthaus des Heiligen-Geist-Hospitals: Eine mittelalterliche Pilgerherberge in der Großen Gröpelgrube," *Lübeckische Blätter* 172.13 (2007), pp. 222–224.
- 3 On the high cost of the journey see Norbert Ohler, "Zur Seligkeit und zum Trost meiner Seele. Lübecker unterwegs zu mittelalterlichen Wallfahrtsstätten," *Zeitschrift des Vereins für Lübeckische Geschichte und Altertumskunde* 63 (1983), pp. 83–103, at 89–90; and Marie-Luise Favreau-Lilie, "The German Empire and Palestine: German Pilgrimages to Jerusalem between the 12th and 16th Century," *Journal of Medieval History* 21 (1995), pp. 321–341.
- 4 On early modern pilgrimage from Lübeck to the Holy Land, in addition to the works cited in the following notes, see Ohler, "Zur Seligkeit und zum Trost meiner Seele" (see Ch. 3, n. 3); Otto F. A. Meinardus, "Mittelalterliche Heilig-Land-Pilger aus dem norddeutschen Raum," *Familienkundliches Jahrbuch Schleswig-Holstein* 30 (1991), pp. 15–23; and Otto F. A. Meinardus, "Die mittelalterliche Umwelt des Lübecker Schmerzensweges," *Zeitschrift des Vereins für Lübeckische Geschichte und Altertumskunde* 72 (1992), pp. 265–276, esp. 268–270.
- 5 On pilgrim routes from Germany to the Holy Land see H. F. M. Prescott, *Jerusalem Journey: Pilgrimage to the Holy Land in the Fifteenth Century* (London: Eyre & Spottiswoode, 1954), pp. 69–114; John Kenneth Hyde, "Navigation of the Eastern Mediterranean in the Fourteenth and Fifteenth Centuries According to Pilgrims' Books," in H. McK. Blake, T. W. Potter, and D. B. Whitehouse, eds., *Papers in Italian Archaeology, 1: The Lancaster Seminar: Recent Research in Prehistoric, Classical, and Medieval Archaeology = British Archeological Reports*, Supplementary Series, 41 (1978), pp. 521–537; reprinted in the author's *Literacy and its Uses: Studies on Late Medieval Italy*, ed. Daniel Waley (Manchester and New York: Manchester University Press, 1993), pp. 87–111; Lia Scheffer, "A Pilgrimage to the Holy Land and Mount Sinai in the 15th Century," *Zeitschrift des Deutschen Palästina-Vereins* 102 (1986), pp. 144–151; Andrea Denke, *Venedig als Station und Erlebnis auf den Reisen der Jerusalem-pilger im späten Mittelalter* (Remshalden: Hennecke, 2001), esp. pp. 29–47 and

Residents of Lübeck who undertook the journey to the Holy Land around the middle of the fifteenth century include:

- 1431 Henrich Vike, also called Grambeke;⁶
- 1432 Henrich Zeleghe;⁷
- 1434 Henrich Tors sent a man to the Holy Land in his place;⁸
- 1436 Gerhard von Bergen wrote his will before going on pilgrimage (no additional records);⁹
- 1440 Henrich Ghereken began his journey to Jerusalem;¹⁰
- 1457 Johannes Boysenborch sent a man to the Holy Land in his place;¹¹
- 1468 Hinrich Constin (or Heinrich Constantin), a rich citizen of Lübeck, returned from a pilgrimage to the Holy Land in 1468 and built a small monument to give thanks for his safe return on Jerusalemberg, just outside the city.¹²

97–107; and Renard Gluzman, “Between Venice and the Levant: Reevaluating Maritime Routes from the Fourteenth to the Sixteenth Century,” *The Mariner’s Mirror* 96.3 (2010), pp. 262–292. For an analysis showing that the average speed of travel of ships carrying pilgrims from Venice to Jaffa in the fifteenth century was 2.8 knots see Sergio Bellabarba, “The Sailing Qualities of Venetian Great Galleys in the 15th Century: Evidence of their Influence on the Development of Sailing Ships in the Atlantic Area During the Following Century,” in Carlo Beltrame, ed., *Boats, Ships, and Shipyards: Proceedings of the Ninth International Symposium on Boat and Ship Archaeology, Venice 2000* (Oxford: Oxbow Books, 2003), pp. 201–211.

- 6 On Vike see Jacobus a Melle, *De itineribus Libecensium sacris, seu de religiosis et votivis eorum peregrinationibus, vulgo Wallfarthen, quas olim devotionis ergo ad loca sacra susceperunt, commentatio* (Lübeck: Böckmann, 1711), pp. 21 and 79; and Reinhold Röhricht, *Deutsche Pilgerreisen nach dem heiligen Lande* (Gotha: F.A. Perthes, 1889), p. 122.
- 7 On Zeleghe see Melle, *De itineribus Libecensium sacris* (see Ch. 3, n. 6), p. 79; and Röhricht, *Deutsche Pilgerreisen* (see Ch. 3, n. 6), p. 122.
- 8 On Tors see Melle, *De itineribus Libecensium sacris* (see Ch. 3, n. 6), pp. 46 and 73; and Röhricht, *Deutsche Pilgerreisen* (see Ch. 3, n. 6), p. 123.
- 9 On von Bergen see Melle, *De itineribus Libecensium sacris* (see Ch. 3, n. 6), p. 15; and Röhricht, *Deutsche Pilgerreisen* (see Ch. 3, n. 6), p. 127.
- 10 On Ghereken see Melle, *De itineribus Libecensium sacris* (see Ch. 3, n. 6), p. 15; and Röhricht, *Deutsche Pilgerreisen* (see Ch. 3, n. 6), pp. 131–132.
- 11 On Boysenborch see Melle, *De itineribus Libecensium sacris* (see Ch. 3, n. 6), p. 79; and Röhricht, *Deutsche Pilgerreisen* (see Ch. 3, n. 6), p. 142.
- 12 On Constin see Melle, *De itineribus Libecensium sacris* (see Ch. 3, n. 6), p. 14; Röhricht, *Deutsche Pilgerreisen* (see Ch. 3, n. 6), p. 153; Jacob von Melle, *Gründliche Nachricht von der kaiserl. freyen und des H.R. Reichs Stadt Lübeck* (Lübeck: G. C. Green, 1787), pp. 533–540; Heinrich Asmus, *Leitfaden zur Lübeckischen Geschichte: Nebst einer Sammlung Legenden, Volkssagen, Märchen und kurzer Beschreibungen einiger Merkwürdigkeiten der freien*

We have no additional evidence that would single out any of the men in the preceding list as a candidate for author of HM 83. Moreover, it is possible that the author of HM 83 moved to Lübeck after visiting the Holy Land, in which case he would not appear on this list—and there also might simply be no record of his voyage.

However, there was another man from Lübeck who spent time in the Holy Land and who does seem like a good candidate. In the second half of the fifteenth century, a man from Lübeck named Baptista, a doctor, was in charge of caring for pilgrims at the Franciscan monastery on Mount Zion; he had been appointed to this duty by Pope Pius II.¹³ Baptista was evidently a very capable man, for in addition to his job caring for pilgrims, he supervised repairs to the roof of the Church of Bethlehem.¹⁴ Pius II was Pope from 1458 to 1464, so Baptista was appointed during that interval; he treated Felix Fabri on Mount

Hansestadt Lübeck (Lübeck, 1834), pp. 115–116; Theodore Hach, *Die Anfänge der Renaissance in Lübeck* (Lübeck: H. G. Rahtgens, 1889), pp. 4–5; Emil F. Fehling, *Lübeckische Ratslinie von den Anfängen der Stadt bis auf die Gegenwart* (Lübeck: Max Schmidt-Römhild, 1925), p. 79, no. 551; and Johannes Baltzer, Friedrich Bruns, and Huigo Rathgens, eds., *Die Bau- und Kunstdenkmäler der Freien und Hansestadt Lübeck*, vol. 4, *Die Klöster: die kleineren Gotteshäuser der Stadt; die Kirchen und Kapellen in den Außengebieten; Denk- und Wegekreuze und der Leidensweg Christi* (Lübeck: Nöhring, 1928), pp. 623–627.

- 13 Meinardus, “Mittelalterliche Heilig-Land-Pilger” (see Ch. 3, n. 4), pp. 17–18, relying on Luke Wadding, ed., *Annales Minorum seu trium ordinum a S. Francisco institutorum* (Florence: Quaracchi, 1931–), vol. 14 (covering the years 1472–1491), the section for the year 1478, p. 194, no. 8; and Guido Farris and Albert Storme, *Ceramica e farmacia di San Salvatore a Gerusalemme* (Genoa: Sagep, 1982), p. 22, who write: “Como infermiere del convento, il papa Pio II inviò il frate Battista da Lübeck, che aveva il grado di dottore, e che la cronaca qualifica molto esperto in medicina.” Farris and Storme cite as sources Felix Fabri and Paul Walther (see just below) and a note in *Le Voyage de la sainte cyté de Hierusalem*, which cites Calahorra—see the next note. On Baptista also see Otto F. A. Meinardus, “Die Franziskaner in Bethlehem: Bruder Battista aus Lübeck,” *Zeitschrift des Vereins für Lübeckische Geschichte und Altertumskunde* 71 (1991), pp. 349–351; and Prescott, *Jerusalem Journey* (see Ch. 3, n. 5), pp. 121–122, 144–145, and 202.

- 14 Juan de Calahorra, *Chronica de la provincia de Syria, y Tierra Santa de Gerusalén: contiene los progressos, que en ella ha hecho la religion serafica, desde el año 1219 hasta el de 1632* (Madrid: Por Iuan Garcia Infançon, 1684), pp. 297–298: “No obstante esto era el Soldan muy afecto à los Religiosos; y assi le permitió, que reparasse muy à su satisfacion aquel Santissimo Templo, el qual bolvió à cubrir, como antes estaua, de planchas de plomo, sirviendose de las antiguas, y añadiendo aquellas que fueron necessarias de nuevo. Para todo esto le fue de grande alivio un Religioso Aleman, llamado Fray Baptista de Lubige, Varón muy ingenioso, y en la medicina peritissimo, a qual avia graduado de Doctor, en la dicha facultad, el Pontifice Pio Segundo, y la avia embiado à Tierra Santa para que curasse à los Religiosos.”

Zion in 1482,¹⁵ and also Paul Walther around the same time,¹⁶ so Baptista held his post on Mount Zion for approximately twenty years. Given that HM 83 has a substantial section on medicine, and that the author had been to the Holy Land, Baptista must be considered a strong candidate for the author of the works in the manuscript. Further, it is worth mentioning that Enea Silvio Piccolomini (later Pope Pius II, who appointed Baptista to his post) had a strong interest in geography, and wrote geographical treatises on Europe and Asia.¹⁷ Of course not everyone who knew Pope Pius II wrote about geography, but it is interesting that one of the very few people who we do know was connected with Baptista was a geographer. If Baptista did return home to Lübeck after his years in the Holy Land (which we do not know), and if it was he who composed the works in HM 83, this was a project of his older years.

Two other statements by the author that relate to the Holy Land are particularly illuminating. On f. 2r of the manuscript, we read:

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- 15 See Felix Fabri, *The Wanderings of Felix Fabri*, in *The Library of the Palestine Pilgrims' Text Society* (London: Palestine Pilgrims' Text Society, 1887; New York: AMS Press, 1971), vols. 7–10, in vol. 9, p. 113.
- 16 See Paulus Walther, *Fratr̃s Pauli Waltheri Guglingensis Itinerarium in Terram Sanctam et ad Sanctam Catharinamm*, ed. M. Sollweck (Tübingen: Litterarischer Verein in Stuttgart, 1892), pp. 136–137: *Post hoc in festo sancti Petri cathedra [22 Febr.], quod erat in sabato sequenti scl. ante Reminiscere, visitavit me dominus misericorditer ex alto cum colica passione, que me tantum torquebat per tres dies et noctes, quod suspicabar me exalare spiritum. Tandem per devotas preces effusas specialiter pro me ab omnibus fratribus recordatus est dominus clementie sue et per suam misericordiam mediante medicina, quam studiose devotus frater Baptista adhibuit, tranatulit a me dominus talem vehementem et horribilem dolorem adiciens vite mee adhuc aliquos dies, ut me emendarem.* On Paul see Kristian Bosselmann-Cyran, “Walther, Paul (von Guglingen),” in Wolfgang Stammeler and Karl Langosch, eds., *Die deutsche Literatur des Mittelalters: Verfasserlexikon* (Berlin and New York: de Gruyter, 1978–), vol. 10, cols. 655–657.
- 17 On Pius II's interest in geography see Alfred Willi Berg, *Enea Silvio de' Piccolomini (Papst Pius II) in seiner Bedeutung als Geograph: Ein Beitrag zur Geschichte der Erdkunde im Quattrocento* (Halle a.S.: Buchdruckerei des Waisenhauses, 1901); Nicola Casella, “Pio II tra geografia e storia: La ‘Cosmografia’,” *Archivio della Società Romana di Storia Patria* 95 (1972), pp. 35–112; and Luigi Guerrini, “Un ordine ancora imperfetto. Ricerche sulla genesi degli interessi geografici e storici di Enea Silvio Piccolomini (1430–1445),” in *Un pellegrinaggio secolare: due studi su Enea Silvio Piccolomini* (Rome: Edizioni di storia e letteratura, 2007), pp. 1–109. Piccolomini's geographical works were first published after his death as *Historia rerum ubique gestarum* (Venice: Johann von Köln and Johannes Manthen, 1477); his treatise on Asia has been edited and translated into Spanish by Domingo F. Sanz as *Descripción de Asia, Eneas Silvio Piccolomini (Papa Pío II)* (Madrid: Consejo Superior de Investigaciones Científicas, 2010).

Arbitror principium Indie de terra sancta distare vix 600 miliaribus teutonicis. Et 200 miliaria per indiam ad Insulas oceani maris que etiam per 200 miliaria protrahantur in latum usque ad paradisum.

I judge that the beginning of India is barely 600 German miles <east> from the Holy Land, and <it is> 200 miles across India to the islands of the <Indian> Ocean, which are spread widely for a distance of 200 miles all the way to Paradise.

The author calculates that the distance from the Holy Land to the Terrestrial Paradise was not insurmountable, and it certainly seems that he had contemplated the possibility of a voyage there. It is easy to imagine him on a hill in the Holy Land looking to the east and thinking about means of transport and costs, or else making the calculation after he returned to Lübeck and pondering what might have been. There is a similar passage on f. 6r of the manuscript, though here the author mentions the eastern edge of the world, rather than Paradise:

Nota Jerusalem distat secundum taxationem viatorum et nautarum de lubeck, que est <secunde?> aquilonaris, circa 777 miliaria teutonica, et de lubeck sunt quasi 223 miliaria ad Islandiam, etiam de Jerusalem circuiter mille miliaria ad finem terre. Sed astronomorum minor est computus; potest tamen utrorumque esse verus, quod viatores et naute oblique vadunt, Astronomi vero in aere recte computant vero obstaculum non habent.

Note that according to the estimate of travelers and sailors, Jerusalem is about 777 German miles from Lübeck, which well <to?> the north, and from Lübeck it is about 223 miles to Iceland, and from Jerusalem about 1000 miles to the <eastern> end of the earth. The figures of the astronomers are smaller, but it is possible that both are correct, for travelers and sailors travel with turns, while the astronomers calculate straight lines in the air, and have no obstacle.

That is, the author thought that when he was in the Holy Land, he was not far from being half way to the eastern edge of the world from his starting place in Lübeck. Given that he had read some travel literature, he must have known that reaching Paradise or the eastern edge of the world would have put him

among the boldest travelers of all time, such as Alexander the Great, John Mandeville, Giovanni de' Marignolli, and Johannes Witte de Hese.¹⁸

The author of HM 83, then, was a man of religion, experienced with maps, well read, well traveled, and a bold thinker.

18 On Alexander the Great's interest in reaching the Terrestrial Paradise see M. Esposito, "A Mediaeval Legend of the Terrestrial Paradise," *Folklore* 29.3 (1918), pp. 193–205; Mary Lascelles, "Alexander and the Earthly Paradise in Mediaeval English Writings," *Medium Aevum* 5 (1936), pp. 31–47, 79–104, and 173–188; and Richard Stoneman, *Legends of Alexander the Great* (London and Rutland, VT: J. M. Dent and Charles E. Tuttle, 1994), pp. 67–75. On Mandeville see Iain Macleod Higgins, *Writing East: The 'Travels' of Sir John Mandeville* (Philadelphia: University of Pennsylvania Press, 1997), pp. 203–204; on Giovanni de' Marignolli see Ananda Abeydeera, "In Search of the Garden of Eden: Florentine Friar Giovanni de Marignolli's Travels in Ceylon," *Terrae Incognitae* 25 (1993), pp. 1–23; and on Johannes Witte de Hese see Scott D. Westrem, *Broader Horizons: A Study of Johannes Witte de Hese's 'Itinerarius' and Medieval Travel Narratives* (Cambridge, MA: Medieval Academy of America, 2001), pp. 10, 223, and 272.

The Geographical Sections

The contents of the geographical section (ff. 1r–8v) and the section on astronomy and geography (ff. 13r–18r) in HM 83 have been detailed above. In the first section, after introductory texts on the three Babylonias and the division of the world among the sons of Noah, there is a list of the provinces of Asia, and the islands that pertain to it; then a list of the islands and provinces of Europe; then a list of the provinces of Africa. Next there is a list of the mountains of the Holy Land, and of the mountains beyond the Holy Land; then of the lands of the Four Kingdoms of the Book of Daniel and of a few others, and of the lands in which the twelve Apostles preached. The section ends with an account of the four different functions or themes that a *mappamundi* can have. In all of the lists of provinces and islands, brief descriptive details about each entry are supplied, and this section is illustrated with seven maps and one generic bird's-eye view of mountains.

In the second section (ff. 13r–18r) there are diagrams of the spheres and of the course of the sun around the earth, followed by three climatic maps of the earth, the first overlain on a map of the earth's waters, the second on a simple T-O map, and the third on a map showing where the Apostles preached. There follow a summary of world history, tables of Biblical genealogy, and discussion of the Four Kingdoms of the world.

As indicated above, the maps in these sections are of great importance in the history of cartography for being the earliest known sequence of thematic maps clearly conceived as such. The maps will be discussed below, but here we would like to mention that at first blush there would seem to be a connection between the way the text of the first section (ff. 1r–8v) is divided into sections (mainland provinces, islands, mountains) and the thematic maps. The author might have drawn inspiration for his 'thematic' divisions of the text from any of a number of different sources. For example, Book 14 of Isidore of Seville's *Etymologiae*,¹ the first great medieval encyclopedia, has chapters about Asia (14.3), Europe (14.4), and Africa (14.5) (HM 83 follows this same order), and then about islands (14.6), promontories (14.7), mountains (14.8), and caves and the underworld (14.9). Lambert of Saint-Omer in his *Liber Floridus*, composed

1 For an English translation of the *Etymologiae* see Isidore of Seville, *The Etymologies of Isidore of Seville*, trans. Stephen A. Barney, W. J. Lewis, J. A. Beach, and Oliver Berghof (Cambridge, UK, and New York: Cambridge University Press, 2006).

between 1090 and 1120, has chapters on islands (34) and rivers, springs and lakes (34 and 35).² Bartholomaeus Anglicus in his *De proprietatibus rerum*,³ written c. 1240, similarly discusses the physical world by dividing it into categories, and thus has chapters that list the rivers of the world (13.5–13.13) and the mountains of the world (14.3–14.44), as well as chapters on such specific subjects as fish ponds (13.14), whirlpools (13.17), valleys (14.46), deserts (14.51), and caves (14.52). Examples from other medieval encyclopedias might easily be adduced. The point we wish to make is that while the authors of other treatises employed the same ‘thematic’ division of geographical material, none of them used maps to indicate the locations of those elements—none of them chose to interpret those divisions cartographically. That is precisely the original stroke of the author of HM 83.

In the present work we have chosen to focus on the apocalyptic section of HM 83, as it seems more distinctive and original (to our way of thinking at least) than the other parts of the manuscript. Therefore, we will not provide a full transcription and translation of the geographical sections. However, we now supply transcriptions, translations, and commentary on several excerpts from the geographical sections that will give the reader a fuller understanding of the work than the summary above could do, and will also shed light on the author’s outlook and sources.

In transcribing the text of HM 83 we have altered it as little as possible, but have expanded abbreviations, changed ‘u’ to ‘v’ and ‘i’ to ‘j’ where this would help make the word understandable, and added punctuation where necessary for the sense. Triangular brackets < > are used to indicate words that we supplied that were necessary for the sense; to mark word of whose readings we are not entirely sure, thus: <habet?>; and to indicate lacunae, thus for one missing word: <...>, and thus for two missing words: <... .>. Parentheses are used to mark our occasional explanatory remarks.

2 See Lambert of Saint-Omer, *Lamberti S. Audomari Canonici Liber Floridus: Codex authographus bibliothecae universitatis Gandavensis*, ed. Albertus Derolez (Ghent: In aedibus Story-Scientia, 1968), p. 104, transcribing f. 51v, chapter 33; pp. 104 and 106, transcribing ff. 51v and 52v, chapter 34; and p. 107, transcribing f. 53r, chapter 35.

3 For discussion of Bartholomaeus Anglicus’s *De proprietatibus rerum* see for example Lynn Thorndike, *A History of Magic and Experimental Science* (New York: Macmillan, 1923–58), vol. 2, pp. 401–435; and Heinz Meyer, *Die Enzyklopädie des Bartholomäus Anglicus: Untersuchungen zur Überlieferungs- und Rezeptionsgeschichte von ‘De proprietatibus rerum’* (Munich: Fink, 2000).

Excerpts from the Geographical Section

We translate and transcribe all of the text on f. 1r, piece by piece, beginning from the top:

Nota tres fuerunt babilonie. Una super flumen chobar ubi regnabat Nabuchodonosor in qua fuit turris babel et hic dicitur deserta et distat a nova babilonia 30 dierum. Alia in egipto super nilum sita in qua regnabat pharao distans a nova quinque dierum. Est tertia scilicet nova babilonia que dicitur gair vel kair vel carra que distat ab alexandria tribus dierum per terram sed sex per aquas.

Note that there were three Babylonias, one on the River Khabur where Nebuchadnezzar reigned, in which <city> was the Tower of Babel, and this region is called a desert and it is a thirty-day journey from the New Babylonia. The second was in Egypt, located on the Nile, in which the Pharaoh ruled and it is a five-day journey from the New Babylonia. The third, that is, the new Babylonia, is called Gair or Cairo or Carra, and is a three-day journey from Alexandria by land, but six by water.⁴

The abrupt opening of the treatise gives it the flavor of being the author's notes, or else an abbreviated version of a longer work, rather than a polished discourse; and the remarkable emphasis on Babylon suggests that this question was one of particular interest to the author, not least because he discusses Babylon again later in the treatise. He may have been inspired to assign such importance to the city by the prophecies against Babylon in Isaiah 13 and 14.⁵ With regard to the source of this passage, several earlier authors discuss the three Babylonias,⁶ but the closest to what we have in HM 83 is the account in

4 The new Babylonia by Cairo is depicted on the map of the Holy Land in Bernhard von Breydenbach's *Peregrinatio in terram sanctam* (Mainz: Erhard Reuwich, 1486)—a work almost exactly contemporary with HM 83.

5 For discussion of the prophecies against Babylonia see Seth Erlandsson, *The Burden of Babylon: A Study of Isaiah 13:2–14:23*, trans. George J. Houser (Lund: Gleerup, 1970).

6 The three Babylonias are discussed in the *Narratio de Statu Terrae Sanctae*, published in Sabino de Sandoli, ed., *Itinera Hierosolymitana cruce signatorum: saec. XII–XIII*, vol. 3: *Tempore recuperationis Terrae Sanctae (1187–1244)* (Jerusalem: Franciscan Print. Pr., 1983), pp. 374–391, towards the end of chapter 2, at p. 380; Gerard of Strasbourg, in Arnold of Lübeck, *Chronicon Slavorum*, in *Monumenta Germaniae Historica, Scriptores* 21, ed. G. H. Pertz (Hannover: impensis bibliopolii Hahniani, 1869), pp. 100–250, at 235–241, esp. 237; and by John Poloner, in Titus Tobler, ed., *Descriptiones Terrae Sanctae, ex saeculo VIII. IX. XII. et XV.* (Leipzig: J. C.

the so-called Rothelin Continuation, written in the mid thirteenth century, of the *Historia* of William of Tyre (c. 1130–1186):⁷

But you must know that there are three Babylons. The first is in Mesopotamia; there lay the field of Shinar on which the giants built a tower to reach up to Heaven. That is where languages were created. This Babylon stands on the great river, the Euphrates, which flows from the earthly Paradise and runs through the land of Mesopotamia, and on another river called Chobar. David spoke of them in the psalms, saying *Super flumina Babilonis*. Nebuchadnezzar was lord of this Babylon, as we find when we read the Bible in the Book of Kings. The second Babylon is in Egypt. Some say that when the children of Israel were in Egypt it was known as Memphis. These two Babylons lie destroyed and desolate, no man or woman lives there. In the Babylon in Mesopotamia live huge numbers of serpents, adders and other snakes which dwell in the ruined walls of the tower built by giants, more such creatures than anywhere else on earth. The third Babylon is sometimes called New Babylon. This has the Cairo as its main castle and stands on the River Nile which flows from the earthly Paradise. From New Babylon to Alexandria is three days' journey by land, six by water. From this Babylon to Damietta takes four days. The sultan was lord of this New Babylon, of the whole land of Egypt, of the surrounding country and of a large part of Syria.

There follows in HM 83 a passage on the division of the world among Noah's sons⁸ that in a more conventional work would be the beginning of the geo-

Hinrichs, 1874; Hildesheim and New York: G. Olms, 1974), pp. 225–281, at 279, with an English translation in Joannes Poloner, *John Poloner's Description of the Holy Land (circa 1421 A.D.)*, trans. Aubrey Stewart (London: Palestine Pilgrims' Text Society, 1894), p. 41. Bernhard von Breydenbach in his *Peregrinatio in Terram Sanctam*, which is contemporary with HM 83, has on ff. 115v–116r a chapter “De Babilonia egipti” that offers much more detail than HM 83; by comparison, the interest of the author of HM 83 in this Babylonia seems rather theoretical.

7 The French text is supplied in *Recueil des historiens des croisades, publié par les soins de l'Académie royale des inscriptions et belles-lettres* (Paris: Imprimerie royale, 1841–1906), *Historiens Occidentaux*, vol. 2 (1859), “Continuation de Guillaume de Tyr, de 1229 à 1261, dite du manuscrit de Rothelin,” pp. 489–639, Chapitre 24, “Quantes Babiloinnes sont,” pp. 536–537; and the English here comes from Janet Shirley, trans., *Crusader Syria in the Thirteenth Century: The Rothelin Continuation of the History of William of Tyre with Part of the Eracles or Acre Text* (Aldershot, England, and Brookfield, VT: Ashgate, 1999), p. 44.

8 For discussion of the conjunction between a different text about the division of the world among Noah's sons and *mappaemundi* see Chet Van Duzer and Sandra Sáenz-López Pérez, “*Tres filii Noe diviserunt orbem post diluvium*: The World Map in British Library Add. MS 37049,” *Word & Image* 26.1 (2010), pp. 21–39.

graphical section, rather than the passage about the three Babylonias (still f. 1r):

Orbis autem ut dicit ysidor in libro quinto decimo tripharie est divisus. Nam una pars Asia alia Europa tertia Affrica appellatur. Quas tres partes orbis non equaliter diviserunt. Nam Asia a meridie per orientem usque ad septentrionem pervenit. Europa vero a septentrione usque ad occidentem pertingit. Sed Affrica ab occidente per meridiem se extendit. Sola quoque Asia continet unam partem scilicet habitabilis nostri medietatem. Alie vero partes scilicet Europa et Affrica aliam medietatem sunt sortite. Inter has autem partes ab oceano marem magnum pregreditur easque intersecat. Quapropter si in duas partes orientem et occidentem orbem dividas in una parte erit Asia in alia vero affricam et europam. Sic autem divise sunt postquam diluvium filiis noe inter quos Sem cum posteritate sua Asiam Japhet Europam Cham Affricam possederunt ut dicit glossa super genesis 10 et super librum paralippo 1. Idem dicit Orosius et ysidorus ac plinius.

The world, as Isidore says in his fifteenth book, is divided in three. For one part is called Asia, the second Europe, and the third Africa. These three parts of the lands have not been equally divided. For Asia stretches from the south through the east to the north; but Europe stretches from the north even to the west; while Africa extends itself from the west to the south. And Asia by itself contains half of our habitable land, while the other two parts, namely Europe and Africa, were allocated the other half. But between these two parts the Mediterranean extends from the Ocean and separates them. Therefore, if you divide the world in two parts, east and west, in one part will be Asia, and in the other Africa and Europe. For this was how they were divided after the Flood among the sons of Noah, among whom Sem with his descendants possessed Asia, Japhet possessed Europe, and Cham possessed Africa, as the gloss on Genesis 10 says, and also that on the book 1 of the Paralipomenon (i.e. Chronicles). Orosius, Isidore, and Pliny say the same thing.

The part of this passage about the orientations of the three parts of the world goes back to Augustine, *De civitate Dei*, 16.17, whence it was borrowed by Isidore in his *Etymologiae* (14.2.2–3) and *De natura rerum* (48), and by the Venerable Bede in his *De natura rerum* (51).⁹ But the whole passage is taken from

9 See *The Etymologies of Isidore of Seville*, trans. Stephen A. Barney et al. (Cambridge, UK, and New York: Cambridge University Press, 2006), p. 285; *Patrologia Latina* 83:1017; and *PL* 90:276, respectively. For discussion of cartographic interpretations of this sentence see

Bartholomaeus Anglicus, *De proprietatibus rerum* 15.1,¹⁰ where it stands at the beginning Bartholomaeus's book on geography.¹¹

Following the passage from Bartholomaeus is a *mappamundi* that shows the division of the world among the sons of Noah, which we will discuss below. Then there is a passage composed by the author of HM 83: he proposes that the actual colonization of the parts of the world assigned to Cham (Africa) and Japhet (Europe) only took place following the Plagues of Egypt, which scared people out of the East, a theory we have not seen in other sources.¹² He adds that the 'plagues' of Islam are causing Christians to remember the True God (still f. 1r):

Hanc terram habitabilem noe divisit tribus filiis suis ut patet in figura. Ante diluvium et post usque ad predictas horribiles plagas omnes homines manserunt in oriente. Nemo in aliis quartis habitabat. Sed deus tam horribiliter egiptum plagavit propter oppressionem et retensionem populi sui per unum integrum annum quo sane mente putabant orientem et Asiam prorsus perire et ita timore perterriti transnavigaverunt per mare magnum. Et quod de genere Cham habitabant circa mare magnum e regione Affrice et Japhet e regione Europe. Sic Dei nutu completa est divisio per noe facta quasi ante 900 annos. In Europa et Affrica veri dei per plagas <cogniti?> x quarte populaverunt hodie postquam 3000 annorum

Chet Van Duzer, "A Neglected Type of Medieval *Mappamundi* and its Re-Imaging in the *Mare historiarum* (BnF MS Lat. 4915, f. 26v)," *Viator* 43.2 (2012), pp. 277–301.

10 For an English translation of the passage in Bartholomaeus see Bartholomaeus Anglicus, *On the Properties of Things: John Trevisa's Translation of Bartholomaeus Anglicus De proprietatibus rerum: A Critical Text*, eds. M. C. Seymour et al. (Oxford, Clarendon Press, 1975–88), vol. 2, p. 726.

11 For comments on the influence of Bartholomaeus's Book 15 see Heinz Meyer, "Bartholomäus Anglicus, 'De proprietatibus rerum': Selbstverständnis und Rezeption," *Zeitschrift für deutsches Altertum und deutsche Literatur* 117.4 (1988), pp. 237–274, at p. 262, note 82; and Meyer, *Die Enzyklopädie des Bartholomäus Anglicus* (see Ch. 4, n. 3), pp. 272–273. The same passage from Book 15 is borrowed in the *Eulogium (historiarum sive temporis): Chronicon ab orbe condito usque ad annum Domini M. ccc. lxxi, a monacho quodam Malmesburiensi exaratum*, ed. Frank Scott Haydon (London: Longman, Brown, Green and Longmans, and Roberts, 1853–1863), vol. 2, Book 4, chapter 9, "De orbe," with some discussion of this chapter in vol. 2, pp. xxiv–xxv.

12 For general discussion of the reception of the story of the division of the world among Noah's sons see Benjamin Braude, "The Sons of Noah and the Construction of Ethnic and Geographical Identities in the Medieval and Early Modern Periods," *The William and Mary Quarterly* 54.1 (1997), pp. 103–142.

eiusdem veri dei quasi oblita machometi plage vastavere opprimere et subjugavere donec eiisdem eundem verum deum recognoscas (*sic*).

Noah divided this habitable land among his three sons, as is clear in the map. Before and after the Flood, and until the predicted horrible plagues, all of mankind lived in the East, and no one lived in the other quarters <of the world>. But God so horribly plagued Egypt because of the oppression and holding back of his people for a whole year, that many reasonably thought that the East and Asia would entirely perish, and so terrified by fear, they took ship across the Mediterranean. As a result, the descendants of Cham who lived near the Mediterranean <were from> Africa, and <those of> Japhet <were from> Europe. And thus by the will of God the division made by Noah about 900 years earlier was completed. In Europe and Africa, the people aware of the true God because of plagues lived in the ten quarters. Today, after 3000 years, when they had almost forgotten that same true God, the plagues of Muhammad devastated, oppressed, and subjugated <them> until because of those same plagues they acknowledged that same true God.

Thus the apocalyptic themes that are so important in the second section of the manuscript are hinted at in the beginning of the geographical treatise.

On f. 1v, in his list of the provinces of Asia, the author mentions the Holy Land, and as he had been there, we might hope for some details based on his own experiences, but such is not the case. Some visitors to the Holy Land made side-trips to Egypt, but the description of Egypt also lacks any details that would seem to have come from personal observation. Neither of these passages comes from Bartholomaeus Anglicus. The passage about Egypt supplies evidence of the author's continuing interest in the different cities called Babylonia:

Palestinam qua habet in se Judeam philistinam Samariam galileam inferiorem et superiorem penthapolim hec etiam palestina fuit in terra chananeorum

Palestine, which has within it Judea, Philistina, Samaria, Lower and Upper Galilee, and Pentapolis. This Palestine was in the land of the Canaanites.

Egiptus olim habuit quinque nominatas civitates in honore deorum. Quarum una fuit solis et eius proprium nomen Naia quam alexander

magnus destructam reedificavit et ampliavit et ex suo nomine alexandriam baptisavit que hodie est nominatissima civitas prope mare magnum in egipto. Et alkaria quam idem alexander nominat novam babyloniam quasi in fine egipti versus ortum solis sicut alexandria in fine egipti versus occidentem et circumdatur egiptus desertis ex austro oriente et aqulione mari magno ex occidenti.

Egypt once had five cities named in honor of gods, of which one was of the sun, and its name was Naia,¹³ which Alexander the Great rebuilt and expanded after it was destroyed, and from his own name he called it Alexandria, which today is a very famous city on the Mediterranean coast in Egypt. And Cairo, which is the same that Alexander named New Babylonia, is in the end of Egypt towards the east, just as Alexandria is in the end of Egypt towards the west. Egypt is surrounded by deserts on the south, east, and north, and by the Mediterranean on the west.

On f. 2r, in a passage cited above in the section on the author of HM 83, the author indicates distances from the Holy Land to India, from India to the Indian Ocean, and from mainland Asia to Paradise:

Arbitror principium Indie de terra sancta distare vix 600 miliaribus teutonicis. Et 200 miliaria per indiam ad Insulas oceani maris que etiam per 200 miliaria protrahantur in latum usque ad paradisum

I judge that the beginning of India is barely 600 German miles <east> from the Holy Land, and <it is> 200 miles across India to the islands of the <Indian> Ocean, which are spread widely for a distance of 200 miles all the way to Paradise.

Of course the distances supplied are much smaller than the actual distances. In addition to shedding light on the author and his thoughts about the possibility of traveling to Paradise, this passage may help us learn about the author's sources. It would be interesting to know where the author obtained his

¹³ We do not know the source of the name Naia for the city that existed on the site of Alexandria before Alexander refounded it; in fact the name of the city was Rhacotis. For discussion see Michel Chauveau, "Alexandrie et Rhakôtis: le point de vue des Égyptiens," in Jean Leclant, ed., *Alexandrie: une mégapole cosmopolite: actes du gème colloque de la Villa Kérylos à Beaulieu-sur-Mer, les 2 & 3 octobre 1998* (Paris: Académie des Inscriptions et Belles-Lettres, 1999), pp. 1–10.

distances. There are not many medieval maps that include a scale of miles and also show the eastern edge of Asia: the ones that come to mind are the Catalan Atlas of 1375,¹⁴ Andreas Walsperger's map of 1448,¹⁵ the so-called Genoese map of 1457,¹⁶ and the Catalan Estense map of c. 1460.¹⁷ In this case, Walsperger's map is the easiest to work with, as his scale is in German miles, which are what the author of HM 83 uses.¹⁸ Walsperger does not indicate the extent of India

- 14 The Catalan Atlas is in Paris, Bibliothèque nationale de France, MS Espagnol 30; it has been published in facsimile several times, for example as *Mapamundi del año 1375 de Cresques Abraham y Jafuda Cresques*, ed. Georges Grosjean (Barcelona: S.A. Ebrisa, 1983); a more recent edition is *El món i els dies: L'Atlas Català* (Barcelona: Enciclopèdia Catalana, 2005); the atlas is also reproduced in Ramon J. Pujades i Bataller, *Les cartes portolanes: la representació medieval d'una mar solcada* (Barcelona: Institut Cartogràfic de Catalunya, 2007), on the accompanying CD, number C16.
- 15 Walsperger's map is in Vatican City, Biblioteca Apostolica Vaticana, MS Pal. Lat. 1362 B; see Konrad Kretschmer, "Eine neue mittelalterliche Weltkarte der vatikanischen Bibliothek," *Zeitschrift der Gesellschaft für Erdkunde* 26 (1891), pp. 371–406 and plate 10, esp. 397, reprinted in *Acta Cartographica* 6 (1969), pp. 237–272. This article includes a large reproduction of the map. There is also a facsimile of the map: *Weltkarte des Andreas Walsperger* (Zurich: Chr. Belser AG, 1981).
- 16 The "Genoese Map" of 1457 is in Florence, Biblioteca Nazionale Centrale, Portolano 1. For discussion see Edward Luther Stevenson, *Genoese World Map, 1457* (New York: American Geographical Society and Hispanic Society of America, 1912), with which a color facsimile of the map was published; and the more recent facsimile edition of the map, with a new transcription and translation of the legends by Angelo Cattaneo, in *Mappa mundi 1457* (Roma: Treccani, 2008). Also see Alberto Capacci, "Planisfero detto 'genovese,'" in Guglielmo Cavallo, ed., *Cristoforo Colombo e l'apertura degli spazi* (Rome: Istituto Poligrafico e Zecca dello Stato, 1992), vol. 1, pp. 491–494; and Gerda Brunnlechner, "The So-Called Genoese World Map of 1457: A Stepping Stone Towards Modern Cartography?" *Peregrinations: Journal of Medieval Art & Architecture* 4.1 (2013), pp. 56–80.
- 17 The Catalan Estense map is in Modena, Biblioteca Estense Universitaria, C. G. A. 1, and has been reproduced in facsimile, with transcription and commentary, in Ernesto Milano and Annalisa Batini, *Mapamundi Catalán Estense, escuela cartográfica mallorquina* (Barcelona: M. Moleiro, 1996); there is a high-resolution digital image of the map on the CD-ROM titled *Antichi planisferi e portolani: Modena, Biblioteca Estense Univesitaria* (Modena: Il Bulino; and Milan: Y. Press, 2004), and a good study of it in Konrad Kretschmer, "Die katalanische Weltkarte der Biblioteca Estense zu Modena," *Zeitschrift der Gesellschaft für Erdkunde zu Berlin* 32 (1897), pp. 65–111 and 191–218.
- 18 Some distances measured on various nautical charts, including the Catalan Atlas, are supplied by A. E. Nordenskiöld, *Periplus: An Essay on the Early History of Charts and Sailing-Directions* (Stockholm: Norstedt, 1897; New York: B. Franklin, 1967), p. 20.

very clearly, but from the Holy Land going as the crow flies¹⁹ he says that it is about 325 German miles to the closest point that might be called India—much less than the figure of 600 miles that the author of HM 83 gives—and about 290 German miles across India to the eastern edge of the continent, rather more than the figure of 200 miles just quoted in HM 83. The total distance from the Holy Land to the eastern edge of Asia on Walsperger's map is about 615 German miles, quite a bit less than the 800 German miles indicated by the author of HM 83. So it seems that the author of HM 83 was using a source quite different from the Walsperger map.

At the same time, the distances on the Walsperger map are much closer to those supplied in HM 83 than those from an itinerary from Paradise to Rome, written in Greek probably in the fourth century, and surviving in a handful of manuscripts from the end of the twelfth century and later. At the end of that brief text, the journey is said to consist of 1425 stages, each of which measures 60 miles, for a total of 85,550 miles.²⁰ Even allowing for the fact that the distance from Paradise to Rome is greater than from Paradise to the Holy Land, and for a different definition of 'mile,' the distance indicated by the itinerary is much greater than that indicated by Walsperger.

Moreover, neither the Walsperger map nor the others just mentioned show Paradise as an island, which seems to be the conception that our author has of it: he says that the islands of the Indian Ocean are spread widely for 200 miles all the way to Paradise. There are several medieval maps that show Paradise as

19 The author indicates a longer distance from the Holy Land to the eastern edge of Asia f. 6r than he does on f. 2r, and on f. 6r says that the distances he gives are travelers' distances, which are longer than the distances indicated by astronomers, which do not include the turns made on a journey, so it is safe to conclude that the distances indicated on f. 6r were measured as the crow flies.

20 The Greek text of this itinerary from Paradise to Rome is supplied in Alfred Klotz, "Ὁδοιπορία ἀπὸ Ἐδέμ τοῦ παραδείσου ἄχρι τῶν Ῥωμαίων," *Rheinisches Museum für Philologie* 65 (1910), pp. 606–616; and with a French translation and notes in Jean Rougé, *Expositio totius mundi et gentium. Introduction, texte critique, traduction, notes et commentaire* (Paris: Éditions du Cerf, 1966) (= Sources Chrétiennes 324), pp. 346–357; there is also discussion of the text and the Greek text of the St. Petersburg manuscript in N. Pigulewskaja, *Byzanz auf den Wegen nach Indien: Aus d. Geschichte d. byzantinischen Handels mit dem Orient vom 4.–6. Jh.* (Berlin: Akademie-Verl.; Amsterdam, Hakkert, 1969), pp. 100–109 and 323–324. For discussion of the calculation of the total distance of the itinerary see Friedrich Pfister, "Die Ὁδοιπορία ἀπὸ Ἐδέμ τοῦ παραδείσου und die Legende von Alexanders Zug nach dem Paradies," *Rheinisches Museum für Philologie* 66 (1911), pp. 458–471, at 470.

an island,²¹ including the Sawley map (c. 1110);²² some maps by Lambert of St. Omer (twelfth century);²³ the Hereford *mappamundi* (c. 1290–1310),²⁴ an anonymous *mappamundi* of c. 1450, once in Olomouc, Czech Republic;²⁵ and the *mappamundi* on the so-called ‘Columbus Map’; a late fifteenth-century nautical chart.²⁶ However, none of these maps places the island of Paradise at a

- 21 On paradise as an island, in addition to the passages cited just below from Alessandro Scafi, *Mapping Paradise: A History of Heaven on Earth* (Chicago: University of Chicago, 2006), see Scafi’s brief article “L’île du Paradis dans la cartographie médiévale,” in Dominique Guillaud, Christian Huetz de Lempis, and Olivier Sevin, eds., *Îles funestes, îles bienheureuses* (Paris: Transboréal, 2004) (=Chemins d’étoiles, 12), pp. 148–156. There is also discussion of the medieval geography and cartography of paradise in Jean Delumeau, “The Earthly Paradise and Medieval Geography,” in his *History of Paradise: The Garden of Eden in Myth and Tradition*, trans. Matthew O’Connell (Urbana: University of Illinois Press, 2000), pp. 39–70.
- 22 The Sawley map is in Cambridge, Corpus Christi College, MS 66, p. 2; for discussion see P. D. A. Harvey, “The Sawley Map and Other World Maps in Twelfth-Century England,” *Imago Mundi* 49 (1997), pp. 33–42; and Scafi, *Mapping Paradise* (see Ch. 4, n. 21), pp. 141–144.
- 23 On Lambert of Saint-Omer’s maps that show paradise on an island see Danielle Lecoq, “La mappemonde du ‘Liber Floridus’ ou la vision du monde de Lambert de Saint-Omer,” *Imago Mundi* 39 (1987), pp. 2 and 9–49, esp. 2, 16, and 17 no. 1 (the map is in Wolfenbüttel, Herzog August Bibliothek, Cod. Gud. lat. 1.2°, ff. 69v–70r); and Scafi, *Mapping Paradise* (see Ch. 4, n. 21), pp. 144, 146, 157, and plate 5b.
- 24 The Hereford *mappamundi* is on permanent display at Hereford Cathedral, and has been reproduced in facsimile as *Mappa Mundi: The Hereford World Map* (London: Folio Society, 2010). Regarding paradise on the map see Scafi, *Mapping Paradise* (see Ch. 4, n. 21), pp. 145–149.
- 25 The anonymous *mappamundi* in question was once in Olmütz, Studienbibliothek MS g/9/155, but was lost after World War II. Its legends and toponyms are transcribed and it is well illustrated in Anton Mayer, *Mittelalterliche Weltkarten aus Olmütz* (Prague: André, 1932) (= *Kartographische Denkmäler der Sudetenländer*, 8); and the map is illustrated and briefly discussed in Scott Westrem, “Against Gog and Magog,” in Sylvia Tomasch and Sealy Gilles, eds., *Text and Territory: Geographical Imagination in the European Middle Ages* (Philadelphia: University of Pennsylvania Press, 1998), pp. 54–75, at 62–65; and Scafi, *Mapping Paradise* (see Ch. 4, n. 21), pp. 214–215 and 248.
- 26 The ‘Columbus Map’ is in Paris, Bibliothèque nationale de France, Rés. Ge AA 562; the *mappamundi* on the chart is conveniently reproduced in Kenneth Nebenzahl, *Atlas of Columbus and the Great Discoveries* (Chicago: Rand McNally, 1990), p. 22; and in Scafi, *Mapping Paradise* (see Ch. 4, n. 21), plate 14 and figs. 8.12a and 8.12b, with discussion on p. 217. The map has been reproduced in facsimile three times, in Charles de La Roncière, *La carte de Christophe Colomb* (Paris: Les Éditions historiques, 1924); *Carte nautique sur vélin de l’Atlantique et de la Méditerranée, attribuée à Christophe Colomb, 1492* (Paris: Bibliothèque Nationale, 1992); and *La carta de Cristobal Colon, Mapamundi, circa 1492*

significant distance from the mainland, and in particular, none shows any islands between the mainland and the island of Paradise.

Giovanni de' Marignolli (fl. 1338–53) in the notes from his voyage to the east locates Paradise on an island near Ceylon, but the travel narrative whose geography of Paradise seems most similar to that in the passage quoted above from HM 83 is Johannes Witte de Hese's *Itinerarius*, which describes an imagined journey to the east that began in Jerusalem in 1389.²⁷ From eastern Asia, Hese sails into the Indian Ocean. He stops on one island, and then continues to the mountain-island where Paradise is located:²⁸

And then, having obtained authorization from Prester John and other lords, we boarded a ship and sailed farther for ten days to a very beautiful, level island, four miles across and full of beautiful trees, with fruits and other kinds of vegetation, and adorned with flowers, and replete with a great many sweetly singing birds. And twelve of us, along with our captain, got off the ship and passed through this island looking at this splendor. And our captain forbade us to take anything away from there. And we were in that place—so it seemed to us—for around three hours, but when we got back to the ship, our shipmates said that we had been in that place for three days and nights. And there was no night there, and indeed I believe that there never has been night there. And this island is called the Root of Paradise.

And sailing farther for twelve days <we came> to Mount Edom. The Earthly Paradise is said to be atop this mountain. And this mountain is extremely high and sheer like a tower, so that there can be no access to that mountain. And around the hour of vespers, when the sun goes down

(Barcelona: Moleiro, 1995). For discussion of the map see Monique Pelletier, "Peut-on encore affirmer que la BN possède la carte de Christophe Colomb?" *Revue de la Bibliothèque Nationale* 45 (1992), pp. 22–25; and Valerie I. J. Flint, "Columbus, 'El Romero' and the So-Called Columbus Map," *Terrae Incognitae* 24 (1992), pp. 19–30.

27 For brief accounts of Johannes Witte de Hese see Bettina Wagner, "Witte, Johannes, de Hese," in Wolfgang Stämmeler and Karl Langosch, eds., *Die deutsche Literatur des Mittelalters: Verfasserlexikon* (Berlin and New York: de Gruyter, 1978-), vol. 10, cols. 1276–1278; and Scott D. Westrem, "Witte de Hese, Johannes (Jan Voet) (fl. 1389–1392?)," in John Block Friedman and Kristen Mossler Figg, eds., *Trade, Travel, and Exploration in the Middle Ages: An Encyclopedia* (New York: Garland, 2000), pp. 649–651.

28 Scott D. Westrem, *Broader Horizons: A Study of Johannes Witte de Hese's 'Itinerarius' and Medieval Travel Narratives* (Cambridge, MA: Medieval Academy of America, 2001), pp. 149–150 (Latin) and 223 (English).

and shines on the mountain, the wall of Paradise can be seen in great clarity and beauty, like a star.

While it is an engaging task to speculate about the sources of the distances to India and Paradise in HM 83, there is not enough evidence to be sure whether the author was consulting a map or a travel narrative, or perhaps combining information from both.

A passage on f. 2r about some of the islands of Asia provides further clues about the author's sources:

Amasonia habet duas insulas quarum unam principalem femine regnantes possident, aliam viri qui suarum uxorum famuli non convenientes nisi causa concipiendi

Amazonia has two islands, of which women rule the principle one, and men the other—men who are servants of their wives, and only come together in order to generate children.

The myth of the islands of men and women entered European culture through the travel narrative of Marco Polo,²⁹ and the earliest map they appear on is Fra Mauro's large *mappamundi* of c. 1450.³⁰ Neither Marco Polo nor any other European source that we know of prior to 1486 associates the islands with the Amazons, but there is some sense to the connection, and it seems to have been made by the author of HM 83. He does not show these islands on his maps, but does show the *Regnum Amasonum* as a single island in the northeastern part of the world in the maps on ff. 3r and 6v–7r (see Figs. 4.9 and 4.14). In any case,

29 See Marco Polo, *The Book of Ser Marco Polo, the Venetian: Concerning the Kingdoms and Marvels of the East*, transl. and ed. Henry Yule (3rd edn., London: J. Murray, 1903), vol. 2, pp. 404–405, with Yule's discussion pp. 405–406; also see Domenico Silvestri's *De insulis et earum proprietatibus*, in José Manuel Montesdeoca, *Los islarios de la época del humanismo: el 'De Insulis' de Domenico Silvestri, edición y traducción* (La Laguna: Servicio de Publicaciones Universidad de La Laguna, 2004), s.v. "Feminina insula" and "Masculina insula," pp. 256–257 and 376–377. Paul Pelliot, *Notes on Marco Polo* (Paris: Impr. nationale, 1959–73), vol. 2, pp. 671–725 has a long section on eastern analogues of the tale.

30 Fra Mauro's legend runs: *Queste do' isole sono habitade per christiani. In una de le qual çoè in nebila habita le done e in l'altra dita mangla habita li lor homeni, i qual solamente tre mesi de l'ano stano con le done*; "These two islands are inhabited by Christians. In one of them, called Nebila, live the women; in the other, called Mangla, live the men, who pass only three months a year with the women": see Piero Falchetta, *Fra Mauro's World Map* (Turnhout: Brepols, 2006), p. 175, *6.

the presence of these islands indicates that the author had access to information from Marco Polo, whether directly or indirectly.

Also on f. 2r there are passages about Mediterranean islands, specifically Venice, Rhodes, and Cyprus. We might hope to see first-hand information here from a man who had traveled to the Holy Land, in all probability by way of Venice, but we do not detect any first-hand knowledge in these passages:

Venecia venetorum nunc civitas metropolis provincie venecie in mari magno magna situ et potestate se tenens ad europam habens multas insulas maris

Rodus metropolis cicladum Ciclades enim sunt insule 13 quarum una et maxima est Rodus tenens se hodie <domina?> ad europam sed situ distat <tantum?> per duas dietas navigales a terra sancta

Cyprus insula a cipro civitate in ea, distans una dieta navigali a terra santa et est hodie regnum tenes se ad dominum europe et dicitur hec insula etiam paphorum.

Venice, now the city of the Venetians, is the capital of the province of Venice, a large city in the Mediterranean, by both its location and its power directs itself towards Europe, controlling many islands in the sea.

Rhodes is the capital of the Cyclades, and the Cyclades are thirteen islands, of which the largest is Rhodes, maintaining a position of power with respect to Europe, but by its location it is just two days by ship from the Holy Land.

Cyprus is named from the city on it called Cyprus, and is one day by ship from the Holy Land, and today is a kingdom that directs itself to the power of Europe, and it is said to be the island of the Paphians.

Felix Fabri in his journey to the Holy Land made the crossing from Limasol (Cyprus) to Joppa in one day, but it is worth mentioning that the departure from Cyprus was delayed for two days by contrary winds, and after he arrived in Joppa it was four days before he got ashore.³¹

At the top of f. 2v of HM 83 the author launches into a digression about the number of provinces in Asia that is revealing in terms of his ideas about exploration:

Ad precedentia considera illud hester primo “Assuerus regnavit ab India usque ad ethiopiam super centum viginti septem provincias,” quod

31 See Fabri, *The Wanderings of Felix Fabri* (see Ch. 3, n. 15), vols. 7–10, in vol. 7, pp. 201–222.

utique est in Asia maiori, in qua tota non dumtaxat ab india ad ethiopiam neque 127 provincias taxare, etiam tantum verum est quod divina scriptura ait. Qua ex re etiam nemo hoc anno christi 1486 praesumat certitudinaliter velle et precise describere Asiam et Affricam cum nulli concedatur illas terras videre, cum nec europam alicui europiano liceat explorare. Sed tum universalium potest sagax mens conjecturare. Nec hodie sic terre omnes nominantur. Sed magis ut vides in figura in <qua> dominia moderna describuntur.

Together with the preceding, consider that verse in Esther 1: “Xerxes reigned over a hundred and twenty-seven provinces from India to Ethiopia,” which certainly refers to Greater Asia, in all of which, from India to Ethiopia, there are not so many as 127 provinces: and yet everything that Divine Scripture says is true. Therefore let nobody in this year 1486 presume to wish to describe Asia and Africa certainly and precisely, since it is granted to no one to see those lands, and not even Europe can be <fully> explored by any European—but then a sagacious mind can visualize the whole world. Even today not all of the lands have names. But that you can see better in the map, in <which> the modern kingdoms are written.

The passage quoted is Esther 1:1;³² the reference to the map is probably to that on ff. 6v–7r, which is the most complete and detailed world map in the manuscript (see Fig. 4.14). The number of provinces in Asia indicated by this verse in Esther is high in relation to the figures offered by other sources: a passage in some manuscripts of Nennius’s *Historia Brittonum* which was repeated on a number of *mappaemundi* says that there were fifteen provinces in Asia,³³ and Ptolemy in his *Geography* 8.2 lists 48 provinces in Asia. The author’s suggestion that Asia and Africa are poorly known is very reasonable, but his claim that no one has managed to see those lands is puzzling, as he says that he has read travel literature, and indeed he supplies maps of those regions. We are to understand that the author had a high standard for accuracy in geographical and cartographic knowledge.

32 Esther 1:1: *In diebus Asueri qui regnavit ab India usque Aethiopiam super centum viginti septem provincias*, “In the days of Assuerus, who reigned from India to Ethiopia over a hundred and twenty seven provinces.” The 127 provinces over which Assuerus ruled are also mentioned in Esther 8:9 and 13:1.

33 See Van Duzer and Sáenz-López Pérez, “*Tres filii Noe*” (see Ch. 4, n. 8), pp. 28–32.

On f. 5v there is a list titled *Sequitur de terris in quibus Monarchi residebant et operabant*, and the text makes it clear that the monarchs in question are those of the Four Kingdoms of the Book of Daniel.³⁴ The text explains that the kingdom of the first monarch, Nebuchadnezzar, was confined to Asia, as Africa and Europe were not yet completely populated. The second was Cyrus, king of Persia, who extended his power to the Mediterranean, particularly to Cyprus. The text continues:

Alexander magnus macedo rex macedonum tertius monarcha circa annum mundi 4900 in asia tota tam arida quam insulari Nabuchodonosor et cirus insulas oceani maris non habuerunt quod omnes subiecte erant Alexandro et figurantur Amasona maxima insula et insula X tribuum israeli <etiam?> magna. <ymo?> Alexander personaliter venit usque ad suetiam sed non intravit Romani etiam ex Europa ultra miserunt Alexandro sua munera sed tamen sapiens Alexander non dominabatur eis contentus <vii?> <conuictione?> per munus oblationem et hic alexander in sua monarchia alkariam magnam civitatem in fine egipti ampliat et fortificat et eam novam babiloniam baptisavit. Ecce secundus monarchus Cirus in secunda monarchia antiquam babiloniam in Caldea destruxit et tertius monarchus alexander in tertia monarchia in egipti novam Babiloniam reedificavit et in quarta monarchia Roma antiqua et nova sunt.

Octavianus Romanus Anno mundi 7172 incepit monarchisare et anno mundi 7200 ut <cecidit?> fuit monarchus quartus Asie Affrice et Europe ita ut universum orbem describetur luce ii quod nullus ante eum fecit. Ipse ergo fuit monarchus totius orbis terre.

Alexander the Great, a Macedonian and King of the Macedons, was the third monarch about the year of the world 4900, in both mainland and insular Asia: Nebuchadnezzar and Cyrus did not control the islands of the ocean, but these were all subject to Alexander, and <in the map> are depicted the large island of the Amazons and island of the ten tribes of Israel, which is also large. In fact, Alexander came in person to Sweden but he did not enter it. The Romans even sent their gifts from Europe abroad to Alexander, but he was wise and was not won over by them, content with the demonstration of <...> through the presentation of gifts. And this Alexander during his reign expanded and fortified Cairo, a large city at the edge of Egypt, and named it New Babylon. Note that the

34 For bibliography on the Four Monarchies see Ch. 1, n. 11.

second monarch, Cyrus, in the second monarchy destroyed ancient Babylon in Chaldea, and the third monarch Alexander in the third monarchy rebuilt the New Babylon in Egypt, and ancient and new Rome are in the fourth monarchy.

The Roman Octavian began to rule in the year of the world 7172, and when he died in the year of the world 7200 he was the fourth monarch of Asia, Africa and Europe. <He ordered> “that the whole world should be described” (Luke 2), which no one had done before him. He was therefore the monarch of the whole world.

The reference to Alexander reaching Sweden is probably to be understood in connection with the *Alexander Romance*, according to which Alexander reached the farthest points of the known world in all directions: on the maps on ff. 3r and 6v–7r of HM 83 (see Figs. 4.9 and 4.14), Suetia is represented as an island in the northern ocean that just touches the northern shore of the *orbis terrarum*.

This passage shows the author’s continuing fascination with Babylon, and also that the list of sovereigns on f. 5v was intended to demonstrate that the area one king was able to rule expanded over the centuries to encompass the whole known world by the time of Octavian (Augustus). Given the author’s strong interest in cartography, it is not surprising that the reference to Augustus’s achievement of world rule should inspire him to mention Augustus’s project to map the world. This passage from Luke 2:1,³⁵ and/or material relating to the survey of the world first ordered by Julius Caesar, and completed by Augustus,³⁶ appears in other medieval cartographic contexts. In two manuscripts of Lambert of Saint-Omer’s *Liber floridus*, which contains a rich collection of *mappaemundi*,³⁷ there is an image of Augustus seated on a throne

35 Luke 2:1: *Factum est autem in diebus illis, exiit edictum a Caesare Augusto ut describeretur universus orbis*, translating literally, “And it came to pass, that in those days a decree went out from Caesar Augustus, that the whole world should be described.”

36 For general discussion of the medieval reception of this survey see Claude Nicolet and Patrick Gautier Dalché, “Les ‘quatre sages’ de Jules César et la ‘mesure du monde’ selon Julius Honorius: réalité antique et tradition médiévale,” *Journal des Savants* 4.9 (1987), pp. 157–218.

37 On the *mappaemundi* in manuscripts of the *Liber floridus* see Manuel Francisco de Barros Santarém, *Essai sur l’histoire de la cosmographie et de la cartographie pendant le Moyen-âge* (Paris: Maulde et Renou, 1849–52), vol. 2, pp. 153–204; Youssouf Kamal, *Monumenta cartographica Africae et Aegypti* (Cairo, 1926–51), vol. 3, fasc. 3, ff. 775–784; Marcel Destombes, *Mappemondes, A.D. 1200–1500* (Amsterdam: N. Israel, 1964), pp. 111–116; and Karen de Coene and Philippe de Maeyer, “One World under the Sun: Cosmography and

and holding an orb inscribed with a T-O map, and the passage from Luke is written in the circular border around the image.³⁸ In the lower left corner of the Hereford *mappamundi* there is an illustration of Augustus sending three surveyors out to explore the world, and the passage from Luke is inscribed above his head; the text in the decorative border surrounding the map indicates that the project was begun by Julius Caesar.³⁹ Caesar's project is also briefly mentioned on the Ebstorf *mappamundi*, but without any citation of Luke 2:1.⁴⁰

The list of sovereigns on f. 5v demonstrates the expansion of the area ruled by great kings to encompass the whole known world, and immediately following the list of sovereigns, there is a list of the places that the Apostles preached (ff. 5v–6r), which shows the Word of God reaching across the whole known world (illustrated in a map on f. 15r, see Fig. 4.18), so there is a connection between the two lists. It seems that the author of HM 83 viewed the extension of unified political control to the ends of the earth as a prerequisite to the diffusion of the Word of God to the ends of the earth.

On f. 6r there is a passage quoted above on the distances from Lübeck to Jerusalem and to Iceland, and from Jerusalem to the eastern shore of Asia:

Cartography in the *Liber Floridus*," in Karen de Coene, Martine de Reu, and Philippe de Maeyer, eds., *Liber Floridus n21: The World in a Book* (Lannoo: Tielt, 2011), pp. 90–127 and 172–173.

- 38 The manuscripts of the *Liber floridus* that contain this image of Augustus are in Ghent, Bibliotheek der Rijksuniversiteit, ms 92, f. 138v; and Paris, BnF, ms lat. 8865, f. 45r. For discussion of this image see Santarém, *Essai sur l'histoire de la cosmographie* (see Ch. 4, n. 37), vol. 2, pp. 160–163; and Nicolet and Gautier Dalché, "Les 'quatre sages' de Jules César" (see Ch. 4, n. 36). The BnF image is reproduced in color on the cover and the title page of Destombes's *Mappemondes* (see Ch. 4, n. 37), and in black-and-white in T. P. Wiseman, "Julius Caesar and the Hereford World Map," *History Today* 37.11 (1987), pp. 53–57, at 57; and in T. P. Wiseman's *Talking to Virgil: A Miscellany* (Exeter: University of Exeter Press, 1992), plate 2 following p. 116, illustrating his essay "Julius Caesar and the Mappa Mundi," pp. 22–42.
- 39 Scott D. Westrem, *The Hereford Map: A Transcription and Translation of the Legends with Commentary* (Turnhout: Brepols, 2001), pp. 8–9, no. 12; Wiseman, "Julius Caesar and the Hereford World Map" (see Ch. 4, n. 38), pp. 53–57; Wiseman, "Julius Caesar and the Mappa Mundi," in his *Talking to Virgil: A Miscellany* (see Ch. 4, n. 38), pp. 22–42; and Valerie I. J. Flint, "The Hereford Map: Its Author(s), Two Scenes and a Border," *Transactions of the Royal Historical Society*, Sixth Series, 8 (1998), pp. 19–44.
- 40 See Konrad Miller, *Mappaemundi: Die ältesten Weltkarten* (Stuttgart: J. Roth, 1895–98), vol. 5, p. 5; quoted by Nicolet and Gautier Dalché, "Les 'quatre sages' de Jules César" (see Ch. 4, n. 36), p. 205.

Nota Jerusalem distat secundum taxationem viatorum et nautarum de lubeck, que est <secunde?> aquilonaris, circa 777 miliaria teutonica, et de lubeck sunt quasi 223 miliaria ad Islandiam, etiam de Jerusalem circuiter mille miliaria ad finem terre. Sed astronomorum minor est computus; potest tamen utrorumque esse verus, quod viatores et naute oblique vadunt, Astronomi vero in aere recte computant vero obstaculum non habent.

Note that according to the estimate of travelers and sailors, Jerusalem is about 777 German miles from Lübeck, which is well <to?> the north, and from Lübeck it is about 223 miles to Iceland, and from Jerusalem about 1000 miles to the <eastern> end of the earth. The figures of the astronomers are smaller, but it is possible that both are correct, for travelers and sailors travel with turns, while the astronomers calculate straight lines in the air, and have no obstacle.

Like the similar passage on f. 2r, this passage may offer some clues about the sources the author was using. Here he clearly states that the figures he supplies are travel distances, rather than measurements as the crow flies, and this distinction is helpful, for there is a difference between his figures here and those on f. 2r. In the earlier passage he said that it is 600 German miles from the Holy Land to the beginning of India, and 200 miles across India to the Indian Ocean, or 800 German miles from the Holy Land to the Indian Ocean, whereas here on f. 6r he gives this distance as 1000 German miles.

Returning to the map of Andreas Walsperger, assuming that a traveler went from Lübeck to the Holy Land by way of Venice, measuring in straight lines on the map south from Lübeck to Venice, from Venice southeast to the open Mediterranean, and from there east to Joppa, we get a distance of about 620 German miles, rather less than the 777 German miles that the author of HM 83 indicates. We can try to check our calculation of the distance by consulting two later maps. The route from Lübeck to Venice as indicated on Erhard Etzlaub's 'Romweg' Map of c. 1500 is quite direct,⁴¹ so it does not seem that turns on that part of the journey would have added substantially to the distance. Also, on

41 For discussion of Etzlaub's Romweg map see Herbert Krüger, "Erhard Etzlaub's 'Romweg' Map and Its Dating in the Holy Year of 1500," *Imago Mundi* 8 (1951), pp. 17–26; Tony Campbell, "The Woodcut Map Considered as a Physical Object: A New Look at Erhard Etzlaub's 'Rom Weg' Map of c. 1500," *Imago Mundi* 30 (1978), pp. 79–91, with a postscript in *Imago Mundi* 33 (1981), p. 71; and Brigitte Englisch, "Erhard Etzlaub's Projection and Methods of Mapping," *Imago Mundi* 48 (1996), pp. 103–123.

Martin Waldseemüller's *Carta itineraria Europae* of 1511, which survives in one exemplar of a 1520 printing,⁴² there is a legend indicating that the distance from Venice to Modona (Methoni, Greece) is 870 Italian miles, and from Modona to Joppa 1000 Italian miles, so 1870 Italian miles in all, and four Italian miles equal one German mile,⁴³ so this is 467.5 German miles—quite different from the measurement of this trajectory on Walsperger's map.⁴⁴ So it seems that the author of HM 83 was using a source quite different than Walsperger's map. Walsperger's map does not include Iceland, so we cannot compare the distance to that island supplied in HM 83 with that on the map.

With regard to our author's indication that it is 1000 German miles from Jerusalem to the eastern edge of the earth, if we plot a route on Walsperger's map starting from Jerusalem and going east to near Babel, and then following the Tigris northeast to the *Torre Lapidea*, and then east southeast to the eastern coast of Asia not far from Paradise, the distance would be about 727 German miles, quite a bit less than the figure of 1000 German miles mentioned in HM 83, f. 6r. This confirms that his figures came from a source quite different from Walsperger's map.

The geographical treatise ends on f. 8v with a unique and extremely interesting discourse on the different purposes or functions of *mappaemundi*. In

42 The unique surviving exemplar of Waldseemüller's *Carta itineraria Europae* is in Innsbruck, in the Tiroler Landesmuseum Ferdinandeum. For discussion of the map see Leo Bagrow, "'Carta Itineraria Europae' Martini Ilacomili, 1511," *Imago Mundi* 11 (1954), pp. 149–50; and Peter H. Meurer, *Corpus der älteren Germania-Karten: Ein annotierter Katalog der gedruckten Gesamtkarten des deutschen Raumes von den Anfängen bis um 1650* (Alphen aan den Rijn: Canaletto Uitgeverij, Repro-Holland, 2001), pp. 155–160; the map has been reproduced in facsimile as Martin Waldseemüller, *Carta itineraria Europae* (Bonn: Kirschbaum Verlag, 1972), with an accompanying study by Karl-Heinz Meine, *Erläuterungen zur ersten gedruckten (Strassen-)Wandkarte von Europa, der Carta itineraria Europae der Jahre 1511 bzw. 1520 von Martin Waldseemüller (um 1470 bis etwa 1521), Kostbarkeit des Tiroler Landesmuseum Ferdinandeum, Innsbruck* (Bonn-Bad Godesberg: Kirschbaum, 1971).

43 The equivalence of one German mile to four Italian miles is asserted by Martin Waldseemüller and Matthias Ringmann in their *Cosmographiae introductio* (St-Dié: G. Ludd, 1507), chapter 9; see *The 'Cosmographiae introductio' of Martin Waldseemüller in Facsimile, Followed by the Four Voyages of Amerigo Vespucci, with their Translation into English*, ed. and trans. Joseph Fischer and Franz von Wieser (New York: The United States Catholic Historical Society, 1907), pp. xxxvi (Latin) and 77 (English).

44 There is a legend very similar to that on Waldseemüller's *Carta itineraria Europae* about the distance from Venice to Joppa on the modern map of Greece (*Tabula moderna Bossinae, Serviae, Graeciae, et Sclavoniae*) in the 1522, 1525, 1535, and 1541 editions of Ptolemy's *Geography*.

less than one page the author reveals an understanding of the concept of thematic maps, touches on problems involved in the creation of *mappaemundi*, addresses the transmission of errors in maps, mentions the different types of sources used by cartographers, and discusses the origin of the monstrous peoples (the 'Plinian races'). This passage calls for an extended discussion:

Mappa mundi multipliciter consideratur primo quoad loca terre habitabilis que sunt valles montes et plana flumina silvestria campestria et cetera. Terra habitabilis prout <quod?> est nunc sicut est a deo creata aliqua loca licet pauca sunt submersa. Et si primus mappe pictor veram posuitur distanciam locorum, tamen successores successive valde transposuerunt situm et distanciam coacti artitudine loci in mappa figurali ubi etiam unum nomen loci in extenso scriptum repellit aliud ad extraneam distantiam. Propter quod ego decrevi perfecta nomina locorum <non?> scribere ad contrarium precedentem et in figura principia nominum figurare et <tamen?> artitudo in figura non permisit nomina loca propter situm ut videtur in figura.

Secundo consideratur mappa mundi quoad edificia et culturam terre et cetera terra habitabilis ab olim est multum variata et ubi prius fuerunt deserta ibi nunc cultura et hominum habitacula et <eius verso?>, et consequenter oportetur sepe pingi novam mappam mundi.

Tertio consideratur mappa mundi quoad homines terre habitatores et ego eram in terra peregrinationis in qua nunquam sunt congregati tales homines monstrosi quos figuralis mappa ibi esse significat. Ex quo ego arguo ut in aliis terre saltem omnibus tales esse et per consequens communis mappa mundi pro illa parte iterum est falsa. Sunt tamen in certe insule monstrosi homines quos in quodam peregrino libro legi fore sic exortos. Aliqua femina peperit femellam monstrosam quam verecundabatur educare ut voluit occidere projecit ergo eam ad quandam desertam insulam. Alia alibi peperit masculum monstrosus quem ex eadem causa ex eventu et fortuna projecit in eandem insulam et dei nutu et cura educati et adulti convenerunt et ultra ex se monstrosos homines generaverunt in tali insula. Et prime figuralis mappe pictor sic tamen in illa una vel certe pluribus insulis homines monstrosos depinxit.

Successoribus mappe pictoribus apparuit fore ornatum mapparum tales homines monstrosos & mirabiliores ubique in cunctis oceani maris insulis in circuitu aride esse depictos & falsitatem nichilpendentes sic ut cernitur in mappis communibus in circuitu insulare mare oceani depinxerunt.

Quarto consideratur mappa mundi quoad homines aliis dominantes et cetera. mappe mundi ab exordio possunt diverse depingi ex divina scriptura, cronicis, et gentilium cosmographia.

A *mappamundi* is considered in several ways. First with regard to the places of the habitable land, which are the valleys, mountains, river plains, wooded fields, etc. The habitable land is now just as it was when it was created by God, although some places have been submerged.⁴⁵ And even if the first painter of a map put the true distance of places, yet <his> successors, one after another, significantly transposed the places and distances, forced by the narrowness of space in the illustrated map, where even one place name written in full would force another to an incorrect location. Because of this I decided <not?> to write the whole names of places each opposite to the preceding <one?>, and in the map to write just the beginnings of the names, so that the narrowness in the map will not restrict the names and places because of their position, as may be seen in the map.

Second, a *mappamundi* is considered as far as buildings, farming, etc. For a long time the inhabited lands have been changing, and where there were previously deserts, in those same places there is now farming and human dwellings and <... >, and consequently, it is appropriate to make a new *mappamundi* frequently.

Third, a *mappamundi* is considered with respect to men as inhabitants of the world, and I have been in the land of pilgrimage in which there are no such gatherings of monstrous men as are depicted there in maps. Because of this, I argue that such men are only in all other parts of the world, and that consequently, the common *mappamundi* is in that part once again mistaken. There are, however, monstrous men in certain islands, who I read in a travel book are born as follows. A woman gave birth to a monstrous female child whom she was ashamed to raise, and she wished to kill her, so she cast her away her on a certain deserted island. In another place, another woman gave birth to a monstrous male

45 For a classical discussion of water taking over what was previously land and vice versa see for example Aristotle, *Meteorologica* 351^a–353^a, trans. E. W. Webster, in *The Works of Aristotle*, ed. W. D. Ross (Oxford: Clarendon Press, 1908–52), vol. 3, at 1.14; on this passage and others on the same subject in other classical authors see Adrian J. Desmond, “The Discovery of Marine Transgression and the Explanation of Fossils in Antiquity,” *American Journal of Science* 275 (1975), pp. 692–707; also see Pliny 2.86.200–206 and Rhiannon Evans, “The Cruel Sea?: Ocean as Boundary Marker and Transgressor in Pliny’s Roman Geography,” *Antichthon* 39 (2005), pp. 105–118, esp. 111–114.

child, whom for the same reason, circumstance, and chance, she cast away on the same island. Through God's will and care, they were brought up, and when they were adults, they came together and thereupon they generated monstrous men in that island. And the painter of the first illustrated map thus painted monstrous men in that one island, or rather in many islands.

To later map painters, such monstrous men and other things still more marvelous painted everywhere in all of the islands in the ocean <and> in the edge of the mainland appeared to be a <mere> decoration of maps. Thinking nothing of the falsehood, they painted them just as they saw them in common maps in the circuit of islands in the ocean.

Fourth, a *mappamundi* is considered with regard to men ruling over other men, etc. From the beginning, *mappaemundi* could be diversely painted from Holy Scripture, chronicles, and pagan cosmography.

This discussion of the distinct roles that *mappaemundi* can play, i.e. showing geographical features, the works of human beings, the different races of men, and political relationships, reveals a conception of maps that led naturally to the creation of the thematic maps that accompany the geographical treatise, which will be discussed below. The sophistication of the author's conception of the roles of maps can be appreciated by comparing this passage with some other medieval texts about the roles of maps. The introduction to the *Descriptio mappe mundi*, a text written c. 1130 and convincingly attributed to Hugh of Saint-Victor, emphasizes that the purpose of *mappaemundi* is to make distant and unknown regions known to those who cannot travel to see them:⁴⁶

Sapientes uiri, tam seculari quam ecclesiastica litteratura edocti, in tabula uel pelle solent orbem terrarum depingere, ut incognita scire uolentibus rerum imagines ostendant, quia res ipsas non possunt presentare. Sed nec omnes ualent circuire oceanum, ut positiones uideant insularum, non omnes possunt adire longinquas regiones, ut aspiciant situs, qualitates et diuisiones earum. Inde est, quod eadem descriptio que mappa mundi appellatur, diuersis modis propter rerum diuersitatem coloratur, ut alio quidem mare Magnum, alio mare Rubrum, alio flumina et alio montes colore uestiti, facilius ab inuicem discernantur. Sed et singuiis rebus que in hac mappa mundi depinguntur, titulus scripture

46 The Latin text comes from Patrick Gautier Dalché, *La 'Descriptio mappe mundi' de Hugues de Saint-Victor: texte inédit avec introduction et commentaire* (Paris: Etudes augustiniennes, 1988), p. 133; the English translation is ours.

apponitur, quia rerum incogitarum imagines sine scripture uel sermonis magisterio aut nullatenus aut difficile intelliguntur.

Wise men, both lay people and those learned in ecclesiastical writings, paint the world on wood or on parchment, so that they can show images of things to those who wish to know things that are unknown, because they cannot present the things themselves. For not everyone can sail on the ocean, so that they can see the locations of islands, nor can everyone visit distant regions, so that they can perceive their situations, qualities, and divisions. It is for this reason that such a delineation, which is called a *mappamundi*, is colored in diverse colors because of the diversity of things, so that the Mediterranean is painted one color, the Red Sea another, rivers another, and mountains another, in order that they can be easily distinguished one from another. And for each thing that is painted in such a *mappamundi*, a label is written beside it, for images of unknown things without writing or the guidance of words are difficult or impossible to understand.

Thus for Hugh of Saint-Victor, the purpose of a map is to teach about geography. A very different purpose is ascribed to maps by Fra Paolino Veneto in his “De mapa mundi,” part of his *Compendium, seu Satyrica historia rerum gestarum mundi* (1321):⁴⁷

Incipit prologus in mapa mundi cum trifaria orbis divisione. Sine mapa mundi ea, que dicuntur de filiis ac filiis filiorum Noe et que de IIIIor monarchiis ceterisque regnis atque provinciis tam in divinis quam humanis scripturis, non tam difficile quam impossibile dixerim ymaginari aut mente posse concipere. Requiritur autem mapa duplex, picture ac scripture. Nec unum sine altero putes sufficere, quia pictura sine scriptura provincias seu regna confuse demonstrat, scriptura vero non tamen

47 The Latin text here is from Biblioteca Apostolica Vaticana MS Lat. 1960, f. 13r; it is transcribed and discussed by Anna-Dorothee von den Brincken, “...ut describeretur universus orbis: Zur Universalkartographie des Mittelalters,” in Albert Zimmermann, ed., *Methoden in Wissenschaft und Kunst des Mittelalters* (Berlin: de Gruyter, 1970) (= *Miscellanea Mediaevalia* 7), pp. 249–278, at 261; and the same author’s “‘Quod non vicietur pictura.’ Die Sorge um das rechte Bild in der Kartographie,” in *Fälschungen im Mittelalter: Internationaler Kongress der Monuments Germaniae Historica, München 16–19 Sept. 1986* (Hannover: Hahnsche Buchhandlung, 1988), vol. 1, pp. 587–599, at 590. The English translation is from Van Duzer and Sáenz-López Pérez, “*Tres filii Noe*” (see Ch. 4, n. 8), p. 32.

sufficienter sine adminiculo picture provinciarum confinia per varias partes celi sic determinat, ut quasi ad oculum conspici valeant.

Here begins the prologue to the *mappamundi* with a threefold division of the world. Without a world map, I would say that it is not just difficult, but impossible to picture for oneself or grasp with the mind what is said of the sons and grandsons of Noah, and of the Four Kingdoms (i.e. Babylon, Persia, Greece, Rome) and other nations and provinces in divine and human writings. What is needed is a two-fold map, with both pictures and text. Nor will you think one sufficient without the other, for a picture without text indicates provinces or kingdoms unclearly, and text without the aid of pictures does not show the boundaries of the provinces in all of their parts, so that they can be perceived almost at a glance.

For Fra Paolino, the primary function of a map is to facilitate the understanding of history and the world's political divisions, and he says not a word about geographical features or ethnography, and nothing about a map having multiple functions that might be treated separately in separate maps. The author of HM 83 would certainly agree about the utility of combining maps with explanatory text.

The Catalan Atlas of 1375 includes in its preliminary matter a definition of *mappamundi*, a definition we are to understand as including nautical charts, as the Catalan Atlas itself is a nautical chart. That definition runs:⁴⁸

Mapa mundi vol dir ayant con ymage del món e de les diverses etats del món e de les regions que són sus la terra de diverses maneres de gens qui en ela habiten.

Mappamundi roughly signifies a picture of the world, of the various ages of the world, of the regions of the earth, and of the various kinds of people who live in it.

This definition is very interesting insofar as it indicates three components of a *mappamundi*, historic, geographical, and ethnographic. Though much briefer than the characterization in HM 83, this definition points towards a richness of function of medieval maps similar to that suggested in HM 83.

48 The quotation is from *Mapamundi del año 1375* (see Ch. 4, n. 14), p. 15; the translation is ours.

Andreas Walsperger, in giving an account of his *mappamundi* of 1448, places great emphasis on the mathematical foundations of his work, and on the facility it offers for measuring the distances between places:⁴⁹

Item in hac presenti figura continetur mappa mundi siue descriptio orbis geometrica, facta ex cosmographya ptholomey proportionabiliter secundum longitudes et latitudes et diuisiones climatum. Et cum uera et integra cartha nauigationis marium. Ita quod quilibet clare in ea potest videre quod miliaribus una regio uel prouincia ab alia sit situata, uel ad quam plagam, si ad orientem, occidentem, austrum vel aquilonem extensa. Terra etenim est alba, maria uiridis coloris, flumina dulcia lasurri, montes varii <item?>. Rubra puncta sunt christianorum ciuitates. Nigra uero infidelium in terra marique existentium.

Volens igitur scire in hac presenti figura quot miliaribus una regio seu ciuitas ab alia sit situata, accipe circulum et pone pedem eius ad medietatem puncti cum nomine alicuius ciuitatis in presenti figura signati. Et exiende alium pedem ad punctum alterius ciuitatis ad placitum. Et tunc circulum sic extensum pone super scalam latam: metrum hic inseruit per puncta diuisa et quilibet punctus in praetacta scala cuiusvis sit coloris dat decem miliaria thevtunica. Et nota quod unum miliare theutunicum continent in se decem milia passuum et unus passus duos pedes <inde?>. Facta est hec mappa per manus fratris Andree Walsperger ordinis sancti benedicti de saltzburga. Anno domini 1448 In constantia.

In this diagram is contained a world map or geometric description of the globe, based on the *Cosmography* of Ptolemy, designed proportionally according to longitude, latitude, and the classification of climates. And with the true and precise nautical chart of the seas, in such a way that anyone can clearly see how many miles one region or province is from another, and in which direction it extends, whether to the east, west, south or north. The land is white, the oceans green, the rivers blue, and the mountains various colors. The red dots are cities of the Christians,

49 The Latin text at the bottom of Walsperger's map is transcribed by Konrad Kretschmer, "Eine neue mittelalterliche Weltkarte der vatikanischen Bibliothek," *Zeitschrift der Gesellschaft für Erdkunde* 26 (1891), pp. 371–406, at 376–377; the article is reprinted in *Acta Cartographica* 6 (1969), pp. 237–272. A translation of the passage into German is supplied by Karl-Heinz Meine, "Zur Weltkarte des Andreas Walsperger, Konstanz 1448," in Wolfgang Scharfe, Hans Vollet and Erwin Herrmann, eds., *Vorträge und Berichte: Kartenhistorisches Colloquium Bayreuth '82, 18.–20. März 1982* (Berlin: D. Reimer, 1983), pp. 17–30, at 19. The English translation is ours.

and the black ones are the cities of the unbelievers who live on the land and by the sea.

Thus, if you want to know how many miles a region or city in this diagram is away from another, take a divider and place one leg in the middle of a point marked with the name of a city in this diagram. And then place the other leg in the point marking another city, whichever you wish. Then put the divider, opened to that same amount, on the wide scale. Here it offers a measure divided into sections, and each section of the marked scale, whatever its color, is ten German miles. And notice that one German mile contains ten thousand paces, and one pace two feet, etc. This map was made by the hands of Brother Andreas Walsperger from the Order of Saint Benedict in Salzburg. In the year of our Lord 1448, in Constance.

An indication of the purpose of a map also follows the world map in the *Rudimentum novitiorum*, a world history printed by Lucas Brandis in Lübeck in 1475, a bit more than a decade before HM 83 was composed in the same city. The map (ff. [85]v-[86]r) precedes a long description of the world (ff. [87]r-[117]r), and in the preface to that description, on f. [87]r, there is this account of the map's intended function:⁵⁰

Prepicta igitur figura, tenaci consideratione inspecta, clarebit, audita aliqua regione, evidentissime scriptis in subsequentibus, qua in parte orbis tripartiti sit situata, primo procedendo per regiones asie, deinde afice ac aurope (*sic*) degimus,⁵¹ qua in nos progressu alphabetico, ut diligens lector tenaci memoria valeat apprehendere distancias coniunctionemque regnorum atque regionum. Quibus ignoratis indicatur de veritate hystorie sacre, libris in canonicis, iudicio ceci de colore, quia Io. iii: Si terrena dixi vobis et non creditis, id est apprehendere non valetis, quomodo, si dixero celestia, credetis, id est comprehendetis.

So the foregoing map, if carefully studied, will make clear, for any given country in the following chapters, in what part of the tripartite world it is

50 This passage about the map's intended function is transcribed and discussed by Michael Herkenhoff, "Das *Rudimentum novitiorum* (1475)," in *Die Darstellung außereuropäischer Welten in Drucken deutscher Offizinen des 15. Jahrhunderts* (Berlin: Akademie Verlag, 1996), pp. 100–111, at 104–105.

51 The word order is incorrect following *aurope*, and we have translated so as to recover what must be the intended sense.

situated—which chapters proceed first through the regions of Asia, then Africa and Europe (in which we live), in alphabetical order—so that a careful reader with a good memory can understand distances and the conjunction between kingdoms and regions. If these things are ignored, the judgment of a blind man about color is likely regarding the truth of sacred history in canonical books, in accordance with John 3:12: “If I have spoken to you earthly things, and you believe not: how will you believe, if I shall speak to you heavenly things?” that is, <how> will you understand?

Thus the purpose of the map is to help the reader understand the spatial context of the places and events described in the following chapters, and thus to comprehend the spiritual significance of what is recounted. A bit more information about the purpose of the two maps (of the world and of the Holy Land) in the *Rudimentum novitiorum* is contained in the printer’s advertisement for the book, which survives.⁵² The part about the maps runs:

Item describit totum orbem tripharium in suis regnis et provinciis cum proprietatibus eorundem. Item terram sanctam ita luculenter expandit omnibus suis in locis, ut diligens lector, habitu acquisito, tocius biblie textum possit localiter scire, versus quemcumque ventum et plagam tocius mundi queque historia tam novi quam veteris testamenti sit peracta, quo ignorato, nemo quantumcumque doctus directe capit silencio transeo textum utriusque testamenti quantum ad circumstantias loci et temporis rei geste.

The book also includes a map of the whole tripartite world with its kingdoms and provinces and the characteristics of those regions. It also shows the Holy Land very clearly in all its parts, so that the serious reader, with practice, can know the whole text of the Bible geographically—towards which cardinal direction and part of the whole world every story of the

52 On the advertisement for the *Rudimentum novitiorum* see A. W. Kazmeier, “Eine bisher unbekannte Buchhändleranzeige und andere frühe Drucke des Lukas Brandis aus einer alten Schloßbibliothek,” *Zentralblatt für Bibliothekswesen* 57 (1940), pp. 292–299, with a reproduction of the advertisement between pp. 292 and 293; Julius Victor Scholderer, “Two Unrecorded Early Book-Advertisements,” *Library*, Series 5, vol. 11 (1956), pp. 114–115; and Hans Michael Winteroll, *Summae innumerae: Die Buchanzeigen der Inkunabelzeit und der Wandel lateinischer Gebrauchstexte im frühen Buchdruck* (Stuttgart: H.-D. Heinz, 1987), with the advertisement reproduced on p. 384 and transcribed on pp. 385–386, with the part about the map on p. 385.

New and Old Testaments took place. Unless this is known, no one, no matter how learned he may be, clearly understands the text of both Testaments with regard to the circumstances of time and place of the occurrence.

The maps of the *Rudimentum novitiorum* are thus intended to facilitate a better understanding of the Bible.⁵³ A similar statement appears on another map of the Holy Land printed by the same printer a few years later in the *Prologus Arminensis in mappam Terraesanctae* (Lübeck: Lucas Brandis, ca. 1478), ff. [11]v-[12]r.⁵⁴

In a passage on f. 12v of HM 83 cited above, the author notes that his maps have a moral purpose, specifically to restrain men from sin,⁵⁵ but his statement occurs at the end of the series of apocalyptic maps, and seems to apply only to those maps, and not necessarily to those in the geographical treatise. In his discourse about the functions of maps on f. 8v, he seems to view maps as tools for understanding the world, particularly by considering different aspects of the world separately. Although he lists the distances between some places on ff. 2r, 6r, and 14r, his maps are not designed to help one determine distances, as

53 Roger Bacon also spoke of a knowledge of geography as being essential to a proper understanding of Scripture: see Roger Bacon, *The 'Opus Majus' of Roger Bacon*, ed. John Henry Bridges (London: Williams and Norgate, 1900), vol. 1, pp. 183–187, esp. 183; this section is translated into English in *The Opus majus of Roger Bacon*, trans. Robert Belle Burke (Philadelphia: University of Pennsylvania Press; and London: H. Milford, Oxford University Press, 1928), vol. 1, pp. 203–208, esp. 204.

54 From the *Prologus Arminensis*, map of the Holy Land, f. 11v: *Assumpto hic tue considerationis loco, civitatis scilicet castelli aut ville aut alio quocumque recurre cum quota eiusdem ad notulam sequentem ad eandem quotam capituli, et ilico occurret desideratus tam novi quam veteris testamentorum per te locus famosus iuxta omnem plagam mundi in situatione sua, quod prevalide unumquenque sacre historie predicatorem juvabit, ac sacre scripture diligentem indagatorem quempiam animabit, quo ignoro audeat nemo feliciter de his quantum ad situm secure fabulari*, “Having chosen here a place for your consideration, take the number beside the city (i.e. the castle) or town, or any other feature, and go to the text following the map, to the chapter with that number, and immediately you will find that place (whether of the New or Old Testament) that is famous throughout the world in its proper place, which will greatly assist every preacher of sacred history, and it will inspire any diligent investigator of Holy Scripture; but no one who does not know these things will be able to successfully talk about Scripture as far as locations.”

55 From f. 12v of HM 83: *Arbitror ergo quod harum figurarum firma fides et frequens consideratio efficacius hominem retraherent a peccatis quam multa bona verba*, “I believe therefore that a firm faith in and frequent contemplation of these diagrams will more effectively restrain a man from sins than would many good words.”

Walsperger's is; nor are they expressly designed to assist readers in understanding the Bible, as are the map of Fra Paolino and the maps in the *Rudimentum novitiorum*, though some of them would certainly be helpful in that enterprise. The author of HM 83 has a broader conception of the possible functions of maps.

In the remainder of his consideration of the first function of *mappaemundi*, the author of HM 83 discusses an important problem in the transmission of maps: in the copying of a map, lack of space can cause one place name to displace another, resulting in errors of location and distance. The author says that he has therefore just written the beginnings of place names on his maps, adding the full names in the accompanying text—though in fact the maps in HM 83 have full place names, which raises the possibility that the maps were smaller in the autograph manuscript. The author's remarks about this issue bespeak considerable experience in making maps; at the same time, other cartographers before him had offered similar warnings. Ptolemy in his *Geography* 1.18.2–3 mentioned the errors introduced during the copying of maps:⁵⁶ "After all, continually transferring <a map> from earlier exemplars to subsequent ones tends to bring about grave distortions in the transcriptions through gradual changes."

The subject is also addressed by Gervase of Tilbury (ca. 1150–ca. 1228) in his *Otia imperialia*, though his complaint is about painters adding their own information to maps rather than about accidental corruption of place names:⁵⁷

Vt autem oculata fide audis mentibus et sitientibus auribus satisfaciamus, in summa naturalem prouinciarum ordinem et situm per tres orbis partes distinctarum in emendatiore picture subiunximus, considerantes quod ipsa pictorum uarietas mendaces effecit de locorum ueritate picturas quas mappam mundi uulgu nominat, plerumque enim pictor, ut

56 J. Lennart Berggren and Alexander Jones, *Ptolemy's Geography: An Annotated Translation of the Theoretical Chapters* (Princeton: Princeton University Press, 2000), p. 80. For a dramatic illustration of errors in the transmission of coordinates in the text of Ptolemy's *Geography* see Alexander Jones "Ptolemy's Geography: A Reform that Failed," in Zur Shalev and Charles Burnett, eds., *Ptolemy's 'Geography' in the Renaissance* (London: Warburg Institute; and Turin: Nino Aragno Editore, 2011), pp. 15–30, at 27–28.

57 Gervase of Tilbury, *Otia imperialia: Recreation for an Emperor*, ed. and trans. S. E. Banks and J. W. Binns (Oxford: Clarendon Press, 2002), Book 2, chapter 25, pp. 526–527. This text is discussed by Anna-Dorothee von den Brincken, "'Quod non vicietur pictura.' Die Sorge um das rechte Bild in der Kartographie," in *Fälschungen im Mittelalter: Internationaler Kongress der Monumenta Germaniae Historica, München 16–19 Sept. 1986* (Hannover: Hahnsche Buchhandlung, 1988), vol. 1, pp. 587–599, at 592–594.

alias testis, cum de suo adicit, partis mendacio totam testimonii seriem decolorat, ut in Decretis, C. tertia, q. .ix., “Pura et simplex.”

It was, then, to satisfy hungry minds and thirsty ears with reliable information that we appended this summary of the natural order and situation of the provinces, as they are distributed through the three parts of the world, so adding to the accuracy of our picture; for we are aware that the very variety of painters has resulted in the production of pictures which depart from the truth of the localities themselves—those pictures which are commonly called *mappae mundi*—since very often the painter, like any kind of witness, mars by the falsity of a part the whole formulation of his evidence, when he adds material of his own, as it says in the Decretum, C. 3 q. 9, “Pure and simple.”

And Fra Paolino Veneto, in his chapter “De mapa mundi” in his *Compendium, seu Satyrica historia rerum gestarum mundi*,⁵⁸ warns: *Quod vero per pictores non vicietur pictura, magna est cautio adhibenda*, “But great caution is to be exercised, lest the map is vitiated by the painters.” Errors by copyists of *mappaemundi* were evidently a widespread and well recognized problem; the author of HM 83 distinguishes himself by focusing on a solution to the problem.

In the second section of his discourse on the purposes of *mappaemundi*, the author of HM 83 addresses the representation of human activities (building, farming, etc.) on maps. In the first section he says that “The habitable land is now just as it was when it was created by God, although some places have been submerged,” but in the second he notes that “the inhabited lands have been changing, and where there were previously deserts, in those same places there is now farming and human dwellings,” so that “it is appropriate to make a new *mappamundi* frequently.” Our author sounds here like a cartographer who works for a governmental Department of Agriculture.

In the third section of his discourse on the functions of maps our author considers ethnography. He speaks of maps that show monstrous peoples in the ‘land of pilgrimage,’ i.e. the Holy Land, and says that he has been to that area and did not see any monstrous races, and again criticizes other mapmakers for

58 The text from Fra Paolino Veneto is transcribed and discussed by von den Brincken, “... ut describeretur universus orbis” (see Ch. 4, n. 47), p. 261; and the same author’s “*Quod non vicietur pictura*” (see Ch. 4, n. 47), p. 590.

their errors in this regard.⁵⁹ We do not know of any *mappamundi* that shows monstrous peoples in the Holy Land: indeed, such a map would have to be very large, since on most *mappaemundi* there is not room for more than brief descriptive texts or small images in that region. Nor do we know of a medieval map specifically of the Holy Land that shows monstrous peoples there.⁶⁰ Indeed, near the end of the late twelfth-century epic poem *Herzog Ernst*, the hero brings a few examples of the monstrous peoples to Jerusalem,⁶¹ which tends to confirm that there was no long tradition of monstrous races living in the Holy Land. So the author's source here is mysterious.

Our author then gives an account of the origin of monsters on islands, where he believes they do exist. A woman gives birth to a monstrous female child, and abandons it on a desert island, and a woman bears a male monster and abandons it on the same island, whence a race of monsters was born. This account is alleged to come from a travel narrative, but we have not been able to determine the author's source.⁶² Most other accounts of the origins of monsters are very different. Aristotle and Pliny, for example, hold that Africa

59 Other authors critical of reports of monsters in specific areas include Fra Mauro, who has a legend on his *mappamundi* expressing grave doubt about reports of monsters in Mauritania, see Falchetta, *Fra Mauro's World Map* (see Ch. 4, n. 30), pp. 386–387, *1043; Caspar Vopel, who in a legend off the eastern coast of South America on his world map of 1558 (*Nova et integra universalisque orbis totius ... descriptio*) says that in fact the Spanish have searched the continent from the West, and the Portuguese from the East, and that no cannibals have been found; and Jean de Léry, *Histoire d'un voyage fait en la terre du Bresil, autrement dite Amerique* (La Rochelle: Pour Antoine Chuppin, 1578), chapter 15, pp. 245–246; translated into English in Jean de Léry, *History of a Voyage to the Land of Brazil*, trans. Janet Whatley (Berkeley: University of California Press, 1990), chapter 15, “How the Americans Treat their Prisoners of War,” pp. 126–127.

60 Kenneth Nebenzahl, *Maps of the Holy Lands: Images of Terra Sancta through Two Millenia* (New York: Abbeville Press, 1986); P. D. A. Harvey, *Medieval Maps of the Holy Land* (London: The British Library, 2012).

61 See *The Legend of Duke Ernst*, trans. J. W. Thomas and Carolyn Dussère (Lincoln: University of Nebraska Press, 1979), pp. 125–126.

62 The most similar story we have found—and it is not very similar—is Geoffrey of Monmouth's account of the earliest settling of the British Isles (Albion), according to whom Albina, the daughter of a Greek King, and her sisters murder their husbands and for this crime are set adrift, reach an uninhabited island. The sisters feel lonely and desirous, and are visited by the devil, who copulates with them, and they bear giants who rule the island for hundreds of years. For a summary of the story see Jeffery Jerome Cohen, *Of Giants: Sex, Monsters and the Middle Ages* (Minneapolis: University of Minnesota Press, 1999), pp. 47–50; for discussion see Lisa M. Ruch, “The British Foundation Legend of Albina and her Sisters: Its Sources, Development, and Place in Medieval Literature,” Ph.D. Dissertation, Pennsylvania State University, 2006; and Anke Bernau, “Beginning with Albina: Remem-

produced many monsters because of the shortage of water, which caused different species to meet at water holes and there interbreed.⁶³ Albertus Magnus attributes the production of monsters to problems with the sperm, a superfluity of nutritive fluid in the female, or other problems of impregnation,⁶⁴ while Nicole Oresme attributes monsters to a lack or overabundance of one of the prerequisites to generation.⁶⁵ The anonymous author of the *Rudimentum novitiorum* (f. 59r) cites a text called *De spermate* or *Liber spermatis*, attributed to Galen,⁶⁶ on the generation of monsters, according to which monsters are born when the generative force is weak and allows the planets to influence the nature of a baby. Islands, like distant parts of the world, are separated from the known and familiar, and for that reason are often settings for marvels and monsters,⁶⁷ but we know of no precedent for HM 83's account of this unnamed island as the crucible for the generation of monsters.

bering the Nation," *Exemplaria: A Journal of Theory in Medieval and Renaissance Studies* 21.3 (2009), pp. 247–273.

- 63 Aristotle, *On the Generation of Animals* 746b7–13; Pliny, *Naturalis historia* 8.17.42.
- 64 See Albertus Magnus, *De animalibus*, 18.1.6 and 18.2.3; Albertus Magnus, *De animalibus libri xxvi, nach der Kölner Urschrift*, ed. Hermann Stadler (Münster: Aschendorff, 1916), vol. 2, pp. 1214–1218 and 1224–1226; and Albertus Magnus, *On Animals: A Medieval Summa Zoologica*, trans. Kenneth F. Kitchell Jr., and Irvén Michael Resnick (Baltimore: Johns Hopkins University Press, 1999), vol. 2, pp. 1303–1307 and 1312–1313. For discussion see Luke E. Demaitre and Anthony A. Travill, "Human Embryology and Developments in the Works of Albertus Magnus," in James A. Weisheipl, ed., *Albertus Magnus and the Sciences: Commemorative Essays 1980* (Toronto: Pontifical Institute of Mediaeval Studies, 1979), pp. 405–440, at 434–439.
- 65 See Nicole Oresme, *Nicole Oresme and the Marvels of Nature: A Study of his De causis mirabilium with Critical Edition, Translation and Commentary*, ed. and trans. Bert Hansen (Toronto: Pontifical Institute of Mediaeval Studies, 1985), pp. 228–229.
- 66 On this work attributed to Galen see Outi Merisalo, "Currunt manus, psallunt homoeoteleuta. Transmitting Medical Texts in the Late Middle Ages: The Case of *De Spermate*," in Ivo Volt and Janika Päll, eds. *Quattuor lustra. Papers Celebrating the 20th Anniversary of the Re-establishment of Classical Studies at the University of Tartu* (Tartu: Societas Morgensterniana, 2012) (= Acta Societatis Morgensternianae IV–V), pp. 245–256.
- 67 See for example Francis Dubost, "Insularités imaginaires et récit médiéval: l'insularisation," in Jean-Claude Marimoutou and Jean-Michel Racault, eds., *L'insularité thématique et représentations: actes du colloque international de Saint-Denis de La Réunion, avril 1992* (Paris: L'Harmattan, 1995), pp. 47–57; and Danielle Lecoq, "Les îles aux confins du monde," in Daniel Reig, ed., *Île des merveilles: mirage, miroir, mythe* (Paris: L'Harmattan, 1997), pp. 13–32. For a general discussion of the geography and cartography of monsters from antiquity to the Renaissance see Chet Van Duzer, "Hic sunt dracones: The Geography and Cartography of Monsters," in Asa Mittman and Peter Dendle, eds., *The Ashgate Research*

The author of HM 83 then offers a remarkable explanation for the fact that other cartographers mistakenly placed monstrous peoples in locations other than the few islands on which they had been generated. He says that they mistook the monstrous peoples depicted on the few islands on the first illustrated map (*prime figuralis mappa*), which were in fact scientific illustrations showing where those creatures had developed, for mere decorations, and thus felt free to copy them in other parts of their maps, where those creatures had never lived (still f. 8v):

To later map painters, such monstrous men and other things still more marvelous painted everywhere in all of the islands in the ocean <and> in the edge of the mainland appeared to be a <mere> decoration of maps. Thinking nothing of the falsehood, they painted them in common maps in the circuit of islands in the ocean.

This distinction between scientific and decorative images on maps is extraordinary, and shows our author to have made a very careful study of available *mappaemundi*, considering the sources of the images and the creators' motivations in painting those images. Several decades later, in 1551, Pierre Belon complained about the images of sea monsters on contemporary maps, but his complaint was simply that the images were not naturalistic, and he does not offer such a sophisticated etiology for the incorrect images, suggesting that the artists had imagined the beasts incorrectly based on their misleading names, having never seen them in nature.⁶⁸ Belon's chapter is titled "Qu'on ait grandement abusé en peignant les poissons sur les cartes, & que l'ignorance des hommes soit cause que plusieurs monstres de mer aient esté faulsement portraits sans aucun iugement," that is, "That there has been great abuse in the painting of fish on maps, and that men's ignorance has caused many sea monsters to be falsely portrayed without any judgment." The chapter begins:

L'Euident erreur de plusieurs hommes ignorants l'artifice de nature ne me permet passer outre sans m'esmouuoir, & les toucher de leur

Companion to Monsters and the Monstrous (Farnham, England, and Burlington, VT: Ashgate Variorum, 2012), pp. 387–435.

68 Pierre Belon, *L'histoire naturelle des estranges poissons marins avec la vraie peinture & description du daulphin, & de plusieurs autres de son espece* (Paris: De l'Imprimerie de R. Chaudiere, 1551), Book 1, chapter 30, f. 16v. There is some discussion of this passage in Wes Williams, *Monsters and their Meanings in Early Modern Culture: Mighty Magic* (Oxford and New York: Oxford University Press, 2011), p. 52.

temerité. N'est ce pas une faute digne de reprehension, de les veoir mettre tant de monstres marins en peinture, sans auoir discretion? Inconstants esprits, que ne considerent ils qu'il y a perfection en nature? Voulants donc peindre & représenter les choses naturelles, ne pouez mieuls faire que suyure le naturel. Et si ils ignorent la chose pourquoy la feignent ils? Qui est cause de si grand erreur, sinon leur folie? Qu'on voie les peintures es cartes marines, combien leurs monstres sont esloignez du naturel. O quels estranges poissons marins?

I cannot pass by the evident error of several men ignorant of the artifice of nature without getting upset, and upbraiding them for their temerity. Is not it a reprehensible error, to see them paint so many sea monsters without discretion? Inconstant spirits, who do not consider the perfection there is in nature! Wishing to paint and represent natural things, they could do no better than to follow nature. And if they do not know the thing, why do they feign it? What is the cause of so great an error, if not their lunacy? When one sees the images painted on nautical charts, how far their monsters are from nature! Oh what strange fish!

The differences between the passages about monsters in HM 83 and Belon shed light on the character of our author: he is less rhetorical, certainly, and perhaps we can even say that he is more introverted than Belon.

Many of the monsters on medieval maps were inspired by historical or encyclopedic works, such as Isidore's *Etymologiae*, Orosius's *Historiarum adversum paganos libri vii* and Solinus's *De mirabilibus mundi*, and thus would qualify as scientific according to the division implicit in HM 83. However, there were indeed maps whose monsters were purely decorative, rather than being based on scholarly works. The most impressive example that we know is the mid-fifteenth-century manuscript of Ptolemy's *Geography* in the Biblioteca Nacional de España in Madrid (MS Res. 255), whose maps are decorated with a remarkable number and variety of sea monsters that bear no relation to contemporary scientific texts, and seem to have come from a source like a model book.⁶⁹

In his fourth paragraph on the functions of *mappaemundi*, the author of HM 83 writes:

69 See Chet Van Duzer, "The Sea Monsters in the Madrid Manuscript of Ptolemy's *Geography* (Biblioteca Nacional, MS Res. 255)," *Word & Image* 27.1 (2011), pp. 115–123; and Chet Van Duzer, *Sea Monsters on Medieval and Renaissance Maps* (London: British Library, 2013), pp. 61–65.

Fourth, a *mappamundi* is considered with regard to men ruling over other men, etc. From the beginning, *mappaemundi* were diversely painted from Holy Scripture, chronicles, and pagan cosmography.

The reference to power relations between groups of people points towards the apocalyptic section of the manuscript, in which the relations between Christians and Muslims figure prominently. Our author's concern with the sources of *mappaemundi* again shows his careful analysis of the genre.

One of the many remarkable things the author of HM 83 does on f. 8v is to propose a mythologized early history of cartography. In the first paragraph he says that the first painter of a map (*primus mappae pictor*) placed his toponyms accurately so that the distances between places were indicated correctly, and in the third paragraph, in addressing the question of the monstrous peoples, he says that the painter of the first illustrated map (*prime figuralis mappae pictor*) understood how monsters were generated and painted them on the correct islands. Who was this supremely talented and knowledgeable early creator of *mappaemundi*? We are given no clue. But his primordial map is like Adam and Eve in Paradise before the Fall, perfect and uncorrupted, while later maps mirror the history of humans following their expulsion from Eden, vitiated and in need of a savior, with their toponyms out of place and their monstrous peoples on the wrong islands.

Excerpts from the Section on Astronomy and Geography

Following the section on the Apocalypse (ff. 8v–12v), the author changes perspective entirely, and opens this new section of his work on f. 13r with a diagram of the whole cosmos: the sphere of the earth rising partly out of the sphere of water, which are surrounded by the spheres of air and fire, then the planetary spheres, and the celestial spheres out to the Empyrean. The text on this folio starts to offer an account of the spheres, but is incomplete and need not detain us here. Two brief texts on f. 13v address the relative sizes of the earth, sun, ocean, moon, and the stars, and they do not require transcription and study here.

On f. 14r there is a map that copies the depiction of the world's waterways (see Fig. 4.16 below) from the map on ff. 7v–8r (see Fig. 4.15 below), and adds parallels that define a set of ten *climata*, and the text surrounding the map lists many places and indicates which *climata* they are in. The two columns of the text, which run alongside the northern and southern parts of the map, seem to reflect a geographical division of their contents: the first column, i.e. the text

alongside the northern part of the map (the first paragraph below) includes more places in the north, while the text alongside the southern part of the map (the second paragraph below) includes more places in the central climates, that is, in regions to the south of the places in the first column (though not places in the southern hemisphere). Most of the places in these two lists are in Europe: there are just a few in Asia at the beginning of both lists, and only one place in Africa, *Cepte* (Ceuta), appears in either of the lists. So the emphasis is on the better known parts of the world. Rostock and Wismar, mentioned towards the end of the first list, were, like Lübeck, members of the Hanseatic League; there seems to be some text missing after *wismaria*. In the second list, considerable space is devoted to the Iberian Peninsula, but the reason for this emphasis is not clear.

Amasones insula x tribus Caucasus mons in oriente. Caspius montes Olympus in macedoniam 7° climate Ethna in cicilia in 4 climate. Rucia extra climata Islandia in fine aquilonaris norwegia extra climata Suecia extra climata Gronlandia circa aquilonem adhuc pagana ignorans evangeliam. Ungaria <magna?> ad huc paga<na> ex quibus exierunt ungari christiani. Dacia in x climate. Bornholm insula intra ix et x climata. Godlandia insula de lubeck 89 miliaribus livonia in asia in 10 climate. Polonia in asia in 9 climate Let<u>ania sub polonia. Ungaria christiana in 7 climate. liptzich in media 8 climate Lubeck in principio novi climate de roma 220 miliaribus Prucia inter 8 et 9 clima partim est asia. Rostig wismaria <...> lucanani ad huc pagani inter ruthenos et suetos qui dicuntur a copmannis de lappen.

Babilonia antiqua in 1° climate circa Eufraten. Babilonia nova in 2° climate circa nilum qui cadit vel verius ascendit in mare magnum per 7 flumina. Babilonia nova et antiqua distant per 36 dietas qui sunt 216 miliaria teutonica. Constantinopolis in fine 6ti climatis. Cecilia in 3° climate. Portugalia in 3° climate. Katalonia in 3° climate. Compostella in 3° climate qua taxatur a viatoribus distare de hamborth 700 miliaribus et totidem de roma. Cepte regnum et 3° climate quod christiani hyspani acquisierunt circa annum christi 1411. Nota castella est regnum et provincia pars hyspanie. Sed Compostella est civitas in qua est cor<p>us san Iacobi in galicia quod etiam est pars hyspanie. Roma in principio 7 climate. Ffrancia in 7 climate et Britannia in fine 7 climate. Anglia in 8 climate et 3100 miliaribus de hamborth. Scotia in 9 cli<mate> in quo etiam hibernia.

The Amazons, the island of the Ten Tribes, and the mountain Caucasus are in the east. The Caspian Mountains <and> Olympus are in Macedonia <in the> seventh climate. Etna in Sicily is in the fourth climate. Russia is outside the climates, Iceland is in the distant north; Norway is outside the climates, Sweden is outside the climates; Greenland is in the north, still pagan and knowing nothing about the Gospel. Greater Hungary is still pagan, <and> from it the Hungarian Christians have departed. Dacia is in the 10th climate. The island of Bornholm sits astride the ninth and tenth climates. The island of Gotland is 89 miles from Lübeck, and Livonia is in Asia in the tenth climate. Poland is in Asia in the ninth climate, and Lithuania is below Poland. Christian Hungary is in the seventh climate. Leipzig is in the middle of the eighth climate. Lübeck is in the beginning of the ninth climate, and is 220 miles from Rome. Prussia sits astride the eighth and ninth climates, and partly in Asia. Rostock Wismar <...>; the Lucanani, still pagans, are between the Russians and the Swedes, and by the copmani (i.e. merchants, cf. Swedish *köpmän*) they are called Lapps.

Ancient Babylonia is in the first climate by the Euphrates. The new Babylon is in the second climate near the Nile, which falls or rather ascends into the Mediterranean through seven channels. The ancient and new Babylonia are separated by a 36-day journey, which is 216 German miles. Constantinople is in the end of the 6th climate. Sicily is in the third climate, Portugal in the third, Catalonia in the third, Santiago de Compostela in the third climate, which travelers estimate to be 700 miles from Hamburg, and the same from Rome. The kingdom of Ceuta is in the third climate, and Spanish Christians took in about the year 1411. Note that Castile is both a kingdom and a province that is part of Spain, but Compostela is a city (in which lies the body of Saint James) in Galicia, which is also a part of Spain. Rome is in the beginning of the seventh climate. France is in the seventh climate and Britain is in the end of the seventh climate. England is in the eighth climate and is 3100 miles from Hamburg. Scotland is in the ninth climate, in which Ireland is also.

On f. 14v there is a map that offers an absolute minimum of geographical details, just the bodies of water of a typical T-O *mappamundi*, but with an extra body of water parallel to and south of the Mediterranean (see Fig. 4.17 below); the surrounding text explains that the extra body of water is the *mare artum* ('narrow sea') or western mouth of the Mediterranean: this separation of the Mediterranean proper and the Strait of Gibraltar into different *climata* is puzzling. On the map are indications of nine climates (the last of which is not numbered), and spread across the map is a table that for each climate gives

elevatio poli artici or elevation of the North Star in each climate, the *dies prolixior* or longest day of each climate, and the width in miles of each climate. The system of climates here is different from that on f. 14r: the system depicted on f. 14r has ten climates, while here he says that modern astronomers do not add any climates beyond the ninth, because night is not distinguished by the setting of the sun in those northern regions. The text above and below the map reads:

Figura hec climatuum astronomorum qui climata distinguunt secundum diversitatem mundi et quod ultra novum clima sol non occidit nec oritur in suis stationibus estivali et hyemali. Ergo novi astronomi non addunt antiquorum climatibus decimum et infra climata quod non cognoscitur ibi nox per solis occasum sed per eius motum in aquilonam plaga<m>.

In hac figura patiatur mare artum in medio tertii climatis et in fine sexti sumatur mare magnum qui hic neglectum est signare

This is a diagram of the climates of the astronomers who divide the climates according to the diversity of the world and because beyond the ninth climate the sun does not set, nor does it rise in its summer and winter stations. Therefore the modern astronomers do not add a tenth climate and beyond those of the ancients, because night is not distinguished there by of the setting of the sun, but by its motion to the northern region.

In this diagram is represented the narrow sea in the middle of the third climate, and at the end of the sixth is included the Mediterranean, which here is not depicted.

The point seems to be that the climates indicated on the map on f. 14r derive from geographical texts, while those on this map on f. 14v derive from astronomers. On f. 15r there is another map with the climates, and the author says that those climates are based on the writings of theologians—and the map indicates the locations where the Apostles preached. So these three maps have three different systems of climates.

The last part of the geographical material in HM 83 that we will transcribe and translate is the summary of world history, with an emphasis on the Last Days, on f. 16r. In this narrative, most of the stages of the Apocalypse are described much as they are illustrated and described in the Apocalyptic section of the manuscript (these connections are indicated in the footnotes below), but the correspondence between the narrative here and that in the Apocalyptic section is certainly not perfect. Moreover, there are significant differences in emphasis between the narrative on f. 16r and in the treatise on the

Apocalypse. In the narrative on f. 16r, the author tells how Antichrist will conquer people through his four-fold method (which corresponds with events depicted in the map on f. 10v), then how Enoch and Elijah will preach against Gog and then rise to Heaven. The map on f. 11r portrays a thorough victory by Christ, with his banner spread over the whole world, with no mention of Enoch and Elijah (they appear in the map on f. 10v, but the text on that folio does not mention them either). Moreover, while the narrative on f. 16r then describes a battle between Christ and Antichrist in the sky above the Mount of Olives, and the map on f. 11v shows the sky above the Mount of Olives, the map on that folio does not depict such a battle, nor does the text there describe it; instead, the focus is on the Last Judgment and the rising of the saved with Jesus and the Apostles, and the descent of the damned into Hell. These differences may indicate that the author was still refining his ideas about the Last Days, or that what we have in HM 83 is an abbreviated version of a fuller account the author had written, and that the process of abbreviation resulted in different emphases in the two different accounts (i.e. that in ff. 8v–11r and that on f. 16r).

There are some unusual and apparently original features in this account of the Last Days. In pseudo-Methodius's influential account of the Last Roman Emperor, who was to lead the fight against Islam,⁷⁰ the Last Emperor lays his crown on the Cross on Golgotha, and then the Cross and crown together are raised to Heaven,⁷¹ while in the narrative on f. 16r in HM 83, the Last Emperor places his crown directly on Jesus's head, "recognizing that that crown is his, and always was his." This is a remarkable politicization of Jesus's reign on earth. As the same time, the author makes absolutely no attempt to connect the Last Roman Emperor with any historical figure, and thus avoids politicizing that figure—something often done by other authors. Another unusual feature of

70 On the idea of the Last Emperor see Marjorie Reeves, "Joachimist Influences on the Idea of a Last World Emperor," *Traditio* 17 (1961), pp. 323–370; Marjorie Reeves, "The Worst Antichrist and the Last Emperor," in her *The Influence of Prophecy in the Later Middle Ages: A Study in Joachimism* (Oxford: Clarendon Press, 1969), pp. 306–319; Paul J. Alexander, "The Medieval Legend of the Last Roman Emperor and Its Messianic Origin," *Journal of the Warburg and Courtauld Institutes* 41 (1978), pp. 1–15; Gerrit J. Reinink, "Pseudo-Methodius und die Legende vom römischen Endkaiser," in Werner Verbeke, Daniel Verhelst, and Andries Welkenhuysen, eds., *The Use and Abuse of Eschatology in the Middle Ages* (Leuven: Leuven University Press, 1988), pp. 82–111; and Hannes Möhring, *Der Weltkaiser der Endzeit: Entstehung, Wandel und Wirkung einer tausendjährigen Weissagung* (Stuttgart: Thorbecke, 2000).

71 See Pseudo-Methodius, *Apocalypse; An Alexandrian World Chronicle*, ed. and trans. Benjamin Garstad (Cambridge, MA: Harvard University Press, 2012), chapter 14, pp. 64–65 and 132–135.

this narrative is that the author says that the reign of Antichrist will be a thousand years, which of course is the duration usually ascribed to the reign of Christ (Revelation 20:1–6), and in fact Revelation 13:5 was widely interpreted as indicating that the reign of Antichrist will be 42 months.⁷² Also, at the end of the narrative the author says that Christ's reign will be 47 years. The ascription of a 1000 year reign to Antichrist could be taken as an instance of Antichrist's 'imitation' of Christ, but the shortening of Christ's reign from 1000 to 47 years, in the face of scriptural authority for the 1000 year figure, is bold indeed. It is noteworthy that the narrative on f. 16r does not include the Resurrection; there is more room on the folio, but there is no way to know whether perhaps the scribe simply did not copy this material, or whether the Resurrection was omitted to create more of a focus on the 'high level' actors in the Apocalyptic drama.

The chronology of this summary of the world's history bears examination. The author says that Muhammad began his career in the year 639—the source of this non-traditional date for the beginning of Muhammad's career is not clear—and that his sect would last 931 years, i.e. to the year 1570, when the Last Roman Emperor would put an end to Islam (and 1570 is the end date of the apocalyptic map on f. 9v, which shows Islam spread throughout the world). The Last Roman Emperor then comes to Jerusalem and gives his crown to Christ, and in that moment, the Roman Empire is said to end. So the Roman Empire is to end in 1570, and the author says that the decline of the Empire would last 931 years, so the decline began in the year 639, i.e. exactly when Muhammad began his activities, well after the year 476, the traditional date of the fall of the Roman Empire.⁷³ The author's setting aside of this traditional date in favor of one based on the chronology of Islam clearly indicates his focus on religion. He says that the Roman Empire was powerful and stable for 639 years, which puts the beginning of that period at the year zero, the year of the birth of Christ—so that what is purportedly a chronology of the Roman Empire is in fact based on religion. Finally the author says that the period when Rome was rising lasted 750 years, which puts the founding of the city at 750 BC. Although 753 BC is the most commonly cited date for the founding of Rome,

72 For assertions that the reign of Antichrist would be three and a half years see for example St. Augustine, *De civitate Dei* 20.23; and St. Jerome, *Commentariorum in Daniele libri III*, ed. F. Glorie, in Jerome's *Opera* (Turnhout: Brepols, 1958-) (= Corpus Christianorum, Series Latina, vol. 75A), p. 849 (2.7.25c).

73 See Brian Croke, "A.D. 476: The Manufacture of a Turning Point," *Chiron* 13 (1983), pp. 81–119, reprinted in his *Christian Chronicles and Byzantine History, 5th–6th Centuries* (Aldershot, Hampshire, Great Britain: Variorum; Brookfield, VT: Ashgate 1992), pp. 81–119; and Giuseppe Zecchini, "Il 476 nella storiografia tardoantica," *Aevum* 59 (1985), pp. 3–23.

Polybius and Diodorus, for example, date the founding of the city to 750/751.⁷⁴ There are numerous grammatical errors in the Latin:

Epilogus totius perituri mundi qui habet tres partes, prima pars terminatur diluvio, 2a pars est duratio babilonie, 3a pars duratio Rome. In qua parte nos sumus hodie quod Roma ad huc presento est. Alie due dudum transierunt et cum dicitur hodie babilonia stat de nova intelligendum est, non de antique. Roma habet tres partes secundum hec Crevit statit et decrescit. Prima pars est crementum et erat 750 annorum, in tot annis crevit a minimo usque ad maximum. Secunda pars est plenitudo et status et erat 639 annorum tot annis imperavit toti mundo. Tertia pars est decrementum et discessio et etiam 931 annorum tot annis decrescit donec nichil sit sicut nichil fuit. Circa primam <partem> natus est Jesus verus Christus. In totali fine Rome nascitur Gog falsus Christus et apparebit in 30 annis prius Rome totalem cassationem. Anno nativitatis Jesu Christi 639 Machometus incepit Romanum imperium cassare et ab illo anno usque in hunc 1488 successive abstraxit quasi totum mundum preter hanc quartam in quam nos sumus.⁷⁵ Quantum Romanorum imperator hodie habeat videmus. Et quando Machometus totum mundum subiciet tunc dominabitur in plena postestate 56 annis in quibus 656 annis Roma nihil habet nisi tantum occultum jus sine omni potestate.⁷⁶ In fine illorum 56 annorum ultimus imperator Romanorum vel per illos absconditus vel nominatus a christianis oppressibus electus exsurgit cum omnibus christianis et Jesu Christo adiutore delebit totam sectam machometicam qui duravit 931 annis.⁷⁷ Quibus deletis imperator

74 Dionysius of Halicarnassus indicates that the Roman Empire lasted from 751 BC to 7 BC, about the period that the author of HM 83 ascribes to the rising of the state to power. See Dionysius of Halicarnassus, *The Roman Antiquities*, trans. Ernest Cary (Cambridge, MA: Harvard University Press; and London: W. Heinemann, 1937–1950), vol. 1, p. 11 (1.3.3–4). It is Dionysius who indicates that Polybius said that the city was founded in 750 BC.

75 See the map on f. 9r, which shows the world from the year 639 to 1514, and shows Europe under the control of the Roman Emperor and the Pope, while much of the rest of the world has fallen to Islam (see Fig. 5.3).

76 See the map on f. 9v, which shows the world from the year 1514 to 1570 (56 years), on which the sword of Muhammad dominates the whole earth (see Fig. 5.5).

77 It was said above that Muhammad began to attack the Roman Empire in the year 639, and adding 931 and 639 we get 1570, and 1570 is the last year represented on the map on f. 9v, which shows the sword of Muhammad controlling the world, and is the first year represented on the map on f. 10r, which shows the increase of Antichrist—and the text here mentions the birth of Antichrist momentarily. Incidentally two ninth-century Islamic

Romanorum cesar ultimus veniet Jerusalem et offert ibi super unam altarem coronam romani regni domino Iesu christo recognoscens illam coronam sui esse et semper fuisse. Et in illa hora qua illa corona offertur expirat Romanum imperium totaliter. In eadem hora verum dicitur: Nunc natus est Gog antichristus sed nemo noscit eum. Ab hora eadem erit regnum Christianorum per totum mundum per 30 annos per 10 reges qui maiorem laborem fecerunt in delendo sectam machometicam. Et gog antichristus educatur et crescit.

Circa finem illorum 30 annorum illi 10 reges incipient litigare quis illorum sit caput omnium. Et apparebit gog antichristus⁷⁸ et subiciet sibi primo 36 reges inde alios 7 et veniet in Jerusalem et dicet se esse verum Christum et illam coronam sibi pertinere, quam sibi ut suam imponet et dicet Iesum esse deceptorem et nequaquam esse Christum. Habet suum regnum initium medium et finem. Initium ipsius gog antichristus 30 annorum erit per quod tempus emittet suos nuntios per totum mundum etiam ad insulas maris oceani qui ducatu spiritus maligni cito venient et probatos tam paucos ut quasi omnes decipiant (i.e. decipiet) quadruplici modo⁷⁹ scilicet Crudelitate per tormentorum illationem etc. superat car-

authors, al-Kindi and Abu Ma'shar al-Balkhi, had made a different estimate of the maximum duration of Islam, namely that it could not last more than 693 years, and this estimate was repeated by Roger Bacon and (from him) by Pierre d'Ailly. See Yahya J. Michot, "Ibn Taymiyya on Astrology: Annotated Translation of Three Fatwas," *Journal of Islamic Studies* 11.2 (2000), pp. 147–208, at 185–187; Pauline Moffitt Watts, "Prophecy and Discovery: On the Spiritual Origins of Christopher Columbus's 'Enterprise of the Indies,'" *American Historical Review* 90.1 (1985), pp. 73–102, at 88–89; Roger Bacon, *The 'Opus majus' of Roger Bacon*, ed. John H. Bridges (Oxford: Williams and Norgate, 1897), vol. 1, p. 266; and Roger Bacon, *The Opus majus of Roger Bacon*, trans. Robert Belle Burke (Philadelphia: University of Pennsylvania Press; London: H. Milford, Oxford University Press, 1928), p. 287. Also see Pierre d'Ailly, *Tractatus de legibus et sectis contra supersticiosos astronomos* ([Rouen]: [Guillaume LeTalleur], 1489), chapter 4, argument 5.

78 The fact that Antichrist begins his activities when he is thirty years old mimics Jesus's beginning his public ministry when he was thirty (see Luke 3:23), and this 'imitation' is a traditional element of the life of Antichrist.

79 See the map on f. 10v, which shows the world from 1606 to 1660, and reveals through symbolic geography the four horns of Antichrist by which he will deceive the people (see Fig. 5.7). For discussion of the source of the four-horn symbolism here see our analysis of the map on f. 10v. As we will show in our discussion of that map, this symbolic interpretation of the four horns of Antichrist comes from Hugh Ripelin of Strasbourg's *Compendium theologicæ veritatis* 7.9, published in Albertus Magnus, *D. Alberti Magni Ratisbonensis episcopi ordinis Praedicatorum Opera omnia*, ed. A. Borgnet (Paris: apud Ludovicum Vivès, 1890–95), vol. 34, pp. 1–306, at 242–243.

nales seipsos amantes. Dolositate per munerum collationem etc. Decipient (i.e. decipiet) carnales avaros. Caliditate per divinie scripture falsam expositionem etc. decipiet inflatos falsa scientia. Sceleritate mentite deitatis per miraculorum operationem qua superat ypocritas seipsos sanctificantes et justificantes. Medium quoque tenet totum mundum in plena potestate est m annorum. Pro illo tempore omnes Jesu Christi confessores sunt in heremo (i.e. eremo) ab antichristi confessoribus incogniti. Tantum enoch et helias audent venire ex paradiso et contra gog predicare a termino mundi ad gog presentiam in Jerusalem⁸⁰ ubi eos occidet qui manebunt insepulti per m diem tunc resurgent et ascendent in celum cunctis videntibus. Et tunc ne cum tali facto superent,⁸¹ vadit super montem oliveti promittens se ascensurum in caelum post illos et ductu dyaboli ascendit in aerem ubi obviabit ei jesus verus christus et occidet eum et cadit cadaver in rupturas monte oliveti quae ibi fiunt quando gog inde pedes elevat⁸² et tunc 12 tribus Israel qui ad gog venerunt tanquam suum Christum diu expectatum convertentur ad verum Christum similiter omnes alii. Et incipiet regnum Jesum Christi per totum 47 annis

80 Enoch and Elijah are not mentioned by name in the Book of Revelation, but they are traditionally identified with the two witnesses chosen to refute the errors of Antichrist (Revelation 11:3–12), particularly as the return of both prophets is predicted in other books of the Bible: see Malachi 4:5, Ecclesiasticus 48:10, Matthew 17:11, and Ecclesiasticus 44:16 (this last on Enoch). On the role of Enoch and Elijah in the Last Days see Hugh Ripelin of Strasbourg's *Compendium theologiae veritatis* 7.12, published in Albertus Magnus, *Opera omnia* (see Ch. 4, n. 79), vol. 34, p. 244. The cycle of illustration of the play *Jour du Jugement* in the fourteenth-century manuscript in Besançon, Bibliothèque Municipale, MS 579, contains a particularly large number of images of the events involving Enoch and Elijah: see Richard K. Emmerson, "Visualizing Performance: The Miniatures of the Besançon MS 579 *Jour du Jugement*," *Exemplaria* 11.2 (1999) pp. 245–284; and Karlyn Marie Griffith, "Illustrating *Antichrist and the Day of Judgment* in the Eighty-Nine Miniatures of Besançon, Bibliothèque Municipale MS 579," MA Thesis, Florida State University, 2008, which reproduces the miniatures in the manuscript, and is available at <<http://diginole.lib.fsu.edu/etd/3956/>>.

81 Given the general correspondence between the narrative here and the sequence of events in the apocalyptic section of the manuscript, it is here that we would expect to have events corresponding to those depicted in the map on f. 11r, that is, the triumph of Christ throughout the earth, and the flattening of the earth to smoothness, as depicted in the smaller map at the bottom of f. 11r (see Fig. 5.8)—but there are no such corresponding events. It is tempting to think that this significant difference between the two narratives indicates that the author continued to revise his work.

82 The topography described here is very similar to that in the map that shows the Last Judgment on f. 11v, but Antichrist is not mentioned in the text on that folio.

quibus finitis omnes beati homines semper sunt parati et exspectant regnum quo mundus dominatur. Impii non credent sicut iis inire finem mundi.

The epilogue of the whole doomed world, which has three parts: the first ended with the Flood, the second coincided with Babylon, and the third with Rome, in which part we now are, because Rome still exists. The other two passed long ago, and that which today is called Babylon is the new one, and must not be understood as the ancient one. Rome has three parts, and they are: it grew, it was stable, and it decreased. The first part is its growth, and it lasted 750 years. Throughout all of these years it grew from minimum to maximum. The second part was its fullness and stability, and it was 639 years, for that period it ruled the whole world. The third part was its decline and division, and indeed for 931 years it decreased until it was nothing, just as it had been nothing originally. During the first <part> Jesus the true Christ was born. At the very end of Rome, Gog the false Christ is born, and he will appear in the thirty years before the complete fall of Rome. In the year 639 after the birth of Christ, Muhammad began to destroy the Roman Empire, and from year until this year of 1488, step by step he conquered the whole world except this quarter in which we are now, which we see the Roman emperor holds today.⁸³ And when Muhammad will control the whole world then he will rule in full power for 56 years, during which 56 years Rome has nothing except for a hidden tradition without any power.⁸⁴ At the end of those 56 years, the last Roman emperor, either hidden or named by them, is elected by the oppressed Christians and rises together with all Christians, and with the help of Jesus Christ will destroy the whole Muhammadan sect, which lasted 931 years.⁸⁵ When it is destroyed, the last Roman emperor will

83 See the map on f. 9r, which shows the world from the year 639 to 1514, and shows Europe under the control of the Roman Emperor and the Pope, while much of the rest of the world has fallen to Islam (see Fig. 5.3).

84 See the map on f. 9v, which shows the world from the year 1514 to 1570 (56 years), on which the sword of Muhammad dominates the whole earth (see Fig. 5.5).

85 It was said above that Muhammad began to attack the Roman Empire in the year 639, and adding 931 and 639 we get 1570, and 1570 is the last year represented on the map on f. 9v, which shows the sword of Muhammad controlling the world, and is the first year represented on the map on f. 10r, which shows the increase of Antichrist—and the text here mentions the birth of Antichrist momentarily. Incidentally two ninth-century Islamic authors, al-Kindi and Abu Ma'shar al-Balkhi, had made a different estimate of the maximum duration of Islam, namely that it could not last more than 693 years, and this

come to Jerusalem and there offer on one altar the crown of the Roman kingdom to Lord Jesus Christ, recognizing that that crown is his, and always was his. And in that very moment when that crown is offered, the Roman Empire expires completely. In the same moment, it will be truthfully said, "Now Gog Antichrist is born," but nobody recognizes him. From that same moment, the kingdom of Christians will exist throughout the whole world for thirty years through ten kings who performed a large task in destroying the Muhammadan sect. And Gog Antichrist is raised and grows.⁸⁶

Around the end of those thirty years, those ten kings will begin to quarrel about which of them is the leader of all of them. And Gog Antichrist will appear⁸⁷ and he will subject to himself first thirty-six kings, and then seven others, and he will come to Jerusalem and say that he is the true Christ, and that that crown is his, which he will put it on his head as his own, and he will say that Jesus is a deceiver, and not at all Christ. His reign has a beginning, middle, and end. The beginning <of the reign> of Gog Antichrist will be a thousand years, during which time he will send his messengers throughout the whole world, even to the islands of the ocean, which through the leadership of an evil spirit will quickly come. The loyal are so few that he will deceive almost everyone by a four-fold method.⁸⁸ That is, by cruelty through the use of tortures, etc., he

estimate was repeated by Roger Bacon and (from him) by Pierre d'Ailly. See Yahya J. Michot, "Ibn Taymiyya on Astrology: Annotated Translation of Three Fatwas," *Journal of Islamic Studies* 11.2 (2000), pp. 147–208, at 185–187; Pauline Moffitt Watts, "Prophecy and Discovery: On the Spiritual Origins of Christopher Columbus's 'Enterprise of the Indies,'" *American Historical Review* 90.1 (1985), pp. 73–102, at 88–89; Roger Bacon, *The 'Opus majus' of Roger Bacon*, ed. John H. Bridges (Oxford: Williams and Norgate, 1897), vol. 1, p. 266; and Roger Bacon, *The Opus majus of Roger Bacon*, trans. Robert Belle Burke (Philadelphia: University of Pennsylvania Press; London: H. Milford, Oxford University Press, 1928), p. 287. Also see Pierre d'Ailly, *Tractatus de legibus et sectis contra superstitiosos astronomos* ([Rouen]: [Guillaume LeTalleur], 1489), chapter 4, argument 5.

- 86 The idea that Antichrist was not known during his youth was traditional: see St. John of Damascus, *An Exact Exposition of the Orthodox Faith*, Book 4, chapter 26, in Saint John of Damascus, *Writings* (New York: Fathers of the Church, 1958) (= *The Fathers of the Church, A New Translation*, vol. 37), p. 400: he "is brought up unnoticed."
- 87 The fact that Antichrist begins his activities when he is thirty years old mimics Jesus's beginning his public ministry when he was thirty (see Luke 3:23), and this 'imitation' is a traditional element of the life of Antichrist.
- 88 See the map on f. 10v, which shows the world from 1606 to 1660, and reveals through symbolic geography the four horns of Antichrist by which he will deceive the people (see Fig. 5.7). As we will show in our discussion of that map, this symbolic interpretation of the

conquers the carnal people who love themselves; by deceitfulness, through the gathering of gifts, etc., he will deceive the greedy; by cunning, through a false interpretation of the divine scriptures, etc., he will deceive those puffed up with false knowledge; by the wickedness of imitating the deity, through the performance of miracles, by which he conquers hypocrites who sanctify and justify themselves. In the middle of his rule he holds the world in full power for a thousand years. During that time, all of those who accept Jesus Christ are in the desert, unknown to those who accept Antichrist. Only Enoch and Elijah will dare to come out of Paradise and preach against Gog from the end of the world until Gog is present in Jerusalem,⁸⁹ where he (Gog) will kill those who will remain unburied for a thousand days, and then they will rise again and ascend into Heaven, in the sight of all. And then lest they (Enoch and Elijah) triumph through this deed,⁹⁰ he (Gog) will arrive above the Mount of Olives, promising that he will ascend into Heaven after them, and being led by the Devil, he ascends into the air, where the true Jesus Christ will meet him and kill

four horns of Antichrist comes from Hugh Ripelin of Strasbourg's *Compendium theologiae veritatis* 7.9, published in Albertus Magnus, *D. Alberti Magni Ratisbonensis episcopi ordinis Praedicatorum Opera omnia*, ed. A. Borgnet (Paris: apud Ludovicum Vivès, 1890–95), vol. 34, pp. 1–306, at 242–243.

89 Enoch and Elijah are not mentioned by name in the Book of Revelation, but they are traditionally identified with the two witnesses chosen to refute the errors of Antichrist (Revelation 11:3–12), particularly as the return of both prophets is predicted in other books of the Bible: see Malachi 4:5, Ecclesiasticus 48:10, Matthew 17:11, and Ecclesiasticus 44:16 (this last on Enoch). On the role of Enoch and Elijah in the Last Days see Hugh Ripelin of Strasbourg's *Compendium theologiae veritatis* 7.12, published in Albertus Magnus, *Opera omnia* (see Ch. 4, n. 88), vol. 34, pp. 1–306, at 244. The cycle of illustration of the play *Jour du Jugement* in the fourteenth-century manuscript Besançon, Bibliothèque Municipale, MS 579, contains a particularly large number of images of the events involving Enoch and Elijah: see Richard K. Emmerson, "Visualizing Performance: The Miniatures of the Besançon MS 579 *Jour du Jugement*," *Exemplaria* 11.2 (1999) pp. 245–284; and Karlyn Marie Griffith, "Illustrating *Antichrist and the Day of Judgment* in the Eighty-Nine Miniatures of Besançon, Bibliothèque Municipale MS 579," MA Thesis, Florida State University, 2008, which reproduces the miniatures in the manuscript, and is available at <<http://diginole.lib.fsu.edu/etd/3956/>>.

90 Given the general correspondence between the narrative here and the sequence of events in the apocalyptic section of the manuscript, it is here that we would expect to have events corresponding to those depicted in the map on f. 11r, that is, the triumph of Christ throughout the earth, and the flattening of the earth to smoothness, as depicted in the smaller map at the bottom of f. 11r—but there are no such corresponding events. It is tempting to think that this significant difference between the two narratives indicates that the author continued to revise his work.

him, and his body will fall into the ruptures of the Mount of Olives, which were created there when Gog raised his feet from that point.⁹¹ And then the twelve tribes of Israel who had come to Gog as if to their long-awaited Christ will be converted to the true Christ, and similarly all the others. And the reign of Jesus Christ will begin for forty-seven years in a row, and when that time is over, all of the blessed men are always ready and expect the kingdom by which the world will be ruled. The impious will not believe that the end of the world will come for them.

This summary of the Last Days near the end of the astronomical and geographical section of HM 83 (ff. 13r–18r) makes no explicit reference to the earlier Apocalyptic treatise (ff. 8v–12v), and thus, unfortunately, we have no information about the author's conception of the relationship between them, or why the summary of the Last Days was thought necessary.

Links with the *Rudimentum novitiorum*

In 1475, about a decade before the composition of the works in HM 83, Lucas Brandis⁹² printed in Lübeck the *Rudimentum novitiorum* (Handbook for Beginners), a universal history that we have mentioned several times previously.⁹³ This was one of the first books printed in the city,⁹⁴ and contains the first printed edition of Burchard of Mount Sion's *Descriptio Terrae Sanctae*, which occupies ff. 162r–188r, and also contains two maps that have an important

91 The topography described here is very similar to that in the map that shows the Last Judgment on f. 11v (see Fig. 5.9), but Antichrist is not mentioned in the text on that folio.

92 Ursula Altmann, "Die Leistungen der Drucker mit Namen Brandis im Rahmen der Buchgeschichte des 15. Jahrhunderts," Dissertation, Humboldt-Universität Berlin, 1974; and Dieter Lohmeier, "Brandis, Lucas: geb. vor 1450 Delitzsch (Sachsen), gest. nach 1500; Buchdrucker," in Olaf Klose and Eva Rudolph, eds., *Biographisches Lexikon für Schleswig-Holstein und Lübeck* (Neumuenster: Wachholtz, 1970–), vol. 10, pp. 53–56.

93 Andrea Worm, "Rudimentum Novitiorum," in Graeme Dunphy, ed., *Encyclopedia of the Medieval Chronicle* (Leiden: Brill, 2010), vol. 2, pp. 1304–1307; there is some good discussion of the 1475 Latin edition in an article that focuses on the later French translation, namely Edith A. Wright, "La Mer des Hystoires, Paris 1488," *Boston Public Library Quarterly* 11 (1959), pp. 59–74.

94 Gustav Kohfeldt, "Zur Druckgeschichte des Lübecker Rudimentum Novitiorum vom Jahre 1475," *Zentralblatt für Bibliothekswesen* 24 (1907), pp. 26–30; Dieter Lohmeier, "Die Frühzeit des Buchdrucks in Lübeck," in Alken Bruns and Dieter Lohmeier, eds., *Die Lübecker Buchdrucker im 15. und 16. Jahrhundert. Buchdruck für den Ostseeraum* (Heide in Holstein: Boyens, 1994), pp. 11–53.

place in the history of cartography. The first is a world map (ff. 85v–86r) that stands at the beginning of a geographical treatise (ff. 87r–117r) based in part on Isidore and Bartholomaeus Anglicus.⁹⁵ This *mappamundi* is the first detailed printed world map,⁹⁶ and is made in a style similar to that of an early printed *mappamundi* that survives in just a fragment,⁹⁷ and to that of the somewhat later printed maps of Hans Rüst (c. 1480) and Hans Sporer (c. 1480–1500).⁹⁸ There is also a map of the Holy Land (ff. 174v–175r) at the beginning of Burchard's description of the Holy Land, very similar in style to the world map, with each named locality represented by a hill.⁹⁹

The combination of the *Rudimentum novitiorum*'s geographical treatise, maps, interest in the Holy Land, and production in Lübeck suggest the possibility of a connection with HM 83. We have seen above some important

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- 95 On the dependence of the geographical treatise in the *Rudimentum novitiorum* on Bartholomaeus Anglicus see Anna Dorothea von den Brincken, "Universalkartographie und geographische Schulkenntnisse im Inkunabelzeitalter (Unter besonderer Berücksichtigung des 'Rudimentum Noviciorum' und Hartmann Schedels)," in Bernd Moeller, Hans Patze, and Karl Stackmann, eds., *Studien zum städtischen Bildungswesen des späten Mittelalters und der frühen Neuzeit* (Göttingen: Vandenhoeck & Ruprecht, 1983) (= Abhandlungen der Akademie der Wissenschaften in Göttingen, Philologisch-Historische Klasse, 3. Folge, Nr. 137, 1983), pp. 389–429, at 406–407; and Michael Herkenhoff, "Das *Rudimentum novitiorum* (1475)," in *Die Darstellung außereuropäischer Welten in Drucken deutscher Offizinen des 15. Jahrhunderts* (Berlin: Akademie Verlag, 1996), pp. 100–111, at 106–107. Herkenhoff also says (p. 106) that the descriptions of some of the islands and rivers in the *Rudimentum novitiorum* come from Isidore.
- 96 The earliest surviving printed map is a small schematic *mappamundi* printed in the 1472 Augsburg edition of Isidore's *Etymologiae*: see Tony Campbell, *The Earliest Printed Maps, 1472–1500* (London: British Library, 1987), p. 108 and Fig. 7. For discussion of the world map in the *Rudimentum novitiorum* see Campbell, *The Earliest Printed Maps*, pp. 144–145 with Fig. 26; and Wesley A. Brown, *The World Image Expressed in the Rudimentum novitiorum* (Washington, DC: Geography and Map Division, Library of Congress, 2000).
- 97 On the fragmentary printed *mappamundi* see Campbell, *The Earliest Printed Maps* (see Ch. 4, n. 96), p. 216; and Margriet Hoogvliet, *Pictura et scriptura: textes, images et herméneutiques des Mappae mundi, XIIIe-XVIIe siècles* (Turnhout: Brepols, 2007), p. 212.
- 98 On Rüst and Spörer's maps see Leo Bagrow, "Rüst's and Spörer's World Maps," *Imago Mundi* 7 (1950), pp. 32–36; and Campbell, *The Earliest Printed Maps* (see Ch. 4, n. 96), pp. 79–84 with figs. 29 and 30.
- 99 On the treatise on the Holy Land in the *Rudimentum* see Michael Herkenhoff, "Das Heilige Land im *Rudimentum novitiorum* (1475)," in his *Die Darstellung außereuropäischer Welten* (see Ch. 4, n. 95), pp. 147–156. On the map of the Holy Land in the *Rudimentum* see Campbell, *The Earliest Printed Maps* (see Ch. 4, n. 96), p. 146 with fig. 61; Nebenzahl, *Maps of the Holy Lands* (see Ch. 4, n. 60), pp. 60–62; and Harvey, *Medieval Maps of the Holy Land* (see Ch. 4, n. 60), pp. 146–147.

differences between the *Rudimentum* and HM 83: the authors' descriptions of the purposes of the maps in the two works (*Rudimentum*, f. 87r; HM 83, f. 8v) are very different, as are their accounts of the creation of monsters (*Rudimentum*, f. 59r; HM 83, f. 8v). The tones of the works are also different, and one may find other specific differences between them, cases in which it is clear that the author of HM 83 was not following the earlier work. For example, the description of Babylon in the *Rudimentum* (ff. 88r–88v) comes straight from Bartholomaeus Anglicus 15.22, whereas HM 83 has a few different passages on Babylon (ff. 1r, 1v, 5v, and 12v), the first of which comes from Rothelin Continuation of the History of William of Tyre, and none of which bears any relation to the text from Bartholomaeus.

However, there are some similarities between the two works that make it seem likely that the author of HM 83 was familiar with the *Rudimentum*. First, the description of the three parts of the world on HM 83, f. 1r, comes from Bartholomaeus Anglicus 15.1, as shown above, just like the corresponding passage in the *Rudimentum* (f. 87r). It seems unlikely that two authors in the same city about a decade apart would use the same source for their descriptions of the world unless there was some influence of one on the other. Also, in both books there are complaints about how a lack of space (*artitudo*) on maps can cause problems with place names. As we saw above, the author of HM 83 writes (f. 8v):

... tamen successores successive valde transposuerunt situm et distantiam coacti artitudine loci in mappa figurali ubi etiam unum nomen loci in extenso scriptum repellit aliud ad extraneam distantiam. Propter quod ego decrevi perfecta nomina locorum <non?> scribere ad <contrarium?> precedentem et in figura principia nominum figurare et <tamen?> artitudo in figura non permisit nomina loca propter situm ut videtur in figura.

... yet <his> successors, one after another, significantly transposed the places and distances, forced by the narrowness of space in the illustrated map, where even one place name written in full would force another to an incorrect location. Because of this I decided <not?> to write the whole names of places each opposite to the preceding <one?>, and in the map to write just the beginnings of the names, so that the narrowness in the map will not restrict the names and places because of their position, as may be seen in the map.

The author of the *Rudimentum* writes (f. 87r): *Presens tamen spera non plene omnium nominum, terrarum, regnorum ac regionum propter artitudinem folii fuit capax*, “The present map could not accommodate all of the names, lands, kingdoms and regions because of the narrowness of the page.” There is a similar complaint on the map of the Holy Land in book printed by Lucas Brandis a few years later, the *Prologus Arminensis in mappam Terraesanctae* (Lübeck: Lucas Brandis, ca. 1478), ff. [11]v-[12]r:¹⁰⁰ *Nec plica libri dorsea et folii artitudo sinunt in hac arte impressoria unumquoque castellum directissime suo comprehendatur punctuali locello*, “But in this printer’s art, the inner gutter of the book and the narrowness of the page do not allow each town to be included in its exact location.”

Also, both the *Rudimentum novitiorum* and HM 83 mention the somewhat unusual place name Vinlandia, i.e. Finland.¹⁰¹ in the *Rudimentum* it appears on the world map and is described on f. 102v, and in HM 83 it is mentioned on f. 2v.¹⁰² The chapter on Vinlandia in the *Rudimentum* is copied from Bartholomaeus Anglicus 15.172; but while the author of HM 83 made use of Bartholomaeus elsewhere, his text on Finland comes from a different source that we have not been able to identify. The presence of this unusual place name in two works produced in the same city about a decade apart seems to suggest that the author of HM 83 had consulted the *Rudimentum*, though, as his purposes were rather different with the work he had in mind, he made little use of it.

100 On the map of the Holy Land in the *Prologus Arminensis* see Campbell, *The Earliest Printed Maps* (see Ch. 4, n. 96), p. 121 with fig. 60; Michael Herkenhoff, “Der Prologus Arminensis (ca. 1478),” in his *Der Darstellung aussereuropäischer Welten* (see Ch. 4, n. 95), pp. 156–164; and Harvey, *Medieval Maps of the Holy Land* (see Ch. 4, n. 60), p. 147.

101 For the identification of Vinlandia as Finland see Fridtjof Nansen, *In Northern Mists: Arctic Exploration in Early Times*, trans. Arthur G. Chater (London: W. Heinemann, 1911), vol. 2, pp. 31–32. It is not related to the Vinland of the Norse discoveries in the New World: see Campbell, *The Earliest Printed Maps* (see Ch. 4, n. 96), p. 145.

102 The text in HM 83, f. 2v runs: *Vinlandia que habet extensum spacium, in quibus omnibus degunt christiani specialis ydyomatis, quod extenditur in livoniam*, “Finland, which has much space, in all of which live Christians <who use> special languages, and it extends to Livonia [on the eastern Baltic].” The section about islands on f. 2v, which includes this passage about Vinlandia, is transcribed in Axel Anthon Bjørnbo, “Adam af Bremens Nordensopfattelse,” *Aarbøger for Nordisk Oldkyndighed og Historie* 24.2 (1909), pp. 120–244, at 240–241.

Early Thematic Mapping

In the examination that will follow of the maps in the geographical treatise in HM 83, we will argue that those maps are the earliest set of maps conceived as thematic maps in accordance with a modern understanding of that genre. Arthur Robinson defines thematic maps thus:¹⁰³

In contrast to the general map, the thematic map concentrates on showing the geographical occurrence and variation of a single phenomenon, or at most a very few. Instead of having as its primary function the display of the relative locations of a variety of different features, the pure thematic map focuses on the differences from place to place of one class of feature, that class being the subject or 'theme' of the map. The number of possible themes is nearly unlimited and ranges over the whole gamut of man's interests in the present and past physical, social, and economic world, from geology to religion, and from population to disease.

He proceeds to note:¹⁰⁴

No map which is primarily thematic appears to have been made before the last half of the seventeenth century. To be sure, occasional 'thematic' additions had been entered on otherwise general maps, but the idea of making a map solely for the purpose of showing the geographical structure of one phenomenon seems not to have occurred to anyone.

Robinson is right to mention 'thematic' additions to some maps made before the second half of the seventeenth century, but he does not discuss or mention maps that have those additions, and thus loses an opportunity to show the development in ideas about maps that led to thematic mapping. The other studies of thematic maps that we have consulted do not mention these earlier maps with 'thematic' additions, or give any hint that anything like thematic maps existed before the seventeenth century,¹⁰⁵ except for some articles by

¹⁰³ Arthur Howard Robinson, *Early Thematic Mapping in the History of Cartography* (Chicago: University of Chicago Press, 1982), p. 16.

¹⁰⁴ Robinson, *Early Thematic Mapping* (see Ch. 4, n. 103), p. 17.

¹⁰⁵ See George Kish, "Early Thematic Mapping: The Work of Philippe Buache," *Imago Mundi* 28 (1976), pp. 129–136; Alan M. MacEachren, "The Evolution of Thematic Cartography: A Research Methodology and Historical Review," *Canadian Cartographer* 16.1 (1979), pp. 17–33; Gilles Palsky, "Origines et evolution de la cartographie thématique (xviiie-xixe siècles)," *Revista da Faculdade de Letras: Geografia* 14 (1998), pp. 39–60; Colette Cauvin,

Petra Svatek in which she discusses thematic elements in some maps by Wolfgang Lazius (1514–1565).¹⁰⁶

In the interest both of creating a fuller understanding of the early history and development of thematic maps, and of contextualizing the maps in HM 83, we will now briefly discuss a few examples—more might be adduced—of pre-seventeenth-century maps that either have thematic additions or that quite simply are thematic maps.

In the city of Haïdra (Roman Ammaedara) in western Tunisia, in a Roman building of uncertain function there is a mosaic of about 30 square meters from the late third or early fourth century AD that is a map of the islands and some coastal cities of the Eastern Mediterranean (Fig. 4.1).¹⁰⁷ The map is cartographically somewhat naïve, as some cities are represented as islands, so that for example there is a representation the city of Idalium (which is on Cyprus) as an island, right beside a representation Cyprus. Nonetheless, its status as a

Francisco Escobar, and Aziz Serradj, "A Brief History of Thematic Cartography," in Colette Cauvin, Francisco Escobar, and Aziz Serradj, *Thematic Cartography*, vol. 1, *Thematic Cartography and Transformations* (London: ISTE; and Hoboken, NJ: Wiley, 2010), pp. 5–23; John M. Delaney, *First X, Then Y, Now Z: An Introduction to Landmark Thematic Maps* (Princeton, NJ: Princeton University Library, 2012).

106 Petra Svatek, "Die Geschichtskarten des Wolfgang Lazius – die Anfänge der thematischen Kartographie in Österreich," *Cartographica Helvetica* 37 (2008), pp. 35–43; Petra Svatek, "Austria: Thematic Cartography from the 16th to 18th Century," *IMCoS Journal* 130 (2012), pp. 7–11; and Petra Svatek, "Thematische Karten und ihre Quellen vom 16. bis ins 19. Jahrhundert unter besonderer Berücksichtigung der österreichischen Kartographie," in Christian Reder, ed., *Kartographisches Denken* (Vienna and New York: Springer, 2012), pp. 319–327.

107 Fathi Bejaoui, "Une nouvelle mosaïque de Haïdra: note préliminaire," *Africa: Revue des études et recherches préhistoriques, antiques, islamiques et ethnographiques* 15 (1997), pp. 1–11; Fathi Bejaoui, "Iles et villes de la Méditerranée sur une mosaïque d'Ammaedara (Haïdra, Tunisie)," *Comptes rendus des séances de l'Académie des inscriptions et belles-lettres* 141 (1997), pp. 825–858; Fathi Bejaoui, "L'île de Chypre sur une mosaïque de Haïdra en Tunisie," *Cahier, Centre d'Études Chypriotes* 28 (1998), pp. 87–93; Fathi Bejaoui, "Découverte dans l'antique Haïdra: La Méditerranée sur une mosaïque," *Archéologia* 357 (1999), pp. 16–23; Kai Brødersen, "Neue Entdeckungen zu antiken Karten," *Gymnasium* 108 (2001), pp. 137–148, at 143–145; and Féthi Béjaoui, "Deux villes italiennes sur une mosaïque de Haïdra," in Mustapha Khanoussi, Paola Ruggeri, and Cinzia Vismara, eds., *L'Africa romana. Lo spazio marittimo del Mediterraneo occidentale: Geografia storica ed economia: Atti del XIV convegno di studio, Sassari, 7–10 dicembre 2000* (Rome: Carocci, 2002), vol. 1, pp. 503–508. There is a very good color image of the mosaic in Aïcha Ben Abed-Ben Khader, Elisabeth de Balanda, and Armando Uribe Echeverría, eds., *Image de pierre: La Tunisie en mosaïque* (Paris: Ars Latina, 2003), fig. 401.



FIGURE 4.1 *A mosaic thematic map of the islands and some coastal cities of the Eastern Mediterranean, about 30 m², late third or early fourth century AD, in Haïdra, western Tunisia, in a Roman building of uncertain function (PHOTO FATHI BEJAOUI, INP, TUNIS).*

thematic map of the islands of the eastern Mediterranean is undeniable.¹⁰⁸ The map has an additional thematic element as well, as the sites it shows are associated with the worship of the goddess Venus.

Zonal *mappaemundi*, many of which illustrate manuscripts of Macrobius's *Commentary on the Dream of Scipio*, and thus are called Macrobian maps, portray the world divided into climatic bands, hot at the equator, temperate north and south of the equator, and cold at the poles, and are certainly to be

¹⁰⁸ The ancients composed books devoted to islands, but not, as far as we can tell, illustrated with maps: see Paola Ceccarelli, "I Nesiotika," *Annali Scuola Normale Superiore di Pisa* 19 (1989), pp. 903–935.

considered thematic climate maps. Macrobius's *Commentary*, written in about A.D. 450, contains clear instructions for the making of this map (2.5.13–14), and the maps appear in manuscripts and printed books from the ninth to the sixteenth centuries.¹⁰⁹

There are several medieval and early Renaissance maps that are based on or include information about road networks, and these maps range from being thematic maps to maps to which thematic information has been added.¹¹⁰ The earliest surviving such map is the Peutinger Map,¹¹¹ which measures about 675 cm long and 34 cm wide, and shows the road network of the Roman Empire from the Atlantic to India; its size makes it clear that it was intended for display rather than practical use by travelers. The map does depict topographical features such as mountains, rivers, and lakes, and it also includes images of cities, but its emphasis is on the road network, and it includes indications of the distances along the roads between many points: it is a thematic map (see Fig. 4.2). The map was made c. 1200, but may ultimately be based on a Roman original

109 On Macrobian and zonal *mappaemundi* see Destombes, *Mappemondes* (see Ch. 4, n. 37), pp. 43–45 and 85–95; Carlos Sanz, *El primer mapa del mundo con la representación de los dos hemisferios concebido por Macrobio: estudio crítico y bibliográfico de su evolución* (Madrid: Impr. Aguirre, 1966), also published in *Boletín de la Real Sociedad Geográfica* 102 (1966), pp. 133–217; David Woodward, “Medieval *Mappaemundi*,” in J. B. Harley and David Woodward, eds., *The History of Cartography* (Chicago: University of Chicago Press, 1987–), vol. 1, *Cartography in Prehistoric, Ancient, and Medieval Europe and the Mediterranean*, pp. 286–370, at 298, 300, and 353–355; Alfred Hiatt “The Map of Macrobius before 1100,” *Imago Mundi* 59.2 (2007), pp. 149–176; and Stefan Schröder, “Die Klimazonenkarte des Petrus Alfonsi. Rezeption und Transformation islamisch-arabischen Wissens im mittelalterlichen Europa,” in Ingrid Baumgärtner, Paul-Gerhard Klumbies, and Franziska Sick, eds., *Raumkonzepte: Disziplinäre Zugänge Unter Mitarbeit von Mareike Kohls* (Göttingen: V&R Unipress, 2009), pp. 257–277.

110 Catherine Delano-Smith, “Milieus of Mobility: Itineraries, Route Maps, and Road Maps,” in James R. Ackerman, ed., *Cartographies of Travel and Navigation* (Chicago: Chicago University Press, 2006), pp. 16–68 and 294–309, offers a good discussion road maps and route maps in relation to itineraries, but seems to entertain a negative view of medieval road and route maps because the surviving exemplars were not designed to be used by travelers. We do not see the fact that a map was designed for use by travelers as something that adds intrinsic value to that map.

111 The Peutinger Map is in Vienna, Österreichische Nationalbibliothek, Codex Vindobonensis 324, and has been reproduced in full several times, for example in *Tabula Peutingeriana: Codex Vindobonensis 324* (Graz: Akademische Druck- u. Verlagsanstalt, 1976); and Luciano Bosio, *La Tabula Peutingeriana: una descrizione pittorica del mondo antico* (Rimini: Maggioli, 1983).



FIGURE 4.2 *Detail of the Peutinger Map, made c. 1200, possibly a copy of an original dating from the fifth century. By both its form and content, the map places great emphasis on the Roman road network (VIENNA, ÖSTERREICHISCHE NATIONAL-BIBLIOTHEK, CODEX VINDOBONENSIS 324, SEGMENT 1, BY PERMISSION OF THE ÖSTERREICHISCHE NATIONALBIBLIOTHEK).*

from the fourth century,¹¹² and thus may provide evidence of this type of thematic map back to classical antiquity.

In about 1250 the English chronicler and monk Matthew Paris made a set of itinerary maps that show the way from London to the coast of England, across the English Channel and then across France and through Italy to Rome, and from Rome south to Otranto. At Otranto we see a boat in the water, and following this segment of the map there is a map of the Holy Land, with the clear implication (from the boats near Acre) that this is the destination of the journey.¹¹³ The maps survive in three manuscript sets and one fragment.¹¹⁴ In the land portions of the journey, the page is divided into two, three, or four vertical strips by a colored framework, and the route to be followed goes straight up the middle of these strips, first up the left strip, and then up next one to the right. The cities along the way are depicted in vignettes. These elaborate maps were

112 Richard J. A. Talbert et al., *Rome's World: The Peutinger Map Reconsidered* (Cambridge: Cambridge University Press, 2010); with valuable additions to the discussion in the review of Talbert's book by Timothy D. Barnes in *Journal of Late Antiquity* 4.2 (2011), pp. 375–378. Benet Salway, "The Nature and Genesis of the Peutinger Map," *Imago Mundi* 57.2 (2005), pp. 119–135, suggests that when the Roman archetype of the map was created, it was without precedent in Roman cartography, and that the archetype was ornamental rather than practical; Emily Albu, "Imperial Geography and the Medieval Peutinger Map," *Imago Mundi* 57.2 (2005), pp. 136–148, argues that the archetype of the Peutinger Map was not Roman, but rather Carolingian.

113 The bibliography on Matthew's maps is substantial; valuable works include Suzanne Lewis, *The Art of Matthew Paris in the 'Chronica majora'* (Berkeley: University of California Press, 1987), pp. 323–364; Daniel K. Connolly, *The Maps of Matthew Paris: Medieval Journeys through Space, Time and Liturgy* (Woodbridge, Suffolk, UK, and Rochester, NY: Boydell Press, 2009); and Salvatore Sansone, *Tra cartografia politica e immaginario figurativo: Matthew Paris e l'Iter de Londinio in Terram Sanctam* (Rome: Istituto storico italiano per il Medio Evo, 2009).

114 The sets are (1) as a preface to a manuscript of Matthew's *Chronica majora* in Cambridge, Corpus Christi College, Parker Library, MS 26, ff. 1r–3r; (2) as a preface to a manuscript of Matthew's *Historia Anglorum*, in London, British Library, MS Royal 14 C VII, ff. 2r–5r; and (3) an abbreviated version in a manuscript of Matthew's *Liber additamentorum*, in London, British Library, MS Cotton Nero D I, ff. 183v–184r. The damaged fragment forms a preface to a manuscript of the *Chronica majora* in Cambridge, Corpus Christi College, Parker Library, MS 16, ff. 2r–2v. Daniel K. Connolly in *The Maps of Matthew Paris* (see previous note), pp. 174–182, and in "Copying Maps by Matthew Paris: Itineraries Fit for a King," in Palmira Johnson Brummett, ed., *The 'Book' of Travels: Genre, Ethnology, and Pilgrimage, 1250–1700* (Leiden and Boston: Brill, 2009), pp. 159–203, argues that the maps in BL MS Royal 14 C VII were made after Matthew died, possibly as late as the 1290s; while Sansone in *Tra cartografia politica e immaginario figurativo* (see previous note) retains the traditional view that Matthew made all four sets.

never intended for practical use, but rather for study and contemplation. The very shape and format of the maps was determined by their focus on the route: they are thematic maps.

The Gough Map of Great Britain, which was made in the fourteenth century,¹¹⁵ has a network of straight red lines drawn from one town to another, with the distances between them indicated in Roman numerals. This information seems to have been on the map from the beginning, and the purpose of the lines and distances, and the question of whether the Gough Map should be considered the first road map of Britain, have generated considerable discussion.¹¹⁶ Many important and well-established roads are not indicated on the map, and thus it is not clear that the lines are intended to represent roads, but the Gough Map is the earliest to include systematic (albeit incomplete) route information with indications of distance, and this information is certainly thematic. Two early sixteenth-century maps that incorporate thematic information about roads are Erhard Etzlaub's 'Romweg' Map of c. 1500, and Martin Waldseemüller's *Carta itineraria Europae* of 1511, which survives in one exemplar of a 1520 printing, mentioned above.¹¹⁷

The earliest medieval island book as such lacks maps,¹¹⁸ but the genre of the *isolario*, or island book illustrated with maps,¹¹⁹ came into being with the *Liber*

115 The Gough Map is usually assigned a date of c. 1360, but recently T. M. Smallwood has argued that it was made c. 1400: see "The Date of the Gough Map," *Imago Mundi* 62.1 (2010), pp. 3–29.

116 See F. M. Stenton, "The Roads on the Gough Map," in E. J. S. Parsons, *Map of Great Britain circa A.D. 1360, Known as the Gough Map: An Introduction to the Facsimile* (Oxford: Bodleian Library, 1958), pp. 16–20; Brian P. Hindle, "The Towns and Roads of the Gough Map," *The Manchester Geographer* 1 (1980), pp. 35–40; and Nick Millea, *The Gough Map: The Earliest Road Map of Great Britain?* (Oxford: Bodleian Library, 2007), esp. 25–32.

117 For details on Erhard Etzlaub's 'Romweg' Map and Waldseemüller's *Carta itineraria Europae* see Ch. 4, n. 41 and Ch. 4, n. 42, respectively.

118 We refer to Domenico Silvestri's *De insulis et earum proprietatibus*, an alphabetical encyclopedia of islands written between 1385 and 1410. For discussion of Silvestri's work see Marica Milanese, "Il *De Insulis et earum proprietatibus* di Domenico Silvestri (1385–1406)," *Geographia Antiqua* 2 (1993), pp. 133–146. The text has been edited twice, first in Domenico Silvestri, *De insulis et earum proprietatibus*, ed. C. Pecoraro = *Atti della Accademia di scienze, lettere e arti di Palermo* 14.2 (1954), pp. 1–319, and in José Manuel Montesdeoca, *Los islarios de la época del humanismo: el 'De Insulis' de Domenico Silvestri, edición y traducción* (La Laguna: Servicio de Publicaciones Universidad de La Laguna, 2004) (CD-ROM edition).

119 For discussion of the *isolario* as a genre see Marziano Guglielminetti, "Per un sottogenere della letteratura di viaggio: gl'isolari fra quattro e cinquecento," in Silvia Benso, ed., *La letteratura di viaggio dal Medioevo al Rinascimento: generi e problemi* (Alessandria:

insularum archipelagi of the Florentine Cristoforo Buondelmonti (c. 1385 – c. 1430), who created four different versions of the work ca. 1418, 1420, 1422, and ca. 1430.¹²⁰ In his book Buondelmonti describes and supplies maps of the islands of the Aegean, and also of Constantinople; the maps are in the style of nautical charts, and the work survives in more than sixty manuscripts. The popularity of Buondelmonti's *Liber* is also attested by the authors who created new isolarii following and expanding on his model: Bartolomeo dalli Sonetti created an isolario that exists in three undated manuscripts and was published in Venice in about 1485,¹²¹ Sonetti's were the first nautical charts to appear in print (see Fig. 4.3). Henricus Martellus, a German cartographer working in Florence in the late fifteenth century, created an isolario that is based on Buondelmonti's and survives in six manuscripts apparently made c. 1490.¹²² Most of these manuscripts bear the title *Insularium illustratum*; Martellus was the first to include islands beyond the Mediterranean, and three surviving

Edizioni dell'Orso, 1989), pp. 107–117; Tarcisio Lancioni, *Viaggio tra gli isolari* (Milan: Edizioni Rovello, Almanacco del Bibliofilo, 1991); and Massimo Donattini, "I libri delle isole," in his *Spazio e modernità: Libri, carte, isolari nell'età delle scoperte* (Bologne: CLUEB, 2000), pp. 167–192.

- 120 On Buondelmonti and his *Liber insularum archipelagi* see Hilary Turner, "Christopher Buondelmonti and the Rise of the Isolario," *Terrae Incognitae* 19 (1988), pp. 11–28; Laura Cassi and Adele Dei, "Le esplorazioni vicine: geografia e letteratura negli Isolari," *Rivista geografica italiana* 100 (1993), pp. 205–269; Giuseppe Ragone, "Il *Liber insularum* Arcipelagi di Cristoforo dei Buondelmonti: filologia del testo, filologia dell'immagine," in Didier Marcotte, ed., *Humanisme et culture géographique à l'époque du Concile de Constance. Autour de Guillaume Fillastre. Actes du Colloque de l'Université de Reims, 18–19 novembre 1999* (Turnhout: Brepols, 2002), pp. 177–217; and Benedetta Bessi, "Cristoforo Buondelmonti: Greek Antiquities in Florentine Humanism," *The Historical Review – La revue historique* 9 (2012), pp. 63–76.
- 121 For discussion of Sonetti's isolario see Wouter Bracke, "Une note sur l'*Isolario* de Bartolomeo da li Sonetti dans le manuscrit de Bruxelles, BR, CP, 17874 (7379)," *Imago Mundi* 53 (2001), pp. 125–129; and Massimo Donattini, "Bartolomeo da li Sonetti, il suo *Isolario* e un viaggio di Giovanni Bembo (1525–1530)," *Geographia Antiqua* 3–4 (1994–95), pp. 211–236. There are two facsimile editions of Sonetti's book: Bartolommeo dalli Sonetti, *Isolario* (Amsterdam: Theatrum Orbis Terrarum Ltd., 1972); and Bartolomeo dalli Sonetti, *Isolario* (Valencia: Vicent García, 2006), the latter of a hand-colored exemplar of the work.
- 122 For general discussion of Martellus's isolario focusing on the manuscript in the James Ford Bell Library see Rushika February Hage, "The Island Book of Henricus Martellus," *The Portolan* 56 (2003), pp. 7–23; while Nathalie Bouloux, "L'*Insularium illustratum* d'Henricus Martellus," *The Historical Review – La revue historique* 9 (2012), pp. 77–94, focuses on the manuscript in the Musée Condé in Chantilly. For discussion of all of the manuscripts of the work see Chet Van Duzer, *Henricus Martellus's World Map at Yale (c. 1491): Multispectral Imaging, Sources, Influence* (forthcoming).



FIGURE 4.3 *The map of Cyprus in Bartolommeo da li Sonetti's Isolario published in Venice c. 1485 (COURTESY OF THE LIBRARY OF CONGRESS).*

manuscripts of his work include a world map.¹²³ The *isolario* reached a truly global scope with Benedetto Bordone's *Libro de tutte l'isole del mondo*, or more fully, *Libro di Benedetto Bordone nel qual si ragiona de tutte l'isole del mondo* (Venice, 1528 and 1532), which was reprinted (1534 and later) under the title *Isolario di Benedetto Bordone*.¹²⁴ The genre continued into the seventeenth century, but there is no need to trace its continuation here; suffice it to say that each *isolario* is clearly a collection of thematic maps.

These examples show that thematic maps did exist prior to the seventeenth century, and also prior to the composition of the texts in HM 83 in 1486–88. The material was certainly available, then, that might have inspired a late fifteenth-century cartographer to expand from one genre of thematic map to several, and create a series of thematic maps that reflect a generalized and fully modern conception of the type. We would also like to mention some other important early thematic maps that may have served as direct inspiration to the cartographer of HM 83.

Earlier we suggested that the thematic arrangement of geographical material in some medieval encyclopedias such as Isidore's *Etymologiae* and Bartholomaeus Anglicus's *De proprietatibus rerum* may have inspired the author of HM 83 in his creation of thematic maps. In fact, the relationship between Bartholomaeus Anglicus and the maps in HM 83 may be closer. By way of preface, it is important to recall that the description of the tripartite division of the world in HM 83, f. 1r, is drawn from Bartholomaeus Anglicus, *De proprietatibus rerum* 15.1, so the author of HM 83 was probably familiar with that work. And there are illustrated manuscripts of Bartholomaeus Anglicus—of the French translation by Jean Corbechon completed in 1372, rather than of the Latin original—that have thematic maps at the beginning of their books.

The manuscript BnF MS fr. 22532, which is of Corbechon's translation of Bartholomaeus Anglicus,¹²⁵ and was made in the third quarter of the fifteenth century, has at the beginning of Book 13 (usually Book 14), on f. 186v, a remarkable unfinished thematic map of the world's mountains, to the exclusion of

123 See Roberto Almagià, "I mappamondi di Enrico Martello e alcuni concetti geografici di Cristoforo Colombo," *La Bibliofilia* 42 (1940), pp. 288–311.

124 On Bordone's *isolario* see Luís de Albuquerque, "Algumas notas sobre o 'Isolario' de Benedetto Bordone," *Revista de História das Ideias* 8 (1983), pp. 579–596; reprinted in his *A Návica e a Ciência em Portugal. Notas sobre as navegações* (Lisbon: Gradiva, 1989), pp. 71–90.

125 For discussion of Corbechon's translation see Michel Salvat, "Jean Corbechon, traducteur ou adaptateur de Barthélemy l'Anglais?" in Charles Brucker, ed., *Traduction et adaptation en France à la fin du Moyen Âge et à la Renaissance* (Paris: Honoré Champion, 1997), pp. 35–46; and Bernard Ribémont, "Jean Corbechon, un traducteur encyclopédiste au xive siècle," *Cahiers de recherches médiévales* 6 (1999), pp. 75–97.



FIGURE 4.4 *An unfinished map of the world's mountains in a manuscript of Jean Corbechon's French translation of Bartholomaeus Anglicus's De proprietatibus rerum made in the third quarter of the fifteenth century (PARIS, BNF, MS FR. 22532, F. 186V, BY PERMISSION OF THE BIBLIOTHÈQUE NATIONALE DE FRANCE).*

other geographical elements (see Fig. 4.4).¹²⁶ There are a total of 27 named mountains, many of them in the Holy Land, but Etna, the Rhiphaean Mountains in the far north, and Olympus and Parnassus are also depicted. In another manuscript of Corbechon's translation, BnF MS fr. 9140, made c. 1480, there is a

¹²⁶ There is a brief discussion of the illustrations at the beginning of Book 14 in manuscripts of Corbechon's translation of Bartholomaeus Anglicus in Donal Byrne, "The Illustrations to the Early Manuscripts of Jean Corbechon's French Translation of Bartholomaeus Anglicus' *De proprietatibus rerum*: 1372–1420," Ph.D. Dissertation, Cambridge University, 1981, pp. 84–86.

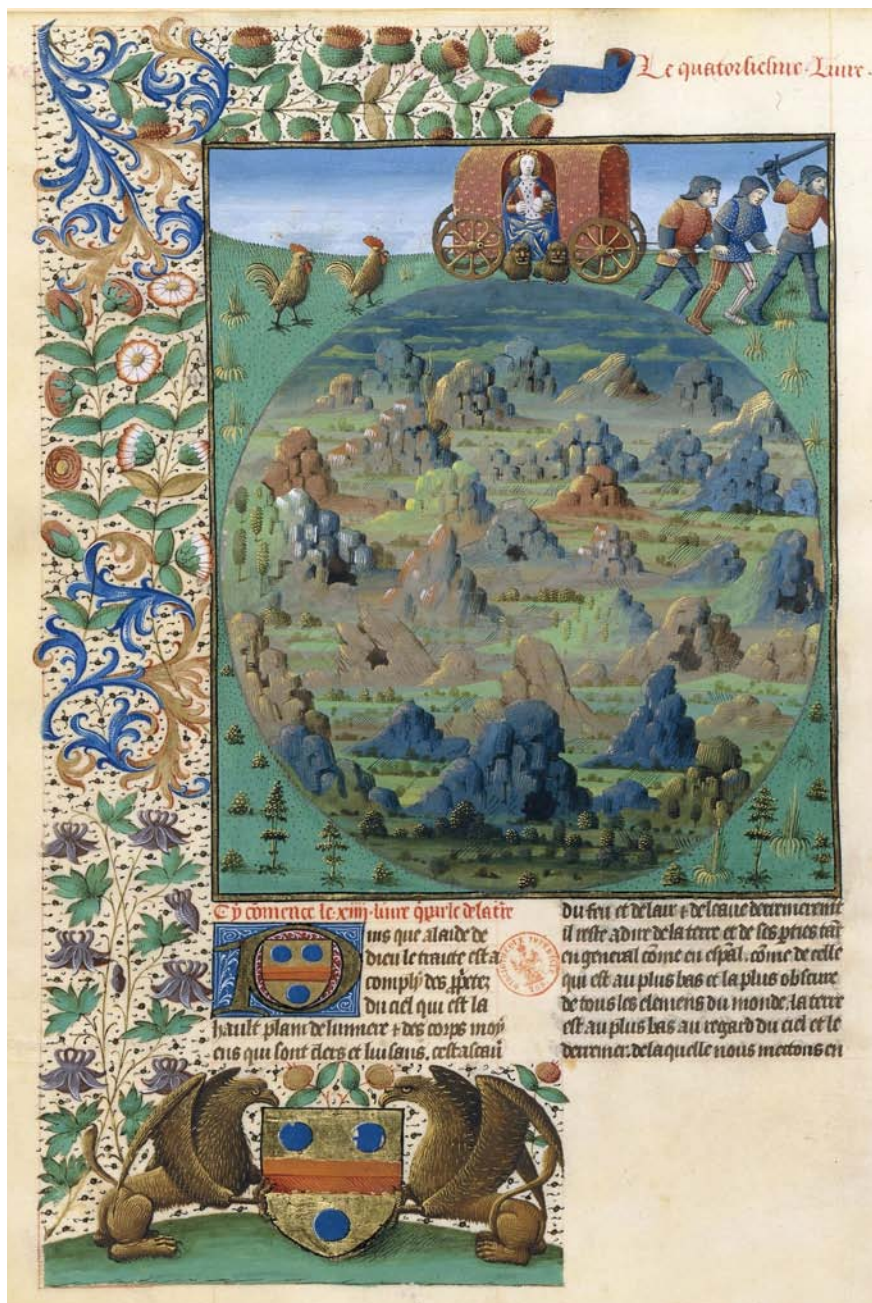


FIGURE 4.5 A map of the world's mountains in a manuscript of Jean Corbechon's French translation of Bartholomaeus Anglicus's *De proprietatibus rerum* made c. 1480 (PARIS, BNF, MS FR. 9140, F. 237V, BY PERMISSION OF THE BIBLIOTHÈQUE NATIONALE DE FRANCE).



FIGURE 4.6 A map of the world's waters in a manuscript of Jean Corbechon's French translation of Bartholomaeus Anglicus's *De proprietatibus rerum* made c. 1480. Compare figs. 4.15 and 4.16 (PARIS, BNF, MS FR. 9140, F. 226V, BY PERMISSION OF THE BIBLIOTHÈQUE NATIONALE DE FRANCE).

bird's-eye view on f. 237v of a large group of generalized mountains—without names in this case—set in a circular *mappamundi*-style frame (Fig. 4.5). Other manuscripts of the same work (BnF MS fr. 136, f. 36v; BnF MS fr. 22533, f. 203v)¹²⁷ present a view of a mountainous countryside similar to the image in HM 83, f. 5r (see Fig. 4.11 below).

Moreover, the maps of the world's waters (with emphasis on the four rivers of Paradise) in HM 83, ff. 7v–8r (Fig. 4.15) and 14r (Fig. 4.16) bear some similarity to a map of the world's rivers in one of the manuscripts of Corbechon's French translation just mentioned, namely BnF MS fr. 9140, f. 226v (see Fig. 4.6). In this same manuscript, the *mappamundi* on f. 243v (see Fig. 4.7) seems to combine information from different parts of Bartholomaeus's work, including information about rivers, mountains, and cities, much the way that the *mappa mundi localis* in HM 83, ff. 6v–7r, does. While the author of HM 83 quotes Bartholomaeus's account of the tripartition of the world in Latin, the *mappaemundi* in manuscripts of Bartholomaeus we have been citing here are all from manuscripts of Corbechon's French translation of the *De proprietatibus rerum*, and we know of no Latin manuscript of the work that has *mappaemundi* similar to these.¹²⁸ On the one hand, it seems likely that the author of HM 83 drew inspiration for his thematic maps from those in a manuscript of Bartholomaeus Anglicus, but on the other, such an influence would entail that our author had access either to both a Latin (for the text) and a French manuscript (for the maps) of Bartholomaeus, or to a Latin manuscript with a more elaborate program of illustration with maps than any Latin manuscript of the work that has come down to us.

The Maps in the Geographical Sections

We will now discuss the maps in the geographical treatise in HM 83, transcribing the toponyms, transcribing and translating legends and descriptive texts, discussing sources where relevant, and also addressing their thematic nature.

127 Images of these folios are available through <<http://mandragore.bnf.fr/html/accueil.html>>. There is a similar view in a printed edition of Corbechon's translation, Bartholomaeus Anglicus, *Le propriétaire des choses* (Lyons: Siber, 1486), at the beginning of Book 14.

128 On illustrated Latin manuscripts and printed editions of Bartholomaeus Anglicus see Heinz Meyer, "Die illustrierten lateinischen Handschriften im Rahmen der Gesamtüberlieferung der Enzyklopädie des Bartholomäus Anglicus," *Frühmittelalterliche Studien* 30 (1996), pp. 368–395; and James Snyder, "The Bellaert Master and *De proprietatibus rerum*," in Sandra Hindman, ed., *The Early Illustrated Book. Essays in Honor of Lessing J. Rosenwald* (Washington, DC: Library of Congress, 1982), pp. 41–62.



FIGURE 4.7 A mappamundi that combines information about rivers, mountains, and cities, much the way that the mappa mundi localis in HM 83, ff. 6v-7r, does (PARIS, BNF, MS FR. 9140, F. 243V, BY PERMISSION OF THE BIBLIOTHÈQUE NATIONALE DE FRANCE).

The Map on f. 1r

This small and relatively undetailed *mappamundi*—oriented, like most medieval *mappaemundi*, with east at the top—should be understood as illustrating

the texts about the tripartition of the world among Noah's sons that precede and follow it (Fig. 4.8). The text above the map to the right reads: *Iste circulus exterior habet mare oceanum. Spatium vero intra nigrum notat terram habitabilem que est quarta pars totius*, "This exterior circle contains the ocean, while the black spaces inside indicate the habitable land, which is a quarter of the whole"; the text written on a curved line parallel to the outer edge of the circumfluent ocean reads: *mare oceanum terram circumdans et dat windes mer*, "The ocean sea, surrounding the land, also the windy sea." Within the map, reading from the top (east) downwards, we have: *India, Asia maior, Sem qui et melchisideck* ("Sem, also known as Melchisideck"),¹²⁹ *mare magnum, egiptus, Europa, Japhet, mare artum, Affrica Cham*.

The map's treatment of the seas is quite different than we find on most other *mappaemundi*. A typical T-O map has the Mediterranean (sometimes called *mare magnum*) dividing Europe and Africa, the Tanais or Don River dividing Europe and Asia, and the Nile dividing Africa and Asia. Here the cartographer distinguishes between the narrow western Mediterranean, which he calls the *mare artum*, no doubt referring specifically to the area around the Strait of Gibraltar; and the more ample eastern Mediterranean, which he calls *mare magnum* (compare the map on f. 3v). He seems to conflate the eastern Mediterranean with the Nile, and shows what is evidently this combination flowing all the way through Africa to the southern part of the circumfluent ocean. On most *mappaemundi* the Tanais is shown flowing north and south, in effect joining the Mediterranean with the northern part of the circumfluent ocean, here there is what seems to be a river flowing northeast and southwest between these two bodies of water. We have not found any text that speaks of the western Mediterranean as a *mare artum*, though Ludolf von Sachsen, in his account of his voyage to the Holy Land written in about 1350, says that people living by the Strait of Gibraltar called it *strictum* or narrow,¹³⁰ and in any case

129 The identification of Melchizedek as Shem is supported by Saint Ephrem the Syrian in his *Commentary on Genesis*, section 11: see his *Selected Prose Works*, trans. Edward G. Mathews, Jr. and Joseph P. Amar, ed. Kathleen McVey (Washington: The Catholic University of America Press, 1994) (= *The Fathers of the Church*, vol. 91), p. 151; and Jerome in his commentary on Genesis 14:18: see his *Liber quaestionum hebraicarum in Genesim* in his *Opera* (Turnhout: Brepols, 1958-) (= *Corpus Christianorum*, Series Latina, 72), p. 19.

130 See Ludolf von Sachsen, *Iter ad Terram Sanctam* (Gouda: Gerard Leeu, 1483–1485), chapter 4, "De barbaria": *Et est notandum quod inter regnum marrochie et hyspanie mare mediterraneum influit ex oceano per brachium latitudinis vix quarte partis unius miliaris. Itaque in una ripa stat mulier cristiana et in alia mulier barbara vestimenta earum lauantes et ad inuicem rixantes, et dicitur illud brachium maris ab incolis strictum, ferit de baltar et alio nomine strictum....* This passage is translated into English in Ludolf von Sachsen,

it is easy to imagine the author of HM 83 inventing this name based on the presence of the Strait of Gibraltar.

The Map on f. 3r

This map (see Fig. 4.9), substantially larger than the preceding, illustrates the list of the oceanic islands pertaining to Asia and Europe on ff. 2r and 2v, respectively, and is labeled *figura insularum maris oceani*, “map of the islands of the ocean.” In this map the width of the circumfluent ocean is increased to accommodate exaggerated representations of the oceanic islands, each shown as a circle with its name inside. Some of the islands are larger than the others, and this seems to be the result of an attempt to reflect the physical sizes of the islands as known in the fifteenth century, with the understanding, evidently, that groups of islands merit larger circles: thus it is that the *fortunate insule 4or* and the *Gor<gon>ides insule* are larger than *Anglia*, for example. The islands on the map, reading from the southeast counterclockwise, are: *Crisse insule auree*,¹³¹ *Thabrona* (Taprobana), *X tribus Israel* (ten tribes of Israel), *Tilos Caucasus*,¹³² *Ungaria magna*,¹³³ *Regnum Amasonum* (the kingdom of the

Ludolph von Suchem's Description of the Holy Land, and of the Way Thither, Written in the Year A.D. 1350, trans. Aubrey Stewart (London: Palestine Pilgrims' Text Society 1895) (= Library of the Palestine Pilgrims' Text Society 12.3), p. 6.

- 131 Chryse, the island of gold, is usually mentioned in conjunction with Argyre, the island of silver; the two islands are described by Pomponius Mela 3.7, Pliny 6.80, Solinus 52.17, and Isidore 14.6.11.
- 132 This Asian island of Thule, not to be confused with the Atlantic Thule, is mentioned by Pliny 6.148, Arrian 7.20.6, Solinus 52.49, and Isidore 14.6.13. For discussion see Vincent H. de P. Cassidy, “The Voyage of an Island,” *Speculum* 38 (1963), pp. 595–602, esp. 597–602.
- 133 The relevant text on HM 83, f. 2v, reads: *Ungaria magna hodie est tributaria duci mustarie et ex illa terra venerunt ungari nostri christiani retinentes idem ydyoma proprium quibus nondum evangelium est predicatum et magis proprie pertinent ad Asiam maiorem utpote supra ubi Sithia superior*, “Greater Hungary nowadays pays tribute to the leader of Moscow, and from that land came our Hungarian Christians, retaining their distinct language, who have not yet been evangelized, and their land pertains more to Greater Asia, like northern Scythia, just mentioned.” The Latin is transcribed by Axel Anthon Bjørnbo, “Adam af Bremens Nordensopfattelse,” *Aarbøger for Nordisk Oldkyndighed og Historie* 24.2 (1909), pp. 120–244, at 240. On *Hungaria Magna* see Heinrich Dörrie, *Drei Texte zur Geschichte der Ungarn und Mongolen: Die Missionreisen des fr. Julianus O.P. ins Uralgebiet (1234/5) und nach Rußland (1237) und Bericht der Erzbischofs Peter über die Tartaren* (Göttingen: Vandenhoeck & Ruprecht, 1956) (= Nachrichten der Akademie der Wissenschaften in Göttingen. I. Philologisch-Historische Klasse, 6); and A. H. Chalikow, “Auf der Suche nach *Magna Hungaria*,” *Hungarian Studies* 2 (1986), pp. 189–216. We thank Felicitas Schmieder for the former reference.

Amazons),¹³⁴ *lucanania* (Lapland),¹³⁵ *Islandia* (Iceland), *Suecia* (Sweden), *Norwegia*, *Gronlandia* (Greenland), *Dacia*, *Scotia*, *Hibernia*, *Britannia minor*,¹³⁶ *Anglia*, *Tanatos*,¹³⁷ *Tile* (Thule),¹³⁸ *Fortunate insule 4or*, *Gor<gon>ides insule*, and *Hesperide insule*. There are no islands in the southern ocean, and this reflects the fact that there is no separate list of islands that pertain to Africa in the text. Also absent from the map are islands peculiar to the nautical chart tradition, such as Brasil and Antilia:¹³⁹ the author of HM 83 seems not to have been conversant with nautical charts.

The names on land, reading from east to west, are: *India*, *Asia maior*, *Asia minor*, *Ungaria*, *Jerusalem*, *Etiopia*, *Europa*, *Affrica*, *mauritania*, *hispania*.

The map is clearly—as its title indicates—a thematic map of the world's islands, and in this case, it seems unlikely that the creator of HM 83 drew

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- 134 For discussion see Albrecht Rosenthal, "The Isle of the Amazons: A Marvel of Travellers," *Journal of the Warburg Institute* 1.3 (1938), pp. 257–259.
- 135 The relevant text on HM 83, f. 2v, reads: *Lucania etiam magis proprie habet se ad Asiam maiorem quam copmanni nominant laplant*, "Lucania pertains to Greater Asia even more, and the Copmanni call it Lapland." The Latin is transcribed by Bjørnbo, "Adam af Bremens Nordensopfattelse" (see Ch. 4, n. 133), p. 240.
- 136 The relevant text on HM 83, f. 2v, reads: *Anglia et Brittannia pro quibus notum quod olim hoc spatium ab hybernia ad thanatos dicabatur brittannia maior et minor et maior habuit xxxiii insulas quarum erant xx deserte et appelebantur iste 33 insule orcade ex quibus saxones expulerunt britones in montem brittanium et maiorem Angliam nominaverunt Adhuc notum quod una 33 insularum dictarum in anglia vocatur Cancia qui magna provincia attingens oceanum britanicum et eius metropolis est cantuaria cuius Archiepiscopus fuit sanctus Thomas*, "England and Britain, for which it is known that in the past this area from Ireland to Thanatos was called Greater Britain and Lesser Britain, and Greater Britain had 33 islands, of which 20 were uninhabited, and these 33 islands were called the Orcades, from which the Saxons expelled the Britons into Mount Britain, and they called the largest island England. Moreover, it is known that one of the 33 just-mentioned islands in England is called Canterbury, which is a large province that reaches to the British Ocean, and its leading city is Canterbury, the archbishop of which was Saint Thomas [Becket]." This passage is transcribed by Bjørnbo, "Adam af Bremens Nordensopfattelse" (see Ch. 4, n. 133), p. 241.
- 137 On the island of Thanatos see A. R. Burn, "Procopius and the Island of Ghosts," *English Historical Review* 70 (1955), pp. 258–261.
- 138 On the Atlantic island of Thule see Vincent H. de P. Cassidy, "The Voyage of an Island," *Speculum* 38 (1963), pp. 595–602; Luigi de Anna, *Thule: le fonti e le tradizioni* (Rimini: Il cerchio, 1998); and Monique Mund-Dopchie, *Ultima Thulé: Histoire d'un lieu et genèse d'un mythe* (Geneva: Librairie Droz, 2009).
- 139 On the islands of Brasil and Antilia see William H. Babcock, *Legendary Islands of the Atlantic: A Study in Medieval Geography* (New York: American Geographical Society, 1922), pp. 50–67 and 144–163, respectively.

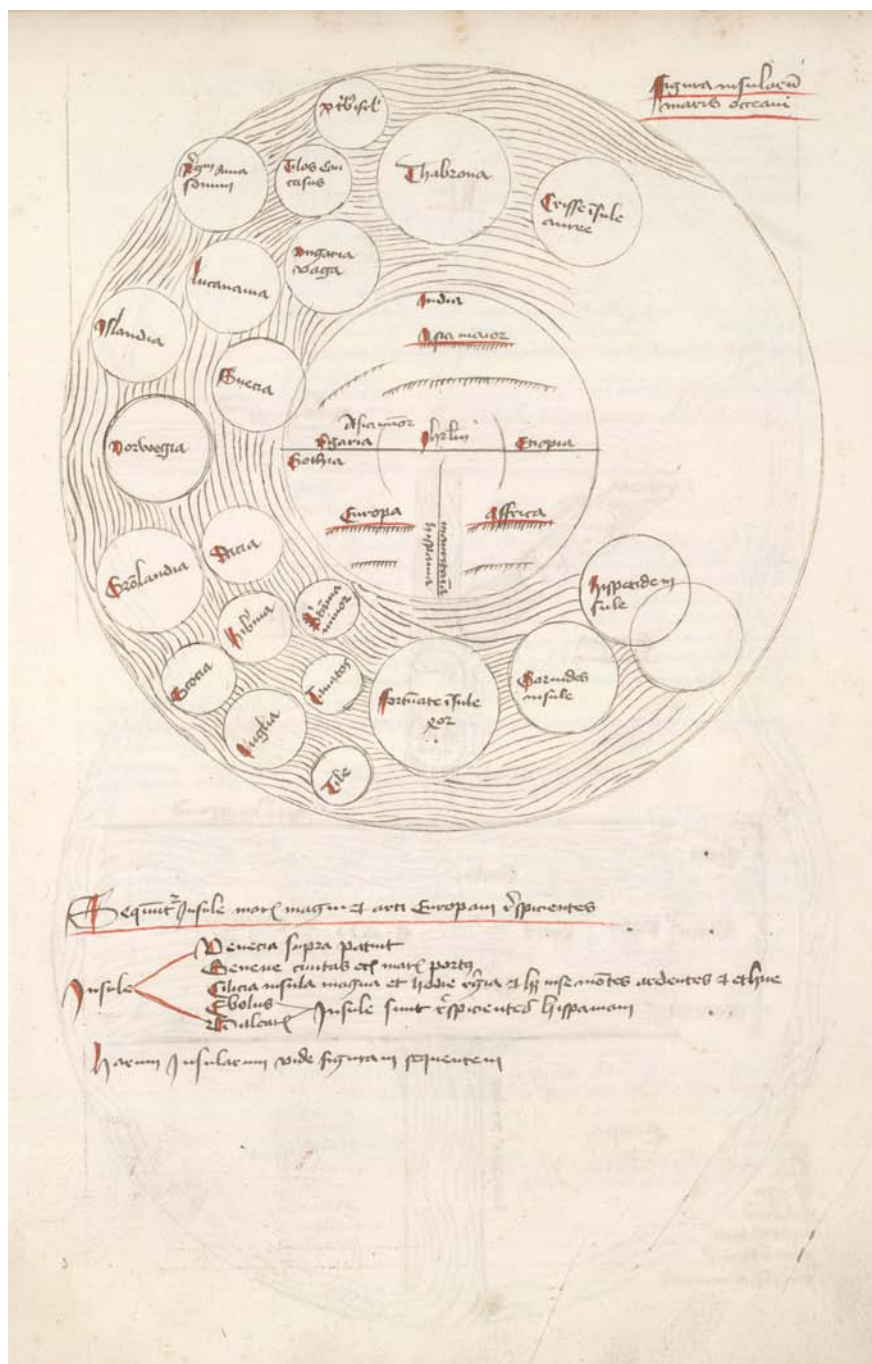


FIGURE 4.9 *Huntington MS 83, f. 3r, a mappamundi of the islands of the ocean, an early thematic map* (COURTESY OF THE HUNTINGTON LIBRARY).

inspiration from the text of Bartholomaeus Anglicus. As mentioned above, Bartholomaeus does have a brief chapter (14.6) about islands in general, but we know of no manuscript of his work, either Latin or French, that illustrates this chapter with anything resembling a thematic map of islands. Isidore of Seville has a chapter (14.6) on islands, but again, we know of no manuscript of his encyclopedia that illustrates this chapter with a thematic *mappamundi*. This map seems to be the particular creation of the author of the works in HM 83. As we saw above, there are earlier thematic maps of islands in Buondelmonti's *Liber insularum archipelagi*, which was composed in about 1420, but Buondelmonti does not combine many islands in one map, and this map in HM 83 is the first of this type that we know of. The next maps explicitly devoted to the world's islands were made about forty years later by Benedetto Bordone in his *Libro di Benedetto Bordone nel quale si ragiona de tutte l'isole del mondo* (Venice: per N. d'Aristotle detto Zoppino, 1528), in the three index maps near the beginning of the work. But the genre of thematic maps of islands did not become common until almost four hundred years after the making of HM 83, beginning with John Rapkin's maps titled *A Comparative View of the Principal Waterfalls, Islands, Lakes, Rivers and Mountains, in the Eastern Hemisphere* and *A Comparative View ... in the Western Hemisphere*, and published in *The Illustrated Atlas, and Modern History of the World Geographical, Political, Commercial & Statistical*, ed. R. Montgomery Martin (London and New York: J. & F. Tallis, c. 1851).

The Maps on f. 3v

These two overlapping *mappaemundi* are thematic maps of the islands of the Mediterranean (Fig. 4.10). The upper map illustrates the list on f. 3r of the islands of the Mediterranean that pertain to Europe, and the lower one, which bears the title *ffigura hec est Insularum maris magni respicientium Asiam maiorem*, "This is a map of the Mediterranean islands close to Asia Minor," illustrates the list on f. 2r of the islands of the Mediterranean that pertain to Greater Asia.

The upper map labels the parts of the world *Asia*, *Europa*, and *Affrica*, and like the map on f. 1r, labels the body of water that would be the Nile on other *mappaemundi* as *mare magnum*, and labels the western Mediterranean *mare artum*. Some of the islands in the upper map are represented in a body of water that stretches diagonally to the northeast. At the top of this stretch is the toponym *venecia*, but it is not in a circle like many of the other islands. Given the location of Venice at the top of this body of water, it is tempting to interpret the branch as representing the Adriatic, but this is not confirmed by the other islands in this body of water. East of the body of water is written *Strata*, which we have not been able to identify. Then in circular islands are written from northeast to southwest *geneve*, *cilicia* (i.e. *Cicilia*, Sicily), *portugalia*, *Ebulus* (Ibiza), and *Balearis*. With regard to *geneve*, on f. 3r we read *geneve civitas etiam*

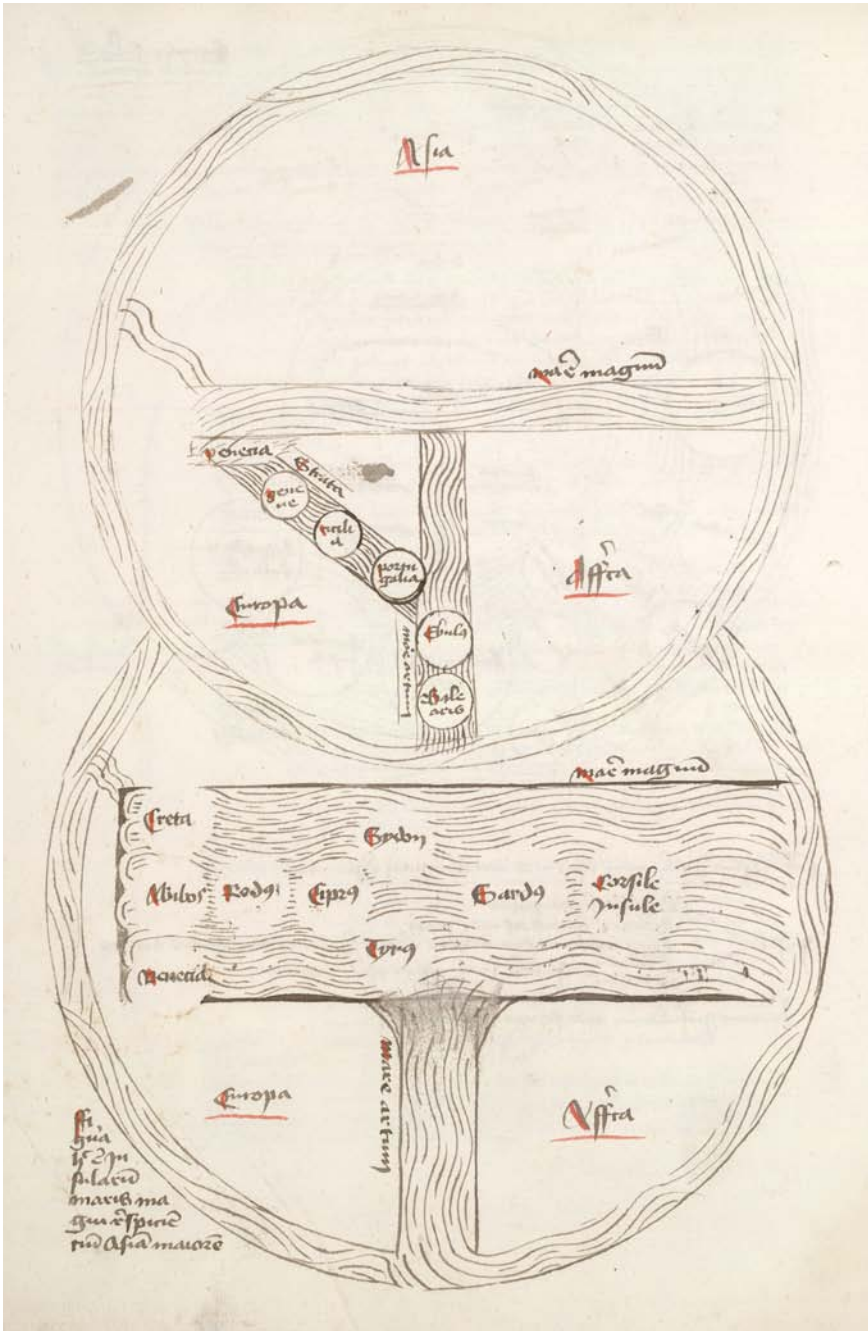


FIGURE 4.10 *Huntington HM 83, f. 3v. Two overlapping mappaemundi, the upper one of five European islands, and the lower one of the Mediterranean islands that pertain to Greater Asia (COURTESY OF THE HUNTINGTON LIBRARY).*

maris portus, which suggests that *portugalia* may be an error for this *portus*, but does not help identify *geneve*.

The lower map labels the parts of the world *Europa* and *Affrica*, labels the Mediterranean *mare magnum*, and the mouth of the Mediterranean in the west the *mare artum*. The islands in the Mediterranean, from left to right, are: *Creta*, *Abibos* (i.e. *Abydos*), *Venecia*, *Rodos*, *Ciprus*, *Tyrus*, *Sydon*, *Sardus*, and *Corsile Insule*.

The Map on f. 5r

As mentioned above, this image is as much a bird's-eye view of some mountains as a map of mountains (Fig. 4.11). It illustrates lists of the mountains of the Holy Land (*Montes terre sancte*, f. 5r) and of other mountains around the Holy Land (*Montes qui sunt termini terre promissionis sunt hii*, ff. 5r–5v); as suggested earlier, this map-view was probably inspired by a similar map-view illustrating Book 14 of John Corbechon's French translation of Bartholomaeus Anglicus's *De proprietatibus rerum*, such as those in BnF MS fr. 136, f. 36v and BnF MS fr. 22533, f. 203v. The next thematic map of mountains that we know of that does not appear in a manuscript of Bartholomaeus Anglicus is Johann Wolfgang von Goethe's famous map *Höhen der alten und der neuen Welt bildlich verglichen*, published in the *Allgemeine Geographische Ephemeriden* 41 (1813), pp. 3–8,¹⁴⁰ which was quickly followed by others, such as Charles Smith's *Comparative View of the Heights of the Principal Mountains &c. in the World* (London: C. Smith, 1816).¹⁴¹ This map does not reproduce well at a small scale, so we illustrate here a slightly later thematic map of the world's mountains, that of F. Humphreys titled *Heights of the Principal Mountains in the World*, published in Henry S. Tanner, *A New Universal Atlas Containing Maps of the Various Empires, Kingdoms, States and Republics of the World* (Philadelphia: H. S. Tanner, 1836) (see Fig. 4.12).¹⁴²

140 On Goethe's thematic map of mountains see Gisela Nickel, "Höhen der alten und der neuen Welt bildlich verglichen": Eine Publikation Goethes im Bertuch Verlag," in Gerhard R. Kaiser and Siegfried Seifert, eds., *Friedrich Justin Bertuch (1747–1822): Verleger, Schriftsteller und Unternehmer im klassischen Weimar* (Tübingen: Niemeyer, 2000), pp. 673–689; and Margrit Wyder, "Vom Brocken zum Himalaja. Goethes 'Höhen der alten und neuen Welt' und ihre Wirkungen," *Goethe-Jahrbuch* 121 (2004), pp. 141–164.

141 A high-resolution image of this map may be consulted on the website of the David Rumsey Map Collection, at <<http://www.davidrumsey.com>>.

142 There is a thematic map of the mountains of Europe and Asia, but in their proper geographical locations, titled *Bergketten in Asien und Europa*, in Heinrich Berghaus, *Dr. Heinrich Berghaus' physikalischer Atlas oder Sammlung von Karten* (Gotha: Justus Perthes, 1845–48). A high-resolution image of this map may be consulted on the website of the David Rumsey Map Collection, at <<http://www.davidrumsey.com>>.



FIGURE 4.11 *Huntington HM 83.f.5r. A generic view of some mountains, followed by a list of the mountains of the Holy Land, and then a list of mountains outside the Holy Land (COURTESY OF THE HUNTINGTON LIBRARY).*

The Map on f. 6r

This *mappamundi* (Fig. 4.13) lacks designations of the continents; the configuration of the Mediterranean it shows is similar to that in the map on f. 1r, but here the parts of the sea lack the labels *mare magnum* and *mare artum*. The map is surrounded by a text that indicates the distance from Lübeck to Iceland and the Holy Land which was transcribed and translated above (*Nota Jerusalem distat secundum taxationem viatorum et nautarum...*), but there is no relationship between that text and the map; the map rather illustrates the text about the Four Kingdoms of the world on f. 5v.

The map is labeled *figura metropolium mundi*, “Map of the metropolises of the world,” and has the cities *Babilonia*, *Niniue*, *Constantinopolis Romana nova* (Constantinople the new Rome), *ultima erit Jerusalem* (the last will be Jerusalem), *Alkraria Antiqua babilonia* (Cairo, the ancient Babylon), *Roma antiqua*, *Carthago antiqua*. It represents a meditation on and extension of the traditional idea of the Four Kingdoms of the Book of Daniel, an extension that includes not only Carthage (which Orosius 2.1.5 includes in his account of the Four Kingdoms) but also Cairo and Jerusalem, the latter a very sensible addition according to Christian eschatology, as the Heavenly Jerusalem would be the final stopping point in the *translatio imperii*.

The map should be understood as a thematic map of the capitals of the most important empires of world history (the traditional Four Kingdoms, together with the author’s extension of that set); that is, it is a political map that shows how the center of the world’s power moves over time. It is also a historical map, and more than that, a map of the world’s history, and as such, it prefigures the apocalyptic maps in the next section of the manuscript that show what will happen to the world at each stage of the Last Days.

There are earlier examples of historical maps. The Peutinger Map, which was copied c. 1200, was certainly copied in order to preserve and put on display an image of the world past, and thus should be considered a historical map, whether it is a copy of an ancient Roman or of a Carolingian archetype.¹⁴³ The maps in manuscripts and printed editions of Ptolemy’s *Geography*, when unmodified by late medieval and early Renaissance cartographers, were historical maps, as they showed the world as it had been in ancient times—even if they were not originally designed as historical maps. Various medieval and early Renaissance maps of the Holy Land were conceived in part as historical maps: on the one hand, they showed the modern traveler how to reach the Holy Land and the sites within it, but on the other, those sites were chosen precisely for their historical Christian significance, particularly their significance in the Bible and in the life of Christ.¹⁴⁴ Thus there certainly were

¹⁴³ For references on the Peutinger Map see Ch. 4, n. 111 and 112.

¹⁴⁴ On medieval and Renaissance maps of the Holy Land see Nebenzahl, *Maps of the Holy Lands* (see Ch. 4, n. 60); and Harvey, *Medieval Maps of the Holy Land* (see Ch. 4, n. 60).

historical maps before the map on f. 6r in HM 83, but this map is a distinctive early example of this category of thematic map,¹⁴⁵ not only showing the world's history, but also alluding to its future.

The Map on ff. 6v–7r

This large map, which is spread across two folios, is labeled *Mappa mundi localis*, which title seems to indicate that the map offers a greater level of local detail than the other maps in the manuscript (Fig. 4.14). As indicated above in the description of the contents of the manuscript, this map combines information from a few of the preceding sections, and thus shows many of the islands in the circumfluent ocean like the map on f. 3r, and also provides more detail about the mainland. The sphere of earth is shown off center in the sphere of water, in contrast with the map on f. 3r, and in accordance with one explanation of how there was land above the waters, despite the fact that the sphere of earth was within the sphere of water.¹⁴⁶

There are a few texts and indications outside the circle of this map. North is indicated with the word *aquilo* at the right, and south by *Austrum* at the right, and there is a curious set of lines on the northern side of the map that seem intended to indicate the east-west extension of *Sithia*, i.e. Scythia. As the area demarcated by these lines reaches as far west as *Alimania* and *Gallia*, the lines have not been drawn with much care, and we have not seen a similar set of lines on any other medieval map.

¹⁴⁵ For discussion of the collection of historical maps in Ortelius's *Parergon* see Peter H. Meurer, "Ortelius as the Father of Historical Cartography," in Marcel van den Broecke, Peter van der Krogt, and Peter Meurer, eds., *Abraham Ortelius and the First Atlas: Essays Commemorating the Quadricentennial of His Death, 1598–1998* (Utrecht: HES Publishers, 1998), pp. 133–159; Liliane Wellens-De Donder, "Un atlas historique: le *Parergon* d'Ortelius," in Robert W. Karrow et al., *Abraham Ortelius (1527–1598): cartographe et humaniste* (Turnhout: Brepols, 1998), pp. 83–92; Walter S. Melion, "Ad ductum itineris et dispositionem mansionum ostendendam: Meditation, Vocation and Sacred History in Abraham Ortelius's *Parergon*," *The Journal of the Walters Art Gallery* 57 (1999), pp. 49–72; and George Tolias, "Glose, contemplation et meditation: Histoire éditoriale et fonctions du *Parergon* d'Abraham Ortelius, 1579–1624," in *Les méditations cosmographiques à la Renaissance* (Paris: PUPS, 2009), pp. 157–186. For additional discussion of the genre of historical maps see Walter Goffart, "When Did Historical Atlases Really Originate?" *Humanities Research Group* 9 (2001), available at <<http://celt.uwindsor.ca/ojs/leddy/index.php/HRG/article/viewFile/268/262>>; Goffart also has a good brief discussion of the *Parergon* in his *Historical Atlases: The First Three Hundred Years, 1570–1870* (Chicago: University of Chicago Press, 2003), pp. 30–35.

¹⁴⁶ For references on the non-coincidence of the centers of the spheres of earth and water see Ch. 1, n. 8.

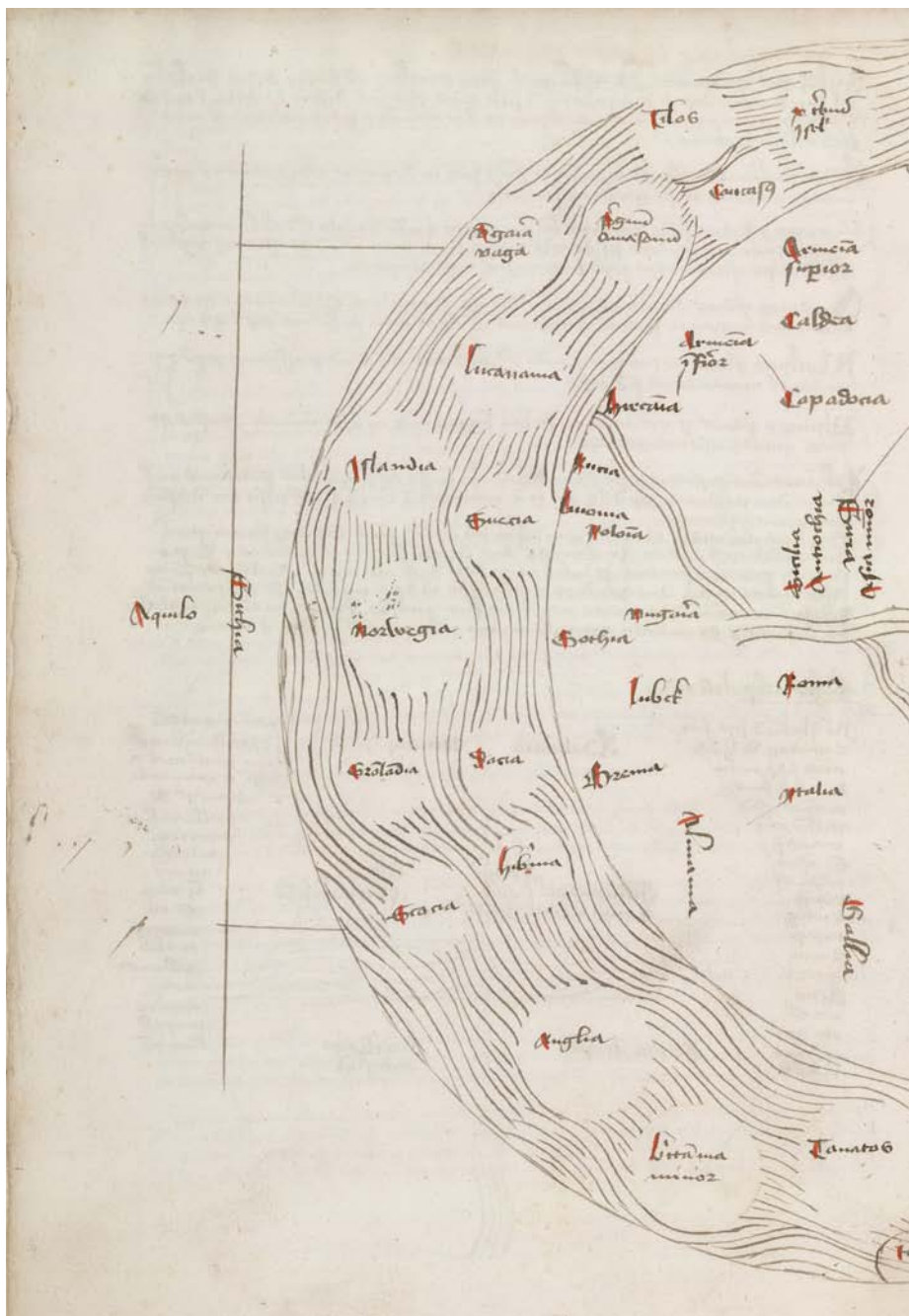
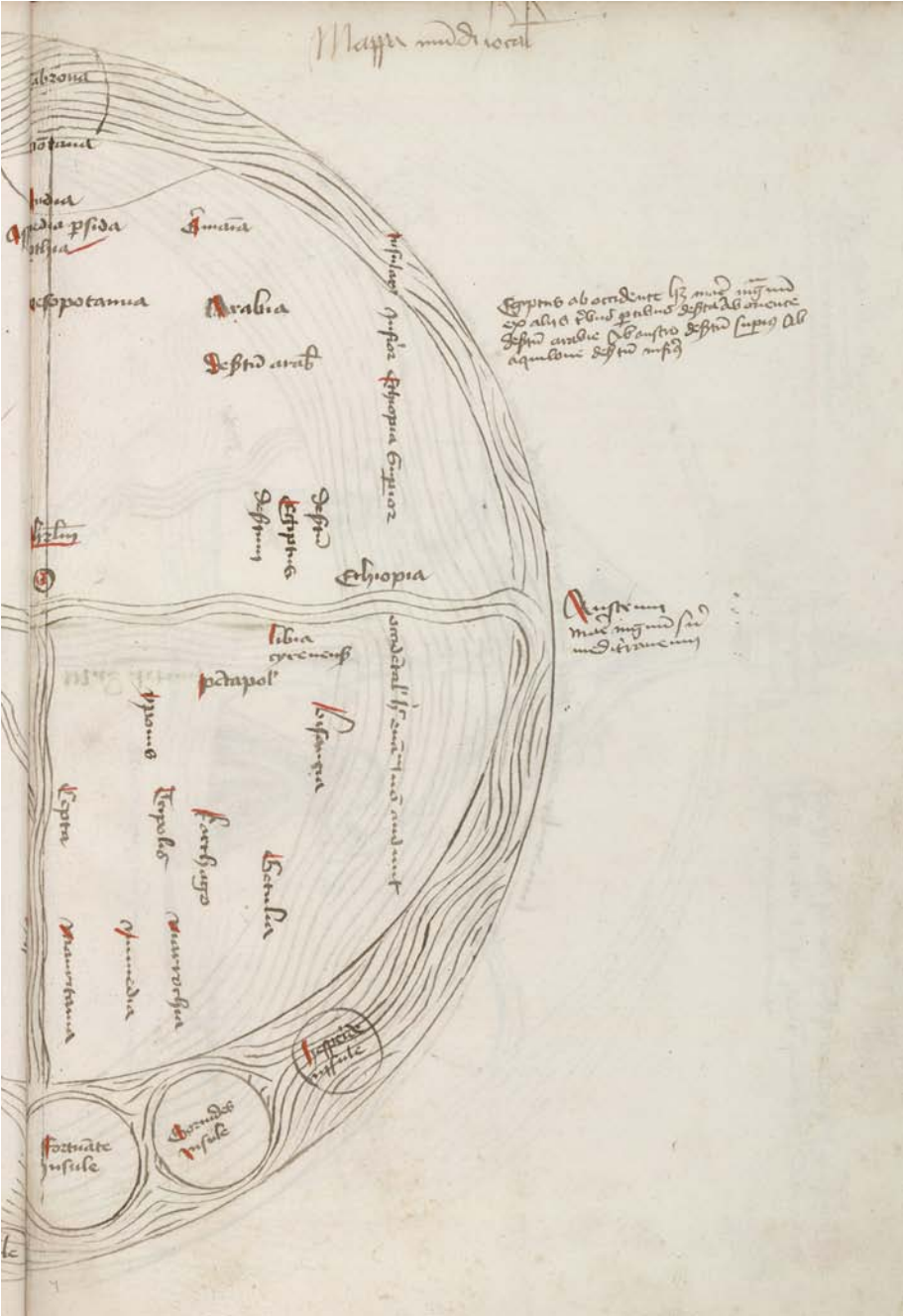


FIGURE 4.14 *Huntington MS 83, ff. 6v-7r. A large map labeled Mappa mundi localis that combines information from other maps in the manuscript (COURTESY OF THE HUNTINGTON LIBRARY).*



Outside the circle of the map in the south there is a text that reads:

Egyptus ab occidente habet mare magnum ex aliis tribus partibus, deserta
ab oriente desertum arabie ab austro desertum superius ab aquilone
desertum inferius

Egypt has the Mediterranean on the west, and in the other three directions, deserts: on the east it has the desert of Arabia, on the south is has upper desert, and on the north the lower desert.

This confused passage (Egypt has the Mediterranean to the north, not the west) was probably modeled on a passage like Isidore 14.3.27 or Bartholomaeus Anglicus 15.53, where the regions around Egypt are listed, but the cartographer's memory did not serve him well here. In a general way, the depiction of Egypt on the adjoining map agrees with this passage, as it shows Egypt between two deserts (see the transcription of the place names in Africa just below). Just outside of the southern edge of the map near the word *Austrum* there is the brief text *mare magnum sive mediteraneum* to identify the Mediterranean, which is too narrow to bear a place name in the map proper.

The islands on the map, proceeding from the east (top) counterclockwise, are as follows; since this list is almost identical to the list of islands on the map on f. 3r, we refer the reader to that list for notes on the identity of and literature about each island: *Tabrona* (Taprobana), *X tribus Israel*, *Tilos*, *Caucasus*, *regnum Amazonum*, *Ungaria vaga* (Hungaria magna), *lucanania* (Lapland), *Islandia*, *Suecia*, *Norsvegia*, *Gronlandia*, *Dacia*, *Hibernia*, *Scotia*, *Anglia*, *britannia minor*, *Tanatos*, *Tile*, *Fortunate insule*, *Gor<go>nides insule*, *Hesperide insule*.

The place names in Asia, reading from top to bottom and left to right, are: *montana*, (perhaps referring to the location of the Terrestrial Paradise on a mountain), *India*, *Armenia superior*, *Ass< >edia persida*, *parthia*, *<Semaria>*, *Caldea*, *Mesopotamia*, *Arabia*, *Hircania*, *Armenia inferior*, *Capadocia*, *desertum arabie*, *Sicilia* (i.e. Cilicia), *Antiochia*, *Siria*, *Asia minor*, *Jerusalem*, *desertum*, *Egyptus*, *desertum*, *Insulares*, *Inferior Ethiopia*, *Superior Ethiopia*. It should be remarked that while Jerusalem is indicated by a prominent circle near the center of the map, it is not precisely in the center, but somewhat to the north and east.

In Europe: *Rucia*, *Livonia*, *Polonia*, *ungaria*, *Gothia*, *lubeck*, *Roma*, *Brema*, *yitalia*, *Alimania*, *Gallia*. Here the cartographer's reason becomes clear for having the northern river of the T-O structure of his maps flow northeast instead of north as it does on most other *mappaemundi*: he counts Russia, Livonia, and

Poland part of Europe, and has arranged the geography of the river that divides Asia and Europe accordingly.¹⁴⁷

In Africa: *libia cyrenensis*, *yponis* (i.e. Hippo), *pentapolis*, <Ethiopia> *occidentalis hic evangelium non audivit* ("In western <Ethiopia> they have not heard the Gospel"), *visantia* (i.e. Byzacium or Byzacena),¹⁴⁸ *Cepta* (Ceuta), *Tripolis*, *Carthago*, *Getulia*, *Mauritania*, *Numidia*, *Maurochia*. The phrase in southwestern Africa to the effect that Gospel has not reached there clearly reflects the author's interest in the approach of the Apocalypse, as Matthew 24:14 says that the end will come after the Gospel has reached the ends of the earth.¹⁴⁹ Given the cartographer's interest in the Apocalypse, it is interesting that on the map of where the Apostles went to preach on f. 15r (see Fig. 4.18), there is no similar legend about the Gospel not reaching southwestern Africa.

The Map on ff. 7v–8r

A large *mappamundi*, spread over two folios, titled *Mappa de Aquis terram irrigantibus*, showing the world's main rivers. From a castle in the east that represents the Terrestrial Paradise flow the four rivers of Paradise (Fig. 4.15). The rest of the world's hydrography is much as in the map on ff. 6v–7r; also as in that map, the sphere of the earth is represented as having a different center than the sphere of water, but while this disposition of the map and also its large size leave room for islands in the circumfluent ocean, no islands are present. Certainly their absence is intended to place more visual emphasis on the rivers of the world. The text outside the eastern part of the map reads:

Ita isti quattuor fontes paradisi vadunt secundum glossam integram
super 24 ecclesiasticus et sepe perduntur meatibus subterraneis et
nomina mutant.

¹⁴⁷ The geography of northern Europe as indicated on this map is reflected in a remark by the maker of HM 83 on f. 9r: *livonia Polonia ungaria hic angulus tenet se ad huc ad Europam et papam et imperatorum aqualiter*, "Livonia, Poland, Hungary: this angle is loyal to Europe and the Pope also to the Emperor."

¹⁴⁸ On African Byzacium or Byzacena see William Smith, *A Dictionary of Greek and Roman Geography* (London: J. Murray, 1878), vol. 1, p. 461; there is discussion of the difference between Byzacium and Byzantium in Gervase of Tilbury, *Otia imperialia* (see Ch. 4, n. 57), Book 1, chapter 11, pp. 318–319.

¹⁴⁹ For discussion of and bibliography regarding the global scope of the evangelical mission see Chet Van Duzer and Ilya Dines, "The Only *Mappamundi* in a Bestiary Context: Cambridge, MS Fitzwilliam 254," *Imago Mundi* 58.1 (2006), pp. 7–22, at 13–15.

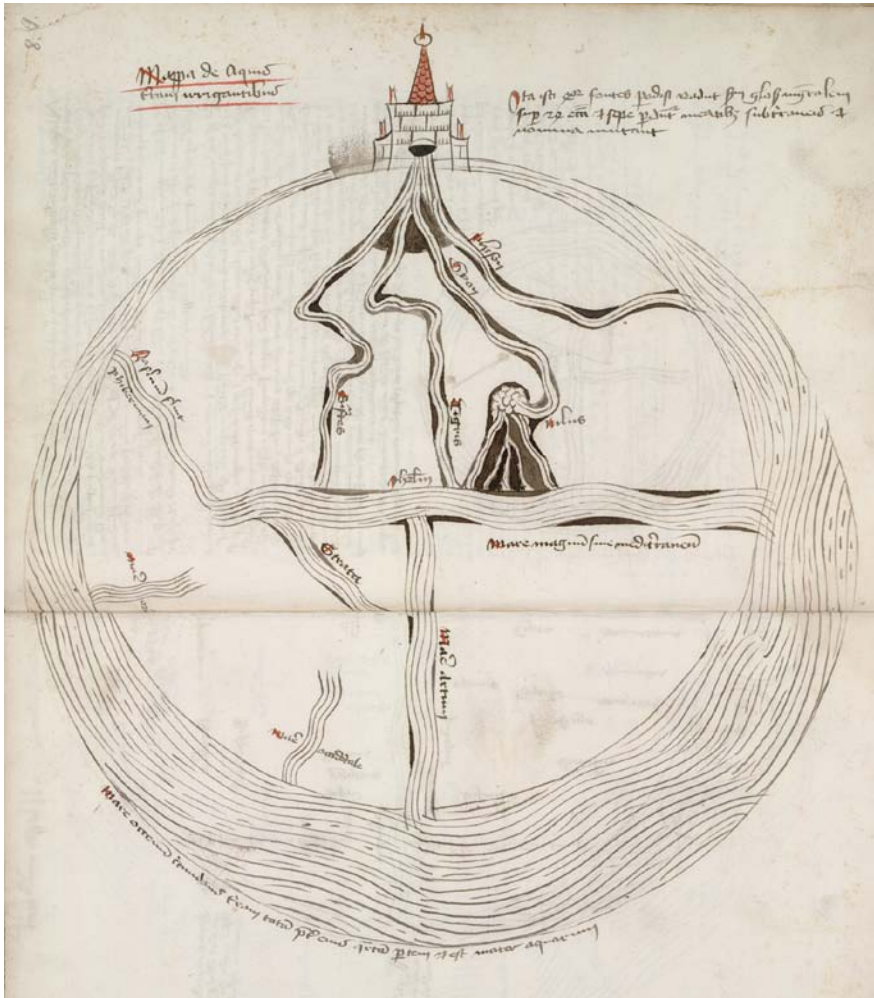


FIGURE 4.15 *Huntington MS 83, ff. 7v-8r. A large map titled Mappa de Aquis terram irrigantibus or map of the waters that irrigate the earth, which places great emphasis on the rivers of Paradise, rotated so that east is at the top (COURTESY OF THE HUNTINGTON LIBRARY).*

Thus these four rivers of Paradise flow according to the ‘integral gloss’ on Ecclesiasticus 24, and they often disappear in underground passages and change their names.

The four rivers flowing westward from Paradise are labeled the *Phison*, *Gyon* and *Nilus*, *Tigris*, and *Eufrates*. The fact that the one river is labeled both the *Gyon* and the *Nilus* is to be taken as reflecting the name change that the

cartographer alludes to in the text outside the map, even though he does not show the river disappearing in subterranean passages.¹⁵⁰ Indeed, the cartographer might have taken advantage of a subterranean passage to have the Nile appear in Africa and debouch into the Mediterranean from Africa, but he does not, and as a result the geography of this river of Paradise on this map is less than satisfying.¹⁵¹ As things stand, in a way the Nile is represented twice on the map, once flowing from Paradise, and also as part of the 'T' of waters that divide the continents on the *mappamundi*. The *Glossa ordinaria* on Ecclesiasticus 24 does discuss the rivers of Paradise,¹⁵² but does not mention

150 For discussion of the rivers of Paradise see Paul Albert Février, "Les quatre fleuves du Paradis," *Rivista di archeologia cristiana* 32.3–4 (1956), pp. 179–199; and S. G. Darian, "The Ganges and the Rivers of Eden," *Asiatische Studien – Études Asiatiques* 31 (1977), pp. 42–54. On the subterranean and suboceanic courses ascribed to the rivers of Paradise by some ancient and medieval authors see Chet Van Duzer, "The Cartography, Geography, and Hydrography of the Southern Ring Continent, 1515–1763," *Orbis Terrarum* 8 (2002), pp. 115–158, esp. 118–121.

151 On Andreas Walsperger's *mappamundi* of 1448 four rivers leave a castle in the East rather like on HM 83, ff. 7v–84; two of the rivers are labeled Ganges and Tigris, and it is reasonable to think that one of the other two was intended to represent the Gyon/Nile, and the Nile does appear in its proper location in Africa, so we are probably to infer a subterranean passage. A different solution to this problem is adopted in an unsigned and undated Venetian copperplate world map of ca. 1485: the Nile arises in Paradise with the other three rivers, and then flows via a land bridge joining Asia to Africa into Africa, and then north to the Mediterranean. For discussion of the map see Erich Woldan, "A Circular, Copper-Engraved, Medieval World Map," *Imago Mundi* 11 (1954), pp. 12–16.

152 The text of the *Glossa ordinaria* on this passage supplied in *Patrologia Latina* 113:1210, is incomplete, and we supply here the text from vol. 2 of the Bible printed in Strasbourg by Adolf Rusch not after 1480: *Quasi Phison. Phison qui et Ganges qui de paradiso exiens vadit ad indiam, et interpretatur caterua quia sic magnis fluminibus impletur. Ganges autem dicitur a gangaro rege indie, et fertur sicut Nilus super Orientis terras exundare. Sicut Tigris. Tigris fluvijs mesopotamie qui pergit contra assirios, et post multos circuitus in mare mortuum fluit, et tigris vocatur quia sicut Tigris bestia velociter fertur. Quasi Euphrates. Euphrates fluvijs mesopotamie gemmarum fertilis. Eufrata enim hebraice fertilitas latine. Mesopotamiam namque per loca irrigat, sic nilus alexandriam. Salutius asserit tigrim et eufraten uno fonte in armenia meare sed postea dividuntur maximo inter se spacio. Terraque quae ab ipsis ambitur mesopotamia dicitur. Quasi Gyon. Gyon, hic ethiopiam cingit. sic vocatus quia irrigat terram egypti, ge enim graece terram significat, qui apud aegyptios nilus vocatur propter limum quem trahit, qui fecunditatem efficit, unde et Nilus dictus est.* There is a facsimile edition of this Bible: *Biblia latina cum glossa ordinaria: Facsimile reprint of the Editio Princeps, Adolph Rusch of Strassburg 1480/81*, introd. Karlfried Froelich and Margaret T. Gibson (Turnhout: Brepols, 1992).

any subterranean passages or changes of name, but these characteristics are mentioned in the *Glossa ordinaria* on Genesis 2.¹⁵³

In northeastern Asia, the body of water that flows northeast to the circumfluent ocean, which also appears in the maps on ff. 1r, 3v, and 6r, is finally identified in the legend *Ra flu<v>im fluit per hiberniam*, “The Rha River flows through Iberia”: the Rha River is the Volga, mentioned by the name Rha by Ptolemy (*Geography* 5.9 and 6.14),¹⁵⁴ and *hibernia* is an error for the Asian Iberia.¹⁵⁵ At the center of the map is Jerusalem; and in the western half of the map the various seas are named: the sea to the north is (quite strangely) labeled *mare ori<entails>*, and is perhaps to be identified with the Baltic; the channel that runs between the northern Mediterranean and the western Mediterranean is labeled *Strata* as it is on the map in f. 3v, but remains unidentified; and the body of water that on most *mappaemundi* would be labeled the Nile is here, much as on the map on f. 3v, labeled *mare magnum sive mediteraneum*. In the west, a sea that is perhaps to be identified with the Bay of Biscay is designated the *mare occidentale*, and the western Mediterranean, as on the maps on ff. 1r and 3v, is labeled *mare artum*.

Just outside the circumfluent ocean to the west is a phrase that reads: *Mare oceanum circumdans terram totam <impenetrans?> quartam partem et est mater aquarum*, “The ocean sea encircles all of the land, <penetrating?> the fourth part, and it is the mother of the waters.” The phrase *mater aquarum* is less common than one might suppose, and the one source earlier than HM 83 where we have found it seems unlikely to have been consulted by the author of

153 From the *Glossa ordinaria* on Genesis 2 in the Bible printed in Strasbourg by Adolf Rusch not after 1480: *Ferunt historici tigrin et eufratem et nilum plerisque locis terre absumi: et paulo post emergentia silitum agere cursum.... Haec flumina gentibus per quas fluvunt notissima sunt: duobus vetustas mutavit nomina: Geon enim nilus nunc vocatur. Phison ganges. Tigris et eufrates antiqua nomina servaverunt.*

154 The Rha River appears as the Ras on Giovanni Leardo's world map of 1452 or 1453: see John Kirtland Wright, *The Leardo Map of the World, 1452 or 1453, in the Collections of the American Geographical Society* (New York: American Geographical Society, 1928), p. 33.

155 The name Hibernia is also used for the Asian Iberia by Andrea da Barberino in his chivalric romance *Il Guerrin Meschino*, which he completed in about 1410 and whose geography is based on that of Ptolemy: see Rudolf Peters, “Über die Geographie im Guerino Meschino des Andrea de' Magnabotti,” *Romanische Forschungen* 22.2 (1908), pp. 426–505, at 473. The Asian Iberia is mentioned in Ptolemy 5.11, and see William Smith, *A Dictionary of Greek and Roman Geography* (London: J. Murray, 1857), vol. 2, pp. 9–10.

HM 83,¹⁵⁶ so the phrase seems to have been re-invented here by the author of HM 83.

This map is essentially a thematic map of the world's waters, though its coverage of European rivers, for example, leaves much to be desired. As indicated earlier, the map is quite similar to a map of the world's rivers in one of the manuscripts of Corbechon's French translation of Bartholomaeus Anglicus, namely BnF MS fr. 9140, f. 226v (see Fig. 4.6), which leads one to suspect that this thematic map was inspired by one in a French manuscript of Bartholomaeus. The map is also very similar to a fifteenth-century map in the front flyleaf of Wolfenbüttel, Herzog August Bibliothek, Cod. Guelf. 442 Helmst. (see Fig. 5.12 below).¹⁵⁷ The relationship between the maps in this manuscript in Wolfenbüttel and those in Huntington HM 83 will be explored in more detail below; for the moment, suffice it to say that this map also seems to have some connection with Bartholomaeus Anglicus, as the first part of the legend about the river Dorix or Araxes on the map comes from Bartholomaeus 13.7, and the manuscript contains geographical excerpts from Bartholomaeus on 118r–121r.¹⁵⁸ These connections between the Wolfenbüttel map and Bartholomaeus on the one hand and the map in HM 83, ff. 7v–8r, on the other, tend to confirm a connection between the HM 83 map and Bartholomaeus.

The thematic map of the world's mountains mentioned and illustrated above, F. Humphreys's *Heights of the Principal Mountains in the World*, published in Henry S. Tanner, *A New Universal Atlas Containing Maps of the Various Empires, Kingdoms, States and Republics of the World* (Philadelphia: H. S. Tanner, 1836), is also a thematic map of the world's rivers—see Fig. 4.12—and is one of the earliest nineteenth-century maps of that type. A nineteenth-century thematic map of the rivers in Europe and Asia, titled *Asia-Eüropa; in*

¹⁵⁶ The only such text we found is from the twelfth century, Hermannus de Runa, *Hermani de Runa Sermones festuales*, ed. Edmond Mikkers (Turnhout: Brepols, 1986) (= Corpus Christianorum, Continuatio Mediaevalis, 64), Sermon 87, line 129: *Mare uocatur mater aquarum pro eo quod omnia flumina fluunt in mare et ipsum non redundat.*

¹⁵⁷ On the *mappamundi* on the front flyleaf of Wolfenbüttel, Herzog August Bibliothek, Cod. Guelf. 442 Helmst. see Jörg-Geerd Arentzen, *Imago mundi cartographica: Studien zur Bildlichkeit mittelalterlicher Welt- und Okumenekarten unter besonderer Berücksichtigung des Zusammenwirkens von Text und Bild* (Munich: W. Fink, 1984), pp. 128–129, 212, 276, and plate 36; and Christian Heitzmann, *Europas Weltbild in alten Karten: Globalisierung im Zeitalter der Entdeckungen* (Wiesbaden: Harrassowitz in Kommission, 2006), pp. 36–37.

¹⁵⁸ On the material from Bartholomaeus Anglicus in Wolfenbüttel, Herzog August Bibliothek, Cod. Guelf. 442 Helmst. see Otto von Heinemann, *Die Helmstedter Handschriften* (Frankfurt am Main: Klostermann, 1963–65), vol. 1, pp. 343–345; and Meyer, *Die Enzyklopädie des Bartholomäus Anglicus* (see Ch. 4, n. 3), pp. 132–133 and 272.

Beziehung auf das Fliessende, und seine Vertheilung in Stromgebiete, which shows the rivers in their proper geographical locations, may be found in Heinrich Berghaus, *Dr. Heinrich Berghaus' physikalischer Atlas oder Sammlung von Karten* (Gotha: Justus Perthes, 1845–48).¹⁵⁹

The Diagram on f. 13r

We move on now to the diagrams and maps in HM 83's heterogeneous section on astronomy and geography (ff. 13r–18r). The author opens this section with view of the whole cosmos: on f. 13r there is a diagram of the spheres labeled *hec figura appellatur ffabrica mundi* that shows the sphere of the earth rising partly out of the sphere of water, which are surrounded by the spheres of air and fire, then the planetary spheres, then the *Celum stellarum* or sphere of the stars, then the *Cristallinum*, then the *Primum mobile*, and finally the *Empyreum* or Empyrean.¹⁶⁰ Just one part of this diagram, to which we will return later, requires mention: outside of the spheres, at the very top of the diagram, there is a rectangle containing a grid that seems to be intended to represent the wall surrounding the Heavenly Jerusalem: this interpretation is confirmed by the very similar grid to the right of the gates of Paradise on f. 11v, in the section of the manuscript that addresses the Apocalypse.¹⁶¹ As mentioned earlier, the text on f. 13r is incomplete, and does not discuss this part of the diagram.

The Diagrams on f. 13v

The upper diagram shows the sphere of the earth rising out of the sphere of water, and the text explains that a quarter of the earth is above the water. Around these is a trace of the course of the sun around the earth, and the text supplies information about the relative sizes of the earth, ocean, and sun. The diagram below illustrates the relative sizes of a star, the earth, and the moon.¹⁶² It seems very likely that we are to understand a progression in the images on ff. 13r, 13v, and 14r, from a view of the whole cosmos, to a view of the central part of the cosmos, to a view of the earth. This use of detail maps is unusual in the late Middle Ages, but there is another example in HM 83, namely on f. 11v (see Fig. 5.9), where the view of the Mount of Olives and some other mountains

159 A high-resolution image of this map may be consulted on the website of the David Rumsey Map Collection, at <<http://www.davidrumsey.com>>.

160 There is a good brief history of the idea of the spheres in E. J. Aiton, "Celestial Spheres and Circles," *History of Science* 19 (1981), pp. 75–114.

161 A high-resolution image of HM 83, f. 13r is available via the Digital Scriptorium at <http://dpg.lib.berkeley.edu/webdb/dsheh/heh_brf?Description=&CallNumber=HM+83>.

162 A high-resolution image of HM 83, f. 13v is available via the Digital Scriptorium at <http://dpg.lib.berkeley.edu/webdb/dsheh/heh_brf?Description=&CallNumber=HM+83>.

functions as a detail of the image of the earth below, and we will discuss another example in the world map and map of the Holy Land in the front fly-leaf of Wolfenbüttel, Herzog August Bibliothek, Cod. Guelf. 442 Helmst. (see Fig. 5.12), a manuscript closely related to HM 83.

The Map on f. 14r

This map is the first of three climatic or zonal maps, each with a different climatic system, so that the three maps show a thematic interest in climate. The map on f. 14r (Fig. 4.16) is based on a map of the world's rivers very similar to that in ff. 7v–8r, emphasizing the rivers of paradise, but with fewer place names elsewhere. Overlain on these geographical details are ten parallels that demarcate ten climates. This system is obviously different from the system of five *climata* proposed by Aristotle and used in many Macrobian maps,¹⁶³ or Ptolemy's system of seven *climata*,¹⁶⁴ and seems to be based on another system of *climata* elaborated by Ptolemy in his *Geography* 1.23.¹⁶⁵ The map is puzzling, as there is no connection between the rivers and the system of *climata*, and the map does not include most of the place names whose *climata* are indicated in the surrounding text. So the author generated that text using a different map.

The place names on the map, beginning in the east and moving west, are as follows: *Eufrates*, *Tigris*, *Phison per evilat*,¹⁶⁶ *India*, *Gyon*, *Nilus*, *Etiopia* (repeated), *Egiptus*, *Jerusalem*. The scribe had initially drawn the Tigris with the western course of the Euphrates, but then did his best to remove the erroneous course of the Tigris. The first climate begins at the northern limit of *Etiopia*.

163 See Aristotle *Meteorology* 2.5 (362a32); on Macrobian maps see Destombes, *Mappemondes* (see Ch. 4, n. 37), pp. 43–45 and 85–95; Leonid S. Chekin, *Northern Eurasia in Medieval Cartography: Inventory, Text, Translation, and Commentary* (Turnhout: Brepols, 2006), pp. 95–120; and Alfred Hiatt, “The Map of Macrobius before 1100,” *Imago Mundi* 59.2 (2007), pp. 149–176.

164 Ernst Honigsmann, *Die sieben Klimata und die πόλεις ἐπισήμοι: Eine Untersuchung zur Geschichte der Geographie und Astrologie im Altertum und Mittelalter* (Heidelberg: Winter, 1929); and Dmitriy Shcheglov, “Ptolemy's System of Seven Climata and Eratosthenes' Geography,” *Geographia Antiqua* 13 (2004), pp. 21–38.

165 See Berggren and Jones, *Ptolemy's Geography: An Annotated Translation of the Theoretical Chapters* (see Ch. 4, n. 56), pp. 84–85.

166 The Phison river is said to flow around Evilath in Genesis 2:11, and see Genesis 10:7. For discussion of Evilath see Ivar Hallberg, *L'Extrême Orient dans la littérature et la cartographie de l'Occident des XIII^e, XIV^e, et XV^e siècles; étude sur l'histoire de la géographie* (Göteborg: W. Zachrissons boktryckeri a.-b., 1907), p. 202, s.v. “Evilach”; and Samuel Krauss, “‘Euilat’ in the LXX,” *The Jewish Quarterly Review* 11.4 (July, 1899), pp. 675–679.

The Map on f. 14v

The climatic diagram on f. 14v includes very little geographical detail (Fig. 4.17), and thus barely qualifies as a map, but it does indicate the bodies of water that create a T-O *mappamundi*, and thus is a *mappamundi*. The map includes an extra body of water parallel to and south of the Mediterranean. The surrounding text explains that the extra body of water is the *mare artum* or western mouth of the Mediterranean: this separation of the Mediterranean proper and the Strait of Gibraltar into different *climata* is puzzling. On the map are indications of nine climates (the last of which is not numbered), and there is a table spread across the map that gives the *elevatio poli artici* or elevation of the North Star in each climate, the *dies prolixior* or longest day of each climate, and the width in miles of each climate.

The latitude of the beginning of the first climate is essentially the same as it is on the map in f. 14r: on that map it marks the northern limit of *Etiopia*; on f. 14v Ethiopia is not indicated. The table on f. 14v indicates the widths of the *climata* in German miles, with fractions indicated in stadia. The system of *climata* is based on that of Johannes de Sacrobosco's *Tractatus de sphaera*, which was the most popular astronomical work of the Middle Ages and Renaissance,¹⁶⁷ which fits with the author's claim that the *climata* on this map are based on astronomy. The latitudes of the first seven *climata* on f. 14v match perfectly those in Sacrobosco (who only indicates seven *climata*). The author's source for his eighth and ninth *climata*, which are said to be centered on 52°N and 56°N respectively, is not clear: the fact that he does not indicate the width in miles of these last two *climata* suggests that he may have added those two *climata* himself.

Moreover, there are problems with the indicated widths in miles of the *climata*. The width of *climata* should decrease as one moves north, as they do in Sacrobosco, but there are irregularities in this regard in the list on f. 14v. The following table indicates the width of the climatic zones in *miliaria* (Sacrobosco) and German miles (HM 83):

Sacrobosco		HM 83, f. 14v
1.	440	175 and 2 stadia
2.	400	153 and 4 stadia

167 On the continued popularity of Sacrobosco's *Tractatus de sphaera* see Corinna Ludwig, "Die Karriere eines Bestsellers. Untersuchungen zur Entstehung und Rezeption der *Sphaera* des Johannes de Sacrobosco," *Concilium medii aevi* 13 (2010), pp. 153–185.

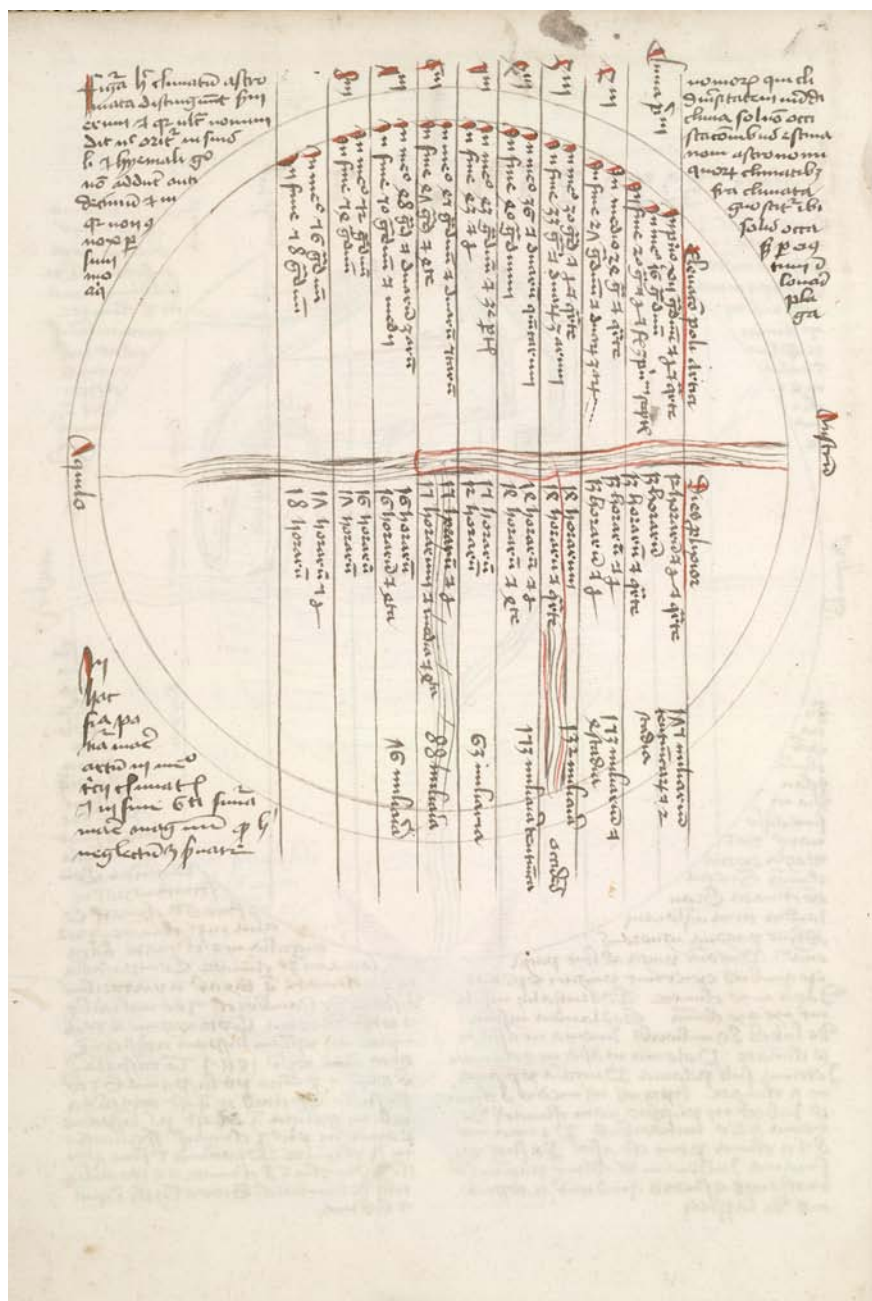


FIGURE 4.17 *Huntington MS 83, f. 14v.* A diagram of nine climatic zones based on astronomical texts, with a table supplying the elevation of the North Pole and the length of the longest day in each climate, and the width of each in German miles (COURTESY OF THE HUNTINGTON LIBRARY).

3.	350	132
4.	300	153
5.	255	63
6.	212	88
7.	185	76
8.	[none]	[not supplied]
9.	[none]	[not supplied]

In addition to the errors of calculation or copying evident in the irregular sequence of *climata* widths on f. 14v, it is not clear what type of *miliare* the author of HM 83 thought Sacrobosco was using. The ratio between the measurements of Sacrobosco and those of f. 14v for the first three *climata* (where the sequence of widths on f. 14v seems regular) averages about 2.6, so the author of HM 83 apparently thought that Sacrobosco was using a *miliare* that was about 0.385 (= 1/2.6) the length of the German mile. The definitions of units of measure in the early modern period are difficult to pin down—Andreas Walsperger on his *mappamundi* of 1448, in a passage transcribed and translated above, says that a German mile is 10,000 feet, while Johann Schöner in his *Opusculum geographicum* ([Nuremberg]: [Johann Petrejus], 1533), Part 1, chapter 12, says that a German mile is 5,760 feet—but even given the great variety of definitions, we do not know of a *miliare* that was approximately 0.385 the length of a German mile.

The Map on f. 15r

The third map of the climatic zones in HM 83 is on f. 15r (Fig. 4.18). The presence of three climatic maps with climate systems from three different sources (geographers, astronomers, theologians) again indicates the author's inclination to use maps as tools for comparison, like his use of thematic and historical maps. The map is puzzling, and seems to be a less detailed copy of a more detailed original. The texts in the upper left and right corners of the folio read:

Hec figura 7 climatum secundum theologos qui partem terre climaticam consideraverunt secundum naturalem et convenientem modum habitabilem hominibus.

Vide in hac figura quomodo Apostolorum audita est vox in omni terra climatica.

This diagram shows the seven climates according to the theologians, who considered the climate of a part of the world according to its nature and the degree to which it is suitable for human habitation.

See in this diagram how the voice of the Apostles is heard in all of the land divided into climates.

The idea of the map, then, is to show that the Gospel has reached all parts of the earth, and specifically all of the climates of the earth, reflecting the author's interest in the approach of the Apocalypse, as Matthew 24:14 says that the end of the world will come after the Gospel has reached the ends of the earth.¹⁶⁸ However, the map includes indications of only three of the Apostles, namely Matthew, Thomas, and James. Moreover, the text below the map says that several places are located in a particular climate *secundum figuram*, according to the map, but those places do not appear on the map. In addition, these same texts indicate that the author was consulting two climatic maps, one with seven *climata*, and another with eight. For example, the second entry below the map says:

Egiptus in 2° climate secundum figuram 8 climatium. Secundum figuram 7 climatium scilicet secundum theologos partim in 2° et partim in 3°.

Egypt is in the second climate according to the seven-climate map, but according to the eight-climate map, that is, according to the theologians, it is partly in the second climate, and partly in the third.

Some of the other entries in the list below the map, beginning with the sixth entry which is for Ceuta, abbreviate the references to the two maps as *secundum figuram u* and *secundam figuram t*; the 't' probably stands for *theologorum*, but it is not clear what the 'u' stands for. It is puzzling that the entry for Egypt just quoted says that the eight-climate map is that of the theologians, while the text above and to the left of the map says that the map shows the seven climates according to the theologians. The map in fact has seven numbered *climata*, and then a red parallel north of the northern limit of the seventh climate, no doubt to be interpreted as indicating the eighth climate—which

¹⁶⁸ For discussion of and bibliography regarding the global scope of the evangelical mission see Van Duzer and Dines, "The Only *Mappamundi* in a Bestiary Context" (see Ch. 4, n. 149), pp. 13–15.

despite the map's title, the author of HM 83 seems to have been somewhat hesitant about.

The earliest reference that we know to an eight-climate system is that in the *De nuptiis Philologiae et Mercurii* of Martianus Capella (fifth century),¹⁶⁹ but Capella certainly was not a theologian, and none of his maps survives. The Wolfenbüttel manuscript of Lambert of Saint-Omer's *Liber Floridus* (Herzog August Bibliothek, Cod. Guelf. 1 Gud. Lat.) has an inscription indicating that its maps are based on those of Martianus Capella,¹⁷⁰ but Lambert does not use the eight-climate system on his maps, nor does he describe such a system. The theologian that the author of HM 83 is referring to must be Bede the Venerable (672/673–735), who in his *De natura rerum*, chapter 47, adopts an eight-climate model.¹⁷¹ However, while there are climatic diagrams in some manuscripts of Bede's works, the ones that we have seen show the five-climate system, rather than an eight-climate system.¹⁷² The only other map we know besides that in HM 83, f. 15r, that shows eight climates is John of Wallingford's *mappamundi* of

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- 169 See Martianus Capella, *The Marriage of Philology and Mercury*, trans. William Harris Stahl and Richard Johnson (New York: Columbia University Press, 1977), 8.876, p. 340; and Martianus Capella, *Le nozze di Filologia e Mercurio*, ed. and trans. Ilaria Ramelli (Milano: Bompiani, 2001), pp. 616–619.
- 170 On the inscription in the Wolfenbüttel manuscript of the *Liber Floridus* see Richard Uhden, "Die Weltkarte des Martianus Capella," *Mnemosyne* Ser. 3, vol. 3 (1936), pp. 97–124; for a list of the maps in the manuscripts of the *Liber Floridus* see Destombes, *Mappemondes* (see Ch. 4, n. 37), pp. 111–116.
- 171 See Bede the Venerable, *De natura rerum*, chapt. 47 ("De circulis terrae"), in *Patrologia Latina* 190:265–273; and Bede the Venerable, *Bedae Venerabilis Opera* (Turnhout: Brepols, 1955–1980), Pars 1, Opera Didascalica (= Corpus Christianorum, Series Latina 123A, 1975), pp. 189–234, at 229; and Bede the Venerable, *On the Nature of Things, and On Times*, ed. and trans. Calvin B. Kendall and Faith Wallis (Liverpool: Liverpool University Press, 2010), pp. 98 and 162. For discussion of Bede's system of climates in relation to those of Pliny, Ptolemy, Martianus Capella, Isidore of Seville, and Gerbert of Aurillac see Mario Arnaldi, "Orologi solari azimutali medievali: Analisi dei testi e possibili collazioni (seconda parte)," *Gnomonica Italiana* 15 (2008), pp. 31–40, at 36 and 39–40; this material is presented in English in Arnaldi's book *De cursu solis: Medieval Azimuthal Sundials, From the Primitive Idea to the First Structured Prototype* (Somerton: British Sundial Society, 2012), Appendix F, "The Climates."
- 172 The maps in manuscripts of Bede's works are listed by Destombes, *Mappemondes* (see Ch. 4, n. 37), pp. 35–36, but he does not include zonal diagrams that lack geographical detail. Munich, BSB Clm. 210, f. 132r (ninth century) has five climatic rings; and Paris, BnF Ms lat. 7474, f. 86v (eleventh century) shows the five-climate system.

c. 1250, but there is no basis to think there is any connection between the Huntington map and John of Wallingford's.¹⁷³

The place names and legends on the map are as follows, reading from south to north: *desertum propter nimium calorem* ("Desert because of excessive heat"); *Ethiopia Matheus* (indicating that the Apostle Matthew went to Ethiopia to preach); in the third climate, from east to west, *homines parvi, mediocres, magni*; in the fourth climate, from east to west, *Bestiae grandes, mediocres, parve*, and back in the east of the fourth climate, *Thomas* (the Apostle);¹⁷⁴ *Jerusalem*; *Jacobus*; in the circumfluent ocean in the east, *X tribus Israel*;¹⁷⁵ *Babel*; *Constantinopolis*; *Savianus unus de 7ta <climata?>* ("Savinian one of the seventh climate"); *Francia*; *desertum esset propter nimium frigus si non habunda<r>ent ligna quibus autem fit ut homines habitent usque ad oceanum mare in yslandia* ("This area would be deserted because of the excessive cold if trees did not abound, by whose presence it occurs that men can live all the way to the ocean in Iceland"); *Anglia*; *hibernia*; *dacia*.

Some of the texts on the map require comment. The indication that in the third climate men are small in the east, medium-sized in the central part of the world, and tall in the west (*homines parvi, mediocres, magni*), is extraordinary. We have not identified its source, and the indication of difference between the east and west is unexpected on a climatic map, where we would anticipate descriptions of differences between north and south.¹⁷⁶ This question is ren-

173 The John of Wallingford map is in London, British Library, Cotton MS Julius D. vii, f. 46r, and is reproduced in P. D. A. Harvey, *Medieval Maps* (London: British Library, 1991), p. 20; see also Destombes, *Mappemondes* (see Ch. 4, n. 37), p. 168, #49.7; Anna-Dorothee von den Brincken, *Fines terrae: die Enden der Erde und die vierte Kontinent auf mittelalterlichen Weltkarten* (Hannover: Hahnsche Buchh., 1992), pp. 109–112 and plate 36; Chekin, *North-ern Eurasia* (see Ch. 4, n. 163), pp. 202–203 and plate 15.1; and Alfred Hiatt, *Terra incognita: Mapping the Antipodes before 1600* (Chicago: University of Chicago Press, 2008), pp. 121, 123–124, and 142 note 128. Incidentally the eighth climate is mentioned by Martin Waldseemüller in his *Cosmographiae introductio* of 1507: see *The 'Cosmographiae introductio' of Martin Waldseemüller in Facsimile, Followed by the Four Voyages of Amerigo Vespucci*, ed. and trans. Joseph Fischer and Franz von Wieser (New York: The United States Catholic Historical Society, 1907), chapter 7, pp. xxiv and 62.

174 The Apostle Thomas is located in the far east of the map, in the area that is designated as India in other maps in HM 83, and of course Thomas was thought to have gone to India to preach: see, W. R. Philipps "The Connection of St. Thomas the Apostle with India," *The Indian Antiquary* 32 (1903), pp. 1–15 and 145–160.

175 The island of the Ten Tribes of Israel appears on other maps in HM 83, including those on ff. 3r, 6v–7r, and 10v (see Fig. 4.9, 4.14, and 5.7, respectively).

176 About a century later, Jean Bodin suggested that the differences between the east and west generate differences among the inhabitants of those regions: see Jean Bodin, *Les six*

dered more complicated by the text in the fourth climate, which says that animals are large in the east, and small in the west—the opposite of the situation in the third climate. The fact that the situations are the opposite in the third and fourth climates is puzzling and makes one wonder what the author of HM 83 thought the cause of this difference was (and certainly makes living in the west, where the men are large and the beasts small, sound more appealing than living in the east). Perhaps the author thought that this difference was what explained all of the accounts of monsters in the east.¹⁷⁷

Savianus certainly refers not to the early seventh-century Pope Sabianus or Sabinian, who had nothing to do with France,¹⁷⁸ but to Saint Savinian of Sens (in French, Savinien de Sens), who in the third century was sent from Rome to France and was martyred there.¹⁷⁹ But it is not at all clear why Savinian is on the map rather than one of the Apostles. Perhaps the author had a connection with France.

The legend about the far north, indicating that it is the presence of wood, i.e. wood for fires, that renders the northern regions habitable for humans, comes from neither Sacrobosco nor Bede, and we have not been able to determine the

livres de la République, ed. Christiane Frémont, Marie-Dominique Couzinnet, and Henri Rochais (Paris: Fayard, 1986), Book 5, chapter 1, “Du reiglement qu’il faut tenir pour accommoder la forme de Republique à la diversité des homes: et le moyen de cognoistre le naturel des peuples,” p. 44. We thank Leonid Chekin for this reference.

177 There is an excellent account of the monsters of the east in Rudolf Wittkower, “Marvels of the East: A Study in the History of Monsters,” *Journal of the Warburg and Courtauld Institutes* 5 (1942), pp. 159–197, reprinted in his *Allegory and Migration of Symbols* (Boulder, CO: Westview Press, 1977), pp. 45–74. Also see James Romm, “Belief and Other Worlds: Ktesias and the Founding of the ‘Indian Wonders,’” in George E. Slusser and Eric S. Rabkin, eds., *Mindscapes: The Geography of Imagined Worlds* (Carbondale: Southern Illinois University Press, 1989), pp. 121–135; and Andrea Rossi-Reder, “Wonders of the Beast: India in Classical and Medieval Literature,” in Timothy S. Jones and David A. Sprunger, eds., *Marvels, Monsters, and Miracles: Studies in the Medieval and Early Modern Imaginations* (Kalamazoo: Medieval Institute Publications, 2002), pp. 53–66.

178 Amedeo Crivellucci, “Il pontificato di Sabiniano primo successore di Gregorio Magno,” *Studi storici* 8 (1899), pp. 203–211.

179 On Saint Savinian of Sens see Abbé Cornat, “Du rétablissement de l’ancienne légende de saint Savinien, martyr et fondateur de l’église de Sens,” *Bulletin de la Société des Sciences Historiques et Naturelles de l’Yonne* 5 (1851), pp. 435–446; “Vita S. Sabiniani martyris, Trecis in Gallia: Ex codice Reginae Sueciae 80,” *Analecta Bollandiana* 4 (1885), pp. 139–157; and Augustin Fliche, *Les vies de saint Savinien, premier évêque de Sens: étude critique suivie d’une édition de la plus ancienne vita* (Paris: Société Française d’Imprimerie et de Librairie, 1912).

author's source here. It may be the author's own reflection on the practicalities of life in the north.

The place of this map in the manuscript raises questions about the composition of HM 83, and in particular about whether its location reflects the author's original intentions. As indicated above, the separation of the map (which is on f. 15r) from the list of the locations where the Apostles preached (ff. 5v–6r), is puzzling. Given that the purpose of the map is to show that the Gospel has reached all parts of the earth, which is a prerequisite of the Apocalypse, it would seem more natural for this map to precede the treatise on the Apocalypse rather than follow it. On the other hand, it is true that the map on 15r goes well with the other climatic maps on ff. 14r and 14v. One other curious aspect of the map on f. 15r is that while this map suggests (as mentioned earlier), at least through the author's statement of its purpose, the completeness of the Apostles' evangelization, the map on ff. 6v–7r indicates that the evangelization is not complete in a legend that reads <Ethiopia> *occidentalis hic evangelium non audivit*, "In western <Ethiopia> they have not heard the Gospel." But perfect consistency throughout the manuscript is too much to expect.

Finally, a few words should be said about other *mappaemundi* that indicate the locations where the Apostles preached. The best-known maps of this type are of course the *mappaemundi* illustrating manuscripts of Beatus of Liébana's *Commentary on the Apocalypse*. These maps appear in the manuscripts just following a list of the Apostles and the regions they went to evangelize, and Beatus's textual reference to the map (*subiectae formulae pictura demonstrat*) makes it clear that he included a map in the autograph manuscript of his *Commentary*.¹⁸⁰ Another map that indicates where the Apostles preached is Oxford, St. John's College, MS 17, f. 6r, made in about 1110, which has references to four of the Apostles in Asia (from east to west): *Achaia ubi sanctus andreas; Effesus sanctus iohanes predicavit; Cesaria hic Petrus predicavit; Athenas hic*

¹⁸⁰ For discussion of the Beatus maps, and particularly of their illustration of the Apostles' mission, see Manuel Adolfo Balloira Bertolo, "Doctrina de la dispersión apostólica en Beato," *Compostellanus* 30.3–4 (1985), pp. 289–316; Serafín Moralejo Álvarez, "El mapa de la diáspora apostólica en San Pedro de Rocas: notas para su interpretación y filiación en la tradición cartográfica de los Beatos," *Compostellanus* 31 (1986), pp. 315–340, reprinted in *Patrimonio artístico de Galicia y otros estudios: Homenaje al Prof. Dr. Serafín Moralejo Álvarez* (Santiago de Compostela: Xunta de Galicia, 2004), vol. 2, pp. 65–74; and Sandra Sáenz-López Pérez, *The Beatus Maps: The Revelation of the World in the Middle Ages* (Burgos: Siloé, 2014), pp. 186–195.

Paulus predicavit.¹⁸¹ There is an almost identical *mappamundi*, with the same legends about the Apostles, in the Peterborough Computus of c. 1120 (British Library, Harley MS 3667, f. 8v);¹⁸² and an unfinished earlier version of a very similar map—which includes the legends *Achaia ubi sanctus andreas* and *Cesaria hic Petrus predicauit*—in Cambridge, Corpus Christi College MS 265 (the ‘Commonplace Book’ of Archbishop Wulfstan II of Worcester, which dates to the last quarter of the eleventh century), p. 210.¹⁸³

It is tempting to think that the author of HM 83 was inspired to make the map on f. 15r by an earlier map of the places where the Apostles preached, but if that is the case, that earlier map has not survived.

181 On the map in Oxford, St. John's College, MS 17, see Destombes, *Mappemondes* (see Ch. 4, n. 37), p. 48, no. 25.8; Faith Wallis, “MS Oxford St. John's College 17, a Mediaeval Manuscript in its Context,” Ph.D. Dissertation, University of Toronto, 1985, pp. 219–223; Anna-Dorothee von den Brincken, “Mundus Figura Rotunda,” in Anton Legner, ed., *Ornamenta Ecclesiae: Kunst und Künstler der Romanik in Köln* (Cologne: Schnütgen-Museum, 1985), vol. 1, pp. 99–106, at 103–105; Evelyn Edson, “World Maps and Easter Tables: Medieval Maps in Context,” *Imago Mundi* 48 (1996), pp. 25–42, at 35–37, with a reproduction of the map in Fig. 4.7; Evelyn Edson, *Mapping Space and Time: How Medieval Mapmakers Viewed their World* (London: British Library, 1997), pp. 86–95, with the map reproduced on p. 88; and Chekin, *Northern Eurasia* (see Ch. 4, n. 163), pp. 64–65, with an illustration of the map on p. 365. Updated material about the map from Faith Wallis's dissertation is available on her website devoted to the manuscript, at <<http://digital.library.mcgill.ca/ms-17/>>.

182 The map in BL Harley MS 3667 is not listed by Destombes in his *Mappemondes* (see Ch. 4, n. 37); the best discussion of the map is that by Martin Foys in the article cited in the following note.

183 Martin Foys, “An Unfinished *Mappamundi* from Late Eleventh-Century Worcester,” *Anglo-Saxon England* 35 (2006), pp. 271–284.

The Treatise on the Apocalypse

We turn our attention now to the treatise on the Apocalypse in HM 83, ff. 8v–12v. As indicated above, the geographical material in ff. 1r–8v serves as a preface to the apocalyptic section, describing the world's geography before it underwent dramatic changes in the Last Days, and reviewing the Four Kingdoms of the world (f. 5v) and also the missions of the Apostles (ff. 5v–6r). And it is abundantly clear that the treatise on the Apocalypse was composed by the same author as the geographical material in ff. 1r–8v and 13r–18r: in all of these sections we see the author's strong propensity to illustrate things with maps, and the summary of the Last Days on f. 16r agrees very well (though not in every detail) with the account of the Apocalypse presented on ff. 8v–12v.

The traditions of illustrating narratives of the Apocalypse are varied, and extend over more than a thousand years: we have evidence from the seventh century of an illustrated manuscript of the Book of Revelation,¹ and manuscripts with illustrations of the Apocalypse survive from the early ninth century.² Yet HM 83 is almost unique in its cartographic program of illustration of the Last Days. The author's experience with thematic maps, evident in

1 So James Snyder, "The Reconstruction of an Early Christian Cycle of Illustrations for the Book of Revelation: The Trier Apocalypse," *Vigiliae Christianae* 18.3 (1964), pp. 146–162, at 147, who notes that Bede records in his *Vita sanctorum abbatum monasterii in Wiramutha et Girvum*, in *Patrologia Latina* 94:718, that Benedict Biscop of Wearmouth traveled to Rome in about 672 "to acquire illustrated manuscripts, including a Book of Revelation, to serve as models for church decorations."

2 The earliest is the Trier Apocalypse of c. 800, which is in Trier, Stadtbibliothek, MS 31, and has been reproduced in facsimile as *Trierer Apokalypse: Vollständige Faksimile-Ausg. im Originalformat des Codex 31 der Stadtbibliothek Trier*, with commentary by Richard Laufner and Peter K. Klein (Graz: Akademische Druck- und Verlagsanstalt, 1974–75). For a detailed list of other manuscripts that contain illustrations of the Apocalypse see Emmerson and Lewis, "Census and Bibliography" (see Introduction, n. 1). For chapters that together form a good discussion of art based on the Apocalypse see Richard K. Emmerson and Bernard McGinn, eds., *The Apocalypse in the Middle Ages* (Ithaca, NY: Cornell University Press, 1992), part 2, pp. 103–289. The chapter that addresses the later Middle Ages is Michael Camille, "Visionary Perception and Images of the Apocalypse in the Later Middle Ages," pp. 276–289. Also see Jonathan Alexander, "The Last Things: Representing the Unrepresentable," in Frances Carey, ed., *The Apocalypse and the Shape of Things to Come* (Toronto and Buffalo: University of Toronto Press, 1999), pp. 43–63, with a catalogue by Michael Michael, Jonathan Alexander and Martin Kauffmann, pp. 64–98.

the geographical sections of the manuscript, makes it unsurprising that he would choose to illustrate the Apocalypse with maps, but it is worth exploring another possible source of inspiration of this program, which is the use of map-like images of the world to illustrate the First Days, i.e. the Creation. It seems possible that programs illustrating the Creation with images of the world may have inspired the author's choice to illustrate the events of the Apocalypse with maps.

There are several surviving manuscripts that illustrate the Creation with *mappamundi*-like images, which however cannot be characterized as maps as they do not show any realistic geographical detail.³ One such sequence is in the Lothian Bible of c. 1220 in the Morgan Library (MS M. 791, f. 4v):⁴ in the illustrations of the second, third, fourth, and fifth days of Creation, the world is depicted as a disk of land surrounded by the circumfluent ocean, in the same format as a *mappamundi*, but without geographical details. Three other more elaborate examples date from the late fourteenth century. One of these is in the Padua Bible (Rovigo, Biblioteca dell'Accademia dei Concordi, MS 212, ff. 1r–1v).⁵ The paintings are unfortunately damaged, so that the details of the earth are not clearly visible, but it does not seem that they offer significant

3 Campbell, *The Earliest Printed Maps* (see Ch. 4, n. 96), p. 17, says that in order to qualify as a map, an image “must attempt to convey, in graphic form, information about the real world or some part of it. It must be concerned—however inaccurately or schematically—with direction and the relative distance of one place or feature from others.”

4 Johannes Zählten, *Creatio mundi: Darstellungen der sechs Schöpfungstage und naturwissenschaftliches Weltbild im Mittelalter* (Stuttgart: Klett-Cotta, 1979), pp. 68, 108, 161, and fig. 116. Morgan Library MS M. 791, f. 4v is also reproduced for example in Suzanne Lewis, *The Art of Matthew Paris in the Chronica majora* (Berkeley: University of California Press, 1987), p. 30; and Michael Lieb, Emma Mason, and Jonathan Roberts, eds., *The Oxford Handbook of the Reception History of the Bible* (Oxford: Oxford University Press, 2010), fig. 13.1. Images of the folio are also available via the Morgan's online catalog at <<http://corsair.morganlibrary.org/>>. For a discussion of the manuscript see John Henry Plummer, “The Lothian Morgan Bible: A Study in English Illumination of the Early Thirteenth Century,” Ph.D. Dissertation, Columbia University, 1953.

5 The Padua Bible has been reproduced in facsimile in Gianfranco Folena and Gian Lorenzo Mellini, eds., *Bibbia istoriata padovana della fine del Trecento: Pentateuco, Giosuè, Ruth* (Venice: N. Pozza, 1962); and for a complete study of it see Susan Macmillan Arensberg, “The Padua Bible and the Late Medieval Biblical Picture Book,” Ph.D. Dissertation, Johns Hopkins University, 1986. There is some discussion and illustration of the Bible's Creation sequence in Zählten, *Creatio mundi* (see Ch. 5, n. 4), pp. 70 and 111, and figs. 128–129. Color images of the Creation sequence in this manuscript are available on the internet site of the Istituto Centrale per il Restauro e la Conservazione del Patrimonio Archivistico e Librario, at <<http://www.icpal.beniculturali.it>>.

geographical detail. However, the images of the earth are surrounded by the elemental and celestial spheres and the Zodiac, as some *mappaemundi* are, and in particular, the images bear a very close relationship to the *mappamundi* painted by Giusto de' Menabuoi in the Battistero del Duomo in Padua in 1375–1378⁶—either Menabuoi's map served as a model for the illustrations in the Bible, or they shared a common model. Thus the connection of these Creation images with *mappaemundi* is particularly close.

Another late fourteenth-century manuscript that contains a Creation cycle illustrated with images of the world is the Egerton Genesis Picture Book (London, British Library, Egerton MS 1894). The illustrations of the six days of Creation (ff. 1r–1v) show God seated on a rainbow above images of the world in the style of a *mappamundi*, with the sphere of the air indicated by a circle of clouds, within that the waters, and in the middle of the waters, an island that represents the dry land.⁷ And a late fourteenth-century Missal and Book of Hours, Paris, BnF MS Lat. 757, contains a striking Creation cycle, with each day represented on a full-page image, each in a *mappamundi* format, with the circle of the earth surrounded by the circumfluent ocean and the elemental and celestial spheres, with God either above or within the image, causing each stage to occur.⁸ As the images are full-page, the representations of the earth

6 On the *mappamundi* painted by Menabuoi in the Battistero in Padua see Frank Lestrinant, *Les méditations cosmographiques à la Renaissance* (Paris: PUPS, 2009), pp. 67–68; and Patrick Gautier Dalché, *La Géographie de Ptolémée en Occident (Ive–XVIIe siècle)* (Turnhout: Brepols, 2009), p. 145.

7 The Egerton Genesis Picture Book is reproduced in facsimile in Mary Coker Joslin and Carolyn Coker Joslin Watson, *The Egerton Genesis* (London: British Library, 2001), with the Creation scenes reproduced on plates 3 and 4, and commentary on them on pp. 30–36. There is some discussion and illustration of the manuscript's Creation sequence in Zahlten, *Creatio mundi* (see Ch. 5, n. 4), p. 68, and figs. 114–115; and on the manuscript generally also see John Lowden, "Concerning the Cotton Genesis and Other Illustrated Manuscripts of Genesis," *Gesta* 31 (1992), pp. 40–53, at 43–46 with fig. 6. Color images of the scenes from the Creation sequence are available via the British Library's online Catalogue of Illuminated Manuscripts, at <https://www.bl.uk/catalogues/illuminatedmanuscripts/welcome.htm>.

8 For discussion of BnF MS lat. 757 see Kay Sutton, "The Original Patron of the Lombard Manuscript Latin 757 in the Bibliothèque Nationale, Paris," *Burlington Magazine* 124.947 (1982), pp. 88–94; Edith W. Kirsch, *Five Illuminated Manuscripts of Giangaleazzo Visconti* (University Park, PA: Pennsylvania State University Press, 1991), pp. 13–17 and figs. 13–18; and Giuseppa Z. Zanichelli, *I conti e il minio: codici miniati dei Rossi 1325–1482* (Parma: Università di Parma, Istituto di storia dell'arte, 1996), pp. 53–64. There is some discussion and illustration of the manuscript's Creation sequence in Zahlten, *Creatio mundi* (see Ch. 5, n. 4), p. 76, and fig. 171; and a much more detailed account in Silvana Tassetto, "La

are large, and in addition to the created beings—plants, animals, birds, Adam and Eve—they include geographical details such as islands and inlets of the circumfluent ocean. However, these details bear no relation to the world's actual geography, and seem intended merely to indicate that the earth is geographically varied.

Given that the author of HM 83 made use of text and illustrations from Bartholomaeus Anglicus, it seems likely that if he was inspired to illustrate the Apocalypse with maps by a Creation cycle with images of the world, it would have been by such a cycle in an illustrated manuscript of Bartholomaeus—for some of the manuscripts of the French translation of Bartholomaeus by Jean Corbechon do contain such sequences. These sequences are less elaborate than those just discussed, and the images of the world less map-like, but they might have suggested a series of maps to someone cartographically inclined. These manuscripts of Corbechon's translation of Bartholomaeus include, in approximate chronological order: (1) a manuscript made c. 1390, which was sold at Sotheby's (London) on June 23, 1998, and again at Christie's (London) on July 7, 2010;⁹ (2) Paris, BnF MS fr. 216, f. 13r, c. 1400, whose illustrations follow those of the preceding manuscript closely;¹⁰ (3) Madrid, Fundación Lázaro Galdiano, MS I 15554, f. 16v, c. 1400;¹¹ (4) Brussels, Bibliothèque Royale,

Creazione del mondo. Aspetti iconografici nel Messale-Libro d'Ore lat.757 della Biblioteca Nazionale di Parigi," *Arte lombarda: Rivista di storia dell'arte* 117.2 (1996), pp. 36–44, with an additional colour plate on p. 57, and English abstract on p. 133. Images of the manuscript's Creation scenes are available via <<http://mandragore.bnf.fr>>, and a PDF of the entire manuscript can be downloaded at <<http://gallica.bnf.fr/ark:/12148/btv1b8470209d>>.

9 On the manuscript sold at Sotheby's and Christie's see Donal Byrne, "Rex imago Dei: Charles V of France and the *Livre des propriétés des choses*," *Journal of Medieval History* 7 (1981), pp. 97–113, at 103–104 and 106; *Western Manuscripts and Miniatures: To Be Sold with the Burdett Psalter* (London: Sotheby's, 1998), lot 52; Meyer, *Die Enzyklopädie des Bartholomäus Anglicus* (see Ch. 4, n. 3), p. 239; Baudouin van den Abeele, "Etat de l'édition du 'De proprietatibus rerum,'" in Baudouin Van den Abeele and Heinz Meyer, eds., *Bartholomaeus Anglicus, 'De proprietatibus rerum': texte latin et réception vernaculaire = Lateinischer Text und volkssprachige Rezeption: actes du colloque international = Akten des Internationalen Kolloquiums*, Münster, 9.–11.10.2003 (Turnhout: Brepols, 2005), pp. 1–12, at 9–10; and *The Arcana Collection: Exceptional Illuminated Manuscripts and Incunabula, Part I: London, King Street, Wednesday 7 July 2010* (London: Christie's, 2010), lot 31.

10 On BnF MS fr. 216 see Meyer, *Die Enzyklopädie des Bartholomäus Anglicus* (see Ch. 4, n. 3), pp. 346–347; images from the manuscript are available on <<http://mandragore.bnf.fr>>.

11 On the Madrid manuscript see Léopold Delisle, *Recherches sur la librairie de Charles V* (Paris: H. Champion, 1907), vol. 1, p. 233, and vol. 2, p. 302; Jesús Domínguez Bordona, *Manuscritos con pinturas: notas para un inventario de los conservados en colecciones públicas y particulares de España* (Madrid: Centro de Estudios Históricos, 1933), vol. 1, p. 505,

MS 9094, f. 12r, c. 1401;¹² (5) Paris, BnF MS fr. 22534, f. 9r, first quarter of the fifteenth century;¹³ and (6) Amiens, BM, MS 399, f. 1r, 1447.¹⁴

Madrid, Fundación Lázaro Galdiano, MS I 15554, f. 16v, illustrated in Fig. 5.1, is typical of the Creation folios in these manuscripts. In the upper left register, God creates the heavens and light, measuring them out in a circular space with a compass;¹⁵ in the second he creates the fire, air, and sea, again in a circular space; and in the third he creates the land with plants and animals, once more

no. 1202, with an illustration of the Creation scene on p. 504; *Manuscrits à peintures: l'heritage de Bourgogne dans l'Art International: Casa de Cisneros del Ayuntamiento, Madrid, 14–24 mai, 1955* (Madrid: Blass, 1955), p. 31, n° 25; and Meyer, *Die Enzyklopädie des Bartholomäus Anglicus* (see Ch. 4, n. 3), pp. 342–343.

- 12 On the Brussels manuscript see Camille Gaspar and Frédéric Lyna, *Les principaux manuscrits à peintures de la Bibliothèque royale de Belgique* (Paris: Société Française de Reproductions de Manuscrits à Peintures, 1937–47), vol. 1, pp. 359–361, no. 151; Patrick M. de Winter, *La bibliothèque de Philippe le Hardi, duc de Bourgogne (1364–1404): étude sur les manuscrits à peintures d'une collection princière à l'époque du 'style gothique international'* (Paris: Editions du Centre National de la Recherche Scientifique, 1985), pp. 195–197, no. 4, with figs. 179–184 (fig. 179 shows the Creation scene); and Meyer, *Die Enzyklopädie des Bartholomäus Anglicus* (see Ch. 4, n. 3), pp. 331–332. The Creation scene from this manuscript is also reproduced in Michael Camille, *Master of Death: The Lifeless Art of Pierre Remiet, Illuminator* (New Haven, CT: Yale University Press, 1996), p. 19.
- 13 On BnF MS fr. 22534 see Meyer, *Die Enzyklopädie des Bartholomäus Anglicus* (see Ch. 4, n. 3), pp. 355–356; images of the miniatures in the manuscript are available on <<http://mandragore.bnf.fr>>.
- 14 The Creation folio from the Amiens manuscript is reproduced in Robert Bossuat, *Le moyen âge* (Paris: J. de Gigord 1931) (= Jean Calvet, ed., *Histoire de la littérature française*, vol. 1), p. 272; on the Amiens manuscript see M. A. Jantier, “Le Livre de la propriété des choses par Barthélémy de Glanville,” *Mémoires de la Société nationale des antiquaires de France* 51 (1890), pp. 373–392; Fernand de Mély, *Les primitifs et leurs signatures*, vol. 1, *Les miniaturistes* (Paris: P. Geuthner, 1913), pp. 175–176; Eberhard König, *Les Heures de Marguerite d'Orléans: reproduction intégrale du calendrier et des images du manuscrit latin 1156B de la Bibliothèque nationale, Paris* (Paris: Editions du CERF and Bibliothèque nationale, 1991), pp. 49–53; and Meyer, *Die Enzyklopädie des Bartholomäus Anglicus* (see Ch. 4, n. 3), pp. 328–329. Images of all of the manuscript's miniatures are available at <<http://initiale.irht.cnrs.fr>>.
- 15 On the image of God using a compass see John B. Friedman, “The Architect's Compass in Creation Miniatures of the Later Middle Ages,” *Traditio* 30 (1974), pp. 419–429; Friedrich Ohly, “Deus Geometra—Skizzen zur Geschichte einer Vorstellung von Gott,” in Norbert Kamp and Joachim Wollasch, eds., *Tradition als historische Kraft: Interdisziplinäre Forschungen zur Geschichte des früheren Mittelalters* (Berlin and New York: De Gruyter, 1982), pp. 1–42; and Katherine H. Tachau, “God's Compass and *Vana Curiositas*: Scientific Study in the Old French Bible *Moralisée*,” *Art Bulletin* 80.1 (1998), pp. 7–33.



FIGURE 5.1

The Creation sequence in a manuscript of Corbechon's French translation of Bartholomaeus Anglicus's De proprietatibus rerum, made c. 1400 (MADRID, FUNDACIÓN LÁZARO GALDIANO, MS I 15554, F. 16V, © FUNDACIÓN LÁZARO GALDIANO).

in a circular space. The last of these images shows part of a landscape rather than an image of the whole world, and none of the images is particularly similar to a *mappamundi*, but such a series could easily have inspired an author interested in maps to portray the Apocalypse using a series of maps.

The narrative of the Last Days in HM 83's treatise on the Apocalypse is brief, choppy, and allusive, and sometimes has the feel of being an abbreviated version of a fuller account. There are elements that are unexplained, or are explained only later: for example, the names of Enoch and Elijah appear on the map on f. 10v, but the accompanying text gives no indication of their role in events, though that role is described in the summary of the events of the Last Days on f. 16v. The way the author handles citations is somewhat sloppy compared with the techniques of contemporary churchmen, for example the work of Johannes von Paltz discussed in the following section. In the text the author frequently refers to the accompanying maps, and it is clear that the text was designed to accompany the maps.

Late Fifteenth-Century German Apocalypticism

The uniqueness of HM 83's treatment of the Last Days can best be brought out by considering other works on the Apocalypse and related subjects produced in Germany, particularly in the second half of the fifteenth century. The Turks' conquest of Constantinople in 1453, and their subsequent conquests of territory in Eastern Europe, spread fear throughout Europe, and gave new impetus and urgency to predictions that the Apocalypse was imminent in the second half of the century and beyond.¹⁶

The Apocalypse was to bring with it vast changes, including powerful punishments of the wicked; as a result, predictions of imminent Apocalypse, with roles in the Apocalyptic drama assigned to specific historical persons, had been popular with reformers for centuries. This was particularly true in fif-

16 See Wolfram Brandes, "Der Fall Konstantinopels als apokalyptisches Ereignis," in Sebastian Kolditz and Ralf C. Müller, eds., *Geschehenes und Geschriebenes: Studien zu Ehren von Günther S. Henrich und Klaus-Peter Matschke* (Leipzig: Eudora-Verlag, 2005), pp. 453–470; and Kaya Şahin, "Constantinople and the End Time: The Ottoman Conquest as a Portent of the Last Hour," *Journal of Early Modern History* 14.4 (2010), pp. 317–354. For a more general discussion of late fifteenth-century German piety see Bernd Moeller, "Frömmigkeit in Deutschland um 1500," *Archiv für Reformationsgeschichte* 56 (1965), pp. 6–30; translated into English as "Piety in Germany around 1500," trans. Joyce Irwin, in Steven E. Ozment, ed., *The Reformation in Medieval Perspective* (Chicago: Quadrangle Books, 1971), pp. 50–75.

teenth-century Germany, on the eve of the Protestant Reformation,¹⁷ which began in 1517, and which grew out of dissatisfactions with the Church and society that had been present and increasing for close to two hundred years.¹⁸ Gian Luca Potestà, in his study of radical apocalyptic movements in the Late Middle Ages, has noted that as these movements in Germany were deemed heretical, they were quickly quashed, and the writings of the fomenters destroyed; as a result, our evidence regarding fifteenth-century German Apocalypticism is incomplete.¹⁹

But brief records, specifically two letters copied in Nürnberg in 1465–66, have survived of the apocalyptic thought of the brothers Janko and Livin of Wirsberg, who predicted that the world would end in the 1460s.²⁰ Their predictions had a strong political component: a messianic figure, the ‘Anointed of the Savior,’ would soon arrive, his advent foretold by a figure similar to St. John the Baptist—evidently this was Janko himself. The messiah, born spiritually from the Virgin and enlightened by God, alone understood the true meaning of the Bible, and would bring the third and final Testament, with a message of

- 17 See J. Rohr, “Die Prophetie im letzten Jahrhundert vor der Reformation,” *Historisches Jahrbuch* 19 (1898), pp. 29–56 and 447–466, esp. 461, who identified three common themes in fifteenth-century prophecy: hostility to Rome, a desire to see Church property confiscated, and a prediction that justice would be meted out to corrupt elements of society by the Turks or an emperor from the north.
- 18 See Alister E. McGrath, *The Intellectual Origins of the European Reformation*, 2nd edn. (Malden, MA: Blackwell Pub., 2004), p. 4: “There has been a growing recognition on the part of Reformation scholars that neither the events nor the ideas of the sixteenth century may be properly understood unless they are seen as the culmination of developments in the fourteenth and fifteenth centuries.” For a very good discussion of late thirteenth- and fourteenth-century predictions of the End of Time in Germany and their political dimensions see Frances Courtney Kneupper, “German Identity and Spiritual Reform at the End of Time: Eschatological Prophecy in Late Medieval Germany,” Ph.D. Dissertation, Northwestern University, 2011; and for example Jennifer Kolpacoff Deane, “The Auffahrtabend Prophecy and Henry of Langenstein: German Adaptation and Transmission of the ‘Visio Fratris Johannis,’” *Viator* 40.1 (2009), pp. 355–386.
- 19 Gian Luca Potestà, “Radical Apocalyptic Movements in the Late Middle Ages,” in John J. Collins, Bernard McGinn, and Stephen J. Stein, eds., *The Encyclopedia of Apocalypticism* (New York: Continuum, 1998), vol. 2, pp. 110–142, at 130–133; and Gian Luca Potestà, “Radical Apocalyptic Movements in the Late Middle Ages,” in Bernard J. McGinn, John J. Collins, and Stephen J. Stein, eds., *The Continuum History of Apocalypticism* (New York: Continuum, 2003), pp. 299–322, at 314–316.
- 20 The two letters are preserved in Augsburg, Universitätsbibliothek, Cod. II.1.2^o 85, ff. 190r–214r; for discussion of the manuscript see Günter Hägele, *Die Handschriften der Universitätsbibliothek Augsburg: Erste Reihe, Die lateinischen Handschriften* (Wiesbaden: Harrassowitz, 1996–2007), vol. 1, pp. 320–329.

salvation. He would cause the death of Antichrist, who was identified with the pope, and bring about a new social order in which the nobles had to move from their country estates to the city, the clergy were deprived of their lands, and many high nobles and clergy would be killed. We have no record of Janko after 1466, but Livin was condemned for heresy in 1468 and imprisoned in a castle belonging to the Bishop of Regensburg, and he died there in 1468 or 1469.²¹

Sape van der Woude has argued that the interest in involving contemporary political and religious leaders in predictions of Apocalypse is evident in the illustrations of the Book of Revelation in the Cologne Twin Bibles of c. 1478–79.²² These two Bibles, one in Middle Low German and the other in Western Low German, lack indication of a printer, but are generally ascribed to Heinrich Quentell or Bartholomäus von Unckel.²³ In the Bible in Western Low German, the Book of Revelation is illustrated with eight woodcuts, several of which show bishops, cardinals, the pope, and kings falling into Hell,²⁴ a strong criticism of contemporary religious and political leaders.

- 21 On the Wirsberger brothers see Otto Schiff, "Die Wirsberger. Ein Beitrag zur Geschichte der revolutionären Apokalyptik im 15. Jahrhundert," *Historische Vierteljahrschrift* 26 (1931), pp. 776–786, with an English summary in *Social Science Abstracts* 4 (1932), p. 870; Gordon Leff, *Heresy in the Later Middle Ages: The Relation of Heterodoxy to Dissent, c. 1250–c. 1450* (Manchester: Manchester University Press; and New York: Barnes & Noble, 1967), vol. 2, pp. 471–474; Alexander Patschovsky, "Die Wirsberger: Zeugen der Geisteswelt Joachims von Fiore in Deutschland während des 15. Jahrhunderts?" in Gian Luca Potestà, ed., *Il Profetismo gioachimita tra Quattrocento e Cinquecento: atti del III Congresso internazionale di studi gioachimiti: S. Giovanni in Fiore, 17–21 settembre 1989* (Genoa: Marietti, 1991), pp. 225–257; Günter Hägele, "Wirsberger-Prophezeiungen," in Wolfgang Stammeler and Karl Langosch, eds., *Die deutsche Literatur des Mittelalters: Verfasserlexikon* (Berlin and New York: de Gruyter, 1978–), vol. 11, cols. 1672–1681; and Potestà's two articles on "Radical Apocalyptic Movements" (see Ch. 5, n. 19).
- 22 Sape van der Woude, "De Apocalypse in de Keulse tweelingsbijbels van 1478/9," in A. R. A. Croiset van Uchelen, ed., *Hellinga Festschrift / Feestbundel / Mélanges: Forty-Three Studies in Bibliography Presented to Prof. Dr. Wytze Hellinga on the Occasion of his Retirement from the Chair of Neophilology in the University of Amsterdam at the End of the Year 1978* (Amsterdam: Nico Israel, 1980), pp. 549–559, with an English abstract on pp. 559–560.
- 23 On the Cologne Bibles see Severin Corsten, "Die Kölner Bilderbibeln von 1478," *Gutenberg-Jahrbuch* 1957, pp. 72–93, and the same author's "The Illustrated Cologne Bibles of c. 1478: Corrections and Additions," in Martin Davies, ed., *Incunabula: Studies in Fifteenth-Century Printed Books Presented to Lotte Hellinga* (London: British Library, 1999), pp. 79–88. Also see the facsimile edition, *Die Kölner Bibel, 1478/1479* (Amsterdam: Buijten & Schipperheijn; and Hamburg: Friedrich Wittig Verlag, 1979).
- 24 One such illustration may be seen in Wilhelm Worringer, *Die Kölner Bibel* (Munich: R. Piper, 1923), plate 26.

In HM 83 there is absolutely nothing of the radical political views implicit in the Wirsbergers' predictions, and in other works on the Apocalypse in fourteenth- and fifteenth-century Germany; indeed, the account of the Apocalypse in HM 83 is totally divorced from contemporary politics.

There is a work on the Apocalypse that it is particularly instructive to compare with HM 83, as it was printed in Germany in 1486, i.e. exactly the same time as the texts in our manuscript were composed, and that is the *Quaestio determinata contra triplicem errorem* of Johannes von Paltz, an Augustinian theologian who lived from 1445 to 1511.²⁵ He was an exponent of what has recently been termed Frömmigkeitstheologie, a theology that aimed to foster the piety of the less educated among the faithful,²⁶ although his *Quaestio determinata* is certainly aimed at an educated readership.²⁷ The three errors against which von Paltz argues in this work are first, attempts to calculate when the Last Day will come; second, claims that Antichrist will not come in person, and that Enoch and Elijah will not come in person, but that Muhammad was the true Antichrist; and third, the conclusions of the book *De cognitione verae*

25 On von Paltz see Marcus Ferdigg, "De vita, operibus et doctrina Joannis de Paltz O.E.S.A. († 1511)," *Analecta Augustiniana* 30 (1967), pp. 210–321, and 31 (1968), pp. 155–318; Adolar Zumkeller, "Paltz, Johann (1445–1511)," in Friedrich Wilhelm Bautz, ed., *Biographisch-bibliographisches Kirchenlexikon* (Hamm: Bautz, 1970–2012), vol. 6, cols. 1473–1476; Berndt Hamm, "Johann von Paltz," in Wolfgang Stämmler and Karl Langosch, eds., *Die deutsche Literatur des Mittelalters: Verfasserlexikon* (Berlin and New York: de Gruyter, 1978–), vol. 4, cols. 698–706; and Berndt Hamm, "Paltz, Johannes von," in Gerhard Krause and Gerhard Müller, eds., *Theologische Realenzyklopädie* (Berlin and New York: W. de Gruyter, 1976–), vol. 25, pp. 606–611.

26 See Berndt Hamm, *Frömmigkeitstheologie am Anfang des 16. Jahrhunderts: Studien zu Johannes von Paltz und seinem Umkreis* (Tübingen: Mohr, 1982); and Berndt Hamm, "Was ist Frömmigkeitstheologie? Überlegungen zum 14. bis 16. Jahrhundert," in Hans-Jörg Niden and Marcel Niden, eds., *Praxis Pietatis. Beiträge zu Theologie und Frömmigkeit in der Frühen Neuzeit. Wolfgang Sommer zum 60. Geburtstag* (Stuttgart: Kohlhammer, 1999), pp. 9–45, esp. 18.

27 The *Quaestio determinata... contra triplicem errorem* was first published without indication of the author in Memmingen by Albrecht Kunne in 1486; the text has been edited by Albert Czogalla in Johannes von Paltz, *Werke*, ed. Berndt Hamm et al. (Berlin and New York: De Gruyter, 1983–89), vol. 3, pp. 37–138. See Ferdigg, "De vita, operibus et doctrina Joannis de Paltz" (see Ch. 5, n. 25), pp. 265–267 on the attribution of the work to von Paltz, and 267–268 for a summary of the work; also see Hamm, *Frömmigkeitstheologie am Anfang des 16. Jahrhunderts* (see Ch. 5, n. 26), pp. 97–99. On the intended scholarly audience of von Paltz's *Quaestio* see Christoph Burger, "Der Antichrist im Straßburger Bildertext (um 1480) und bei Johannes von Paltz (1486)," in Mariano Delgado and Wolker Lepin, eds., *Der Antichrist: Historische und systematische Zugänge* (Fribourg: Academic Press, and Stuttgart: W. Kohlhammer Verlag GmbH, 2011), pp. 241–256.

vitae,²⁸ which argues that Heaven consists in beholding God, and Hell in the absence of that vision, and thus that neither is a physical location, and specifically that Heaven is not in the Empyrean, and Hell is not inside the earth.

This book is very different from the treatise on the Apocalypse in HM 83. In both works Hell is a physical place in the middle of the earth (see HM 83, ff. 11v and 12v, see Figs. 5.9 and 5.11), but while von Paltz argues at length that one should not try to calculate when the Second Coming will occur,²⁹ that is precisely what the author of HM 83 does in great detail. Von Paltz's work is more scholarly and thorough than the treatise in HM 83, and the unusual program of illustration with maps in the treatise in HM 83 may also be seen as suggesting that the author's education and life experience was different from that of most clerics. This difference raises questions about the intended audience of HM 83: it was certainly not intended for an audience of clerics, and while its emphasis on illustration with maps might be taken as indicating an aim at a wider audience, the choppy and allusive nature of the text would impede an attempt to reach a broad public. It may be that what we have in HM 83 is a condensed version of a longer and smoother-flowing work, but the intended audience of the work in its current form is not clear.

It is also instructive to compare HM 83 with another contemporary work that, though it does not involve the Apocalypse as such, does involve apocalyptic themes, namely Johannes Lichtenberger's *Pronosticatio*, which was first published in Heidelberg in 1488—the same year that the works in HM 83 were

28 The *De cognitione verae vitae* was first printed by Peter Schoeffer, probably in Mainz around 1475; and has also been published in *Patrologia Latina* 40:1005–1032. It was often ascribed to Augustine, but is more likely by Honorius Augustodunensis: see for example William M. Clark, "A Thirteenth Century Manuscript of Honorius of Autun's *De cognitione verae vitae*," *Manuscripta* 16 (1972), pp. 112–119.

29 See Johannes von Paltz, *Werke* (see Ch. 5, n. 27), vol. 3, pp. 69–88. For the opinions of some medieval authors on the question of whether it was appropriate to try to calculate the time of the Second Coming see Saint Thomas Aquinas, *The 'Summa Theologica' of St. Thomas Aquinas* (London: Burns, Oates & Washbourne, Ltd., 1913–), Third Part (Supplement), QQ. LXXXVII–XCIX. and Appendices, Question 88, Article 3, "Whether the Time of the Future Judgment is Unknown?" pp. 15–18; Franz Pelster, "Die Quaestio Heinrichs von Harclay über die zweite Ankunft Christi und die Erwartung des baldigen Weltendes zu Anfang des XIV. Jahrhunderts," *Archivio italiano per la storia della pietà* 1 (1951), pp. 26–81, at 12, 31, 44, 45, 56, 57, and 78; there is some discussion of these criticisms of those who wanted to calculate the time of Christ's Second Coming in Heiko Augustinus Oberman, "Fourteenth-Century Religious Thought: A Premature Profile," *Speculum* 53 (1978), pp. 80–93, at 90–91; this article is reprinted in Oberman's *The Dawn of the Reformation: Essays in Late Medieval and Early Reformation Thought* (Edinburgh: T. & T. Clark, 1986), pp. 1–17.

being finished. The *Pronosticatio*, despite its inscrutable structure and eclecticism, was extremely popular, and was printed fifty times, and excerpts of it some twenty-nine times. Lichtenberger, influenced in part by the advances of the Turks, and also by the 'greater conjunction' of Jupiter and Saturn in 1484, believed that he lived in a time when apocalyptic prophecies would be fulfilled, and devotes considerable energy in his book to identifying contemporary leaders (cardinals and popes, kings and princes) with figures mentioned in those prophecies. He believed that two false prophets would soon arise, the second of which he called the *antichristus mixtus*, and that there would be plagues and social upheaval. Yet he was convinced that these difficulties would be followed not by the end of the world, but rather by a time of peace, which would arrive between 1488 and 1499, perhaps inaugurated by Philip I of Castile (1478–1506).³⁰ As we will see later, the works in HM 83 did circulate, but Lichtenberger's work was vastly more popular, perhaps in part because of the author's lively interest in contemporary politics, which (again) the author of HM 83 did not share at all. Lichtenberger's uniting of prophecy and astrology was less successful than combinations of these same fields of knowledge by other fifteenth-century authors; we would argue that the combination of prophecy and cartography in HM 83 is indeed successful: maps are an effective tool for illustrating the Apocalypse.

30 On Lichtenberger and his *Pronosticatio* see Dietrich Kurze, "Johannes Lichtenberger – Leben und Werk eines spätmittelalterlichen Propheten und Astrologen," *Archiv für Kulturgeschichte* 38 (1956), pp. 328–343; Dietrich Kurze, "Prophecy and History: Lichtenberger's Forecasts of Events to Come (from the Fifteenth to the Twentieth Century), Their Reception and Diffusion," *Journal of the Warburg & Courtauld Institutes* 21 (1958), pp. 63–85; Dietrich Kurze, *Johannes Lichtenberger († 1503): Eine Studie zur Geschichte der Prophetie und Astrologie* (Lübeck: Matthiesen, 1960); Dietrich Kurze, "Popular Astrology and Prophecy in the Fifteenth and Sixteenth Centuries: Johannes Lichtenberger," in Paola Zambelli, ed., *'Astrologi hallucinati': Stars and the End of the World in Luther's Time* (Berlin: W. de Gruyter, 1986), pp. 177–193, esp. 181–188; and Laura Ackerman Smoller, "'Teste Albumasare cum Sibylla': Astrology and the Sibyls in Medieval Europe," *Studies in History and Philosophy of Biological and Biomedical Sciences* 41C.2 (2010), pp. 76–89, at 85. A few paragraphs of Lichtenberger's work are translated into English in Bernard McGinn, ed., *Visions of the End: Apocalyptic Traditions in the Middle Ages* (New York: Columbia University Press, 1979, 1998), pp. 272–274. There is an English translation of the section headings of the *Pronosticatio* in Barbara Baert, "Iconographical Notes to the *Prognosticatio* by Johannes Lichtenberger (1488): Using a Copy Printed by Peter Quentel (Cologne, 1526) and Preserved in the Library of the Theology Faculty in Leuven," in Frans Gistelinck and Maurits Sabbe, eds., *Early Sixteenth Century Printed Books, 1501–1540 in the Library of the Leuven Faculty of Theology* (Leuven: Bibliotheek Godgeleerdheid and Uitgeverij Peeters, 1994), pp. 139–168, at 167–168.

HM 83 also bears comparison with a mid-fifteenth-century German work that briefly considers the Apocalypse in terms of geography. This is the *De malis huius saeculi per omnes aetates* by Jacobus de Clusa, also known as Jacobus de Jüterbog, Jacobus Carthusianus, and Jacobus de Paradiso, and in Polish Jakuba z Paradyża. Jacobus was born in Jüterbog, Germany, in 1381, and entered the Cistercian monastery of Paradies, Poland, in 1401, and studied and later was a Professor of Theology at the University of Krakow. In 1441 he entered the Carthusian monastery in Erfurt, and taught at the university there, and died in Erfurt in 1465.³¹ He wrote the *De malis huius saeculi per omnes aetates* in 1447, and the work was popular, as it survives in forty-seven manuscripts.³² The work is motivated by a desire to reform the Church, and a wish that this could be accomplished through a moral renewal of all Christians. Jacobus presents a history of evil, beginning with the Bible, and shows that there has been a continuous process of corruption throughout history—and he holds that the situation is so bad that the Apocalypse must be near.

An essential part of this history is a geographical survey of the state of Christianity throughout the world,³³ which he offers at the end of chapter 14

31 On Jacobus de Clusa see Heinrich Kellner, "Jakobus von Jüterbogk," *Theologische Quartalschrift* 48 (1866), pp. 315–348; Ludger Meier, *Die Werke des Erfurter Kartäusers Jakob von Jüterbog in ihrer handschriftlichen Überlieferung* (Münster: Aschendorff, 1955), pp. 1–8; Dieter Mertens, "Jakob von Paradies," in Wolfgang Stämmler and Karl Langosch, eds., *Die deutsche Literatur des Mittelalters: Verfasserlexikon* (Berlin and New York: de Gruyter, 1978–), vol. 4, cols. 478–487; and Raphael Witkowski, "Some Remarks on Jacobus de Paradiso before his Carthusian Profession," in James Hogg, ed., *'Stand Up To Godwards': Essays in Mystical and Monastic Theology in Honour of the Reverend John Clark on his Sixty-Fifth Birthday* (Salzburg: Institut für Anglistik und Amerikanistik, Universität Salzburg, 2002) (= *Analecta Cartusiana* 204), pp. 301–318, with a very thorough bibliography of earlier works on pp. 301–303; and Paul Wendell Knoll, "Iacobus Carthusiensis (James of Paradise) and Ecclesiastical Reform in Fifteenth-Century Cracow and Erfurt," in Nancy van Deusen, ed., *Procession, Performance, Liturgy, and Ritual: Essays in Honor of Bryan R. Gillingham* (Ottawa: Institute of Mediaeval Music, 2007), pp. 191–202.

32 For a chronology of Jacobus's works see Dieter Mertens, *Iacobus Carthusiensis: Unters. zur Rezeption d. Werke d. Kartäusers Jakob von Paradies: (1381–1465)* (Göttingen: Vandenhoeck und Ruprecht, 1976), pp. 26–46, esp. 36–43. The *De malis huius saeculi per omnes aetates* is published in Jacobus de Clusa, *Wybór tekstów dotyczących reformy kościoła*, ed. Stanisław Andrzej Porębski (Warsaw: Akademia Teologii Katolickiej, 1978), pp. 103–273, from Pelpin, Biblioteka Seminarium Duchownego, MS 287, ff. 121r–223v. On manuscripts of the work see Meier, *Die Werke des Erfurter Kartäusers Jakob von Jüterbog* (see Ch. 5, n. 31), pp. 50–51; and Jacobus de Clusa, *Wybór tekstów dotyczących reformy kościoła*, pp. 103–104.

33 On the *De malis huius saeculi per omnes aetates* see Jan Fijałek, *Mistrz Jakób z Paradyża i uniwersytet krakowski w okresie soboru bazylejskiego* (Kraków: Akademia umiejętności,

and in chapter 15 of the work, which are titled “De apostolis” and “Descriptio partialis terrae fidelium et infidelium,” respectively. The results of his survey would be discouraging to Christian readers, for he notes that several regions that had once been Christian no longer are:³⁴

Iam enim loca sanctissima passionis Christi a gentibus et Saracenis incolluntur, avaritiae suae consulentes per visitationem christianorum ad loca sancta peccatis exigentibus christianorum, ubi sunt Ephesii, Tesselonicenses, Salathae, Colosenses, Philippenses, Macedones, Corinthii et ceteri, quibus olim aureas epistolas Paulus de carceribus Romanis et aliis locis mittebat, potius pro his flendum est quam aliquid scribendum. Quod videlicet tam latitudo immensa et multitudo hominum a principe tenebrarum debet possideri. Et quid dicam de Africa, tertia mundi parte, ubi beatissimus Cyprianus in Carthaginense, ut puto, civitate metropoli et Augustinus post eum in Hypponensi civitate praefuerunt dignissimi praesules perspicuitate vitae et doctrinae suis temporibus refulgentes.

For now, the most holy places of Christ’s Passion are inhabited by heathens and Saracens, who, motivated by their avarice for the visits of Christians to the Holy Places to expiate their sins, where are the Ephesians, the Thessalonicians, the Salathi, the Colossians, the Philippians, the Macedonians, the Corinthians, and the rest, to whom Paul from a Roman prison and other places once sent golden letters—it would be better to weep for them, rather than to write something, because so wide a region and so many men are now under the sway of the Prince of Darkness. And what shall I say of Africa, a third of the world, where the most blessed Cyprian in the metropolis (I suppose) of Carthage, and after him Augustine in the city of Hippo, both eminent prelates, presided, each illustrious in his time for the clarity of his life and doctrine?

1900), vol. 2, pp. 99–101 and 232–235; on the geographical section of the work see Bronisław Geremek, “Geografia i apokalipsa. Pojęcie Europy u Jakuba z Paradyża,” in Helena Chłopocka, ed., *Mente et litteris: O kulturze i społeczeństwie wieków średnich* (Poznań: Wydawn. Nauk. Uniwersytetu im. Adama Mickiewicza w Poznaniu, 1984), pp. 253–261; this same material was published in French a few years later in Bronisław Geremek (trans. Lucjan Grobelak), “Géographie et apocalypse: la notion de l’Europe chez Jacques de Paradyż,” *Acta Poloniae Historica* 56 (1988), pp. 5–17. Also see Adam Krawiec, *Ciekawość świata w średniowiecznej Polsce: studium z dziejów geografii kreacyjnej* (Poznań: Wydawn. Nauk UAM, 2010), pp. 378–383.

34 Jacobus de Clusa, *Wybór tekstów dotyczących reformy kościoła* (see Ch. 5, n. 32), p. 188.

In his survey of the world, Jacobus reaches similar conclusions about other regions, and in the following passage, the sentence he uses to describe the different parts of the world was probably inspired by Isidore, *Etymologiae* (14.2.2–3) or *De natura rerum* (48),³⁵ where it is sometimes illustrated with a *mappamundi*. This text from Isidore text appears with a *mappamundi* on f. 1r of HM 83, which is merely a coincidence, but it seems possible that Jacobus's text was informed by consultation of a *mappamundi*:³⁶

... Asia mediam mundi partem continet, scilicet a meridionali parte per Orientem usque ad Occidentem; Africa a meridie usque ad aliam partem Occidentis; Europa partem occidentalem, in qua nostra foveatur habitatio. Haec nobilissima pars terrae et amplissima, scilicet Asia, quae mediam partem terrae continet, ut creditur, plena est idolis et infidelibus populis, ubi prius sacra vestigia Apostolomun Thomae, Ioannis Evangelistae, Bartholomaei et ceterorum terram ipsam sacro fetu divini verbi irradiaverunt.

... Asia contains half of the world, from the south through the east to the west; Africa from the south to another part of the west, and Europe, in which we live, is in the west. This most noble and ample part of the earth, Asia, which contains the half of the earth, as is believed, is full of idols and unbelievers, where in former times the sacred traces of the Apostle Thomas, John the Evangelist, Bartholomew, and all the others irradiated the very earth with the sacred fruit of the divine word.

Jacobus concludes his survey thus:³⁷

Videsne studiose lector quam parvam immo minimam terrae habitabilis partem Christi fides complectitur et quam amplissimam terrae partem princeps tenebrarum in suo continet principatu et quomodo artati sunt veri christiani, et undique ab infidelibus circumdati?

35 See *The Etymologies of Isidore of Seville*, trans. Stephen A. Barney et al. (Cambridge, UK, and New York: Cambridge University Press, 2006), p. 285; and *Patrologia Latina* 83:1017.

36 Jacobus de Clusa, *Wybór tekstów dotyczących reformy kościoła* (see Ch. 5, n. 32), p. 190. For discussion of the likelihood that Jacobus de Clusa was inspired by a map in writing his global survey of Christianity see Geremek, "Géographie et apocalypse: la notion de l'Europe chez Jacques de Paradyż" (see Ch. 5, n. 33), p. 15.

37 Jacobus de Clusa, *Wybór tekstów dotyczących reformy kościoła* (see Ch. 5, n. 32), p. 192.

Do you see, learned reader, how small a part, indeed minimal, of the inhabitable earth the Christian faith holds, and how ample a part the Prince of Darkness has in his power, and how crowded together the true Christians are, surrounded on all sides by unbelievers?

Jacobus also believes that the Gospel has already been preached to all of the corners of the earth, and thus that the Apocalypse is imminent:³⁸

Puto enim iam tempus illud completum, quod Evangelium Christi in universo orbe est praedicatum in testimonium omnibus gentibus (Mat xxiv), nec est natio, nec insula tam longe et occulte abscondita, quin nomen christianorum ibi sit divulgatum. Recensentes enim omnes historias, non reperimus terrae partem aliquam, in qua fides christiana non sit annuntiata. Iam enim dudum vox apostolica insonuit. Nos sumus, in quos fines saeculorum devenerunt.

For I think that that time is complete, that the Gospel of Christ has been preached in the whole world as a testimony to all nations (Matthew 24), nor is there any nation, nor any island, so far away and secretly hidden that the name of Christians has not reached there. For in examining all of the histories, we do not find any part of the earth in which the Christian faith has not been announced. For a long time now the apostolic voice has resounded. We are those upon whom the ends of the ages have come.

This geographical survey and conclusion that Christianity is confined to a small portion of the earth's surface, together with the deduction that the Apocalypse is imminent, is quite reminiscent of the map on HM 83, f. 9r, which covers the years 639 to 1514, and shows Islam on the ascendant in all parts of the world except Europe, and in Europe, according to the text located in that part of the map, there is much dissension among the sovereigns, and the region will fall to the sword of Muhammad soon. The map on f. 9v, which depicts what is supposed to happen to the world between 1514 and 1570, shows Islam in control throughout the world, and then follows the beginning of the Last Days.

This global survey of Christianity by Jacobus de Clusa shares some striking similarities with the treatise on the Apocalypse in HM 83—and yet the two works coincide only in one part, and it seems very unlikely that the author of HM 83 drew inspiration for the map on f. 9r from Jacobus's survey. There are no verbal echoes of the *De malis huius saeculi per omnes aetates* in HM 83, and the

38 Jacobus de Clusa, *Wybór tekstów dotyczących reformy kościoła* (see Ch. 5, n. 32), p. 192.

other parts of the two works are very different in conception, purpose, and intended audience.

These comparisons of HM 83 with contemporary German works on the Apocalypse bring out the uniqueness of the treatise on the Apocalypse in HM 83: its style is different from that of other contemporary works, the chronology of the Apocalypse it proposes is found nowhere else in all of the literature on the Apocalypse, and its program of illustration using maps is all but unparalleled. This unstudied treatise in this unstudied manuscript is an essential piece of evidence for the development of Apocalyptic thought in the fifteenth century.

The Apocalyptic Maps and Texts

The brief treatise on the Apocalypse in HM 83 (ff. 8v–12v) is a well-defined unit, illustrating the transformations that the earth will undergo from a point sometime around the year 1 to the Last Judgment in 1661 (or rather 1651, if we correct an error in the author's arithmetic) in a series of nine maps, each with accompanying text. The maps are a set of thematic maps showing the world's (future) history, perhaps inspired by a Creation cycle illustrated with images of the earth, but here the illustrations are true maps, whereas in Creation cycles the images generally do not qualify as maps. These maps illustrating the Apocalypse form the earliest sequence of historic (thematic) maps that we know.

Two of the maps, those on f. 10r (which covers the years 1570 to 1600) and f. 10v (which covers the years 1600 to 1606) contain striking examples of what we may term symbolic geography or allegorical geography: in the former, the ten horns of the beast of Daniel 7 are represented as what seem to be mountain ranges reaching to the edges of the earth, and in the latter, the four horns of Antichrist, which represent the four methods by which he will deceive people, are represented by four huge peninsulas that jut out into the circumfluent ocean. Physical features of actors in the Apocalypse have been given geographical interpretation and cartographic representation. Other examples of this type of allegorical geography include the *Libellus de formatione arche*, commonly referred to as *De arca Noe mystica*, of Hugh of St-Victor, written c. 1128, in which Hugh locates Noah's ark, stretched to stupendous dimensions and symbolizing the church, across the whole world, with its bow at Paradise in the East, where history began, and its stern in the West, where the blessed and the damned will be separated at the end of time.³⁹ Another example is supplied by

39 The text of *De arca Noe mystica* is supplied in *Patrologia Latina* 176:682–704, and has been edited by Patrice Sicard in *De arca Noe; Libellus de formatione arche* (Turnhout: Brepols,

the maps of Opicinus de Canistris (1296–c. 1353). These maps are based on nautical charts, but usually represent Europe and North Africa as people, with their heads close at the Strait of Gibraltar. These people have different identities in his different maps: the person in North Africa may represent the spiritual world, and that in Europe, the spiritual church; or Europe may represent the traitor Judas, and North Africa the Church of the People, for example.⁴⁰

The chronology of the Apocalypse proposed in this brief treatise is unique, not only in the year it proposes for the End of Days, but also in the durations it assigns for the different parts of the apocalyptic drama. On the one hand, this reveals something about the author, namely that he was comfortable interpreting various biblical passages about days as years and so forth, and making the necessary calculations himself; on the other, there are almost as many timetables of the Apocalypse⁴¹ as there are authors who were willing to disregard the various warnings against trying to predict when the Second Coming

2001) (= Corpus Christianorum, Continuatio Mediaevalis 176–176A). Also see J. Ehlers, “Arca significat ecclesiam. Ein theologisches Weltmodell aus der ersten Hälfte des 12. Jahrhunderts,” *Frühmittelalterliche Studien* 6 (1972), pp. 171–187. A reconstruction of Hugh’s map is supplied by Sicard, *De archa Noe*, vol. 2, fig. 11; Danielle Lecoq, “La ‘mappemonde’ du *De Arca Noe Mystica* de Hugues de Saint-Victor (1128–1129),” in Monique Pelletier, ed., *Géographie du monde au Moyen Âge et à la Renaissance* (Paris: CTHS, 1989), pp. 9–31, figs. 1 and 2; Conrad Rudolph, *First, I Find the Center Point: Reading the Text of Hugh of Saint Victor’s ‘The Mystic Ark’* (Philadelphia: American Philosophical Society, 2005), figs. 1, 4, 5, and 8; and Rudolph’s *The Mystic Ark: Hugh of Saint Victor, Art, and Thought in the Twelfth Century* (Cambridge and New York: Cambridge University Press, 2014), chapter 1, figs. 1–32.

40 The bibliography on Opicinus is substantial, but see for example Richard G. Salomon, “A Newly Discovered Manuscript of Opicinus de Canistris: A Preliminary Report,” *Journal of the Warburg and Courtauld Institutes* 16.1–2 (1953), pp. 45–57; Michael Camille, “The Image and the Self: Unwriting Medieval Bodies,” in Sarah Kay and Miri Rubin, eds., *Framing Medieval Bodies* (Manchester: Manchester University Press, 1994), pp. 62–99, esp. 87–95; and Karl Whittington, *Body-Worlds: Opicinus de Canistris and the Medieval Cartographic Imagination* (Toronto: Pontifical Institute of Mediaeval Studies, 2014).

41 On the different predicted chronologies of the Apocalypse see David Burr, “Olivi’s Apocalyptic Timetable,” *Journal of Medieval and Renaissance Studies* 11.2 (1981), pp. 237–260; Walter Klaassen, *Living at the End of the Ages: Apocalyptic Expectation in the Radical Reformation* (Lanham, MD: University Press of America; Waterloo, Ontario: Institute for Anabaptist and Mennonite Studies, Conrad Grebel College, 1992), pp. 23–31; and Laura Smoller, “The Alfonsine Tables and the End of the World: Astrology and Apocalyptic Calculation in the Later Middle Ages,” in Alberto Ferreiro, ed., *The Devil, Heresy and Witchcraft in the Middle Ages: Essays in Honor of Jeffrey B. Russell* (Leiden: E. J. Brill, 1998), pp. 211–239.

would take place.⁴² So it is not surprising that the apocalyptic chronology in HM 83 is unique.

Without further ado, we present our transcription, translation, and analysis of the maps and text in the treatise on the Apocalypse in HM 83, folio by folio.

The Map and Text on f. 8v

This folio marks the end of the first geographical section of the treatise (ff. 1r–8v) with a discussion of the different purposes of *mappaemundi*, discussed above. Below that text is a simple *mappamundi* (see Fig. 5.2) that offers even less detail than that on f. 1r. It has the modified T-O structure we have seen in other maps in the manuscript, with the left bar of the ‘T’ veering east, which as the map on ff. 7v–8r (see Fig. 4.15) indicates, is to be identified as the Rha River (i.e. the Volga), rather than the Tanais or Don that forms the straight left bar of the ‘T’ on most *mappaemundi*. The map has just two names on it, and they are names of people rather than of places: *Jesus Christus*, located where we are to understand Jerusalem to be, and *Octavianus* (corrected from *Optavianus*, just as on f. 5v), located where we are to understand Rome to be. From the beginning of the name *Octavianus* a line extends to the southeast to the easternmost point of the inhabited lands, and from the end of the name a line extends to the northeast, crossing the other line and reaching the outer edge of the circumfluent ocean. The purpose of these lines is not clear: nothing similar appears on any of the other maps in the manuscript.

The text to the left of the map reads:

Hec figura est mappa mundi de dominio terre a nativitate jesu christi ad eius annum 639. Romanorum enim imp<er>ator quorum primus verus et principalis fuit Optavianus (i.e. Octavianus) dominabatur tot annis per totum orbem et jesu rex jure divino mundo praesidens.

This figure is a *mappamundi* of the rule of the world from the birth of Jesus Christ to his year 639. Octavian, who was the first true and most important Roman emperor, ruled the whole earth for many years, and Lord Jesus rules the world according to divine law.

The name *Octavianus* had been written as *Optavianus* in the map as well, but there it was corrected. There is no explanation of the year 639 here, but as we learn on f. 16r, the author took this as the year in which Muhammad began to shake the Roman Empire.

42 For warnings against trying to calculate when the Second Coming would take place see Acts 1:7, Mark 13:32, and Matthew 24:36; also see Ch. 5, n. 29.

The Map and Text on f. 9r

The text in the upper left corner of the folio, which we transcribe and translate below, indicates that the map shows the lordships of the world from the year 639 to 1514, that is, from the rise of Muhammad to 26 years after the texts in HM 83 were composed (1488). The message of the map and the surrounding text is very clear: Islam is taking over the world, and while Europe is still Christian, it is weak and will soon fall. The map (see Fig. 5.3) has the same modified T-O structure as the map on f. 8v, but is much larger and more detailed. It is a thematic map in two senses, first insofar as it is a map of the world's religions, and second insofar as it is a historical map, though its role as the latter is not striking, as it covers a period during which the manuscript was made.

We first transcribe and translate the text in the map proper, working generally from east to west (top to bottom), and beginning with the texts in the circumfluent ocean.

X tribus Israel hic degunt montibus caspas et Caucaso incluse et parte australi subsunt Imperatori tartarorum et ex parte Aquilonari regine Amasonum

The ten tribes of Israel remain here confined in the Caspian Mountains and the Caucasus, and in the southern part they are subject to the Emperor of the Tartars, and in the northern part, to the queen of the Amazons.

In the map on f. 3r (see Fig. 4.9), and also that on ff. 6v–7r (see Fig. 4.14), the Ten Lost Tribes of Israel are located on an island in the circumfluent ocean; here the mention of the Caspian Mountains and the Caucasus makes it sound like they are rather on the mainland—but in the map on ff. 6v–7r there is an island labeled *Caucasus*, so the author's intentions with regard to the location of the Ten Lost Tribes are not clear. Proceeding westward in the northern ocean in the map on f. 9r we have: *Regnum Amasonum*; *Ungaria vaga* (i.e. *magna*); *RUSda* (probably for *Russia*); *Scotia*; *Hibernia*; *Anglia*. The Amazons are here placed on an island much as in the map on ff. 6v–7r.

In the body of the map, the legend in the Far East (at the top) reads:

India Hic regnat presbiter Johanes cum patriarcha thoma sub lege Christi et discessit a romano imperio

India. Here reigns Prester John with the Patriarch Thomas in accordance with the law of Christ, and he separated himself from the Roman Empire.

Prester John, a more or less mythical Christian monarch in the East, was often regarded as a potential ally and thus source of hope in the Christian struggle against Mongols or Muslims,⁴³ but the author of HM 83 paints a bleak picture of the situation in Asia, apparently ruling out the possibility of a cooperation between European powers and Prester John by noting that John has dissociated himself from the Roman Empire.

The next legend to the west reads:

Haldarum Hic est regia civitas ad 6 miliare de antiqua Babilonia in qua viget universale lege machometi sub qua hic per totum gubernat imperator tartarorum tam australium quam septentrionalium qui vagantur de loco ad locum.

Chaldea: Here is the royal city, six miles from ancient Babylonia, in which the universal law of Muhammad is in force, and here the emperor of the Tartars governs everywhere according to that law, both in the south and in the north. The Tartars wander from place to place.

Odoric of Pordenone, who wrote in the fourteenth century, makes no mention of the Tartars in his description of Chaldea,⁴⁴ and neither does Fra Mauro on his *mappamundi* of c. 1450. But Marino Sanudo in the fourteenth century said that the Tartars controlled Chaldea,⁴⁵ so there are sources that would support our author's claim here.

Moving to the northwest, in the far north, northwest of the unnamed river which we know from the map on ff. 7v–8r to be the river Rha, are the names *Ru<sia>*, *li<von>ia*, *po<lon>ia*, and *un<garia>*, and the author discusses this 'corner' in the text below the map. To the south of this 'corner' are *Turchia*, *Lex machometi*, and *Constantinopoli*: the phrase *Lex machometi* makes it clear that

43 On Prester John see Charles F. Beckingham and Bernard Hamilton, eds., *Prester John, the Mongols, and the Ten Lost Tribes* (Aldershot, Hampshire; and Brookfield, VT: Variorum, 1996); and Michael E. Brooks, "Prester John: A Reexamination and Compendium of the Mythical Figure Who Helped Spark European Expansion," Ph.D. Dissertation, University of Toledo, 2009. The forged letter allegedly from Prester John that was circulated across Europe in the twelfth century is translated into English in Michael Uebel, *Ecstatic Transformation: On the Uses of Alterity in the Middle Ages* (New York: Palgrave Macmillan, 2005), pp. 155–160.

44 See Henry Yule, ed. and trans., *Cathay and the Way Thither: Being a Collection of Medieval Notices of China*, revised by Henri Cordier (London: The Hakluyt Society, 1913–16), vol. 2, pp. 110–111 (English), 282–283 (Latin), and 339–340 (Italian).

45 Marino Sanudo, *The Book of the Secrets of the Faithful of the Cross*, trans. Peter Lock (Farnham, England; Burlington, VT: Ashgate, 2011), p. 27.

the area is Muslim, and in the text below the map the author alludes to the fall of Constantinople in 1453.

Further south is the legend:

Hic gubernat novi babilonie Soldanus magnus princeps sarracenorum orientalium sub lege machometi per totum spatium ad mare magnum etiam terram sanctam.

Here the great Sultan of New Babylonia (i.e. Cairo), the prince of the eastern Saracens, rules beneath the law of Muhammad all the land to the Mediterranean, including the Holy Land.

On the three different Babylonias see the passages on ff. 1r and 12v. The author's emphasis on Islam's control of much of the world is clear. Just west of the preceding legend is the place name *Alexandria*, and the text to the right of the map, which we transcribe below, indicates that in "Alexandria, which is a great city of Egypt, lives a Patriarch of the Christians beneath a Muslim oppressor," so the emphasis on the pervasiveness of Islam continues.

The text in Europe reads:

Cesar romanus et Papa vicarius christi gubernant hic hodie tantum nomine. In nulla parte mundi est tanta dominorum contraria diversitas sicut in hac quarta. Europa ut sic seipsam debilitet et gladio machometi citius subdatur sicut reliquae partes iam sunt subjectae ut cernis.

The Roman Emperor and the Pope, Vicar of Christ, now govern here only in name. In no <other> part of the world is there so much controversy among sovereigns as there is in this part. As Europe is thus weakening itself, it is quickly falling to the sword of Muhammad, just as the other parts <of the world> have already fallen, as you see.

This prediction about the fall of Europe to Islam is vividly portrayed in the following map. Finally, the text in Africa reads:

Hic per totum dominatur unus magnus rex sarracenorum occidentalium cuius nomen Miramamolon. rex fidelium habens sub se septem reges vicarius machometi sub lege cuius hic regit primus parium regnum cepte quod tenent Christiani hispani ab ano domini Christi 1411 in hunc annum 1486.

In this whole region rules one great king of the western Saracens, whose name is Miramamolin. The king of the faithful, who has under him seven kings, is the vicar of Muhammad, in accordance with whose law he reigns here, the first among equals. The kingdom of Ceuta, which Spanish Christians have held from the year 1411 until this year 1486.

‘Miramamolin’ is the Latin transcription of Amīr al-Mu‘minīn, i.e. ‘Commander of the Believers,’ a title first used by the Almohad king ‘Abd al Mu‘min (1133–1163), who fought important battles in North Africa and the Iberian Peninsula, and subsequently by his successors.⁴⁶ Our author is a little confused about the details of the conquest of Ceuta, which was effected by the Portuguese, not the Spanish, and in 1415, rather than 1411.⁴⁷ This text about Muslims in Africa completes an image of a world in which Christianity is in peril.⁴⁸

There are elements of thematic maps of the world’s religions in some of the more elaborately decorated *mappaemundi* and nautical charts, where Christian cities are indicated with crosses, and Muslim cities with crescents, and Andreas Walsperger on his world map of 1448 writes that *Rubra puncta sunt christianorum ciuitates. Nigra uero infidelium in terra marique existentium*, “The red dots are cities of the Christians, and the black ones are the cities of the unbelievers who live on the land and by the sea.” Martin Waldseemüller used such symbols on his world map of 1507, and describes his use of them in chapter 9 the

46 On this derivation of Miramamolin see Alexander Patschovsky, “Der heilige Kaiser Heinrich der ‘Erste’ als Haupt des apokalyptischen Drachens: Über das Bild des römisch-deutschen Reiches in der Tradition Joachims von Fiore,” *Florensia: Bollettino del Centro Internazionale di Studi Gioachimiti* 12 (1998), pp. 19–52, at 30–31; also see Marco Rainini, *Disegni dei tempi: il ‘Liber figurarum’ e la teologia figurativa di Gioacchino da Fiore* (Roma: Viella, 2006), pp. 119–120.

47 On the taking of Ceuta by the Portuguese see “The Conquest of Ceuta, Being the Chronicle of the King Dom João I,” in Virginia de Castro e Almeida, ed., *Conquests & Discoveries of Henry the Navigator; Being the Chronicles of Azurara*, trans. Bernard Miall (London: G. Allen & Unwin, Ltd., 1936), pp. 29–115; and H. V. Livermore, “On the Conquest of Ceuta,” *Luso-Brazilian Review* 2.1 (1965), pp. 3–13.

48 Warfare between Christians and Muslims is also portrayed on the Borgia *mappamundi* at the Vatican: the map is described in Destombes, *Mappemondes* (see Ch. 4, n. 37), pp. 239–241 and plate 29; and see A. E. Nordenskiöld, “Om ett aftryck från xv:de seklet af den i metall graverade världskarta, som förvarats i kardinal Stephan Borgias museum i Velletri, Med 1 facsimile,” *Ymer* 11 (1891), pp. 83–92, with the reproduction of the map between pp. 130 and 131; for an account of the conflicts depicted on the map see Felicitas Schmieder, “Anspruch auf christliche Weltherrschaft. Die Velletri/Borgia-Karte (15. Jahrhundert) in ihrem ideengeschichtlichen und politischen Kontext,” in Ingrid Baumgärtner and Martina Stercken, eds., *Herrschaft verorten: Politische Kartographie des Mittelalters und der Frühen Neuzeit* (Zurich: Chronos Verlag, 2012), pp. 253–271.

Cosmographiae introductio, printed to accompany the map.⁴⁹ But the map in HM 83 is more purely thematic than the examples just mentioned, and bears comparison with nineteenth-century thematic maps of the world's religions.⁵⁰ William C. Woodbridge in his *Moral and Political Chart of the World, Exhibiting the Prevailing Religion, Government, Degree of Civilization, and Number of Inhabitants of Each Country*, in his *Modern Atlas on a New Plan, to Accompany the System of Universal Geography* (London: Geo. B. Whittaker, 1828), uses symbols to designate regions as Protestant, Catholic, Orthodox, Muslim, or pagan. The depiction is more detailed and the differences indicated with color in the map titled *Verschiedenes zur Anthropographie* in Heinrich Berghaus, *Dr. Heinrich Berghaus' Physikalischer Atlas oder Sammlung von Karten* (Gotha: Justus Perthes, 1845–48) (see Fig. 5.4).

The text around some of the other maps in this sequence is in one column, so that the lines continue from the left of the map to the right, but in this case the text is in two columns, except for some text in one column at the bottom of the page. The text in the left column reads (still f. 9r):

Haec figura est mappa mundi de dominiis terre ab ano christi 639 ad annum 1514 per capituli apocalipsis 12 13 14 15 16 17 18 et primum 19 usque ad punctum “Et vox de throno <exclusiet?>.” Sic enim ut figura ostendit citus discessio ab imperio romano per tot annos et tot tala sucessi<o>ne, et tandem illa discessio complebitur in europe discessu ad quod devenitur nunc anno christi 1486 per sectam machometicam, ut cernis hic in figura que varietatem ostendit resastans (i.e. resistans) per mundum

Rucia verum regit dux muscavie sub lege christi hoc scismaticus ut papam ut imperatorem advertens

49 On the symbols that Waldseemüller uses to indicate different religions on his 1507 map see Ch. 5, n. 59 below.

50 There is a pair of rare eighteenth-century maps that are somewhat limited thematic maps of religion: they are maps of the Christian dioceses in Africa and Asia by Francesco Maria Sassi titled *Limiti delle diocesi in terra ferma* and published around 1740 in the book *Alla Santità di nostro Signore Benedetto Papa XIV. memoriale responsivo alle animadversioni di monsignor Segretario della S. Congregazione de Propaganda Fide sopra la nuova erezione de' Vescovadi nell'Indie Orientali* (Rome, c. 1740), a copy of which was listed for sale by Reiss & Sohn in the catalog for their *Auktion 166, 30.–31. Oktober 2013, Geographie, Reisen, Atlanten, Landkarten, Ansichten, Dekoratives* (Königstein im Taunus: Reiss & Sohn, 2013), pp. 51–52, number 2557. There are exemplars of the maps in Lisbon, Biblioteca Nacional de Portugal, in the map collection, shelfmark C.C. 865 V.; and in Paris, Archives Nationales, shelfmarks NN/181/10/1 and NN/181/10/2.

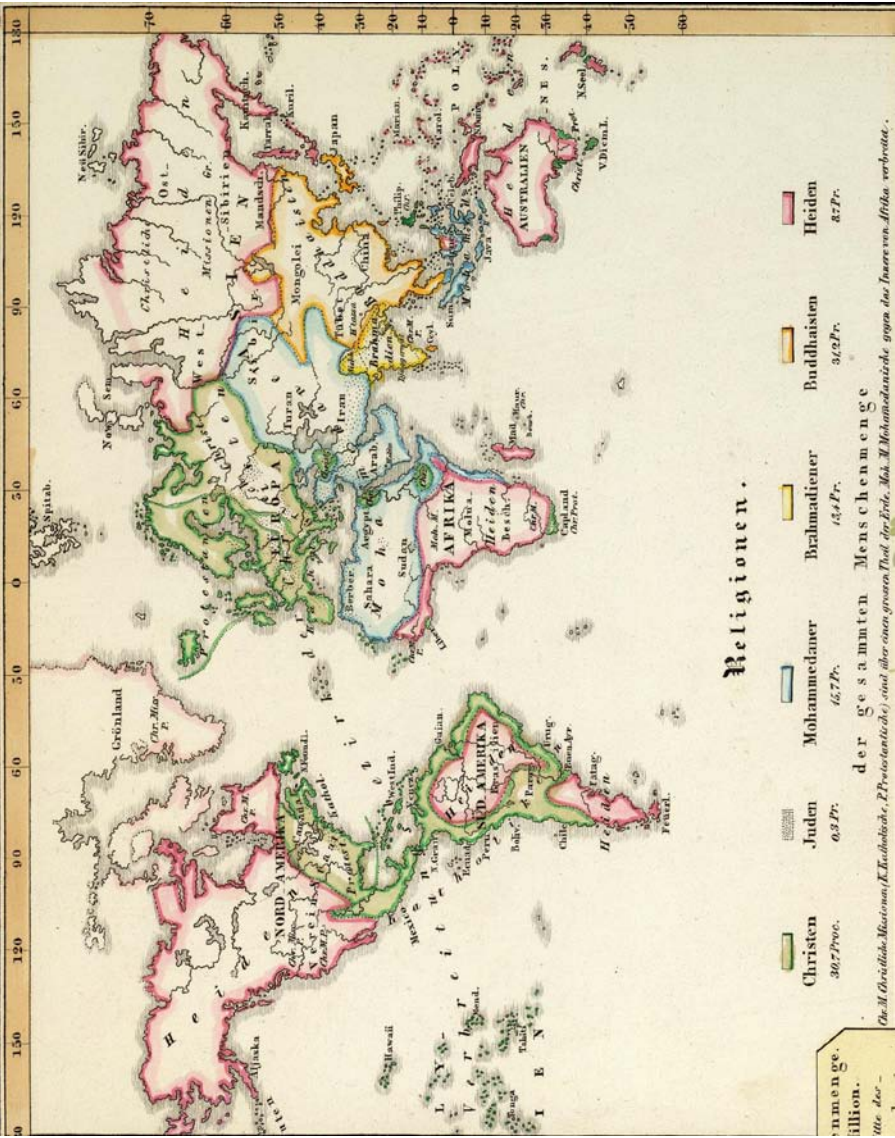


FIGURE 5.4 Thematic map of the world's religions, a detail of the map Verschiedenes zur Anthropographie, in Heinrich Berghaus, Dr. Heinrich Berghaus' physikalischer Atlas oder Sammlung von Karten (Gotha: Justus Perthes, 1845-48) (BY COURTESY OF THE DAVID RUMSEY MAP COLLECTION).

Ungaria magna gentibus ruthenis tributaria livonia Polonia ungaria hic angulus tenet se ad huc ad Europam et papam et imperatorem aqualiter

Iselandia Norwegia suecia dacia ad Europam

Turkia verum dominatur imperator tartarorum sub lege machometi <tenens?> hodie ab anno christi 1453 totam gretiam cuius metropolis est Constantinopolis

This diagram is the *mappamundi* of the lordships of the world from the year 639 to the year 1514 through Revelation chapters 12, 13, 14, 15, 16, 17, 18, and the first part of 19, to the point “And a voice came out of the throne” (Rev. 19:5). The map shows the rapid disintegration of the Roman Empire across many years and by such a succession, and that disintegration will finally be completed through the disintegration of Europe, which is approaching now in the year 1486 because of the Muhammadan religion, as you see in this map, which shows the variety persisting throughout the world.

The lord of Muscovy rules Russia according to the law of Christ, <and yet> this heretic rejects both the Pope and the <Holy Roman> Emperor.

Greater Hungary pays tribute to the Ruthenian peoples. Livonia, Poland, Hungary: this area is loyal to Europe and the Pope also to the Emperor.

Iceland, Norway, Sweden, Denmark <are loyal> to Europe.

Turkey however is ruled by the emperor of the Tartars according to the law of Muhammad, <and> today from the year 1453 he holds all of Greece, whose capital is Constantinople.

The author says that this map covers the period during which the events of Revelation 12–19:5 will occur, but in fact there is no clear correspondence between the events in those chapters of Revelation and what we see on the map. The remarks about the situation of Christianity in Russia and so on in the latter half of this text read like legends that might have been in a larger version of the map. The text to the right of the map reads:

Nota Alexandrie que est magna civitas Egipti residet patriarcha christianorum sub machometione oppressore qui militi sunt valde boni. Et Soldanus residens in Alkaria que appellatur nova Babilonia veneratur eum muneribus sed non permitit eum communicare romano pontifici ut scripto ut ore eum confitendo. Corde et voluntate nequit prohibere <...>. Similiter et Indi tantum corde possunt romano Papae communicare et subesse. Asiam quoque impedit multitudino machometorum qui intermediat ut oculatim cernis in hac figura. Sed a gladio rome victi quos

cesar romanus tenet penitus penitus (*sic*) discesserunt corde sicut ore
ymmo illi gladio hodie nichil subest nisi Europa et parvus angulus livonia
polonia ungaria, et quod et quam pauci in eadem parte hodie subsunt
romano cesare nam ignoratur hoc anno 1486.

Note that in Alexandria, which is a great city of Egypt, lives a Patriarch of the Christians beneath a Muslim oppressor; the Muslims are very good soldiers. And the Sultan, who lives in Cairo, which is called New Babylon, honors the patriarch with ceremonies, but does not permit him to communicate with the Roman Pope, nor to acknowledge him either in writing or verbally. <However> he cannot prohibit him in his heart and mind. Similarly the people of India can only communicate with and be subordinate to the Roman Pope in their hearts. The multitude of Muslims also troubles Asia, for they surround it, as you can clearly see in the map. But those defeated by the sword of Rome whom the Roman Emperor holds will thoroughly rebel both in heart and in speech <...>. But in fact today, nothing is subject to that sword except for Europe and a small corner <consisting in> Livonia, Poland, and Hungary, and what and how few in that area are today subject to the Roman Emperor is unknown in this year 1486.

Most of this text is similar in character to the legends on the map. The reference to Livonia, Poland, and Hungary repeats that in the left-hand column of text—evidently the author of HM 83 was very interested in that area. His indication that we do not know how many people in that area are subject to the Roman Emperor recalls his statement near the top of f. 2v that “not even Europe can be <fully> explored by any European.”

The single-column text at the bottom of the page reads:

Machometus in Alchorano dicitur sibi gladium a deo datum quo romanum imperium successionem sibi subiciat quod verum res per multos annos ostendit. Et tandem romam cassat et europam sibi subiciet ut hec sequens figura ostendit et tunc in plena potestate dominabitur 56 annos sicut Methodius dicit finem (or suum) magnam (or magistrum) <in> historie sanctae c 16 genesis et apocalipsis confirmat.

In the Koran it is said that Muhammad <had> a sword that was given to him by God, by which he would gradually bring the Roman Empire under his control, which events over many years show to be true. And at last he caused the fall of Rome and subjugated Europe as this following map shows, and then he will rule in full power for 56 years as Methodius says <...> and Genesis and Apocalypsis confirms.

This last bit of text refers to the map on the next folio, and the author similarly places text on the bottom of one folio that introduces the map on the following folio elsewhere in the treatise on the Apocalypse. The Koran had been translated into Latin well before the fifteenth century,⁵¹ but it says nothing about a sword of Muhammad—in fact the word for sword, *saif*, does not occur in the book. So the reference to the Koran is incorrect, and the author must have taken the reference to the sword of Muhammad from another source. In some accounts Muhammad was said to have acquired the famous sword named *Dhu'l-Faqar* or *Zulfiqar* in the Battle of Badr (624), and according to some accounts, it was the Archangel Gabriel who gave the sword to Muhammad at Badr.⁵² Yet we do not find a medieval Latin account of Muhammad that mentions this sword.⁵³

We do know of two earlier texts that speak of the *gladius Machometi* or 'sword of Muhammad.' Rodrigo Jiménez de Rada (1170–1247) in his *Historia Arabum*, following a long list of provinces all over the world and their capitals, says *Has omnes provincias subiugavit secta et gladius Mahometi*, "All of these provinces the religion and sword of Muhammad subdued."⁵⁴ William of Tripoli (ca. 1220–1277) in his *De statu Sarracenorum* (Treatise on the Condition of the

51 On medieval translations of the Koran see Marie-Thérèse d'Alverny, "Deux traductions latines du Coran au Moyen Âge," *Archives d'histoire littéraire et doctrinale du Moyen Âge* 16 (1947–1948), pp. 69–132; reprinted in Marie-Thérèse d'Alverny, *La connaissance de l'Islam dans l'occident médiéval*, ed. Charles Burnett (Aldershot: Variorum, 1994); Hartmut Bobzin, "Latin Translations of the Koran: A Short Overview," *Der Islam: Zeitschrift für Geschichte und Kultur des islamischen Orients* 70 (1993), pp. 193–206; Thomas E. Burman, "Tafsir and Translation: Traditional Arabic Quran Exegesis and the Latin Qurans of Robert of Ketton and Mark of Toledo," *Speculum* 73 (1998) pp. 703–732; Afnan Fatani, "Translation and the Qur'an," in Oliver Leaman, ed., *The Qur'an: An Encyclopedia* (Oxon: Routledge, 2006), pp. 657–669; and Thomas E. Burman, *Reading the Qur'an in Latin Christendom, 1140–1560* (Philadelphia: University of Pennsylvania Press, 2007).

52 On Muhammad's sword see G. Zawadowski, "Note sur l'origine magique de Dhoū-l-Faqār," *En terre d'Islam*, series 3, vol. 21 (1943), pp. 36–40; and Francesca Bellino, "Dhū l-Faqār," in Kate Fleet, Gudrun Krämer, Denis Matringe, John Nawas, and Everett Rowson, eds., *The Encyclopaedia of Islam, Three* (Leiden and Boston: Brill, 2012), pp. 77–79. On the belief that Muhammad had received the sword from the Archangel Gabriel see Jean Calmard, "Dhū'l-faqar," in Ehsan Yarshater, ed., *Encyclopaedia Iranica* (London and Boston: Routledge & Kegan Paul, 1982–2012), vol. 7, Fasc. 6, pp. 566–568, at 566.

53 For a survey of Latin accounts of the life of Muhammad see John Victor Tolan, "European Accounts of Muhammad's Life," in Jonathan E. Brockopp, ed., *The Cambridge Companion to Muhammad* (New York: Cambridge University Press, 2010), pp. 226–250.

54 Rodrigo Jiménez de Rada, *Historia Arabum*, ed. José Lozano Sánchez (Seville: Publicaciones de la Universidad de Sevilla, 1974), p. 23.

Saracens), chapter 24, writes, *Item unus de articulis credendorum apud eos sic dicit: Sarracenorum fides surrexit per gladium Machometi et carruet per gladium, qui erit Dei, quasi diceret: Per gladium incepit, per gladium desinet*, “One of the articles of belief among them goes this way: ‘The Saracen religion arose through the sword of Muhammad and will fall through the sword which will be God’s,’ that is to say, ‘it began through the sword and through the sword will end.’”⁵⁵ It is possible that the author of HM 83 took up his programmatic interest in the sword of Muhammad from one of these passages, but he also may have been inspired by one of the many medieval accounts of Islam as a religion of the sword.⁵⁶

The vision of the threat to Christianity from Islam on this map, as mentioned above, is very similar to that in Jacobus de Clusa’s *De malis huius saeculi per omnes aetates*, which he wrote in 1447, though it seems unlikely that Jacobus de Clusa influenced our author. There is another similar passage in a later work, namely Erasmus of Rotterdam’s colloquy “On Eating Fish,” of 1526. In the colloquy a butcher reports his impressions upon seeing a world map:⁵⁷

Recently I saw a painting, on a very large canvas, of the whole world. From it I learned how small a portion of the world wholeheartedly and sincerely professes Christianity: part of western Europe, of course; then another part towards the north; a third stretching far away to the south; Poland seemed to be as far as the fourth part went, towards the east. The rest of the world contains either barbarians, not so very different from brutes, or schismatics or heretics, or both.

55 William of Tripoli, *Notitia de Machometo; De statu Sarracenorum*, ed. and trans. Peter Engels (Würzburg: Echter; and Altenberge: Oros, 1992), p. 330; the translation is from Bernard McGinn, ed., *Visions of the End: Apocalyptic Traditions in the Middle Ages* (New York: Columbia University Press, 1979), p. 154.

56 For discussion of passages in medieval authors in which Islam is described as a religion of the sword see Svetlana Luchitskaja, “The Image of Muhammad in Latin Chronography of the Twelfth and Thirteenth Centuries,” *Journal of Medieval History* 26.2 (2000), pp. 115–126.

57 The passage about the map comes from Erasmus of Rotterdam, *Colloquies*, trans. Craig R. Thompson, in *Collected Works of Erasmus* (Toronto: University of Toronto Press, 1974–), vol. 40, p. 686. For another translation of the text see Desiderius Erasmus, *The Essential Erasmus*, trans. John P. Dolan (New York: New American Library, 1964), pp. 271–326, including a good introduction. The passage in Erasmus is cited and briefly discussed in Urs B. Leu, “Textbooks and their Uses—An Insight into the Teaching of Geography in 16th Century Zurich,” in Emidio Campi, Simone De Angelis, Anja-Silvia Goeing, and Anthony T. Grafton, eds., *Scholarly Knowledge: Textbooks in Early Modern Europe* (Geneva: Librairie Droz, 2008), pp. 229–248, at 240.

One wonders about the exact nature of the map Erasmus had in mind, and whether it was real: did it have legends or symbols indicting which religion was predominant in each region,⁵⁸ or was the butcher knowledgeable about these matters, and simply impressed when he saw the maps and realized the relative extents of the territories? The heightened concern about the Apocalypse in fifteenth century Europe went hand in hand with a heightened concern about Islam, but the author of HM 83 was the only author we know of to display the basis for the latter concern cartographically.

The Map and Text on f. 9v

This map (Fig. 5.5) is a stunning example of symbolic cartography: on a full-page *mappamundi* unencumbered by much geographical detail, five graphic representations of the sword of Muhammad reach out to the edges of the earth, indicating the spread of Islam over the whole surface of the *orbis terrarum*, as was predicted on the preceding folio. The focus on the spread of Islam resulted in the omission of indications of countries and cities, in contrast to the situation in the preceding map. Earlier cartographers used other signs to indicate the religious affiliation of cities: on some nautical charts, Christian cities bear crosses while Muslim cities fly the flag of the crescent; and on Andrea Walsperger's *mappamundi* of 1448, he writes that "The red dots are cities of the Christians, and the black ones are the cities of the unbelievers who live on the land and by the sea."⁵⁹ But the use of these swords by the author of HM 83 to indicate the spread of Islam is different: they are used dynamically, to indicate change, and of course the blades have a hostile and sinister symbol-

58 See the description of the symbols used by Martin Waldseemüller on his world map of 1507 to indicate the regions under the control of different religions, described in the following note.

59 Martin Waldseemüller used such symbols on his world map of 1507. In chapter 8 the *Cosmographiae introductio*, printed to accompany the map, he and Matthias Ringmann explain that: "The greater part of Africa and a part of Asia we have distinguished by crescents, which are the emblems of the Sultan of Babylonia, the Lord of all Egypt, and of a part of Asia. The part of Asia called Asia Minor we have surrounded with a saffron-colored cross joined to a branding iron, which is the symbol of the Sultan of the Turks, who rules Scythia this side of the Imaus, the highest mountains of Asia and Sarmatian Scythia. Asiatic Scythia we have marked by anchors, which are the emblems of the great Tartar Khan. A red cross symbolizes Prester John (who rules both eastern and southern India and who resides in Biberith)...." The translation is from Joseph Fischer and Franz von Wieser, *The 'Cosmographiae introductio' of Martin Waldseemüller in Facsimile, Followed by the Four Voyages of Amerigo Vespucci, with their Translation into English* (New York: The United States Catholic Historical Society, 1907), chapter 8, on the back of the diagram between pages 66 and 77.

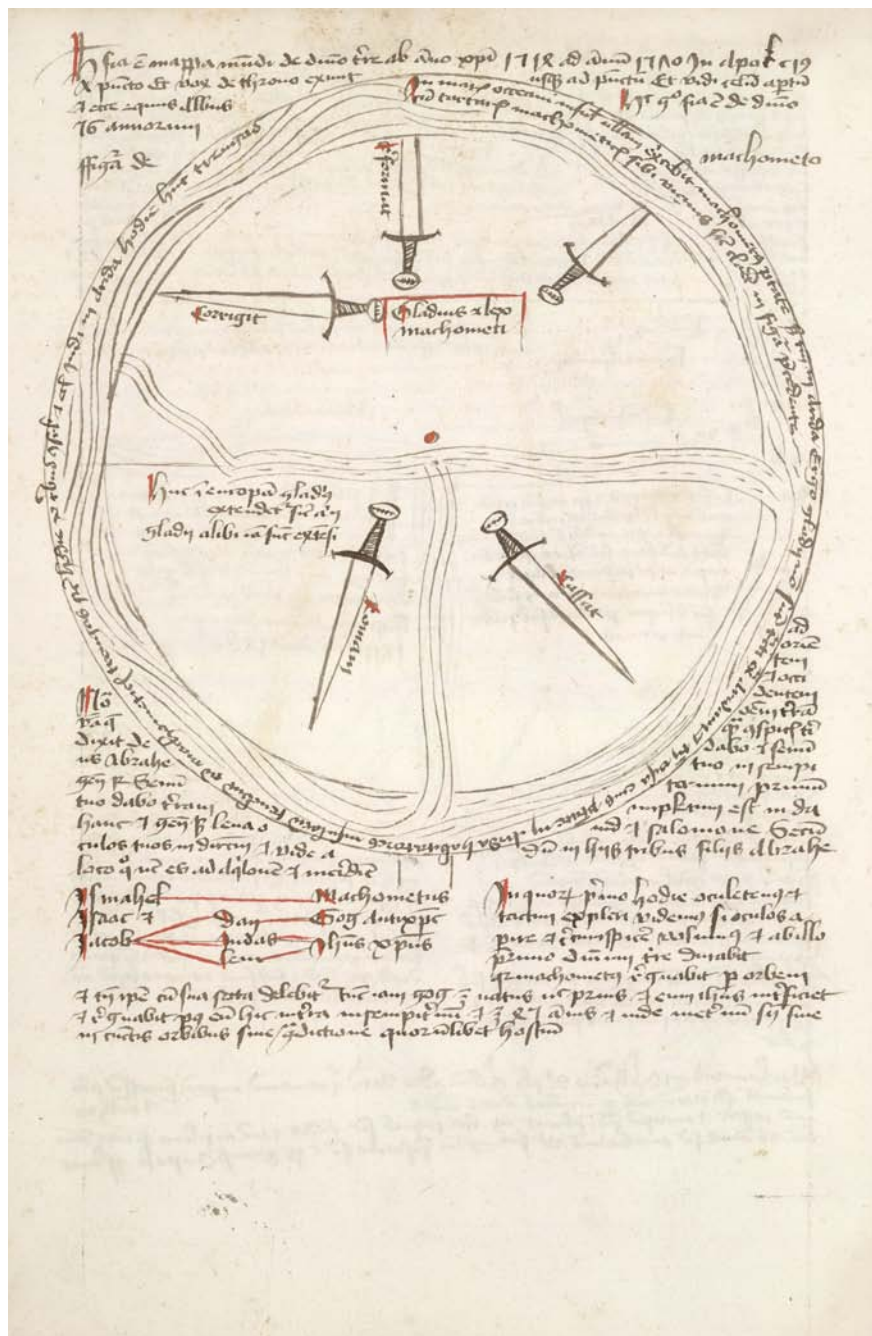


FIGURE 5.5 *Huntington HM 83, f. 9v. A prophecy map showing the world from 1514 to 1570, when Sword of Islam has conquered Europe and reached all the way to the edges of the earth (COURTESY OF THE HUNTINGTON LIBRARY).*

ism. The text above the map, which we will transcribe and translate below, indicates that the map shows what will happen to the earth from 1514 to 1570.

In the map, the long text in the circumfluent ocean reads:

In mare oceani insulam nullam exercebit machometus potestatem sed tantum in arida. Ergo gladii non sunt tracti extra aridam et tamen visa cuius potestate in arida habitatores insularum ferebunt cum machometione treugas sicut hodie X tribus Israel et etiam Indi in arida hodie habent treugas cum tartare machometione sibi vicinis sicut claretur in figura precedente.

Muhammad will not have power over any island in the ocean, only on the mainland. For this reason, the swords are not extended beyond the mainland. Nonetheless, the inhabitants of the islands, having seen his power on the mainland, will make treaties with the Muslims, just as today the Ten Tribes of Israel, and also some in India in the mainland, make treaties with the Muslim Tartars near them, as is clear in the preceding map.

It is not clear why the author of HM 83 thinks that the Muslims will not conquer the islands of the ocean, but one wonders if he thinks of those islands as at least a temporary refuge from the approaching troubles.

The text in center of the eastern (upper) part of the map reads *Gladius est lex machometi*, “The sword is the law of Muhammad.” And the text in the lower left part of the map, i.e. Europe, reads *Huc in europam gladius extendetur sicut ante gladii alibi iam sunt extensi*, “From here the sword is extended into Europe, just as the swords had already been extended elsewhere.” The swords are labeled *Corrigit*, *Reformat*, *Cassat*, and *Romam*, with the fifth sword in the southeast unlabeled, i.e. “It corrects,” “It reforms,” “It crushes,” and “to Rome,” the last of these located in Europe. A red dot at the center of the map indicates the location of Jerusalem.

The text above the map reads:

Hec figura est mappa mundi de dominio terre ab anno christi 1514 ad annum 1570. In apocalipsis c 19 a puncto et vox de throno exivit usque ad punctum et vidi celum apertum et ecce equus albus. Hec ergo figura est de dominio 56 annorum.

This diagram is a world map of the rule of the earth from the year 1514 to the year 1570. In Revelation chapter 19 from the point “And a voice came out of the throne” (Rev. 19:5) to the point “I saw Heaven standing open

and there before me was a white horse" (Rev. 19:11). This map thus covers a reign of 56 years.

Unfortunately we see no connection whatsoever between the contents of Revelation 19:5–11 and the content of the map, so the citation is obscure. Below this text we read *Figura de machometo*, "Diagram of Muhammad." In the text below the map we read:

Nota verba quae dixit deus Abrahae genesis 12⁶⁰ Semini tuo dabo terram hanc et genesis 13⁶¹ leva oculos tuos in directum. Et vide a loco quo nunc es ad aquilonem et meridiem ad orientem et occidentem omnem terram quam conspicias tibi dabo et semini tuo in sempiternum primum impletum est in david et salamone Secundum in hiis tribus filiis Abrahae.

Ismahel Machometus	
Isaac et Gog antichristus	
Jacob	Dan
Judas	Jhesus Christus
Sem	

In quorum primo hodie oculere usque et tactim expleri videmus si oculos aperire et circumspicere voluimus et ab illo primo dominium terre durabit quod machometus regnabit per orbem et tamen ipse cum sua secta delebitur tunc iam gog est natus ut prius, et eum Jesus interficiet et regnabit post eum hic in terra in sempiternum et etiam 45 annis et inde in eternum sine fine in cunctis orbibus sine contradictione quorumlibet hostium.

Note the words that the God of Abraham said in Genesis 12: ⁶² "I give this land to your descendants" and Genesis 13: ⁶³ "Lift up your eyes from where you are and look north and south, east and west. All the land that you see I will give to you and your descendants forever." The first was fulfilled in David and Solomon, and the second in these three sons of Abraham:

Ismahel	Muhammad
---------	----------

60 The passage is Genesis 12:7.

61 The passage is Genesis 13:14–15.

62 The passage is Genesis 12:7.

63 The passage is Genesis 13:14–15.

Isaac and Gog Antichrist	
Jacob	Dan
Judas	Jesus Christ
Sem	

In the first of these, today we see it fulfilled both by sight and by touch, if we are willing to open our eyes and look around. And from the first of these the lordship of the world will last so that Muhammad will reign throughout the world, and yet he with his religion will be destroyed. Then Gog is born as before, and Jesus will kill him and will reign after him both here on the earth forever and 45 years, and from that point forever without end in every world without contradiction from any enemy.

The citation of Genesis 12:7 and 13:14–15 on God's gift of the land of Israel to Abraham should be interpreted as indicating sensitiveness to the fact that according to the diagram, that territory will soon be part of Islamic territory.

The Map and Text on f. 10r

This striking image (Fig. 5.6) hardly seems to be a map at first, but it is another remarkable instance of symbolic cartography. The central set of triangles, ranging from small to large, shows an increase in size, and specifically represents the increasing influence of Antichrist. The eleven-pointed star behind the triangles represents the horns of the beast of Daniel 7:⁶⁴ the surrounding text speaks of ten horns, while there are eleven in the map, but this accords with Daniel 7:8, in which an eleventh horn representing Antichrist arises. These horns separate ten kings in the outer ring of the map. The text above the map says that it shows what will happen to the earth between 1570 and 1600; the cartographic representation of the increasing importance of Antichrist and the beast of Daniel 7 during this period by a series of sharp promontories is extraordinary, and recalls the swords of Muhammad on the previous map. The familiar geography of the earth, the kingdoms of Europe, Africa and Asia, are relegated to the outer ring of the map as the cartographic representation of the apocalyptic drama dominates the center.

The kings in the outer circle of the map, beginning in the lower right and continuing counter-clockwise, are: *Rex Egipti*, *Rex indie ad quem regnum abdicat*, *Rex calcedonie cum media et persida*, *Rex grecie Rusia*, *Rex gotie ad*

64 On the beast in Daniel 7 see Chrys C. Caragounis, "Greek Culture and Jewish Piety: The Clash and the Fourth Beast of Daniel 7," *Ephemerides theologicae Lovanienses* 65.4 (1989), pp. 280–308.

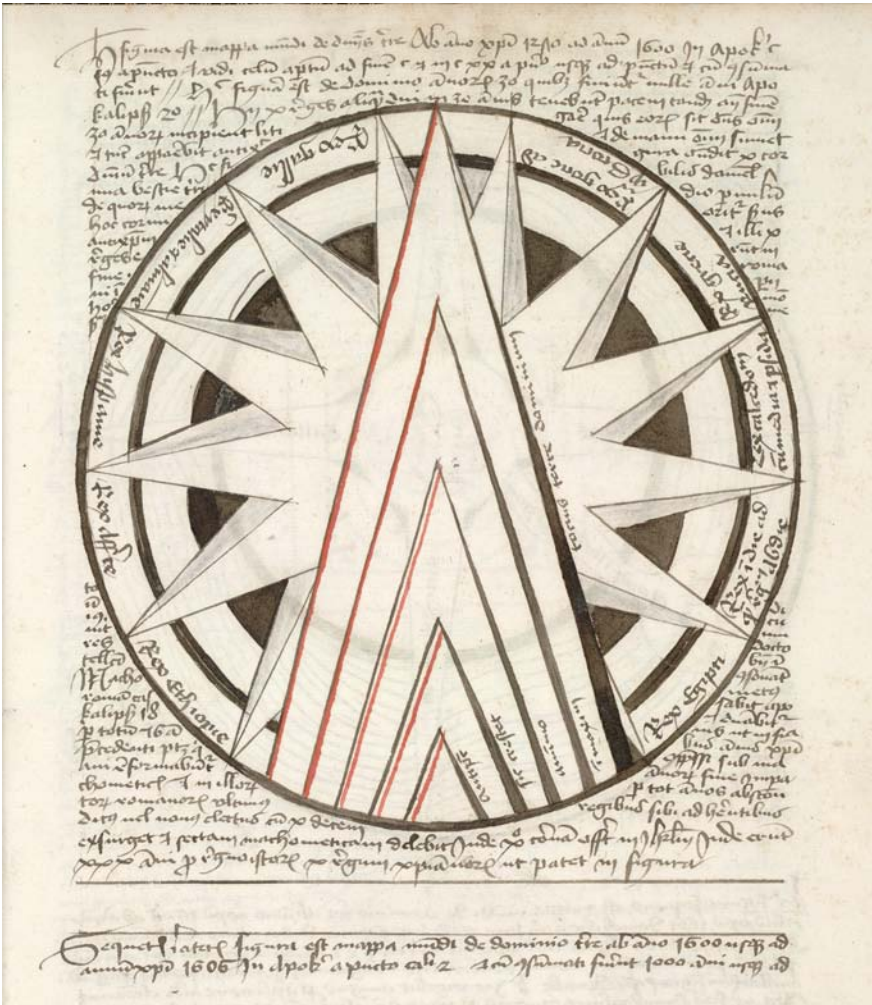


FIGURE 5.6 *Huntington HM 83, f. 10r. A symbolic prophecy map showing the world from 1570 to 1600. The series of small-to-large triangles in the center represent the increase of Antichrist, and the other spikes that radiate to the edges of the earth represent the horns of the beast of Daniel 7 (COURTESY OF THE HUNTINGTON LIBRARY).*

quem Scotia, Rex gallie, Rex ytalie et germanie, Rex hispanie, Rex affrice, and Rex Ethiopia, that is, the King of Egypt; the King of India, whom the kingdom rejects; the King of Calcedonia with Medea and Persia; the King of Greece; Russia; the King of the Goths to whom Scotland; the King of Gaul; the King of Italy and Germany; the King of Spain; the King of Africa; and the King of Ethiopia. Near the bottom of the triangles we read Antipater sic crescet a minimo in maximum, "Thus Antipater (perhaps an error for Antichrist) grows

from small to large.” The text higher on the largest of the triangle reads *tocius terre dominium*, “the rule of all of the land.”

The text outside the map is in one column, and so to read much of it one must jump from left to right across the map. This text runs:

Haec figura est mappa mundi de dominiis terre ab anno christi 1570 ad annum 1600. In apocalypsis 19 a puncto et vidi celum apertum ad finem capituli et in capitulum 20 a principio usque ad punctum et cum consummati fuerunt. Haec figura est de dominio annorum 30 quibus finiuntur mille anni Apocalypsis 20. Hii X reges aliquamdiu in 30 annis tenebunt pacem tandem ante finem 30 annorum incipient litigare quis eorum sit dominus omnium et tunc apparebit antichristus et de manu omnium sumet dominum terre. Hec figura ostendit X cornua bestiae terribilis danielis 7 de quorum medio parvulum hoc cornu oritur⁶⁵ signus <antichristi?> et illi X reges erunt in fine romani imperii <... .> in cuius <vivit?> doctores bene intellectum consonant Machomentus romam cassabit apocalypsis 18 et dominabitur per totum 56 annos ut in figura precedente propter quod oppressi sub machometione et in illorum annorum fine imperatorum romanorum ultimus per tot annos absconditus vel novus electus cum X decem (*sic*) regibus sibi adhaerentibus exsurgit et sectam machometricam delebit Inde christo coronam offert in Jerusalem Inde erunt xxx anni pro regno istorum X regum christianorum ut patet in figura.

This diagram is a map of the lordships of the world from the year 1570 to 1600. In Revelation 19 from the point “I saw Heaven standing open” to the end of the chapter, and in chapter 20 from the beginning to the point “And they were consumed by fire.” This diagram is of the lordship of the 30 years in which finish the 1000 years <mentioned in> Revelation 20. Sometime in <those> 30 years these ten kings will have peace, but before the end of the 30 years they will begin to argue about which of them will be lord of all, and then Antichrist will appear, and from the hand of all he will take the lordship of the earth. This diagram shows the ten horns of the terrible beast of Daniel 7, from whose midst this small horn arises, the sign of Antichrist, and those ten kings will appear at the end of the Roman Empire <... .> the learned agree. Muhammad will conquer Rome—Revelation 18—and will rule for all the 56 years as indicated in the

65 See Daniel 7:8, *Considerabam cornua et ecce cornu aliud parvulum ortum est de medio eorum....*

preceding map, and because of this, they will be oppressed by the Muslims. And in the end of those years, the Last Roman Emperor, hidden for so many years, or else newly elected, will arise with 10 kings by his side, and he will destroy the Muslim sect. Then he offers the crown to Christ in Jerusalem. Then there will be thirty years of the rule of those ten Christian kings, as is clear from the diagram.

Again there is little apparent connection between the events depicted in the map or narrated on this folio and the biblical passages the author cites, namely Revelation 19:22–21 and 20:1–9. The ten kings mentioned here and depicted in the map appear in Revelation 17:12, and not the later chapters the author cites. So perhaps he was citing these passages from memory. The role of the Last Roman Emperor in HM 83 was discussed above in the context of his appearance in the summary of the Last Days on f. 16r.

The text at the bottom of the page reads:

Sequente latere figura est mappa mundi de dominio terre ab anno 1600 usque ad annum christum 1606. In apocalypso a puncto capituli 2: Et cum consummati fuerint 1000 anni usque ad

On the next folio, the diagram is a map of the lordship of the earth from the year 1600 to the year 1606. In Revelation chapter 2, from the point “When the thousand years come to an end, until”

The citation of Revelation 2 is an error for Revelation 20, specifically 20:7, *Et cum consummati fuerint mille anni solvetur Satan de carcere suo*, “When the thousand years come to an end, Satan will be let out of his prison.” As on f. 9r, the author uses the bottom of one folio to introduce the material on the next.

The Map and Text on f. 10v

This map (Fig. 5.7) is another remarkable work of symbolic cartography. The huge peninsulas that jut out into the circumfluent ocean represent the four horns of Antichrist, which in turn represent the four methods by which he deceives people into following him, namely cruelty, deceit, craftiness, and imitation of the deity.⁶⁶ So the four peninsulas are in fact cartographic repre-

66 Adso of Montier-en-Der in his *Libellus de Antichristo*, written in the tenth century, indicates that Antichrist will deceive people by three techniques rather than four, namely fear, gifts, and miracles. For an English translation of the *Libellus* see Bernard McGinn, *Apocalyptic Spirituality: Treatises and Letters of Lactantius, Adso of Montier-en-Der,*

sentations of abstractions. These peninsulas go all the way across the circumfluent ocean, in contrast to the swords of Muhammad on the map on f. 9v, indicating the greater power and reach of Antichrist. The prominent island is that of the Ten Tribes of Israel, which appears on other maps in the manuscript, for example those on ff. 3r and 6v–7r (see Figs. 4.9 and 4.14). The orientation of this map is different than that of the others in the manuscript, for it has south at the top rather than east, and the reason for this change is not clear. The text above the map, which is transcribed and translated just below, indicates that the map shows what will happen to the earth during the years 1600 to 1606.

The map includes indications of the cardinal directions, *Auster*, *Oriens*, *Occidens*, and *alquilo* (*sic*), and it is to these directions that the four large peninsulas are oriented. The peninsulas, which represent the four horns of Antichrist and the four methods by which he deceives people into following him, are labeled *Crudelitas*, *Dolositas*, *Calliditas*, and *Mentita deitas*, i.e. cruelty, deceit, craftiness, and imitation of the deity. The island in the lower left and the peninsula that joins it to the *orbis terrarum* is labeled *Et tribus Israhel venient in Jerusalem ad Gog*, “And the tribes of Israel will come to Jerusalem to Gog,” i.e. Antichrist. On the *orbis terrarum* are the names *Enoch* and *Elias*, that is, Enoch and Elijah, and the text at the center of the world says *Jerusalem Antichristus*, so that Antichrist is at Jerusalem, from which his four horns radiate. It is interesting that much of the text on the map is oriented so as to be readable if the map were rotated so that east were at the top, and it is tempting to deduce that that was this map’s original orientation.

The text surrounding the map reads:

Gog antichristus est serpens cornutus habet enim quatuor cornua id est quatuor modos superandi ut patet genisi 49 cum glosa magistrali.⁶⁷ Et ipse in principio sue ostensionis ponet sedem suam in Jerusalem ut patet in figura cornu crudelitatis per tormentorum illationem superabit carnales seipsos amantes quales sunt gulosi et luxuriosi ... Cornu dolositatis per munus collationem quo superat avaros Cornu caliditatis per

Joachim of Fiore, the Franciscan Spirituals, Savonarola (New York: Paulist Press, 1979), pp. 89–96, esp. 92. We thank Laura Smoller for this reference.

67 Genesis 49:17, *fiat Dan coluber in via*. The *Glossa ordinaria* on this passage, from vol. 1 of the Bible printed in Strasbourg by Adolf Rusch not after 1480, reads: *Alii ad antichristum haec transferrunt, quem de tribu dan venturum asserunt.... Qui non solum coluber sed ceras-tes vocatur. Cerasta enim graecae cornua dicuntur, et hic serpens cornutus esse perhibetur, per quem dignae adventus antichristi asseritur, qui contra sanctos morsu pestiferae praedicationis et cornu potestatis armabitur.*

divine scripture falsam expositionem quo superat scientiae inflatos
 quales sunt capitosi sibi ipsis sapientes ad suum caput retorquentes
 Cornu mentite deitatis per miraculorum operationem quo superat
 ypocritas <...> se ipsos iustificantes Quales sunt qui sibi ipsi iusti viden-
 tur et gloriam hominum quaerunt.

Gog Antichrist is a horned serpent who has four horns, that is, four meth-
 ods of conquering, as is clear from Genesis 49 with the magisterial gloss.
 And in the beginning of his appearance, he places his seat in Jerusalem,
 as is clear from the diagram. With his horn of cruelty, through the appli-
 cation of tortures, he will conquer carnal people who love themselves,
 such as those who are gluttonous and luxurious. By his horn of deceit,
 through the giving of gifts, he will conquer the greedy. By his horn of
 craftiness, through a false exposition of divine scripture, he conquers
 those proud of their knowledge, such as the conceited who think them-
 selves wise, looking only at themselves. By his horn of imitating the deity,
 through the performance of miracles he conquers the hypocrites who
 justify themselves, such as those who regard themselves as just, and seek
 the glory of men.

It was not clear where the author of HM 83 got the idea of the swords of
 Muhammad sweeping across the *orbis terrarum*, but we have determined the
 source of his account of the four horns of Antichrist, which is the *Compendium
 theologiae* or *Compendium theologiae veritatis* of Hugh Ripelin of Strasbourg
 (c. 1205 – c. 1270), a widely-read manual of practical theology.⁶⁸ In Book 7,
 chapter 9 of the *Compendium* Hugh discusses the four means by which
 Antichrist will deceive people, and we offer excerpts from that chapter.⁶⁹

68 For discussion of the *Compendium* see Luzian Pfleger, “Der Dominikaner Hugo von Stras-
 sburg und das ‘Compendium theologiae veritatis,’” *Zeitschrift für katholische Theologie* 28
 (1904), pp. 429–440; Martin Grabmann, “Entscheidung der Autorfrage des ‘Compendium
 theologiae veritatis,’” *Zeitschrift für katholische Theologie* 45 (1921), pp. 147–153; Georg
 Steer, *Hugo Ripelin von Straßburg: Zur Rezeptions- und Wirkungsgeschichte des ‘Compen-
 dium theologiae veritatis’ im deutschen Spätmittelalter* (Tübingen: Niemeyer, 1981),
 reviewed by Nigel F. Palmer in *Modern Language Review* 78.2 (1983), pp. 486–487; and
 Georg Steer, “Hugo Ripelin von Straßburg,” in Wolfgang Stammeler and Karl Langosch,
 eds., *Die deutsche Literatur des Mittelalters: Verfasserlexikon* (Berlin and New York: de
 Gruyter, 1978–), vol. 4, cols. 252–266.

69 In the past the *Compendium* was sometimes attributed to Albertus Magnus, and thus it is
 printed in Albertus Magnus, *D. Alberti Magni Ratisbonensis episcopi ordinis Praedicatorum
 Opera omnia*, ed. A. Borgnet (Paris: apud Ludovicum Vivès, 1890–95), vol. 34, pp. 1–306;

Merito comparatur Antichristus cerasti qui est serpens cornutus: quia quatuor cornibus armabitur, scilicet callida persuasione, miraculorum operatione, donorum largitione, et tormentorum exhibitione. Primus ergo modus subvertendi homines erit callida persuasio. Praedicabit enim legem novam pravam esse, et legem Christi pro posse destruet. Praedicatores enim sui discurrent per universas partes mundi Secundus modus subvertendi erit per fallacia miracula: quia per artem magicam illa faciet.... Item, per artem magicam simulabit se mortuum, et feretur a daemonibus in aera, quasi ascendat in coelum: et sic putabitur ab hominibus resurrexisse, qui prius mortuus putabatur: et tunc mirabuntur populi, et adorabunt eum, atque laudabunt.... Tertio, decipiet per munera. Ipse namque Antichristus inveniet thesauros absconditos, per quos ad sequendum se inclinabit plurimos: ditabit enim bonis divites hujus saeculi, et tunc eorum falsam felicitatem ad decipiendum alios ostendet. Quarto, compellet per minas, et tormenta, quos aliter vincere non poterit. Tanta vero, sicut ait Dominus, tunc erit tribulatio, ut in errorem inducantur, si fieri potest, etiam electi Antichristus autem sicut erit crudelior omnibus persecutoribus, ita sancti tunc temporis fortiores erunt omnibus retro martyribus.

Antichrist is rightly compared to a *cerastes*, which is a serpent with horns, for he is armed with four horns, namely subtle persuasion, the working of miracles, gifts of presents, and the distribution of tortures. His first method for overthrowing men, then, will be subtle persuasion. For he will proclaim that the new law is wicked, and he will destroy the law of Christ as far as possible. His preachers will run through all parts of the world.... His second method of overturning men will be by false miracles, for he will perform these by means of the magic art.... Likewise, by means of magic he will feign death, and will be carried into the air by demons, and as it were, go up into Heaven: and so he will be thought by men to have been resurrected, who before was thought to be dead: and the people will be amazed, and will bow down before him, and praise him.... Third, he

the Antichrist section of Book VII, "De ultimis temporibus," is on pp. 241–245, and see especially pp. 242–243 on his four methods of deceiving people—the passage quoted comes from this edition. The *Compendium* was also sometimes attributed to St. Bonaventura, and thus this same chapter is also printed in St. Bonaventura, *Compendium theologiae veritatis*, Book 7, chapter 9, in St. Bonaventura, *S. R. E. Cardinalis S. Bonaventurae ... opera omnia Sixti V. pontificis maximi jussu diligentissime emendata* (Paris: Ludovicus Vivès, 1864–71), vol. 8, pp. 232–233.

will deceive through gifts. For Antichrist himself shall find hidden treasures by which he will persuade many to follow him: he will enrich the rich of his era, and then he will show their false happiness in order to deceive others. Fourth, he will compel with threats and tortures those who he was not able to overcome in any other way. So great, in fact, as the Lord says, will the tribulation then be, that even the elect will be led astray, if that is possible But as Antichrist will be more cruel than all persecutors, so the saints of that time will be stronger than all the martyrs of earlier times.

It is difficult to doubt that Hugh Ripelin of Strasbourg's *Compendium* was the source of the ideas underlying the map on f. 10v of HM 83 (or that they shared a common source), though the cartographic interpretation of those ideas is original and unique. There is a similar passage in a sermon by the famous preacher Bertold of Regensburg (c. 1220–1272),⁷⁰ who in his *Rusticanus de Dominicis*, *Sermo sextus*, describes how Antichrist will deceive people. Part of the text near the beginning of this discourse runs:⁷¹

illis enim erit cerastes, qui dicitur serpens cornutus, unde ceraste grece, latine cornua dicuntur. per quem recte Antichristus intelligitur, qui contra nos multis cornibus armabitur, de quibus omnibus nunc non sufficimus enarrare, sed nunc ad presens tantum de quatuor principalibus aliqua breviter dicam, scilicet de callida suasionem et miraculorum operatione et beneficiorum largitione et minarum terrore.

70 There is a good brief discussion of Berthold in Frank G. Banta, "Berthold von Regensburg: Investigations Past and Present," *Traditio* 25 (1969), pp. 472–479; for a more detailed treatment see Georg Steer, "Leben und Wirken des Berthold von Regensburg," in *800 Jahre Franz von Assisi: Franziskanische Kunst und Kultur des Mittelalters: Niederösterreichische Landesausstellung, Krems-Stein, Minoritenkirche 15. Mai – 17. Oktober 1982* (Vienna: Amt der NÖ Landesmuseums, Abt III/2 – Kulturabteilung, 1982), pp. 169–175; and Ariane Czerwon, *Predigt gegen Ketzer: Studien zu den lateinischen Sermones Bertholds von Regensburg* (Tübingen: Mohr Siebeck, 2011). On the manuscripts of Berthold's Latin sermons see Laurentius Casutt, *Die Handschriften mit lateinischen Predigten Bertholds von Regensburg O. Min. ca. 1210–1272* (Freiburg/Schweiz, Universitätsverlag, 1961).

71 See Anton E. Schönback, "Studien zur Geschichte der altdeutsche Predigt: Die Überlieferung der Werke Bertholds von Regensburg, I," *Sitzungsberichte der Philosophisch-Historischen Klasse der Kaiserlichen Akademie der Wissenschaften* 151 (1906), pp. 1–184, *Rusticanus de Dominicis*, *Sermo sextus*, pp. 5–21, esp. 13–17, particularly 13.

For to them he will be a *cerastes*, which is said to be a serpent with horns, whence they are called a *cerastes* in Greek, and *cornua* in Latin, by which Antichrist is rightly understood, who will be armed against us with many horns. There is no time now to describe them all, but for the present I will just say something brief about the four principal ones, namely about subtle persuasion and the working of miracles and gifts of presents and the terror of threats.

Bertold expatiates on these four horns at some length, and the gist of his discourse is similar to Hugh's. Bertold and Hugh were contemporaries, and it does not seem possible to know whether Bertold borrowed from Hugh, or vice versa, but it does seem clear that the author of HM 83 borrowed from Hugh rather than from Bertold, as Hugh and the author of HM 83 speak of tortures, while Bertold speaks of threats.⁷²

The text below the map on f. 10v, which looks ahead to the map on f. 11r, reads:

Hec figura sequens est mappa mundi de dominio terre ab anno christi 1606 ad annum Jhesum Christum 1661 danielis XII in fine et est hec figura de dominio 45 annorum. Gog occiso stabit regnum Jesum Christum hic in terra per 45 annos et erit hoc tempore aureum plenum pace mansiva et omni bono, variis religionibus per machimetum et gog annullatis in figuris precedentibus. Hic vigebit coniugium pro completionem numeri electorum. Ita ut sciam simul plures pueros par<i>unt sicut olim quando exierunt de egipto in terram promissionis ysaye et ita ut dicitur "Angustus

72 This material about Antichrist's four methods, whether from Hugh or from Bertold, appears in one other source contemporary with them, namely the so-called 'Passau Anonymous,' who wrote in the 1260s. See *Vom Antichrist: Eine mittelhochdeutsche Bearbeitung des Passauer Anonymus*, ed. Paul-Gerhard Völker (Munich: W. Fink, 1970), chapter 12, "Qualiter anticristus hominess (*sic*) decipiet," pp. 83–84, at 83: *Das ain sind sein valsch vnd böß rütt, das ander seine zaichen, die er tüt, das dritte, die groß gaub vnd ere, die er git, daz vierd drawe vnd schricke vnd marter; wann gott wirt im verhengent, wen er mit künender rede vnd raut oder mit zaichen oder mit gaub oder mit draw nit überwinden mag, daz er die mit mäniger vnd grülicher schlachte marter tötte*, that is, "The first <thing> are his false and evil counsels, the second his <miraculous> signs that he works, the third the great gift<s> and honor<s> that he gives, the fourth threat<s> and terror and torture, since God will give to him <this>: <that> those whom with skillful speech and counsel or with signs or with gift<s> or with threat<s> he will not be able to overcome, that he kill those with the torture of manifold and horrid battles." We thank Renate Burri for her help with this translation.

est mihi locus fac spatium ubi habitem.” Machometus et antichristus sicut religiones exfinxerunt sic et biblie libros et expositores conbusserunt. Hic tamen biblie reservare usus est ad finem mundi. Tunc ultra ut biblie usus erit. Nec mirere hoc fieri in Europa cum machometus hoc iam complevit pro maiori parte in Asia et affrica. Sicut nunc principalis pars ecclesie est ex gentibus sic tunc principalior pars erunt X tribus Israel sicut multipliciter scriptura divina ostendit. Sequitur figura.

The following diagram is a map of the lordship of the world from the year 1606 to the year 1661—<see> the end of Daniel 12—and this is a diagram of the lordship of those 45 years. Following the death of Gog, the kingdom of Jesus Christ will stand here in the world for 45 years and there will be in this period plenty of gold, with lasting peace and all good, following the destruction of various religions of Muhammad and Gog that we saw in the preceding diagrams. Here marriage will flourish towards the completion of the number of the elect. As I know, many will give birth to children at the same time, just as in the old days when they departed from Egypt to the promised land of Isaiah, and as it is said, “This place is too small for us; give us more space to live in” (Isaiah 49:20). Muhammad and Antichrist, just as they invented religions, so they burned both the books of the Bible and their interpreters. Here <on earth> nonetheless the use of the Bible, which was preserved, will continue till the end of the world, and even afterwards the use of the Bible will continue. Do not marvel that this should happen in Europe, as Muhammad has already done the same in the greater part of Asia and Africa. Just as now, the greatest part of the church consists of non-Jews, then an even larger part will be of the Ten Tribes of Israel, just as Holy Scripture shows many times. Here follows the diagram.

The apocalyptic chronology here involves an error of arithmetic: 1606 plus 45 years is 1651, rather than 1661, the figure that the text gives.⁷³ This passage represents one case in which we can get an idea of how the author of HM 83 arrived at his chronology of the Apocalypse. At the beginning of this passage—which, just to repeat, looks ahead to the map on f. 11r—the author refers to the end of Daniel 12 and to a period of 45 years. Near the end of Daniel 12 we read (12:11–12): “From the time that the daily sacrifice is abolished and the abomina-

73 The arithmetic is correct in the rubric for the map that corresponds to that on f. 11r here in Wolfenbüttel, Herzog August Bibliothek, Cod. Guelf. 442 Helmst., Beilage f. 1r: see below.

tion that causes desolation is set up, there will be 1,290 days. Blessed is the one who waits for and reaches the end of the 1,335 days.” If we take 1335 minus 1290, we get 45. It was certainly from this passage that author of HM 83 arrived at the span of 45 years covered by the map on f. 11r, but his thought process in doing so is not at all clear. Setting aside the fact that Daniel is talking about days rather than years—for this type of change in units of time is common in interpretations of apocalyptic chronology—it is not clear why the author attributed such significance to the numbers in this passage in Daniel, or even why he thought that one of the numbers should be subtracted from the other. It is worth mentioning that Jerome in his commentary on Daniel did not interpret these days as years.⁷⁴

The passage about the Bible being used after the end of the world is a paraphrase of Matthew 24:35, or Mark 13:31, or Luke 21:33: “Heaven and earth will pass away, but my words will never pass away.”

The Map and Text on f. 11r

This folio has two maps (see Fig. 5.8), one large near the top of the page as on the other folios in this section, the other smaller and towards the bottom of the page. The large map, which is introduced by a long paragraph at the bottom of f. 10v, represents a complete change from the situation depicted in the map on f. 10v. There Antichrist was at the center of the world, deceiving people with his four horns while the Ten Tribes of Israel marched towards Jerusalem to support him; here on f. 11r Antichrist, his horns, and his followers have disappeared, and the flag of Christ is at the center of the world, and Christ is said to be worshipped everywhere. There are no geographical details of the earth in the image, but it should still be recognized as a map, for both the format of the image and the texts on it make it clear that it represents the earth. The smaller map is remarkable, for it is completely blank, representing a new earth, from which all familiar geographical details have been wiped away. As the image is explicitly identified as a map in the text, it represents an interesting challenge for anyone attempting to define the word ‘map.’⁷⁵ The text outside the upper

74 Saint Jerome, *Jerome's Commentary on Daniel*, trans. Gleason L. Archer, Jr. (Grand Rapids: Baker Book House, 1958), pp. 150–151. On the interpretation of Biblical days as years also see Robert E. Lerner, “Refreshment of the Saints: The Time after Antichrist as a Station for Earthly Progress in Medieval Thought,” *Traditio* 32 (1976), pp. 97–144, esp. 130–133. We thank Laura Smoller for this latter reference.

75 This image of the world does fulfill the definition of maps as “graphic representations that facilitate a spatial understanding of things, concepts, conditions, processes, or events in the human world,” which is supplied by J. B. Harley and David Woodward, eds., *The History of Cartography* (Chicago: University of Chicago Press, 1987–), vol. 1, p. xvi. For

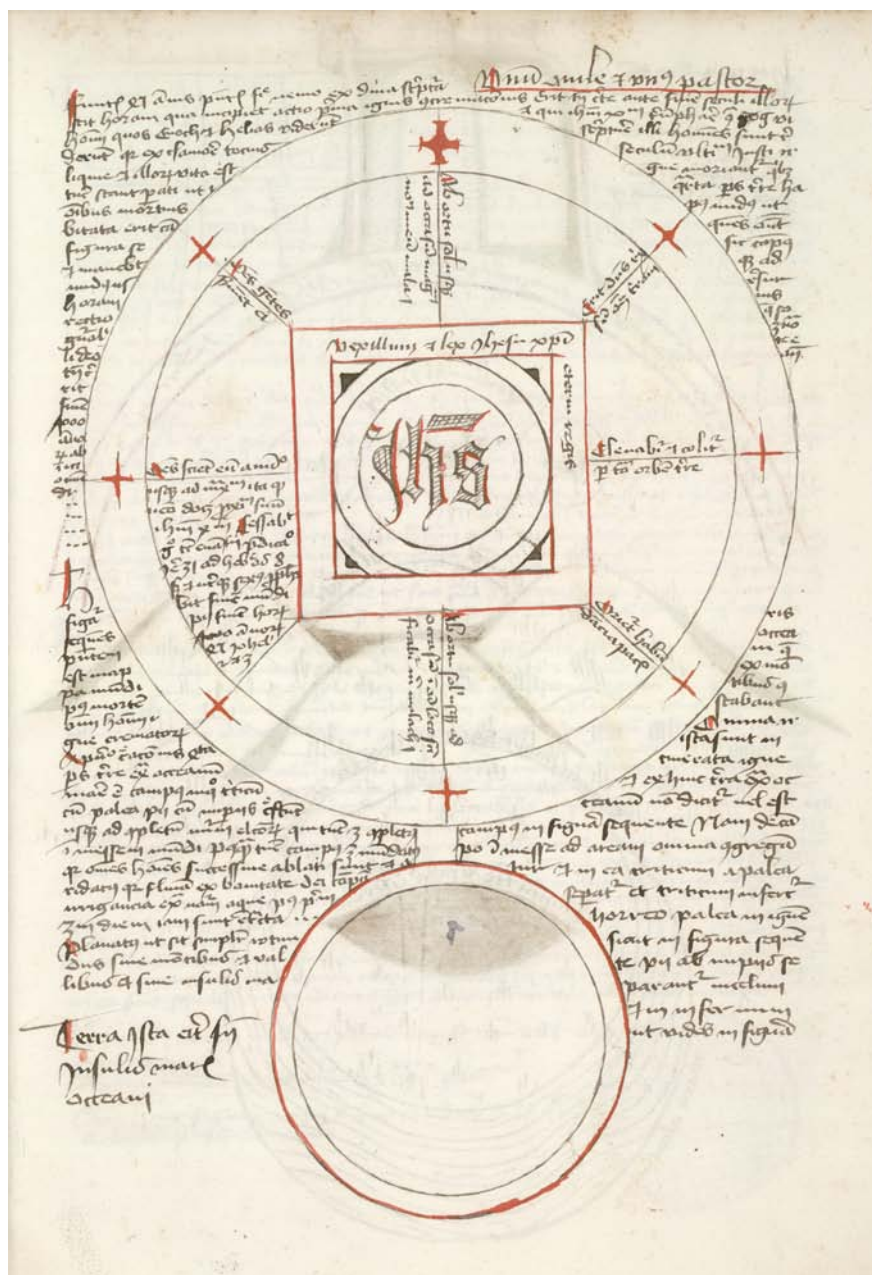


FIGURE 5.8 Huntington HM 83, f. 11r. A prophecy map of the world from 1606 to 1661 (a mistake for 1651). The situation has changed completely from that in the preceding map: the center of the earth is now occupied by the flag and law of Christ, which we are told will be raised and worshipped throughout the world (COURTESY OF THE HUNTINGTON LIBRARY).

half of the large map applies to that map, while the text outside the lower half of the large map applies to the smaller map below. The text at the bottom of f. 10v, the preceding folio, says that the map shows what will happen to the world from 1606 to 1661 (an error for 1651).

The texts on the large map are as follows. At the center of the world there is a large flag bearing the name *Jesus*, and in the upper border of the flag, the text *Vexillum et lex Jhesu Christi eterni regis*, “The flag and law of Jesus Christ, eternal king”—so the law of Christ has now replaced the law of Muhammad. The text at the top of the map, which is the east, reads *Ab ortu solis usque ad occasum magnum nomen meum Malachi*, “From the rising of the sun to its setting, my name is great (Malachi),” quoting from Malachi 1:11.⁷⁶ In the upper left, *Omnes gentes servient ei*, “All nations shall serve him,” quoting Psalm 71:11,⁷⁷ and in the upper right, *Erit dominus rex super omnem terram*, “The Lord will be the king over all the land,” quoting Zechariah 14:9.⁷⁸ The longer text on the left reads:

Omnes scient eum a minimo usque ad maximum ita que nemo docet proximum suum Ihesum christum. Cessabit ergo tunc evangeli praedictio Jerimiah 31 ad hebraeos 8 sed et uterque sexus prophetabit finem mundi prius finem horum annorum 45, Iohani 2 et 3.

Everyone from the least to the greatest will know him, and so no one will teach his neighbor about Jesus Christ. Therefore the foretelling of the evangelist will cease: Jeremiah 31, Epistle to the Hebrews 8. But men and women will predict the end of the world before the end of these 45 years. Joel 2–3.

additional discussions of the definition of ‘mappamundi’ and map’ see Alessandro Scafi, “Defining *Mappaemundi*,” in P. D. A. Harvey, ed., *The Hereford World Map: Medieval World Maps and Their Context* (London: British Library, 2006), pp. 345–354; and J. H. Andrews, “What Was a Map? The Lexicographer’s Reply,” *Cartographica* 33.4 (1996), pp. 1–11.

76 Malachi 1:11, *Ab ortu enim solis usque ad occasum magnum est nomen meum in gentibus et in omni loco sacrificatur et offertur nomini meo oblatio munda quia magnum nomen meum in gentibus dicit Dominus exercituum.*

77 Psalm 71:11, *Et adorabunt eum omnes reges terrae, omnes gentes servient ei.*

78 Zechariah 14:9, *Et erit Dominus rex super omnem terram in die illa erit Dominus unus et erit nomen eius unum.*

As the author indicates, the first phrase comes from Jeremiah 31:34,⁷⁹ the second from Hebrews 8:11,⁸⁰ and the third from Joel 2:28,⁸¹ though of course Joel does not mention the period of 45 years.

The text in the right-hand part of the map, which refers to the flag of Christ, reads *Elevabitur et colitur per totum orbem terre*, "It will be raised and worshipped throughout the world." The text in the lower right reads *Orietur habundacia pacis*, "There will arise an abundance of peace," and the text at the bottom of the map reads *Ab ortu soli usque ad occasum in omni loco sacrificatur Malachi 1*, "From the rising of the sun to its setting sacrifice is made everywhere (Malachi 1)," citing Malachi 1:11.⁸²

The rubric above and to the right of the map reads *Unum ovile et unus pastor*, "One flock and one shepherd," a quotation from John 10:16,⁸³ pointing to the unification of the world under Christ's leadership implied by the map. The text outside the top half of the map is in one column, i.e. continuous left to right, while the text outside the lower half of the map is in two columns. The text outside the upper half of the map reads:

Finitis 45 annis precedentis sicut nemo ex divina scriptura scit horam qua incipiet actio prima ignis concremationis, Erit tamen certe ante finem seculi illorum et qui ihesum christum triumphare contra Gog viderunt quod ex clamazione totius scripture. illi homines sunt reliquie et illorum vita est seculum ultimum. Iusti enim tunc stant parati ut igne moriantur, quibus omnibus mortuis, quarta pars terre habitata erit campus nudus ut figura sequens ostendit et manebit sic campus nudus usque ad horam resurrectionis generali<s> qua soli deo est notum certe erit ante finem 7000 annorum ab initio mundi.

79 Jeremiah 31:34, *Omnes enim cognoscent me, a minimo eorum usque ad maximum, ait Dominus.*

80 Hebrews 8:11, *Et non docebit unusquisque proximum suum et unusquisque fratrem suum dicens cognosce Dominum quoniam omnes scient me a minore usque ad maiorem eorum.*

81 Joel 2:28, *...et prophetabunt filii vestri et filiae vestrae senes vestri somnia somniabunt et iuvenes vestri visiones videbunt.*

82 Malachi 1:11, *Ab ortu enim solis usque ad occasum, magnum est nomen meum in gentibus, et in omni loco sacrificatur: et offertur nomini meo oblatio munda, quia magnum est nomen meum in gentibus, dicit Dominus exercituum.*

83 John 10:16, *Et alias oves habeo, quæ non sunt ex hoc ovili: et illas oportet me adducere, et vocem meam audient, et fiet unum ovile et unus pastor.* On the importance of this passage in apocalyptic prophecy see Marjorie Reeves, *The Influence of Prophecy in the Later Middle Ages: A Study in Joachimism* (Oxford: Clarendon Press, 1969), pp. 503–504.

After the preceding 45 years, as nobody knows from the Holy Scripture the hour at which the first action of the conflagration will begin, nonetheless it will certainly be before the end of the epoch of those people, and <of> those who will see Jesus Christ triumph over Gog, which <is> the proclamation of all the scripture. Those men remain, and their life is the final epoch. For the just men stand ready to die in the fire, and when they are all dead, one quarter of the inhabited land will be an empty field, as the following diagram shows. And it will remain an empty field until the hour of the general resurrection, which is known for sure only to God, <but> it will certainly come before the end of 7000 years from the beginning of the world.

The doctrine that the world would last 7000 years is a development of the idea that the world would last 6000 years, on analogy with the six days of creation, which goes back to the apocryphal Epistle of Barnabas 15:3–5,⁸⁴ deriving from 2 Peter 3:8, “...one day is with the Lord as a thousand years, and a thousand years as one day.” When the world did not end in Anno Mundi 6000, the chronology was extended another thousand years.⁸⁵

The text outside the lower half of the map, which applies to the small map below, reads:

Hec figura sequens precedentem est mappa mundi prius mortem omnium hominum igne crematorum. A principio cremationis quarta pars terre extra oceanum macer est campus in quo triticum cum palea

84 See Michael W. Holmes, *The Apostolic Fathers in English* (Grand Rapids, MI: Baker Academic, 2006), pp. 172–198, at 193–194: “He speaks of the Sabbath at the beginning of creation: ‘And God made the works of his hands in six days, and finished on the seventh day, and rested on it, and sanctified it.’ Observe, children, what ‘he finished in six days’ means. It means this: that in six thousand years the Lord will bring everything to an end, for with him a day signifies a thousand years. And he himself bears witness when he says, ‘Behold, the day of the Lord will be as a thousand years.’ Therefore, children, in six days—that is, in six thousand years—everything will be brought to an end. ‘And he rested on the seventh day.’ This means: when his son comes, he will destroy the time of the lawless one and will judge the ungodly and will change the sun and the moon and the stars, and then he will truly rest on the seventh day.”

85 For discussion of this chronology see Richard Landes, “Lest the Millennium Be Fulfilled: Apocalyptic Expectations and the Pattern of Western Chronography, 100–800 C.E.,” in Werner Verbeke, Daniel Verhelst, and Andries Welkenhuysen, eds., *The Use and Abuse of Eschatology in the Middle Ages* (Leuven: Leuven University Press, 1988), pp. 137–211; and Smoller, “The Alfonsine Tables and the End of the World” (see Ch. 5, n. 41), p. 214.

pii cum impiis restunt usque ad completum numerum electorum qui tunc est completum in messem mundi. priusquam tamen campus est mundatus quod omnes homines successive ablati sunt et aridatus quod flumina ex bonitate dei campum irrigantia extra naturam, aque post <principii?> tertium diem iam sunt circumscripta (*sic*) <...>. Planatus ut sit simpliciter rotundus sine montibus et vallibus et sine insulis maris oceani quod ex montibus constabant. Omnia enim ista sunt incinerata igne et ex hinc terra extra oceanum non dicitur vel est campus in figura sequente. Nam de campo in messe ad arcam omnia congregantur, et in ea triticum a palea separatur, et triticum infertur horreo palea in ignem, sicut in figura sequente pii ab impiis separantur in celum et in infernum, ut vides in figura.

This diagram, which follows the preceding, is a *mappamundi* before the death of all men burned up by fire. From the beginning of the fire a quarter of the land that is above the ocean is a bare field in which the grain with the chaff—the pious with the impious—will remain until the completion of the number of the elect, which will be complete in the harvest of the world. First however the field is cleaned, insofar as all men have been successively carried away, and dried because the rivers that through the goodness of God irrigated the field beyond nature, <because> the waters after the third day were already confined. <The earth> is flattened so that it is perfectly round without mountains or valleys or islands in the ocean, which are the tops of mountains. All those things have been incinerated by fire, and because of this, the land beyond the ocean is not mentioned, even if it is a field in the following diagram. For in the harvest, everything is gathered together from the field in one place, and in that place, the wheat is separated from the chaff, and the wheat is carried into the barn, and the chaff into the fire, just as in the following diagram, the pious are separated from the impious to Heaven and Hell, as you see in the diagram.

The phrase *quarta pars terre extra oceanum* sounds very much like Isidore's description of a hypothetical southern continent inhabited by the antipodes,⁸⁶ but rather means the fourth part of the earth that is above the level of the

86 Isidore, *Etymologiae* 14.5.17, *Extra tres autem partes orbis quarta pars trans Oceanum interior est in meridie, quae solis ardore incognita nobis est; in cuius finibus Antipodes fabulose inhabitare produntur*. For discussion of this passage see Hiatt, *Terra incognita* (see Ch. 4, n. 173), pp. 78–82.

ocean. Of course the imagery of the harvest as part of the Apocalypse comes from biblical passages such as Matthew 3:12, Luke 3:17, Matthew 14:24–43 (the Parable of the Tares), and Revelation 14:14–16. As we would expect from an author interested in geography and cartography, the account we have here of the transformation the earth undergoes is more detailed than the brief references in Revelation 6:14, “...every mountain and island was removed from its place,” and 16:20, “And every island fled away, and the mountains were not found.”⁸⁷ Our author specifies that the rivers are dried up and that the mountains are flattened so that the earth becomes a perfect sphere, and depicts this state of affairs in a remarkable blank map. To the left of the map are the words *Terra ista <...> sine insulis maris oceani*, “This is the earth without islands in the ocean.” The absence of islands here is to be contrasted with the emphasis on islands in some of the maps in the geographical section of HM 83, particularly those on ff. 3r and 3v (see Figs. 4.9 and 4.10).

The Map and Text on f. 11v

The complex image on this folio (Fig. 5.7) represents what will happen to the earth during the Last Judgment. The date of this event is not indicated, which is surprising given the author's strong interest in apocalyptic chronology, but we are left to believe that it would follow closely the end of the period covered by the map on f. 11r, which the author indicates as 1661, but which should be 1651 according to the figures he supplies. At the bottom of the image is the earth surrounded by the ocean, with the earth is eccentric to the sphere of water, just as in the maps on ff. 6v–7r (Fig. 4.14) and 7v–8r (Fig. 4.15), and an image of the abyss into which the damned will fall. The abyss below the Mount of Olives was perhaps inspired by Zechariah 14:4, in which a rift is said to open beneath the Lord's feet when he is on the Mount of Olives. Above this there is a view of the Mount of Olives and some other mountains, very similar to the image of mountains on f. 5r, and functioning as a detail of the image of the earth below. The device of a detail of a map is unusual in the late Middle Ages, but we saw a closely related idea in the progression of images on ff. 13r, 13v, and 14r, where each image is in effect a detail of the preceding as the cartographer ‘zooms in’ on the earth, and we will discuss another example in the world map and map of the Holy Land on the front flyleaf of Wolfenbüttel, Herzog August Bibliothek, Cod. Guelf. 442 Helmst., a manuscript closely related with HM 83.

87 For discussion of apocalyptic imagery of the flattening of the earth's mountains in the *Oracles of Hystaspes*, fragments of which are preserved in Book 7 of Lactantius's *Divine Institutions*, see Bruce Lincoln, “The Earth Becomes Flat’—A Study of Apocalyptic Imagery,” *Comparative Studies in Society and History* 25.1 (1983), pp. 136–153, at 143–145.

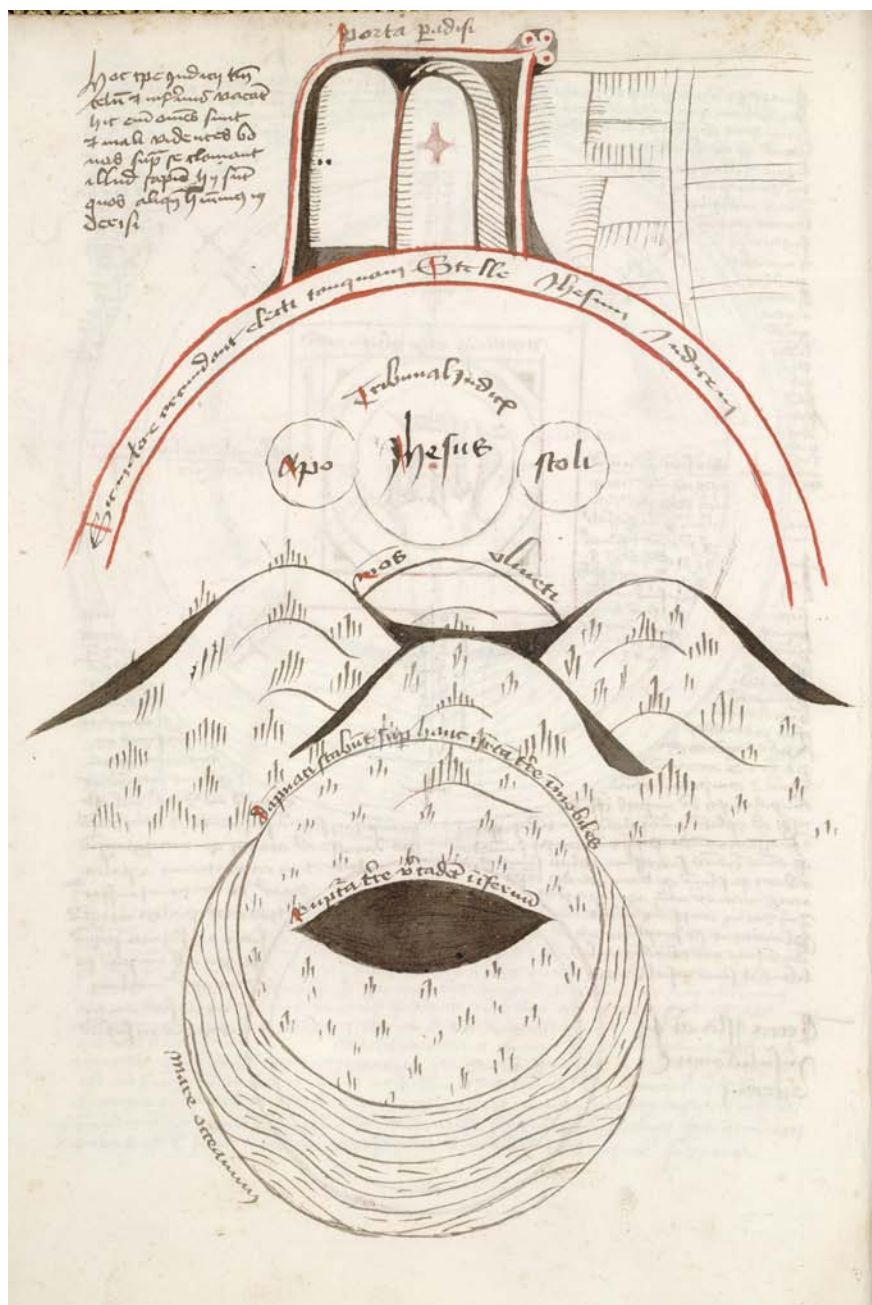


FIGURE 5.9 Huntington HM 83, f. 11v. *The Last Judgment*. The gates of Paradise are at the top, the elect in a curved band just below, then Jesus and the Apostles in the sky; below on the earth is the Mount of Olives, then the damned in a curved band standing above the abyss that leads to Hell (COURTESY OF THE HUNTINGTON LIBRARY).

The presence of the Mount of Olives in the diagram in HM 83, f. 11v is puzzling, given that all of the world's mountains were said to have been flattened on the preceding folio, but certainly the author was inspired to imply that Jesus rose to Heaven from the Mount of Olives after his Second Coming from the fact that he arose from the same mountain after his first sojourn on earth: see Acts 1:9–12. Above the Mount of Olives, Jesus and the Apostles are in the sky, and above them, the elect are in a rainbow-like band across the sky, and are said to be like the stars. Above the elect is their destination, the gates of paradise, elaborately drawn and contrasting with the destination of the damned far below.

The grid to the right of the gates of Paradise is intended to represent the wall surrounding the Heavenly Jerusalem: the walls receive great emphasis in the description of the city in Revelation 21:11–20,⁸⁸ and no doubt the author of HM 83 did not indicate the walls to the left of the gates simply because he needed this space for the text written. On another folio in HM 83 there is another depiction of this wall: on f. 13r there is a diagram of the universe, with the earth at the center, surrounded by the elemental and then celestial spheres, which are labeled out to the *Empyreum*; outside of the Empyrean sphere there are two unlabeled spheres, and beyond these, at the very top of the diagram, there is a rectangle containing a grid that is clearly intended to represent the same object as the grid beside the gates of Paradise on f. 11v: the wall surrounding the Heavenly Jerusalem. The latter part of the text on f. 13r addresses the celestial spheres, but breaks off abruptly before anything is said about Paradise.⁸⁹

With regard to the text on f. 11v, above the Gates of Paradise we read *porta paradisi*, “Gates of Paradise,” and just to the left of the Gates we read:

hoc tempore iudicii totum celum et infernus vacant. hic enim omnes sunt et mali, videntes bonos supra se, clamant illud sapientes “hii sunt quos aliquando habimus in derisi”

At this time of judgment, the whole of Heaven and Hell are empty. However, everyone is here, and the evil ones, seeing the good people

88 For discussion of the iconography of the Heavenly Jerusalem see Stanislaw Kobielski, “La Jérusalem céleste dans l’art médiéval,” in Evelyne Berriot-Salvadore, ed., *Le mythe de Jérusalem du Moyen Âge à la Renaissance* (Saint-Etienne: Publications de l’Université de Saint-Etienne, 1995), pp. 101–121; on earlier traditions see Bianca Kühnel, *From the Earthly to the Heavenly Jerusalem: Representations of the Holy City in Christian Art of the First Millennium* (Freiburg im Breisgau: Herder, 1987).

89 The end of the text on f. 13r reads: *Regio celestis habet tres celos, firmamentum ut celum primum, Cristallinum ut 2m Empyreum et 3m....*

above them, cry out, knowing this: “These are the ones whom we held for some time in derision.”

The quotation at the end is from the apocryphal Book of the Wisdom of Solomon 5:3: *Hi sunt quos habuimus aliquando in derisum*. The rainbow-like curved surface on which the Gates of Paradise rest has text that reads *Sic in aere circumdant electi tamquam Stelle Jhesum iudicem*, “Thus in the air, the chosen surround Jesus Christ like stars,” drawing on Daniel 12:3.⁹⁰ Below the rainbow we have *Jhesus* and the *apostoli* in the sky, and they are labeled *Tribunal Judiciis*, i.e. *Tribunal Judicii*, “Tribunal of Judgment,” and they are above the *mons oliveti*, “Mount of Olives.” Just below the Mount of Olives, and along the top edge of the image of the earth, we read *Dampnati stabunt super hanc rupturam terre immobiles*, “The damned stand immobile above this abyss in the earth.” Above the hole in the earth are the words *Ruptura terre unde cadetur in infernum*, “Abyss in the earth from which one falls into Hell,” and the water in which the earth sits is labeled *mare oceanum*, “The ocean.”

The Map and Text on f. 12r

The penultimate folio (Fig. 5.10) of the treatise on the Apocalypse supplies detailed discussion of the Last Judgment for which the map on the preceding folio left inadequate space; as well as a small map that is essentially the same as the blank map of the earth on f. 11v, but with what looks like a grid of latitude and longitude—but perhaps we are to understand that after the earth is crystallized (as described in the text), its appearance is like that of the wall of the Heavenly Jerusalem, which is depicted as a grid on ff. 11v and 13r. The text runs:

Ruptura terre data in iudicio sententia ut impii incident figuratur et arguitur ex ruptura terre numerorum 16 in quam chore cum suis cecidit nec tamen corpora illorum ruerunt in tophet⁹¹ tunc sed circa superficiem terre manserunt profundius tamen communi in sepulchro, sed prius

90 Daniel 12:3, *Qui autem docti fuerint, fulgebunt quasi splendor firmamenti: et qui ad iustitiam erudiunt multos, quasi stellae in perpetuas aeternitates*.

91 The reference is to the story of Korah in Numbers 16, who rebelled against Moses. See Numbers 16:31–33: “As soon as he finished saying all this, the ground under them split apart and the earth opened its mouth and swallowed them and their households, and all those associated with Korah, together with their possessions. They went down alive into the realm of the dead, with everything they owned; the earth closed over them, and they perished and were gone from the community.” For a good discussion of the episode see John S. Vassar, *Recalling a Story Once Told: An Intertextual Reading of the Psalter and the Pentateuch* (Macon, GA: Mercer University Press, 2007), pp. 45–61.

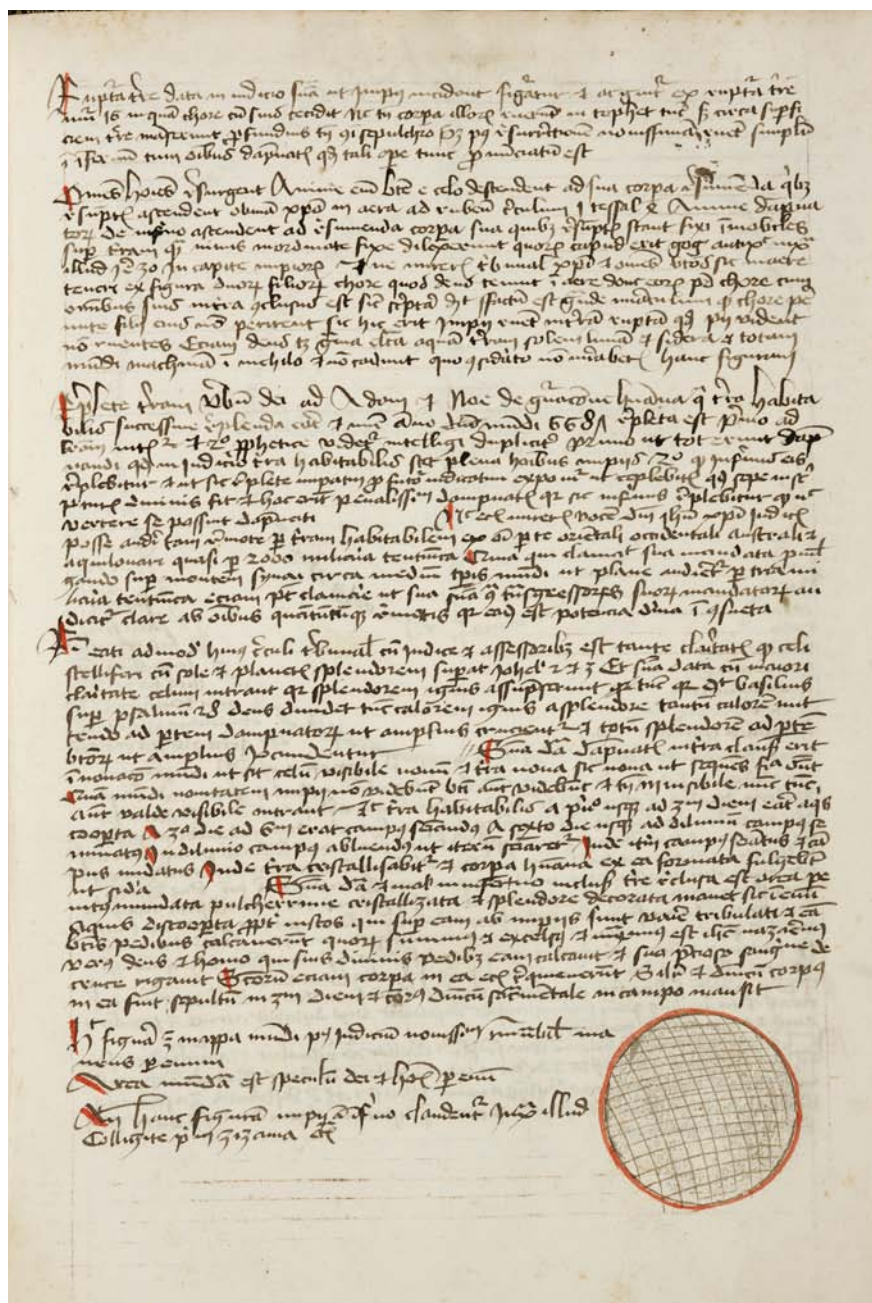


FIGURE 5.10 Huntington HM 83, f. 12r. Description of the Last Judgment, Resurrection, and renewal of the earth, with a small map of a featureless earth which the text says represents the world after the Last Judgment (COURTESY OF THE HUNTINGTON LIBRARY).

resurrectionem novissimam ruent simplum in infernum cum omnibus dampnatis quod tali opere tunc pronunciatum est.

Omnes homines resurgent. Anime cum virtute e celo descendent ad sua corpora adsumenda, quibus resumptis, ascendent obviam christum in aera ad rubeum circulum in tessal (i.e. Thessalonians) 4,⁹² et Anime dampnatorum de inferno ascendent ad resumenda corpora sua, quibus resumptis, stant fixi immobiles super terram, quam nimis inordinate fixe dilexerunt, quorum capud erit gog antichristus. iuxta illud Jeremiah 30. "In capite impiorum."⁹³ Et ne mirere tribunal christi et omnes beatos sic in aere tenere ex figura duorum filiorum chore quos deus tenuit in aere donec corpus patris chore cum omnibus suis in terra conclusus est, sicut scriptura dicit: "factum est grande miraculum quod chore pereunte, filii eius non perirent."⁹⁴ Sic hic erit impii ruent in terram ruptam quod pii vident non ruentes. Etiam deus tenet gravissima elementa aquam terram solem lunam et sidera et totam mundi machinam in nichilo et non cadunt, quo considerate, non mirabere hanc figuram.

"Replete terram" verbum dei ad Adam et Noe de generatione humana,⁹⁵ qua terra habitabilis successive replenda erat, et nunc anno mundi 6684 repleta est, primo ad scripturam intelligi, et secundo prophetice videtur intelligi. dupliciter, primo ut tot erunt dampnandi quod in iudicio terra habitabilis stet plena hominibus impiis, secundo quod in primis eis replebitur, et ut sic "replete" imperatum pro futuro iudicatum, exponitur ut "replebitis," quod sepe in scripturis divinis sit. Et hoc oritur penalissimum dampnatis quod sic infernus replebitur quod ut vertere se <non> possint dampnati.

Nec etiam mirere vocem domini Jesum christi iudice posse audiri tam remote per terram habitabilem ex omni parte orientali occidentali australi et aquilonari quasi per 2000 miliaria teutonica. Venia qui clamat sua mandata promulgando super montem synai circa medium temporis mundi ut plane indicitur per tria miliaria teutonica, etiam potest clamare

92 Both the general idea here and the phrase *obviam christum in aera* come from Thessalonians 4:17: *Deinde nos, qui vivimus, qui relinquimur, simul rapiemur cum illis in nubibus obviam Christo in aëra, et sic semper cum Domino erimus.*

93 See Jeremiah 30:23: *Ecce turbo Domini furor egrediens procella ruens in capite impiorum conquiescet.*

94 Numbers 26:10–11: *Et factum est grande miraculum, ut, Core pereunte, filii illius non perirent.*

95 Genesis 1:28: *Benedixitque illis Deus, et ait: Crescite et multiplicamini, et replete terram...;* and Genesis 9:1: *Benedixitque Deus Noë et filiis ejus. Et dixit ad eos: Crescite, et multiplicamini, et replete terram.*

ut sua sententia contra transgressores suorum mandatorum audiat
clare ab omnibus quantulumque remotis quod eadem est potentia divina
inconsueta.

Beati ad modum huius circuli tribunal cum Iudice et assessoribus est
tante claritate quod celi stelliferi cum sole et planete splendorem superat
Johel 2 et 3.⁹⁶ Et sententia data cum maiori claritate celum intrant quod
splendorem ignis assumpserunt tunc quod dicit Basilius super psalmum
28: "deus dividet tunc calorem ignis a splendore tantum calorem mit-
tendo ad partem dampnatorum ut amplius crucientur et totum
splendorem ad partem beatorum ut amplius jucundentur."⁹⁷

Sententia data dampnatis in terra clausis, erit innovatio mundi ut sit
celum visibile novum et terra nova sic nova ut sequens figura ostendit.⁹⁸
Veniam <et> mundi novitatem impii non videbunt beati autem videbunt
et tum invisibile nunc tunc autem valde visibile intrant. Etiam terra hab-

96 The references to Joel here are a bit surprising. The author seems to be citing Joel 2:10 and 3:15, which speak of the sun and moon being darkened and the stars no longer shining, but that imagery goes a step further than the tribunal simply being brighter than the stars, sun, and planets, to imply that the brightness of the tribunal will obscure the light of those celestial bodies.

97 There are differences in the various manuscripts and editions of St. Basil's *Homiliae in Psalmos*, and the version of the work cited here does not match well with that in the *Patrologia Graeca* 29:298, or with that in St. Basil, *Opera omnia quae extant, vel quae ejus nomine circumferuntur, ad mss. codices gallicanos, vaticanos, florentinos & anglicos, necnon ad antiquiores editiones castigata* (Paris: J. B. Coignard, 1721–30), vol. 1, p. 361, though the version cited here is translated in Saint Basil, *Exegetic Homilies*, trans. Agnes Clare Way (Washington: Catholic University of America Press, 1963), p. 206. However, it does match well the version cited by Jacobus de Voragine (c. 1230–1298) in his *Legenda aurea: vulgo historia Lombardica dicta*, ed. J. G. Théodor Graesse (Dresden and Leipzig: Impensis Librariae Arnoldianae, 1846), chapter 1, "De adventu Domini," p. 8: *Nam secundum Basilium Deus facta mundi purgatione dividet calorem a splendore et totum calorem mittet ad regiones damnatorum, ut amplius crucientur, et totum splendorem ad regionem beatorum, ut amplius jucundentur*; also see Jacobus de Voragine, *The Golden Legend: Readings on the Saints*, trans. William Granger Ryan (Princeton: Princeton University Press, 1993), p. 9: "According to Saint Basil, once the purgation of the world is accomplished, God will separate the heat of the fire from its light and will send all of the heat to the region of the damned to torture them, and all the light to the region of the blessed to their great enjoyment." This version is also cited by St. Thomas Aquinas: see *The 'Summa Theologica' of St. Thomas Aquinas* (London: Burns, Oates & Washbourne, Ltd., 1913–), Third Part (Supplement), QQ. LXXXVII–XCIX. and Appendices, Question 97, Article 4, "Whether the Damned are in Material Darkness," pp. 172–173

98 See Revelation 21:1, *Et vidi caelum novum et terram novam primum enim caelum et prima terra abiit et mare iam non est.*

itabilis a primo usque ad tertium diem erat aquis cooperta. A tertia die ad sextem erat campus seminandus. A sexto die usque ad diluvium campus seminatus. In diluvio campus abluendus ut iterum seminaretur. Inde iterum campus seminatus et campus nudatus. Inde terra crystallisabitur et corpora humana ex ea formata fulgebunt ut sidera.

Sententia data et mali in inferno inclusi terre, reclusa est arca penitus mundata pulcherrime cristallizata et splendore decorata, manet sic in <circulum?> aquis discooperta propter iustos qui super eam ab impiis sunt varie tribulati et eam beatis pedibus calcaverunt, quorum summus et excelsus et maximus est iesus nazarenus, verus deus et homo qui suis divinis pedibus eam calcavit et suo pretioso sanguine de cruce rigavit. Sanctorum etiam corpora in ea etiam requiescerunt. Similiter et dominicum corpus in ea fuit sepultum in tertium diem et corpus dominicum sacramentale in campo mansit.

Hec figura esta mappa mundi post iudicium novissimum mutabit manens pro evum

Arca mundata est speculum dei et homine per evum

In hanc figuram impii in inferno claudentur. juxta illud “Colligite primum zizania,” etc.⁹⁹

The last three lines of the preceding text are beside the small map of the blank earth that has a grid on it. We translate:

The abyss in the earth—the sentence having been given in judgment that the impious should fall—is depicted, and it is based on the abyss in the earth in Numbers 16, into which Korah and his followers fell.¹⁰⁰ However, their bodies will not fall into Hell then, but will remain in the upper parts of the earth, very deep in a common grave, but before the Last Resurrection

99 See Matthew 13:30, *Sinite utraque crescere usque ad messem, et in tempore messis dicam messoribus: Colligite primum zizania, et alligate ea in fasciculos ad comburendum: triticum autem congregare in horreum meum.*

100 The reference is to the story of Korah in Numbers 16, who rebelled against Moses. See Numbers 16:31–33: “As soon as he finished saying all this, the ground under them split apart and the earth opened its mouth and swallowed them and their households, and all those associated with Korah, together with their possessions. They went down alive into the realm of the dead, with everything they owned; the earth closed over them, and they perished and were gone from the community.” For a good discussion of the episode see John S. Vassar, *Recalling a Story Once Told: An Intertextual Reading of the Psalter and the Pentateuch* (Macon, GA: Mercer University Press, 2007), pp. 45–61.

they will fall straight into Hell with all of the damned, as it was declared in that work (i.e. Numbers).

All men will rise again. The souls of the virtuous will descend from Heaven to assume their bodies, and when they have assumed them, they will ascend to meet Christ in the air at the red circle (i.e. rainbow), see Thessalonians 4.¹⁰¹ The souls of the damned will ascend from Hell to assume their bodies, and when they have assumed them, they <will> stand immovably fixed on the earth, which they loved far too much and intently; their chief will be Gog Antichrist. Regarding this, see Jeremiah 30, "On the head of the wicked."¹⁰² And do not marvel that the tribunal of Christ and all the blessed are thus suspended in the air, according to the example of the two sons of Korah, whom God held in the air while the body of their father Korah with all his people was swallowed by the earth, as the Bible says: "A great miracle was performed: although Korah died, his sons survived."¹⁰³ Thus will it be here: the impious will fall into the ruptured earth, which the pious will see, but they will not fall. Indeed, God holds the heaviest elements, namely the water, earth, sun, moon, and stars, and the whole structure of the world up in nothingness, and they do not fall—taking this into consideration, you should not be astonished by this diagram.

"Fill the earth" was God's word to Adam and Noah concerning the generation of men,¹⁰⁴ by which the habitable land was to be successively filled. And now, in the year of the world 6684, it is full. This may be understood first as Scripture, and second as a prophecy, in two senses, first, because there will be so many damned that in the Last Judgment the habitable land will be filled with impious men, and second, because it will be filled with them from the beginning, and thus as the imperative "Fill <the earth>" can be understood as standing for the future tense, meaning "You will fill," as is often the case in the Bible. And hence arises a very severe

101 Both the general idea here and the phrase *obviam christum in aera* come from Thessalonians 4:17: *Deinde nos, qui vivimus, qui relinquimur, simul rapiemur cum illis in nubibus obviam Christo in aëra, et sic semper cum Domino erimus.*

102 See Jeremiah 30:23: *Ecce turbo Domini furor egrediens procella ruens in capite impiorum conquiescet.*

103 Numbers 26:10–11: *Et factum est grande miraculum, ut, Core pereunte, filii illius non perirent.*

104 Genesis 1:28: *Benedixitque illis Deus, et ait: Crescite et multiplicamini, et replete terram...;* and Genesis 9:1: *Benedixitque Deus Noë et filiis ejus. Et dixit ad eos: Crescite, et multiplicamini, et replete terram.*

punishment to the damned, that Hell will be so full that the damned will <not even> be able to turn around.

Do not marvel that the voice of Jesus Christ, as judge, can be heard so far through the habitable earth, in all parts to the East, West, South, and North, as if across two thousand German miles. Clemency who proclaims his orders, promulgating <them> above Mount Sinai around the middle of the earth's history—as is plainly indicated—across three German miles, indeed he can shout so that his sentence against the transgressors of his orders can be clearly heard by everyone, no matter how distant, for so exceptional is the divine power.

The tribunal of this very blessed circle, with the judge and assessors, is of such brilliance that it surpasses the splendor of the star-bearing heavens with the sun and planets: Joel 2 and 3.¹⁰⁵ And after their sentence has been given, with even greater brilliance they enter Heaven so that they can then take up the splendor of fire, as Basil says on Psalm 28: “God will then separate the heat of the fire from the light, sending so much heat to the region of the damned that they will be tortured even more, and all the light to the region of the blessed so that they will have even more joy.”¹⁰⁶

105 The references to Joel here are a bit surprising. The author seems to be citing Joel 2:10 and 3:15, which speak of the sun and moon being darkened and the stars no longer shining, but that imagery goes a step further than the tribunal simply being brighter than the stars, sun, and planets, to imply that the brightness of the tribunal will obscure the light of those celestial bodies.

106 There are differences in the various manuscripts and editions of St. Basil's *Homiliae in Psalmos*, and the version of the work cited here does not match well with that in the *Patrologia Graeca* 29:298, or with that in St. Basil, *Opera omnia quae extant, vel quae ejus nomine circumferuntur, ad mss. codices gallicanos, vaticanos, florentinos & anglicos, nec non ad antiquiores editiones castigata* (Paris: J. B. Coignard, 1721–30), vol. 1, p. 361, though the version cited here is translated in Saint Basil, *Exegetic Homilies*, trans. Agnes Clare Way (Washington: Catholic University of America Press, 1963), p. 206. However, it does match well the version cited by Jacobus de Voragine (c. 1230–1298) in his *Legenda aurea: vulgo historia Lombardica dicta*, ed. J. G. Théodor Graesse (Dresden and Leipzig: Impensis Librariae Arnoldianae, 1846), chapter 1, “De adventu Domini,” p. 8: *Nam secundum Basilium Deus facta mundi purgatione dividet calorem a splendore et totum calorem mittet ad regiones damnatorum, ut amplius crucientur, et totum splendorem ad regionem beatorum, ut amplius jucundentur*; also see Jacobus de Voragine, *The Golden Legend: Readings on the Saints*, trans. William Granger Ryan (Princeton: Princeton University Press, 1993), p. 9: “According to Saint Basil, once the purgation of the world is accomplished, God will separate the heat of the fire from its light and will send all of the heat to the region of the damned to torture them, and all the light to the region of the blessed to their great enjoyment.” This version is also cited by St. Thomas Aquinas: see *The ‘Summa Theologica’ of St.*

After the sentence has been given and the damned are imprisoned in the earth, there will be a renewal of the earth, so that there will be a new Heaven visible and a new earth—new as the following diagram shows.¹⁰⁷ The impious will not see <God's> clemency and renewal of the world, but the blessed will see it, and what is now invisible will then be visible, and they will enter it. Similarly the inhabited lands from the first day to the third day were covered with water, from the third day to the sixth it was a field to be seeded, and from the sixth day until the flood it was a seeded field. At the time of the flood, the field had to be washed so that it could be seeded again. Then the field was seeded again, and <again> denuded. Then the earth will be crystallized, and human bodies formed from it will shine like stars.

After the sentence has been given, and the evildoers are imprisoned inside the earth in Hell, the rainbow (i.e. the renovated earth) is revealed, thoroughly cleaned, beautifully crystallized, and decorated with splendor. It remains thus in a circle, uncovered from the waters for the sake of the just, who suffered tribulations on it at the hands of the impious, and they had walked on it with their blessed feet. Of these just men, the highest, most sublime, and greatest is Jesus of Nazareth, the true God and <true> man who walked on it with his divine feet, and watered it with his precious blood from the cross. For the bodies of the saints will certainly rest in it. Similarly the Lord's body was buried in it on the third day, and the Lord's sacramental body remained in the field.

This diagram is the map of the world after the Last Judgment; the world will change, but remain in place forever.

The spotless rainbow is a mirror of God and man forever.

In this diagram the impious are imprisoned in Hell, in accordance with the phrase "First collect the weeds...", etc.¹⁰⁸

The prominence in this material of Korah, who is mentioned in connection both with the abyss into which the damned will fall, and in connection with the suspension of the tribunal in the air, is surprising. It may simply have been

Thomas Aquinas (London: Burns, Oates & Washbourne, Ltd., 1913-), Third Part (Supplement), QQ. LXXXVII.-XCIX. and Appendices, Question 97, Article 4, "Whether the Damned are in Material Darkness," pp. 172-173.

107 See Revelation 21:1, *Et vidi caelum novum et terram novam primum enim caelum et prima terra abiit et mare iam non est.*

108 See Matthew 13:30, *Sinite utraque crescere usque ad messem, et in tempore messis dicam messoribus: Colligite primum zizania, et alligate ea in fasciculos ad comburendum: triticum autem congregate in horreum meum.*

that Korah's rebellion was of particular personal interest to the author of HM 83, but it is worth mentioning that Korah's rebellion received more attention in rabbinical literature than in medieval Europe, and the prominence of Korah in HM 83 may reflect the time that the author spent in the Holy Land. The author indicates that the Anno Mundi when he wrote was 6684, and he supplies current Anno Domini dates of 1486 and 1488, so we can determine which of the several systems of Anno Mundi dating he was using. $6684 - 1486 = 5198$, so he was using a system in which Jesus was born in about Anno Mundi 5198. Eusebius of Caesarea in his *Chronicon* said that the Creation took place in 5199 BC, and Jerome in his *Chronicon* or *Temporum liber* indicated the same date, so the author of HM 83 was using a chronology in this tradition. The author's suggestion that the earth will be crystallized during the Last Days is unusual, and we do not know its source.

The Map and Text on f. 12v

The detailed description of the Last Judgment on f. 12r seems like it might be the end of the apocalyptic section of the manuscript, but in fact the section is brought to a close on f. 12v, where the author gives a brief account of the size of Hell and also describes the crystallization of the surface of the earth following the Last Judgment, which will insure that the blessed and the damned remain separated. We have not found a source for the idea that the earth is crystallized during the Last Judgment. Very importantly, the author also explains the purpose his apocalyptic maps: "I believe therefore that a firm faith in and frequent contemplation of these diagrams will more effectively restrain a man from sins than would many good words." That is, the cycle of illustration has an explicit moral function. The text ends with material about the three Babylonias that is very similar to that on f. 1r, whose presence here is puzzling.

The text is illustrated with a simple diagram of the relative diameters of earth and of Hell inside it (see Fig. 5.11); the legends on the diagram indicate that the diameter of the earth is 2186 German miles, and its circumference 8000 German miles, while the diameter of Hell is 2000 German miles, and its circumference 6100 German miles. These figures are curious, for while the author says that he calculated them according to the rules of geometry, the two sets of dimensions indicate the use of two different values for π . In a circle, if c is the circumference and d the diameter, $c = \pi d$, so $\pi (= 3.14159\dots) = c/d$, but the values of π indicated by these numbers, $8000/2186 = 3.66$, and $6100/2000 = 3.05$, are not very close to the true value. So the author's training in geometry was not of a high caliber.

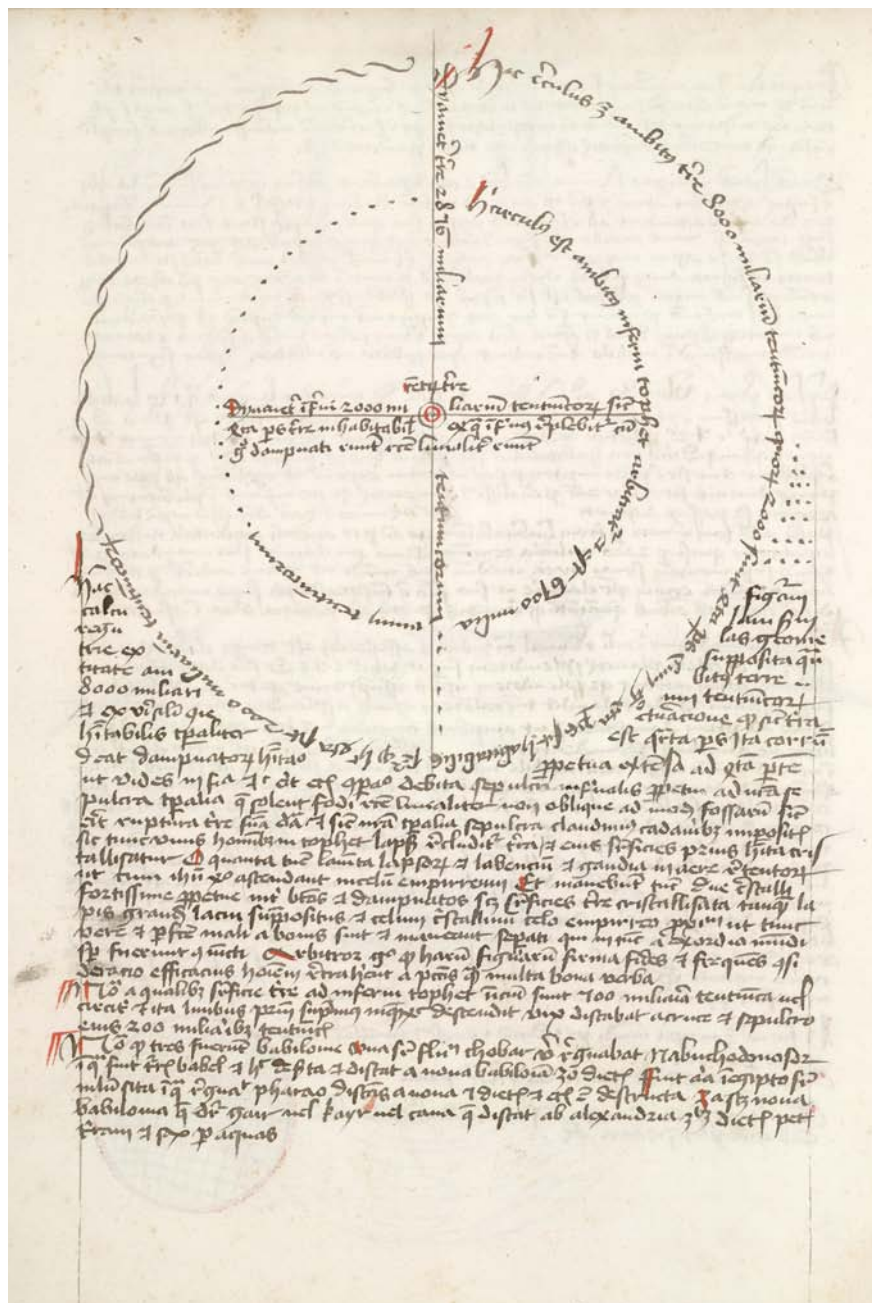


FIGURE 5.11 *Huntington HM 83, f. 12v. A diagram of the relative diameters of the earth and Hell. The text discusses their dimensions, the crystallization of the earth following the Last Judgment, and its role in separating the blessed and the damned (COURTESY OF THE HUNTINGTON LIBRARY).*

The text runs as follows:

Hanc figuram calculavi secundum regulas geometrie ex supposita quantitate ambitus terre 8000 miliarium teutonicorum et ex universale coniecturacione quod sicut terra habitabilis corporaliter est quarta pars, ita <corrum debeat?> dampnatorum habitatio perpetua extensa ad quartam partem ut vides in figura. Et erit etiam comparatio debita sepulcri infernalis perpetui ad nostra sepulcra temporalia, quod solent fodi terre, simaliter non oblique ad modum fossarum, sicut erit ruptura terre, sententia data, et sicut nostra temporalia sepulcra claudimus cadaveribus impositis, sic tunc unus (i.e. unis) hominibus in tophet lapsis recluditur terra, et eius superficies prius habitata cristallisatur. O quanta tunc lamenta lapsorum et labentium et gaudia in aere retentorum ut cum ihesu cristo ascendant in celum empirreum.

Et manebunt tunc due cristalli fortissime perpetue inter beatos et dampnatos, scilicet superficies terre cristallisata tanquam lapis grandis lacui superpositus, et celum cristallinum celo empirio proximum ut tunc vere et perfecte mali a bonis sint et manerint separati, qui in tunc a exordia mundi semper fuerunt convicti. Arbitror ergo quod harum figurarum firma fides et frequens consideratio efficacius hominem retraherent a peccatis quam multa bona verba.

Nota a convalibus superficie terre ad inferni tophet initium sunt 700 miliaria teutonica vel circiter, et ita limbus primum supremus in quod christus descendit vix distabat a cruce et sepulchro eius 200 miliaribus teutonicis.

Nota quod tres fuerunt babilonie. Una super flumen chobar ubi regnat Nabuchodonossor in qua fuit torris babel et hec deserta et distat a nova babilonia 30 dierum, fuit alexandria in egypto super nilum sita in qua regnavit pharao distans a nova 7 dierum et etiam est destructa. Tertia scilicet nova babilonia que dicitur gair vel kayr vel cana que distat ab Alexandria tribus dierum per terram et sex per aquas.

I calculated this diagram according to the rules of geometry from the supposed circumference of the earth, i.e. 8000 German miles, and from the universal conjecture that just as the inhabited land is physically one quarter <of the earth>, so the <...> perpetual habitation of the damned extends to the fourth part, as you see in the figure. And there will be the obligatory comparison of the perpetual infernal sepulcher to our temporary sepulchers, which are typically dug in the earth, very similarly to ditches, just as there will be an abyss in the earth after the judgment is

delivered. And just as we close our temporary sepulchers by putting cadavers on top, thus at that time when some men have fallen into Hell, the earth is closed up, and its surface, which had been inhabited, is crystallized. Then O how many laments of the fallen and falling, and joy of the saved in the air, when with Jesus Christ they ascend to the Empyrean Heaven.

And then there will remain two crystals, eternal and very strong, between the blessed and the damned, namely the crystallized surface of the earth, like a large stone placed on a lake, and the crystallized Heaven close to the empyrean Heaven, and then the good will be and will remain truly and completely separated from the evil, who from the beginning of the earth until that time had always been convicted. I believe therefore that a firm faith in and frequent contemplation of these diagrams will more effectively restrain a man from sins than would many good words.

Note that from the valleys of the earth's surface to the highest part Hell (*tophet*) it is 700 German miles, or approximately that. And so the first and highest purgatory to which Christ descends is barely 200 German miles from his cross and sepulcher.

Note that there were three Babylonias, one on the river Chobar (i.e. Khabur) where Nebuchadnezzar reigned, in which was the Tower of Babel, and this is <now> deserted, and is a thirty-day journey from the New Babylonia. <The second> was Alexandria in Egypt, located on the Nile, where the Pharaoh reigned, which is a seven-day journey from the New Babylonia, and it is now destroyed. The third, that is, the New Babylonia, is called Gair or Cairo or Cana, and it is three days from Alexandria by land, and six by sea.

The brief treatise on the Apocalypse in HM 83 is distinctive not only for its illustration of the Last Days with maps, but also for its selection of events to be described. Gone from its account are the Lamb of God, the Woman Clothed with the Sun, the Four Horsemen, the Seven Trumpets, the Seven Seals, the marking of people on the forehead, the Whore of Babylon, and any mention of any angel—gone, indeed, are most of the elements that were so popular with the artists of most cycles of Apocalypse illustration. The focus is on the chronology, mechanics, geography, and cartography of the Last Days.

Proof of Circulation: Wolfenbüttel, HAB, Cod. Guelf. 442 Helmst.

The apocalyptic material in HM 83 is very distinctive, previously unstudied, and almost unknown, and we see no evidence of its influence on later works about the Apocalypse. The question arises, then, as to whether the work circulated, or whether perhaps it was a private exercise by the author that remained on his shelf after he composed it. The fact that the texts in HM 83 were written by three scribes indicates that it is not the author's autograph manuscript, and the allusive and disjointed style of some parts of the text create the impression that it could be an abbreviated version of a longer work—all of which implies at least some copying and reworking of the texts.

But in fact excellent evidence that both the texts and maps preserved in HM 83 circulated is provided by a manuscript in Wolfenbüttel, Herzog August Bibliothek, Cod. Guelf. 442 Helmst., which contains some maps that are cruder and also somewhat modified versions of those in HM 83, and also some texts that are very closely related to some of those in HM 83. Moreover, some of these texts in the Wolfenbüttel manuscript have marks indicating the line breaks in the manuscript from which they were copied, and those line breaks do not correspond to those in the texts in HM 83, so the Wolfenbüttel manuscript demonstrates the existence of at least one other manuscript of the works in HM 83 (i.e. a third, beside HM 83 and the Wolfenbüttel manuscript).

Wolfenbüttel, Herzog August Bibliothek, Cod. Guelf. 442 Helmst., is a fifteenth-century miscellaneous manuscript written on paper, with works principally on religious subjects.¹⁰⁹ The manuscript contains several sections that relate to the Apocalypse and some geographical works, including excerpts from Bartholomaeus Anglicus,¹¹⁰ so the subject matter of part of the manuscript is similar to that in HM 83:

- ff. 66v–68v, *Signa tribulationis proxime, qua ecclesia reformabitur ante Gog*
- ff. 86r–86v, *Apocalypsis*
- ff. 87r–89r, *De Gog et Mahometo*

¹⁰⁹ Wolfenbüttel, Herzog August Bibliothek, Cod. Guelf. 442 Helmst. has been digitized and a PDF of the whole manuscript can be downloaded from <<http://diglib.hab.de/mss/442-helmst/start.htm?image=00001>>. It is described by Otto von Heinemann, *Die Helmstedter Handschriften* (Frankfurt am Main: Klostermann, 1963–65), vol. 1, pp. 343–345; and *Die handschriftliche Überlieferung der Werke des heiligen Augustinus*, vol. 5, *Bundesrepublik Deutschland und Westberlin*, ed. R. Kurz (Vienna: H. Böhlau, 1969–), part 2, pp. 511–512 (the latter relying on the former).

¹¹⁰ On the excerpts from Bartholomaeus Anglicus in 442 Helmst. see Meyer, *Die Enzyklopädie des Bartholomäus Anglicus* (see Ch. 4, n. 3), pp. 132–133 and 272.

- ff. 89r–89v, *De terra santa*
- f. 90r, *Vastatio Constantinopolis*
- ff. 92v–101, *Chronica mundi usque ad hec tempora*
- ff. 108r–108v, *De variis regionibus terre*
- ff. 118r–121r, *Collecta ex libro de proprietatibus rerum*

There are some loose folios kept with the manuscript and written in the same hand as the manuscript, and one of these contains the following inscription:¹¹¹

Ordinationes congregationis provincialis in conventu Cellensi per reverendum patrem fratrem Hennygum Zelen quoad fratres de observantia ordinis minorum provincie Saxonie vicarium provincialem, de consilio et consensu venerabilium patrum diffinitorum anno Domini 1452 pro die virginis gloriose assumptionis celebrate.

Regulations of the provincial congregation in the convent of Celle for the reverend father, brother Hennygum Zelen, provincial vicar of the brothers of the order of Observant Friars Minor of the province of Saxony, published by the advice and consent of the venerable father assessors in the year 1452, for the day of the Assumption of the Blessed Virgin (i.e. August 15).

This inscription indicates a date of 1452 for the loose folios, but below we present strong evidence, in the form of another date on one of the loose folios, that they were written much later in the century, in 1492 or 1494—much closer in time to HM 83. Celle is northeast of Hanover, and about 180 km (112 miles) southwest of Lübeck.

Only three parts of the manuscript have received scholarly attention. Alfonso Margani has studied two of the songs in the manuscript,¹¹² and there is combination of a world map and map of the Holy Land which are drawn on parchment and pasted on the inside of the manuscript's front cover that has

¹¹¹ The inscription is transcribed by von Heinemann, *Die Helmstedter Handschriften* (see Ch. 5, n. 109), p. 345; and by Alfonso Margani, "Ein mittelniederdeutsches Glaubensbekenntnis aus dem 15. Jahrhundert (Helmstedt Hs. 442 der Herzog August Bibliothek Wolfenbüttel)," *La Torre di Babele: Rivista di letteratura e linguistica* 1 (2003), pp. 221–238, at 221.

¹¹² Alfonso Margani, "Eine mittelniederdeutsche Fassung des Hohenliedes aus dem 15. Jahrhundert und ihre lateinische Vorlage: Hs. Helmstedt 442 der Herzog August Bibliothek Wolfenbüttel," *Jahrbuch des Vereins für Niederdeutsche Sprachforschung* 116 (1993), pp. 28–71; and Margani, "Ein mittelniederdeutsches Glaubensbekenntnis" (see Ch. 5, n. 111).

attracted notice,¹¹³ though it has never been carefully studied, and is not discussed in any of the standard works on maps of the Holy Land.¹¹⁴

The map on the pastedown inside the front cover of the manuscript is of considerable interest here, as its depiction of the rivers flowing from Paradise (see Fig. 5.12) is strikingly similar to that on the map of the world's bodies of water on ff. 7v–8r in MS 83, and also to the depiction in the map on f. 14r (see Figs. 4.15 and 4.16). This map in the Wolfenbüttel manuscript thus merits a detailed discussion.

The map is in two parts, a map of the Holy Land at the top of the page, and a *mappamundi* below it. The map of the Holy Land quite remarkably functions as a detail of the world map: a miniature version of the former can be seen at the center of the latter. One puzzling feature of the map of the Holy Land, which is repeated in its miniature version in the world map, where the orientation is clear, is that the Red Sea (represented by a red rectangle) is located in the northern part of the Holy Land, rather than the south—and despite the fact that the Tigris, which flows into the Mediterranean south of the Holy Land, is labeled *hic vocatur mare rubrum*, “Here it is called the Red Sea.” Even in a map with confused geography like this one, the error about the Red Sea is surprising.

The central part of the map of the Holy Land is labeled *terrasancta*, and the black rectangle at the top of the map is labeled 140 stadia in its long dimension, and 40 in its short dimension: these are the dimensions ascribed to the Sea of Galilee by Hegesippus, who was thought to be the author of a fourth-century Latin adaptation of Josephus's *The Jewish War*, which bears the title *De bello Judaico et excidio urbis Hierosolymitanae*, in book 3, chapter 26.¹¹⁵ As the

113 On the map on the inside cover of 442 Helmst. see Richard Uhden, “Zur Herkunft und Systematik der mittelalterlichen Weltkarten,” *Geographische Zeitschrift* 37.6 (1931), pp. 321–340, at 335 and 340, no. 39; Destombes, *Mappemondes* (see Ch. 4, n. 37), p. 189, no. 51.39 (where the manuscript is mis-dated to the fourteenth century); Arentzen, *Imago mundi cartographica* (see Ch. 4, n. 157), pp. 128–129, 212, 276, and plate 36; and Heitzmann, *Europas Weltbild in alten Karten* (see Ch. 4, n. 157), pp. 36–37, which includes a color illustration of the map.

114 Nebenzahl, *Maps of the Holy Lands* (see Ch. 4, n. 60); Harvey, *Medieval Maps of the Holy Land* (see Ch. 4, n. 60).

115 See *Patrologia Latina* 15:2199, where the work is attributed to St. Ambrose and carries the title *De excidio urbis Hierosolymitanae libri quinque*, and the passage reads: *Namque lacus ipsius, velut quodam maris ambitu sinus amplissimus, in longitudinem centum quadraginta extenditur stadia, latitudine quadraginta diffunditur crispantibus aquis auram de seipso excitans*. For discussion of the textual tradition of Hegesippus see Vincenzo Ussani, “Un ignoto codice cassinese del così detto Egesippo e i suoi affini,” in *Casinensia*

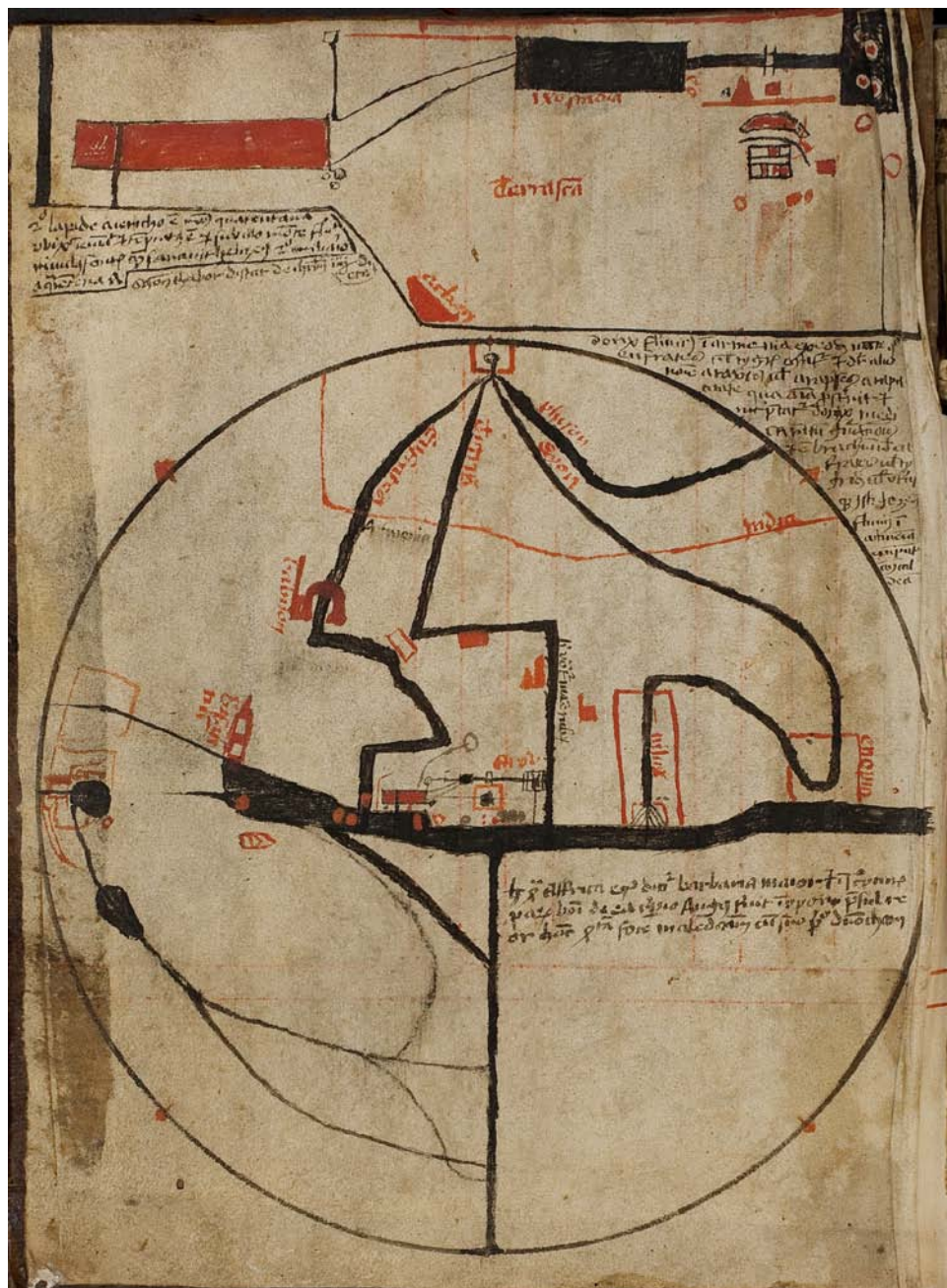


FIGURE 5.12 A map of the Holy Land and of the world; the depiction of the world's rivers is very similar to that in HM 83, ff. 7v-8r and 14r—compare Figs. 4.15 and 4.16 (WOLFENBÜTTEL, HERZOG AUGUST BIBLIOTHEK, COD. GUELF. 442 HELMST., VORDERSEITE, BY PERMISSION OF THE HERZOG AUGUST BIBLIOTHEK).

dimensions identify the body of water as the Sea of Galilee (and also reveal one of the sources the cartographer was using), we can deduce that the river to the right of this body of water is the Jordan River, and the body of water to the right of the Jordan is the Dead Sea. The depiction of islands in the Dead Sea is of interest, as is the bridge indicated over the Jordan,¹¹⁶ as we do not know of any other depiction of a bridge over the Jordan in a medieval map. The city of Jerusalem is indicated with some abstract symbols near the Jordan, and the port of Acre seems to be indicated by a red triangle in the lower part of the map. The two rivers to the left of the Sea of Galilee probably represent the Jor and Dan,¹¹⁷ and then we have—very strangely—the Red Sea, with the black line across it indicating the path that the Tribes of Israel took while fleeing from the Pharaoh. This path is indicated similarly on many nautical charts and some *mappaemundi*, such as the Hereford map. To the left in the map of the Holy Land there is a legend that reads:

secundo lapide a iericho est mons quarentana ubi christus ieunavit et temptatus est. Et sub illo monte fluit rivulus fontis quem sanavit heliseus. Secundo miliario a quarentana stat mons thabor distat de ierusalem iiii diebus.

At the second milestone from Jericho is Mount Quarentana where Christ fasted and was tempted. And at the foot of that mountain flows the stream from the spring that Elisha restored. At the second milestone from Quarentana is Mount Tabor which is four days distant from Jerusalem.

(Montecassino: ex Typographia Casinensii, 1929), vol. 2, pp. 601–614; reprinted in his *Scritti di filologia e umanità* (Naples: Ricciardi, 1942), pp. 250–265; for discussion of the work also see Albert A. Bell, “Josephus and pseudo-Hegesippus,” in Louis H. Feldman and Gohei Hata, eds., *Josephus, Judaism, and Christianity* (Detroit: Wayne State University Press, 1987), pp. 349–361; and Neil Wright, “Twelfth-Century Receptions of a Text: Anglo-Norman Historians and Hegesippus,” *Anglo-Norman Studies* 31 (2009), pp. 177–195.

116 There were two bridges over the Jordan between the Sea of Galilee and the Dead Sea in the Middle Ages, the Umm al-Qanāṭir and the Jisr al-Mujamiyya: see Andrew Petersen, “Medieval Bridges of Palestine,” in Urbain Vermeulen and Kristof d’Hulster, eds., *Egypt and Syria in the Fatimid, Ayyubid and Mamluk Eras, 6: Proceedings of the 14th and 15th International Colloquium Organized at the Katholieke Universiteit Leuven in May 2005 and May 2006* (Leuven: Uitgeverij Peeters, 2010), pp. 291–306, at 300 and 302, but there does not seem to be any way to determine which is depicted on this map.

117 On these two rivers see for example Isidore, *Etymologiae* 13.21.18.

Similar material appears in an earlier text, namely pseudo-Eugesippus's *Tractatus de distantiiis locorum Terrae Sanctae*,¹¹⁸ but the source seems to be Rorgo Fretellus's *Descriptio de locis sanctis*, composed in the twelfth century.¹¹⁹ We see that the cartographer—or the creator of the map he was copying—devoted considerable research to his work.

As mentioned above, the disposition of the rivers of Paradise on the *map-pamundi* on the inside cover of Helmst. 442 is very similar to that on the maps in HM 83 ff. 7v–8r and 14r (Figs. 4.15 and 4.16), and given how unusual this disposition is, we can be certain that these maps shared a source. The disposition of the rivers on f. 14r is more similar to that in the Wolfenbüttel manuscript, particularly in the way the Nile dips south into Ethiopia, and the sharpness of the turn in the course of the Tigris; also, these two maps share the red line that runs across Asia indicating the border of India. Outside the map to the south east is the following text:

dorix flumen in armenia ex eodem monte quo eufrates vel tygris oritur et dicitur alio nomine araxes aut arapsses a rapacitate qua omnia prosternit et interpretatur dorix medicamentum generationis et est brachium vel eufrates vel tygris vel utrumque isti <jereoi?> fluvii in <Armenia?> <incipiunt?> <...> caldeam

The Dorix River rises in Armenia from the same mountain as the Euphrates or Tigris, and is also called the Araxes or Arapsses from the 'rapacity' with which it overthrows all things, and 'dorix' means a repro-

118 The work of pseudo-Eugesippus is printed in *Patrologia Graeca* 133:991–1004, with the relevant passage on col. 1003.

119 See Rorgo Fretellus, *Rorgo Fretellus de Nazareth et sa Description de la Terre Sainte: histoire et édition du texte*, ed. P. C. Boeren (Amsterdam and New York: North-Holland Pub. Co., 1980), p. 41, chapter 73: *Secundo lapide ab Ihericho ad sinistram locus in deserto, quod Quarantena vocatur. In qua Ihesus quadraginta dierum totidemque noctium ieiunium complevit, eius ieiunio ieiunium nostrum consecrans et designans.... Secundo miliario a Quarantena contra Galyleam mons excelsus ille, diabolus in quo Ihesum iterum temptavit, ostendens ei omnia regna mundi et dicens: Si cadens adoraveris me, hec omnia tibi dabo. Sub Quarantena fontis illius rivulus, quem beatus Helyseus sanctificans sale conspersurn, eius sanata sterilitate de amaro potabilem reddidit.* On Mount Quarantena see the chapter in Bernhard von Breydenbach, *Peregrinatio in Terram Sanctam* (Mainz: Erhard Reuwich, 1486), f. [53v]; and Bernardino Dinali, *La Jerosolomitana peregrinatione' del mercante milanese Bernardino Dinali (1492): dal codice della Biblioteca statale di Lucca*, ed. Ilaria Sabbatini (Lucca: Maria Pacini Fazzi, 2009), pp. 132–133.

ductive medicine, and it is a branch of the Euphrates or the Tigris or of both. Those rivers <...> Chaldea.

Most of this is taken from Bartholomaeus Anglicus, *De proprietatibus rerum* 13.7, his chapter on the Dorix, but it seems that the last part comes from a different source, as Bartholomaeus does not mention Chaldea in that chapter.

Within the *mappamundi*, from east (top) to west (bottom), are: *Eufrates*, *Tigris*, *Gyon*, *Phison*; the name *India* along the red line that indicates that region's western edge; *Armenie* just outside that line; and *Babilon* along the Euphrates. As mentioned above, the part of the Tigris closest to Jerusalem bears the legend *hic vocatur mare rubrum*, "Here it is called the Red Sea," which complicates matters as the Red Sea is also depicted to the north of Jerusalem. On the northeastern Mediterranean shore is *bisantium*,¹²⁰ but the place name by the miniature version of the map of the Holy Land in the middle of the *mappamundi* is illegible. The miniature version of the map of the Holy Land reproduces many details of the larger one, including the bridge over the Jordan. The mouth of the *Gyon* is labeled the *Nilus*, and the identity of the river is also confirmed by the depiction of its delta. The region through which a southern bend of the river flows is labeled *Etiopia*.

The *mappamundi* includes the same branch of water cutting diagonally across southeastern Europe that is labeled *Strata* on HM 83, ff. 7v–8r, and appears without label on other maps in that manuscript. In addition, the left-hand part of the 'T' of the T-O structure of the map is completed by a river that cuts off to the northeast rather than continuing directly north as the Tanais does on most *mappaemundi*, and it is tempting to identify this river with the Rha or Volga, which is how the corresponding river is identified on the map in HM 83, ff. 7v–8r. The northern part of the Wolfenbüttel map contains some

120 The use of the place name *bisantium* rather than *Constantinopolis* is very unusual. Chekin, *Northern Eurasia in Medieval Cartography* (see Ch. 4, n. 163), lists a few maps that use the place name Byzantium or variants thereof, namely the *mappaemundi* in Naples, Biblioteca Nazionale, MS IV F 43, f. 33v, eleventh century; Munich, Bayerische Staatsbibliothek, CLM 14731, f. 83v, made between 1145 and 1152 at the monastery of St. Emmeram in Regensburg; Paris, Bibliothèque nationale, MS lat. 6813, f. 2r, made at the end of the twelfth century, probably in Germany; and Dublin, Trinity College, MS 367, f. 85v, made in England in the first half of the thirteenth century: see Chekin's pp. 46–51 with the plates on pp. 353–356. Also see Chekin's "Die 'Warägischen Grenzpfähle' und andere Rätsel einer Regensburger Karte aus der Mitte des 12. Jahrhunderts," in Hermann Beyer-Thoma, ed., *Bayern und Osteuropa: aus der Geschichte der Beziehungen Bayerns, Frankens und Schwabens mit Russland, der Ukraine und Weissrussland* (Wiesbaden: Harrasowitz, 2000), pp. 95–116, esp. 107–110.

puzzling and inscrutable designs, and from this region a large river system flows southwest into Europe, making the North Pole a source of waters similar to Paradise in the East. None of these northern details appear on the maps in HM 83. Finally, Africa on the Wolfenbüttel map is, like Europe, devoid of toponyms, but it does contain this legend:

hec quarta Affrica communiter dicitur barbaria maior et in Hispania
parum homini de ea imperio (*sic*) Augustinus fuit in ypon<e> praesul
reor hanc quartam fore maledictam cum suo primo domino cham

This quarter of Africa is commonly called Barbaria Major, and in Spain there are few men from this kingdom. Augustine was praesul in Hippo. I believe that this quarter will be cursed along with its first ruler, Ham.

The place name *barbaria maior* is very rare;¹²¹ the ‘Curse of Ham,’ on the other hand, was a medieval commonplace.¹²²

While this map in the Wolfenbüttel manuscript is different in several significant ways from the maps in HM 83, ff. 7v–8r and 14r, particularly with regard to the long legends and the depiction of the far north, the similarities in their unusual river systems are so strong that we must conclude that the maps shared a common model. Even though the map on the inside of the cover of the Wolfenbüttel manuscript was evidently pasted in from elsewhere, it would seem to have come from the same source as other materials in the manuscript, which are also very closely connected with HM 83.

Beilage f. 1r

One of the leaves associated with 442 Helmst., which in the digitized version of the manuscript is designated image 275, and has now been assigned the designation Beilage f. 1r, has four crude maps (see Fig. 5.13) that are intimately related to some of the apocalyptic maps in HM 83, though there are differences between them. The largest of these four maps, which is to the left on the page, is like a combination of the map on HM 83, f. 9r, which shows the world from

121 One text in which the place name *barbaria maior* appears is in Ramon Llull's *De fine* 2.3: see Ramon Llull, *Raimundi Lulli Opera Latina* (Turnhout: Brepols, 1975–1989), vol. 9 (120–122: in Monte Pessulano anno 1305 composita) (= *Corpus Christianorum Continuatio Mediaevalis* 35), p. 277, *Et sic Andalusia acquisita bellator rex cum suo exercitu ampliato ad Maiorem Barbariam poterit ultra ire, primo uidelicet ad regnum Cepte, quoniam de mari nisi per septem miliaria illud distat.*

122 See Benjamin Braude, “Cham et Noé. Race et esclavage entre judaïsme, christianisme et Islam,” *Annales* 57.1 (2002), pp. 93–125.

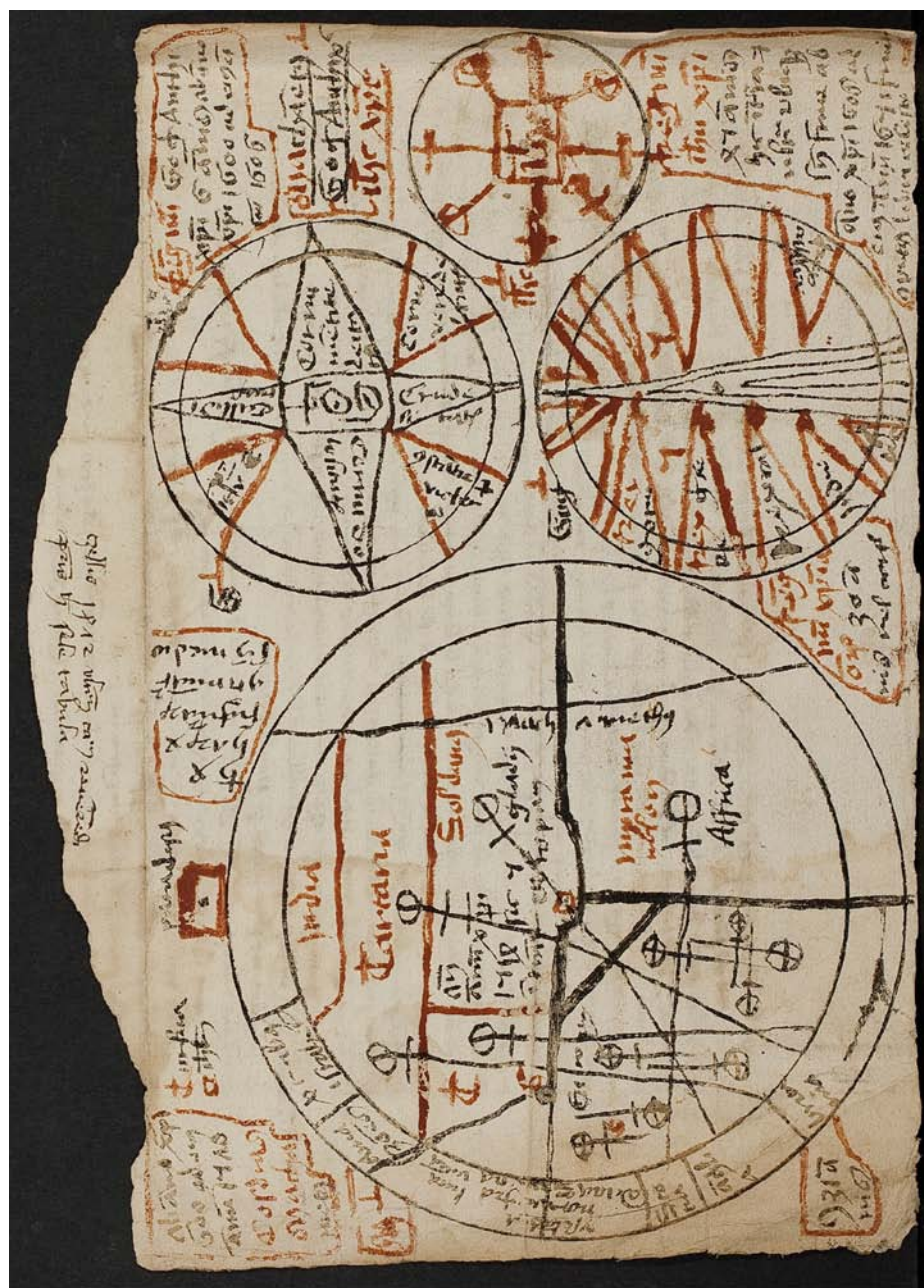


FIGURE 5.13

Different versions of four of the apocalyptic mappae mundi in Huntington HM 83—compare Figs. 5.3, 5.6, 5.7, and 5.8 (WOLFEN-
BÜTTEL, HERZOG AUGUST BIBLIOTHEK, COD. GUELF. 442 HELMST., BEILAGE F. 1R, BY PERMISSION OF THE HERZOG
AUGUST BIBLIOTHEK).

639–1514, and that on f. 9v, which shows the world from 1514–1570: it has a geographical configuration similar to that of the earlier map, albeit with fewer details, but it uses the device of the swords of Muhammad to indicate the threat to Christendom. And here the swords, rather than pointing out towards the edges of the earth as they do in HM 83 f. 9v, point menacingly at Europe, and from the tip of each of them a line is drawn across Europe, evidently indicating the path it will take. Within Europe, the dissention among Christian leaders that on HM 83 f. 9r is described verbally, is here represented symbolically, by pairs of Christian swords (with crosses in their pommels) set against each other.

The text outside this map in the upper left corner of the folio reads *ab anno christi 600 ad eius annum 1570 <...> Machamet*, “From the year of Christ 600 to his year 1570 <...> Muhammad.” In HM 83 the first turning-point year indicated in the treatise on the Apocalypse was 639, when Muhammad came to power, and the reference to the year 600 here would seem to indicate some sloppiness in copying information from the source manuscript. But 1570 is indeed one of the turning-point years in HM 83, the endpoint of the map on f. 9v, and the starting point of the map on f. 10r (see Figs. 5.5 and 5.6). Looking at the details of the map in Beilage f. 1r, *paradisus* is indicated by a red rectangle at the top of the map, outside the ‘O’ of the circumfluent ocean; Paradise is discussed in HM 83, and is also represented by a castle from which the four rivers of Paradise flow in the maps on ff. 7v–8r and 14r (see Figs. 4.15 and 4.16). In the circumfluent ocean, reading from east (top) to west (bottom), we have: *X tribus Israel, Amazonas, lucanania* (Lapland), *yslandia, norwegia, Suecia, dacia, Scotia, Anglia, britania*. The islands indicated are very similar to those on the maps on HM 83, ff. 3r and 6v–7r (see Figs. 4.9 and 4.14), and to a lesser extent to those on f. 9r (see Fig. 5.3), the prophecy map for the years 639–1514, so this map in Wolfenbüttel represents a recombination of information about islands available on the maps in HM 83. Within the *orbis terrarum*, reading from east to west, we have: *India, Tartaria, Soldanus*. On the map in HM 83 f. 9r, this same segment of the map is occupied by the Chaldeans. The *Soldanus* is the *babilonie soldanus* of the map in HM 83 f. 9r, i.e. the Sultan of Egypt.

In the central part of the Wolfenbüttel map we read *ante annum christi 1514 sic 5 gladii intrant europam*, “Before the year of Christ 1514 five swords thus enter Europe.” There are also five swords on the map in HM 83, f. 9v, but on that map only one of them enters Europe. Just to the left of this legend there is a red vertical line with no evident function, but there is a vertical line in exactly the same position on the map in HM 83, f. 9v. The red capital ‘T’ to the left of this line in the Wolfenbüttel map stands for *Turkia*, as we can gather both from the key to the map to the left of Paradise, where *Turkia* is written with a red ‘T’ and

the rest of the word in black ink, and by analogy with the map in HM 93, f. 9v. The same key indicates that the small red rectangle at the center of the map stands for *Jerusalem*, and the same analogy indicates that the 'C' on the Wolfenbüttel map represents *Constantinopolis*.

In the southern (right-hand) part of the map, a line cuts east and west across Asia, Africa, and the circumfluent ocean, and just north of the line is the phrase *i machamethii*, "The Muslims." The implication seems to be that there are no Muslims south of that line, and this is not a feature shared by any of the maps in HM 83. In Africa there is the name *myramamolon*, i.e. Miramamolin, who was mentioned on the map in HM 83 f. 9v;¹²³ and the place name *Affrica*.

The hilts of the non-Christian swords are beside some of the names on the map, and it seems that we are to understand that one of the swords represents the Turks, another the Tartars, another the Sultan of Egypt, and another Miramamolin; there is no name associated with one of the swords in the north. The line emanating from the sword of the Sultan of Egypt passes right through Jerusalem, with clear implications. The lines emanating from the swords of Miramamolin, the Sultan of Egypt, and the anonymous sword intersect in one point, and it is tempting to think that that point is supposed to represent Rome.

To the right of the lower part of the large map on Beilage f. 1r is a map that is a crude rendering of the situation illustrated in the map on HM 83, f. 10r (see Fig. 5.6), which shows the years from 1570 to 1600, and depicts the ten horns of the Beast of Daniel 7, with Antichrist rising in the middle represented by a series of nested triangles. The rubric to the left of the map reads *regnum Christi per 30 annos vel...*, "The kingdom of Christ for thirty years or..." The reference to thirty years indicates that the map shows the same time period as that on HM 83, f. 10r (1570–1600), and also recalls a phrase on f. 16r of that manuscript, *Ab hora eadem erit regnum Christianorum per totum mundum per 30 annos per 10 reges qui maiorem laborem fecerunt in delendo sectam machometicam. Et gog antichristus educatur et crescit*, "From that same moment, the kingdom of Christians will exist throughout the whole world for thirty years through ten kings who performed a large task in destroying the Muhammadan sect. And Gog Antichrist is raised and grows." In the map on Wolfenbüttel Beilage f. 1r, it is possible to read the word *rex* written between some of the horns of the Beast of Daniel 7, just as in HM 83 f. 10r, but the names of their countries are not legible, except for *Indie* (without *rex*) in the lower left.

Above this map on Beilage f. 1r is a map very similar to that on HM 83 f. 10v (see Fig. 5.7), which covers the years 1600 to 1606 and depicts the four horns of Antichrist, which are depicted as huge peninsulas in the circumfluent ocean,

123 For bibliography on Miramamolin see Ch. 5, n. 46.

and represent the four ways he deceives people. The rubric to the right reads, *Signum Gog Antichristi 6 annis ab anno chrsiti 1600 ad eius annum 1606*, “The sign of Antichrist <will last> six years, from the year of Christ 1600 to 1606,” specifying the same span of year as the map in HM 83, f. 10v. At the center of the map is *Gog*, much as *Antichristus* is at the center of HM 83 f. 10v; the upper peninsula is labeled *Calliditas*, that to the left *cornu dolositatis*, that to the right *Cornu mentite deitatis*, and that at the bottom *Crudelitatis*: the horns are the same as in HM 83 f. 10v. But this map on Beilage f. 1r adds something not present on HM 83 f. 10v: inverted horns that point inward in between the horns of Antichrist that seem intended to counteract them. The ‘counterhorn’ on the upper right lacks an identifier, and the identifier of the one on the upper left is illegible, but the one on the lower right reads *Cornu vere deitatis*, “Horn of the True God,” and that on the lower left reads *constantie et victorie*, “<Horn> of perseverance and victory.” There is no hint of these ‘counterhorns’ anywhere in HM 83.

Finally, there is a small map on the far right of Beilage f. 1r that is a crude and less detailed rendering of the information presented in the map on HM 83, f. 11r, which covers the years 1606–1661 (an error for 1651), and shows the flag of Christ triumphant in the middle of the world. The rubric below the Wolfenbüttel map reads *Regnum iesum christi 45 annis hic in terra et infra ubique sine fine ab anno christi 1606 ad eius annum 1651 finit <...> libri celestis*, “The kingdom of Christ <will endure> 45 years here on the earth and below and everywhere without end from the year of Christ 1606 to 1651; it ends <...> of the heavenly book.” There is a contradiction here in the idea that the kingdom of Christ will end after 45 years, on the one hand, and that it is *sine fine*, on the other, but perhaps the author just got carried away by enthusiasm. It is noteworthy that here the arithmetic of $1606 + 45 = 1651$ is correct, whereas in HM 83 the author arrived at the incorrect sum of 1661.

The similarities between the maps on Wolfenbüttel, Cod. Guelf. 442 Helmst., Beilage f. 1r, and the apocalyptic maps in HM 83 are overwhelming, and it cannot be doubted that they derive from a common model. At the same time, the differences between the maps point to a process of revision, though without other versions of the work we have no way of knowing how extensive or protracted those revisions may have been.

Beilage f. 2r

The largest map on the leaf on Beilage f. 1r, as we saw, is very similar to that on HM 83, f. 9r, and the Wolfenbüttel manuscript has a second leaf, image 277 in the digitized version of the manuscript, now designated Beilage f. 2r (see Fig. 5.14) with a map very similar to that on HM 83, f. 9r (see Fig. 5.3)—which is

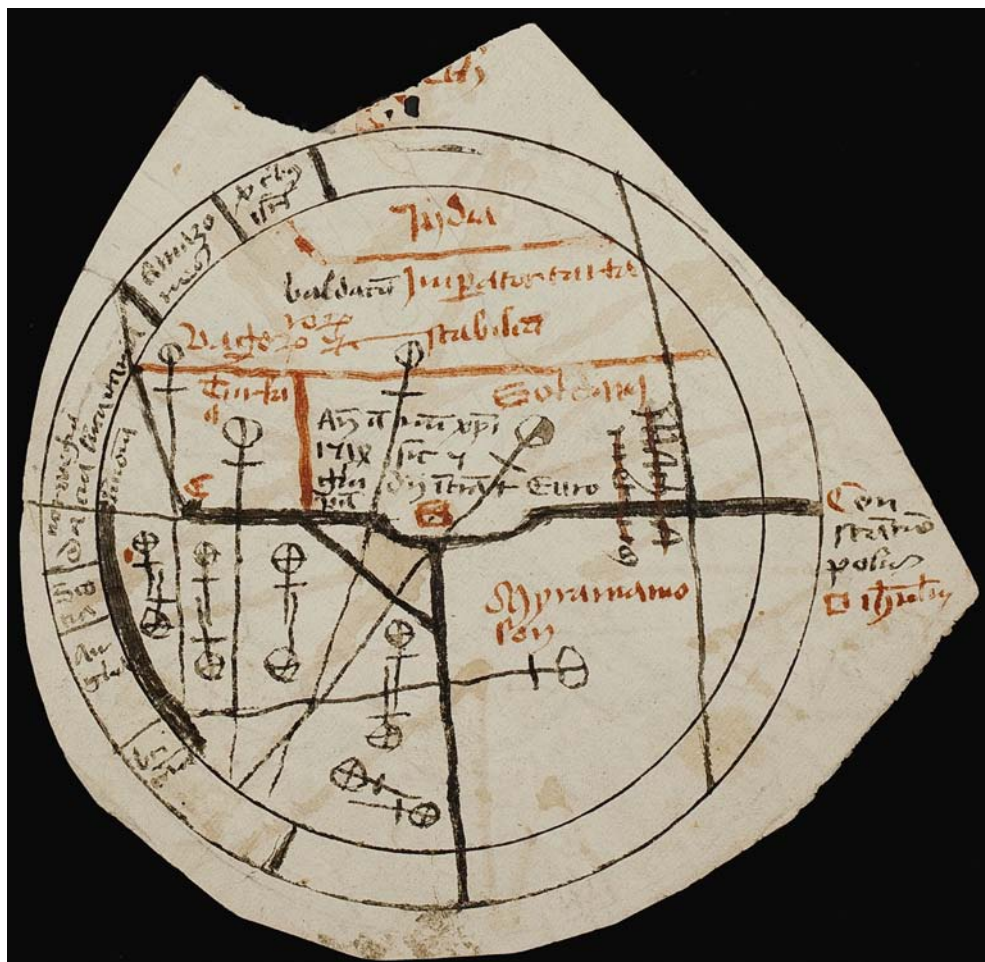


FIGURE 5.14 A mappaemundi very similar to Huntington HM 83, f. 9r, the prophecy map illustrating the spread of Islam—compare Fig. 5.3 (WOLFENBÜTTEL, HERZOG AUGUST BIBLIOTHEK, COD. GUELF. 442 HELMST., BEILAGE F. 2R, BY PERMISSION OF THE HERZOG AUGUST BIBLIOTHEK).

better executed than that on Beilage f. 1r. As this map is very similar to that on Beilage f. 1r, we need only briefly point out the more important differences and remark on a few other points. Where the large map on Beilage f. 1r has *Tartaria*, the map on Beilage f. 2r has *Imperator tartarorum vagorum et stabilium*, “Emperor of the Tartars, both the nomads and those who live in one place,” and includes in this region *Baldacum*, i.e. Baghdad. On Beilage f. 1r it was not clear what group was associated with one of the swords that was going to attack Europe, but here we see that two of the swords will come from the Tartars, one

from the nomad Tartars, and one from the Tartars who live in one place. This map includes *Livonia* in the far north, and like the map on Beilage f. 1r, has a key, according to which 'C' stands for *Constantinopolis*, and the red rectangle represents Jerusalem. On this map, the name *Machametus*, which indicates that Muslims live north of the line in the south, is crossed out.

Beilage f. 2v

Beilage f. 1r has a map very similar to that on HM f. 10r, the prophecy map covering the years 1570–1600, and there is another leaf associated with the manuscript that has a similar map, that numbered image 278 in the digitized version of the manuscript, now designated Beilage f. 2v (see Fig. 5.15), which again is a more detailed version of the map on Beilage f. 1r. As the map is familiar, we can run through the details quickly. The rubric outside the map reads: *Regnum iesum christi hic in terra per 45 annos, inde suum iudicium et regnum ubique sine fine*, "The kingdom of Jesus Christ here in the earth <will last> 45 years; from that time his judgment and kingdom <will be> everywhere without end." Just beside this text we read *Jerusalem metropolis mundi*, but it is not clear that Jerusalem is represented on the map. The kingdoms listed between the horns on the map, reading first the left side top to bottom, are *Rex gallie*, *Rex ytalie*, *Rex hispanie*, *Rex Affrice*, and *Rex ethiope*; and on the right side top to bottom, *Rex gotie et Suecie*, *Rex grecie et Ruizie*, *Rex caldee medie et perside*, *Rex Indie et Iuddie*, and *Rex egipti*. In the middle of the nested central triangles we read *Gog anthichristus*, and in the other triangles, *Sic crescit sub 14 regibus quos subiicit antequam 30 annum*, "Thus he grows beneath the fourteen kings whom he subjected before the thirtieth year."

Beilage f. 3r

This folio, crowded with text, contains two numbered genealogies from Adam to Jesus with abundant annotation; they recall those on HM 83, ff. 16v and 17r. Such genealogies are not at all rare, so their presence in the two manuscripts cannot be taken as strong evidence connecting them, but it is minor corroborating evidence. It is worth remarking that both on the left on Beilage f. 3r and in the genealogy on HM 83, f. 16v, the scribe had problems in assigning the numbers of the list to the correct individuals, and in both cases these mistakes were corrected with short lines joining the correct number to the correct individual. These problems do not occur at the same points in the list, but it is tempting to think that the correspondence between numbers and names was not very clear in the models from which both scribes were working.

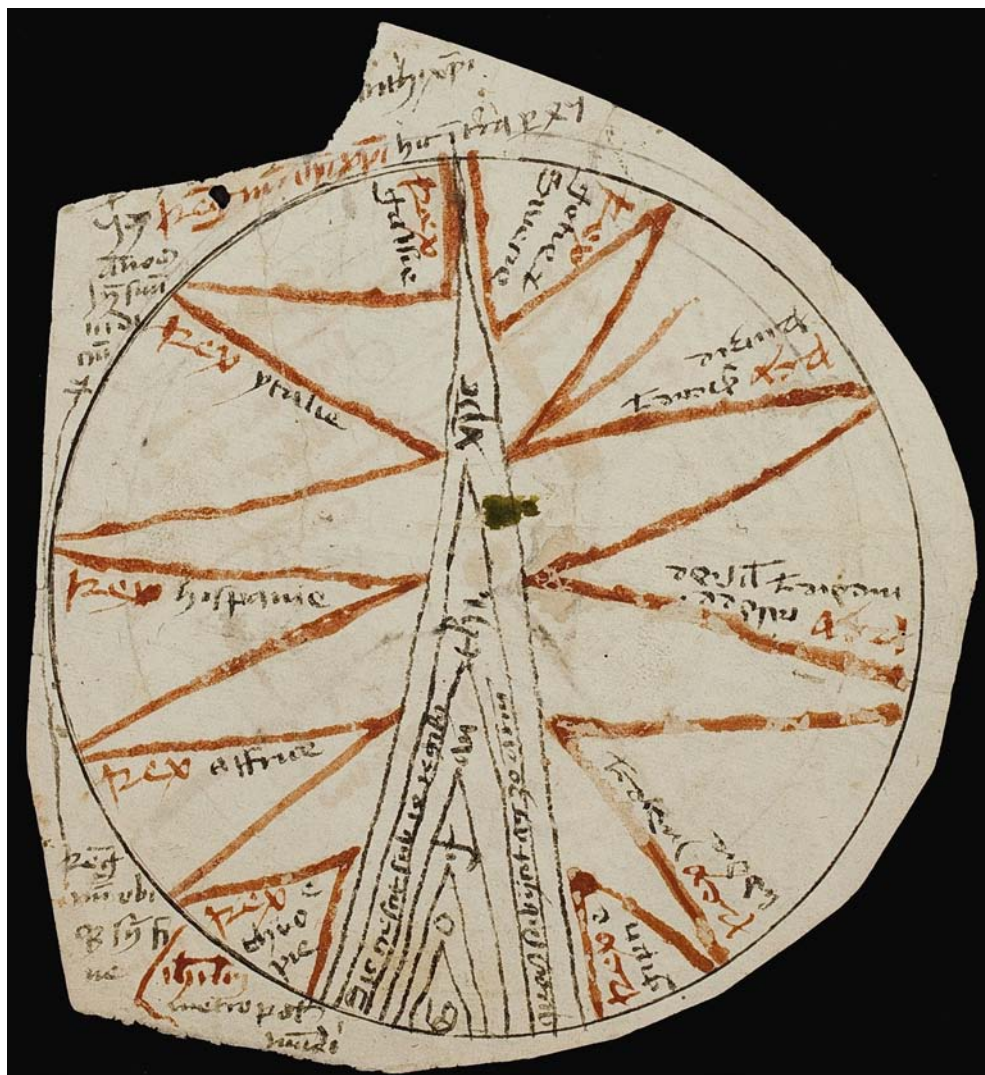


FIGURE 5.15 A mappaemundi very similar to Huntington HM 83, f. 10r, the prophecy map showing the increase of Antichrist and the horns of the beast of Daniel 7—compare Fig. 5.6 (WOLFENBÜTTEL, HERZOG AUGUST BIBLIOTHEK, COD. GUELF. 442 HELMST., BEILAGE F. 2V, BY PERMISSION OF THE HERZOG AUGUST BIBLIOTHEK).

Beilage f. 3v

This elaborately designed and densely written page (see Fig. 5.16) has several texts that are very similar to those in HM 83. The texts in the Wolfenbüttel manuscript include indications of the line breaks in the manuscript from which

they were copied, and as these line breaks differ from those in the corresponding texts in HM 83, the Wolfenbüttel manuscript supplies clear evidence of the existence of a third manuscript of the works in HM 83, and thus further evidence of their diffusion.

The presence of what seems to be a rainbow at the top of the Wolfenbüttel page and two large concentric circles in the lower part of the page suggest that it is laid out as a combination of elements from HM 83, f. 11v (see Fig. 5.9), the image of the Last Judgment with the elect on a rainbow between the earth and Paradise, and f. 12v (see Fig. 5.11), the diagram indicating the relative diameters of the earth and Hell—and several of the texts on the folio in the Wolfenbüttel manuscript correspond with texts on the folio between these two in HM 83, i.e. f. 12r, which describes the Last Judgment and the changes the earth will undergo at the end of history. Moreover, some of the texts on the Wolfenbüttel page confirm the correspondence of these features. The text in the rainbow on Wolfenbüttel Beilage f. 3v reads:

Hic semicirculus ymaginandus est admodum supporte (or sperre) <...> super quartam partem terre habitam ab hominibus a principio mundi ad finem, qui in medio dividitur in duos circuitus <sua?> <suei?> 25 sub beatorum qui sic in <athere?> <...>quam stelle circumdant Jesum iudicem, et dampnatorum qui fixi immobiles stant super quartam partem terre quam nimis inordinate dilexerunt (*sic*) quasi et replent scilicet hanc usque ad vocem qua iudex eos sententiat: 'ite maledicti.'¹²⁴ Ad quam vocem hac quarta pars terre rumpetur et cadent in tophet et infernum <...>.

This semicircle is to be imagined like the support (or sphere) <...> above the quarter of the earth inhabited by men from the beginning of the world to the end, which is divided in the middle into two parts <....> the blessed who thus in the heavens are gathered like stars around Jesus the judge, and the damned stand immovably fixed on the quarter of the earth that they loved far too much and intently, and they fill it, namely this <circle>, until that utterance by which the judge will sentence them: "Go, evildoers." At which utterance, this quarter of the earth will break and they will fall into Tophet and Hell....

¹²⁴ The phrase *Ite maledicte* is a rare variant in Matthew 25:41, which usually reads *Discedite a me maledicti in ignem æternum*.

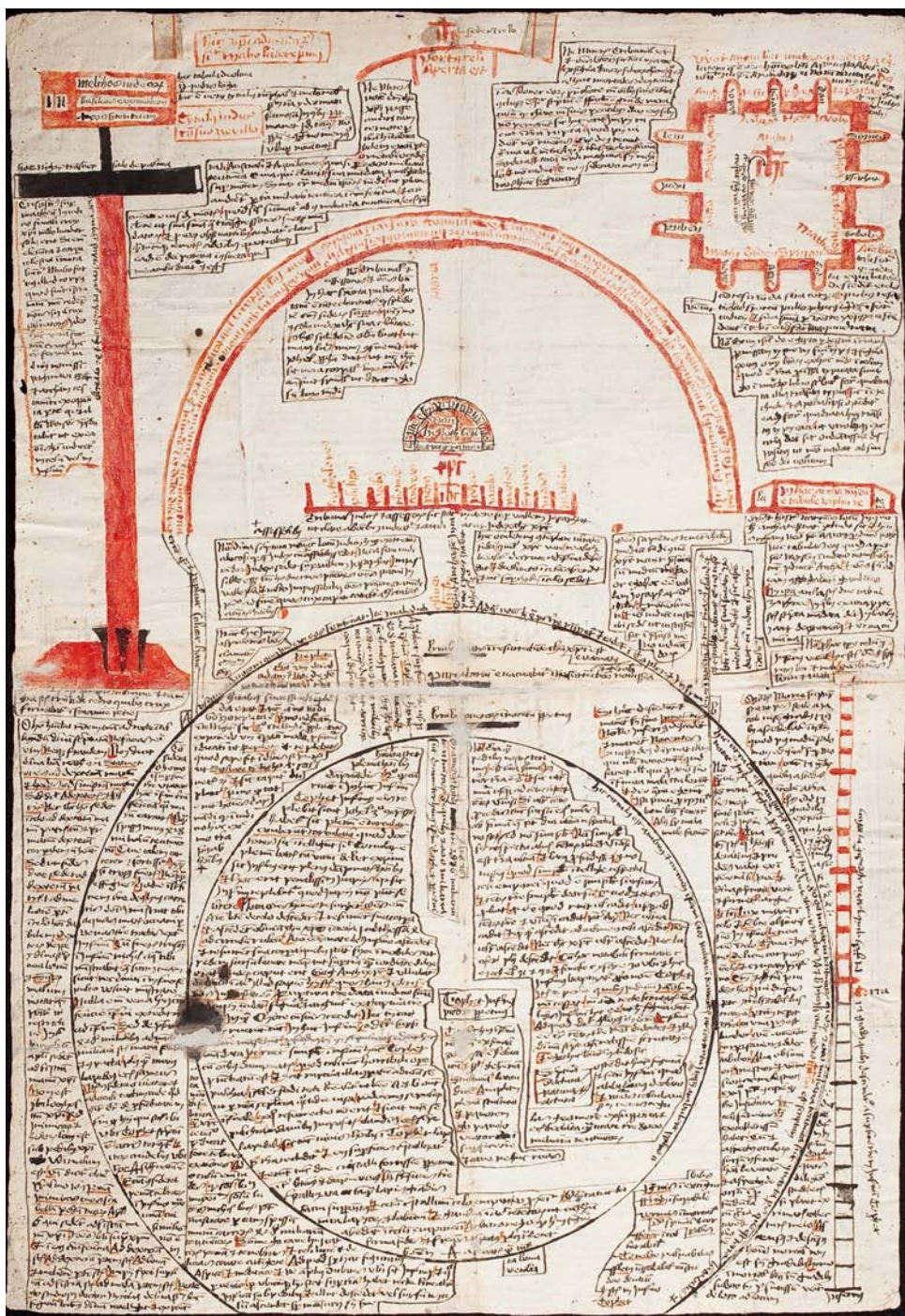


FIGURE 5.16 This page contains several elements familiar from HM 83: the rainbow of HM 83, f. 1v; the diagram of the diameters of earth and Hell similar to that in f. 12v, and texts that appear on f. 12r (WOLFENBÜTTEL, HERZOG AUGUST BIBLIOTHEK, COD. GUELF. 442 HELMST., BEILAGE F. 3V, BY PERMISSION OF THE HERZOG AUGUST BIBLIOTHEK).

The similarity to the text in the rainbow on HM 83, f. 11v (*Sic in aere circumdant electi tamquam Stelle Jhesum iudicem*, “Thus in the air, the chosen surround Jesus Christ like stars”) is clear, and the phrase *dampnatorum qui fixi immobiles stant super quartam partem terre quam nimis inordinate dilexerunt* (*sic*) is very similar to one on HM 83, f. 12r: *dampnatorum...stant fixi immobiles super terram, quam nimis inordinate fixe dilexerunt*.

The texts along the concentric circles in the lower part of the Wolfenbüttel page indicate that the diagram shows the relative diameters of the earth and Hell, just like the diagram on HM 83, f. 12v. The text just inside the right-hand part of the larger circle on the Wolfenbüttel page reads:

Hic circulus est ambitus et circuitus terre 8000 miliarium teutonicorum quarum 2000 miliaria teutonica sunt quarta pars que est terra. Notatur in hac figura per spatium inter duas lineas rectas A et B intus spatii medio Jesum Christum est scriptum

This circle is the outer limit and circumference of the earth, which measures 8000 German miles, of which 2000 German miles is one quarter, which is the known earth. The known earth is indicated in this diagram by the space between the two straight lines A and B, and in the middle of that space, ‘Jesus Christ’ is written.

The lines marked A and B are vertical lines tangential to the inner circle: it is interesting that the author thus indicates that the extent of the known part of the world coincides with the diameter of Hell. The text just inside the right-hand part of the inner circle on the Wolfenbüttel page reads:

Hic circulus est ambitus et circuitus inferni 6100 miliariarum teutonicorum ut ‘in circuitu impii ambulent’ psalmo 11.

This circle is the outer limit and circumference of Hell, which is 6100 German miles—as Psalm 11 says, “The wicked walk all around.”

The quotation is from Psalm 11:9; the figures of 8000 and 6100 for the circumferences are the same as those given in the diagram in HM 83, f. 12v. In the middle of the upper part of the inner circle on the Wolfenbüttel page there is a text written vertically that reads:

Diameter totius terre 2856 miliarium teutonicorum de quibus 2000 miliaria sunt diameter huius inferni tophet perpetui.

The diameter of the whole earth is 2856 German miles, of which 2000 miles are the diameter of this perpetual Hell, Tophet.

This figure agrees with the number supplied in exactly the corresponding position in the diagram in HM 83, f. 12r.

The preceding texts show a close similarity in layout and content of Wolfenbüttel Beilage f. 3v, on the one hand, and HM 83, ff. 11v and 12v on the other. In addition, several of the texts on the Wolfenbüttel page are very similar to texts on HM 83, ff. 12r–12v. Working down from the top of Beilage f. 3v, the first text that is similar to one in HM 83 is in the largish, irregularly shaped text box just to the left of center near the top of the page. The text in HM 83 to which it is similar, which is on f. 12r, reads:

Nec etiam mirere vocem domini Jesum christi iudice posse audiri tam remote per terram habitabilem ex omni parte orientali occidentali australi et aquilonari quasi per 2000 miliaria teutonica. Venia qui clamat sua mandata promulgando super montem synai circa medium temporis mundi ut plane indicitur per tria miliaria teutonica, etiam potest clamare ut sua sententia contra transgressores suorum mandatorum audiatur clare ab omnibus quantulumque remotoris quod eadem est potentia divina inconsueta.

The text near the top of the Wolfenbüttel page reads as follows; its close similarity to the passage in HM 83, f. 12r is immediately obvious, and we mark in italics the phrases that differ significantly from the corresponding ones in f. 12r:

Nec mirere vocem domini Jesum christi posse audiri tam remote per terram habitabilem ex omni parte orientali occidentali australi et aquilonari quasi per 2000 miliaria teutonica. Venia qui clamat sua mandata promulgando super montem synay circa medium temporis mundi ut plane indicitur per tria miliaria teutonica, *in <rerum?> sententia <...> eiusdem montis quod sic summatur ad 9 miliaria teutonica etiam potest clamare ut sua sententia contra transgressores suorum mandatorum item per eorum omnibus variationibus audiatur clare quantulumque remotis ab omnibus quia utrubique eadem est dei potentia inconsueta que miraculum dicitur et est.*

The text just to the right of center at the top of Beilage f. 3v is very similar to another passage on HM 83, f. 12r. The text in the Huntington manuscript runs:

Et ne mirere tribunal christi et omnes beatos sic in aere tenere ex figura duorum filiorum chore quos deus tenuit in aere donec corpus patris chore cum omnibus suis in terra conclusus est, sicut scriptura dicit: "factum est grande miraculum quod chore pereunte, filii eius non perirent." sic hic erit impii ruent in terram ruptam quod pii vident non ruentes. Etiam deus tenet gravissima elementa aquam terram solem lunam et sidera et totam mundi machinam in nichilo et non cadunt, quo considerate, non mirabere hanc figuram.

The text to the right of center at the top of Beilage f. 3v runs as follows, with significant differences indicated in italics:

Ne mirere tribunal christi et omnes beatos sic in aere tenere ex figura duorum filiorum chore quos *adhuc mortales* deus tenuit in aere donec corpus patris chore cum omnibus suis in terra conclusus est, sicut *scriptum est*: "factum est grande miraculum quod chore *cum suis pereuntibus duo eius* filii non perirent." sic hic erit impii ruent in terram ruptam quod pii vident non ruentes. Etiam deus tenet gravissima elementa Aquam *et* terram solem lunam et Sydera et totam mundi machinam in nichilo et non cadunt, quo considerate, non mirare hanc figuram.

Also, in the lower part of Beilage f. 3v, the text between the two large circles at about 11 o'clock is very similar to text in HM 83, f. 12r. The text in the Huntington manuscript runs:

"Replete terram" verbum dei ad Adam et Noe de generatione humana, qua terra habitabilis successive replenda erat, et nunc anno mundi 6684 repleta est, primo ad scripturam intelligi, et secundo prophetice videtur intelligi. dupliciter, primo ut tot erunt dampnandi quod in iudicio terra habitabilis stet plena hominibus impiis, secundo quod in primis eis replebitur, et ut sic "replete" imperatum pro futuro iudicatum, exponitur ut "replebitis," quod sepe in scripturis divinis sit. et hoc oritur penalissimum dampnatis quod sic infernus replebitur quod ut vertere se possint dampnati.

The text on Beilage f. 3v between the two large circles at about 11 o'clock runs as follows, with significant differences of words indicated in italics, and in addition, the order of the second and third thirds of the text is reversed:

“Replete terram” verbum dei ad Adam et Noe de generatione humana, qua terra habitabilis successive replenda erat, et nunc anno mundi 6690 repleta est, primo ad scripturam *intelligitur sic* secundo intelligitur prophetice *exponiendo* verbum imperatum moda pro futuro indicatum ut replete id est replebitis quod sepe sit in divinis scripturis. *Ait “Solvite templum hoc,”*¹²⁵ *id est solvetis repletum* (i.e. templum) *et sic capitur dupliciter, primo quod tot erunt homines dampnandi quod in iudicio hoc extremo terra singulis hominibus.*

The difference in the *anno mundi* between the two texts is important. If we assume that the difference is not simply the result of scribal error, then the texts on these folios associated with the Wolfenbüttel manuscript were written six years after those in HM 83, i.e. in 1492 or 1494.

Also, in the lower part of Beilage f. 3v, inside the inner circle, on the left side, beginning on line 14 from the top, there is a text very similar to text in HM 83, f. 12r. The text in the Huntington manuscript runs:

Omnes homines resurgent. Anime cum virtute e celo descendunt ad sua corpora adsumenda, quibus resumptis, ascendent obviam christum in aera ad rubeum circulum in tessal 4, et Anime dampnatorum de inferno ascendent ad resumenda corpora sua, quibus resumptis, stant fixi immobiles super terram, quam nimis inordinate fixe dilexerunt, quorum capud erit gog antichristus.

The text on Beilage f. 3v on the left side of the inner circle, beginning at line 14, runs as follows, with the significant differences indicated in italics:

Nota omnes homines resurgent. Omnes enim anime virtute de celo descendunt et resument sua corpora et ascendent obviam jesum christum in aera in thessa 4 ad circulum rubeum. Anime dampnate de inferno ascendent ad resumenda sua corpora, quibus stant fixe immobiles <...> <rederi?> sursum levare nequeant super terram quam inordinate dilexerunt, quorum caput erit gog antichristus.

Further down in the same text on the left-hand side of the inner circle, there is some text that begins just to the left of the word ‘Tophet’ in the center of the diagram that is very similar to text in HM 83, f. 12r. Here is the passage in the Huntington manuscript:

¹²⁵ John 2:19.

Ruptura terre data in iudicio sententia ut impii incident figuratur et arguitur ex ruptura terre numerorum 16 in quam chore cum suis cecidit nec tamen corpora illorum ruerunt in tophet tunc sed circa superficiem terre manserunt profundius tamen communi in sepulchro, sed prius resurrectionem novissimam ruent simplum in infernum cum omnibus dampnatis quod tali opere tunc pronunciatum est.

And here is the text on Beilage f. 3v on the left side of the inner circle, beginning just to the left of the word 'Tophet' at the center of the diagram, with the significant differences indicated in italics. There is some damage to the folio in this area, and the lacunae have been supplied by comparison with HM 83, f. 12r:

Ruptura terre data in iudicio sententia <ut> impii incident figuratur et arguitur ex ruptura terre <numerorum 16> In quam chore cum suis cecidit Nec tamen cor<pora illorum> ruerunt *tunc in hunc Infernum* sed circa superfi<ciem ter>re manserunt profundius tamen communi sepulchra <sedeant?> <hec?> *sententia data. Ita ruit* simplum in infernum hanc tophet cum omnibus dampnatis quod tali tunc horribile opera pronunciatum est.

And finally, a passage from lower in the left-hand side of the inner circle in Beilage f. 3v, beginning eight lines from the bottom, is very similar to a passage on HM 83, f. 12v. Here is the passage in the Huntington manuscript:

Et manebunt tunc due cristalli fortissime perpetue inter beatos et dampnatos, scilicet superficies terre cristallisata tanquam lapis grandis lacui superpositus, et celum cristallinum celo empirio proximum ut tunc vere et perfecte mali a bonis sint et manerint separati, qui in tunc a exordia mundi semper fuerunt convicti. Arbitror ergo quod harum figurarum firma fides et frequens consideratio efficacius hominem retraherent a peccatis quam multa bona verba.

The text on Beilage f. 3v on the left side of the inner circle, beginning eight lines from the bottom, runs as follows, with the significant differences indicated in italics:

Et *erunt* tunc due cristalli fortissime perpetue inter beatos et dampnatos, scilicet superficies terre cristallisata tanquam lapis grandis lacui superpositus, et celum cristallinum celo empirio proximum. *O <quanta?> <...>*

lamenta lapsorum et labentium et gaudia in aeris retentorum ut cum <boni?> ascendent in celum empirium. Arbitror ergo quod harum figure firma fides et frequens aspectus plus retraherent hominem a peccatis quam multa bona verba.

These passages show not only that the works in HM 83 circulated, but also that they continued to be redacted for some time. The verbal differences in the passages just cited demonstrate revision, but it is impossible to know the process the author's texts underwent before reaching the forms in which we see them in HM 83 and Wolfenbüttel 442 Helmst. Are the texts in HM 83 earlier, more concise drafts which the author later expanded into the form we find in the Wolfenbüttel manuscript? The later date of the Wolfenbüttel pages (*anno mundi* 6690 for the Wolfenbüttel pages, versus 6684 for the Huntington manuscript) would seem to favor the suggestion that the texts underwent expansion, and the images of the swords in the *mappaemundi* on Beilage ff. 1r and 2r seem to be the result of a development from what we see on HM 83, f. 9v, as do the 'counterhorns' on Beilage f. 1r versus what we see in HM 83, f. 10v. But it is also at least possible that what we have in the Huntington manuscript is the result of a paring down of a longer, earlier version of the works.

The layout of Beilage ff. 3r and 3v of the Wolfenbüttel manuscript is much less elegant than the corresponding pages in the Huntington manuscript: the Wolfenbüttel pages are closer to an author's working copy of the work, while the Huntington manuscript seems designed for presentation.

Another question presented by the loose folios associated with the Wolfenbüttel manuscript is the relationship between the smaller folios with the maps (Beilage ff. 1r, 2r, 2v) and the large folios dominated by text (Beilage ff. 3r and 3v). The diagram in the lower half of Beilage f. 3v indicates the relative diameters of Hell and the earth, and is similar to the diagram in HM 83, f. 12v (with which it shares a text). The large size of the diagram indicates that the scribe was willing to draw the maps large. Yet the maps on Beilage ff. 1r, 2r, and 2v are small, and it is at least possible that the small maps come from one redaction of the work, and the larger pages (Beilage f. 3) from another.

Other Attempts to Map the Apocalypse

The focus on geography and cartography in the apocalyptic material in HM 83 and Wolfenbüttel 442 Helmst. is unique among illustrated accounts of the Apocalypse, despite the great variety of programs illustrating the Last Days

that were created over the centuries.¹²⁶ However, there are other cases in which maps are part of these programs, and some words about these maps are necessary as they shed light on the program in HM 83 and 442 Helmst. by way of contrast, and demonstrate more completely the independence and originality of the programs in these two manuscripts.

The Revelation of St. John describes many transformations of the earth: the islands and mountains are twice said to move, the sea turns to blood, a star falls to earth, and indeed the earth and Heaven are entirely remade (Revelation 21:1). It seems reasonable to expect that the global scale of some of these changes would have inspired medieval artists to use multiple *mappaemundi* or images of the world in cycles illustrating the Apocalypse, but in fact there is only one passage that is often illustrated with a *mappamundi*. That passage is Revelation 7:1, and the reference to the four corners of the earth in that text naturally lends itself to illustration with a map:

After this I saw four angels standing at the four corners of the earth, holding back the four winds of the earth to prevent any wind from blowing on the land or on the sea or on any tree.

A number of the manuscripts of Beatus of Liébana's *Commentary on the Apocalypse*, which was composed in the eighth century, are illustrated with detailed *mappaemundi* that illustrate the parts of the earth assigned to the Apostles to evangelize.¹²⁷ But several manuscripts are also illustrated with simpler *mappaemundi* that specifically illustrate Revelation 7:1. The earliest surviving illustrated manuscript of the work, New York, Morgan Library, MS M.644, which dates from c. 940–945, has a well-known *mappamundi* on ff. 33v–35r, and a less detailed *mappamundi* illustrating Revelation 7:1–3 on

¹²⁶ For a detailed list of other manuscripts that contain illustrations of the Apocalypse see Richard Emmerson and Lewis, "Census and Bibliography" (see Introduction, n. 1).

¹²⁷ The literature on Beatus *mappaemundi* is very large; see for example Gonzalo Menéndez-Pidal, "Mozárabes y asturianos en la cultura de la Alta Edad Media en relación especial con la historia de los conocimientos geográficos," *Boletín de la Real Academia de la Historia* 134 (1954), pp. 137–291; Ingrid Baumgärtner, "Visualisierte Weltenräume. Tradition und Innovation in den Weltkarten der Beatus-tradition des 10. bis 13. Jahrhunderts," in Hans-Joachim Schmidt, ed., *Tradition, Innovation, Invention. Fortschrittsverweigerung und Fortschrittsbewußtsein im Mittelalter* (Berlin and New York: Walter de Gruyter, 2005), pp. 231–276; and Sandra Sáenz-López Pérez, *The Beatus Maps: The Revelation of the World in the Middle Ages* (Burgos: Siloé, 2014).

f. 115r.¹²⁸ In the four corners of a rectangular frame, four angels, rather than restraining the winds, blow at the earth, each labeled *ventus*. Another angel enters at the top of the composition, its feet covered with the sun, and holding a scepter topped with a cross in one hand; this is the angel of Revelation 7:2–3 who comes from the rising of the sun bearing the sign of the living God with which to mark the foreheads of the servants of God. Around the edge of the image is the circumfluent ocean, here labeled *mare*, and in the middle the oblong disk of the earth. On the earth are the servants of God, and several trees, those which the winds are to be prevented from damaging. This *mappamundi*, rather than supplying geographical details of the earth, presents it as a stage for the playing out of Christian history.¹²⁹

There are corresponding illustrations in several other manuscripts of Beatus's *Commentary*.¹³⁰ For example, in the late eleventh-century St-Sever Beatus (Paris, Bibliothèque nationale de France, MS lat. 8878), in addition to its oft-reproduced *mappamundi* on ff. 45bisv–45terv, has an illustration of Revelation 7:1–3 on f. 119r (Fig. 5.17).¹³¹ Many of the elements are similar to those in the Morgan illustration just described, but here the *orbis terrarum* is circular rather than oblong; the angels at the corners of the earth hold the heads of personified winds, two of which they restrain, and one of which is at

128 This *mappamundi* in Morgan MS M.644, f. 115r, is reproduced in John Williams, *The Illustrated Beatus: A Corpus of the Illustrations of the Commentary on the Apocalypse* (London: Harvey Miller, 1994–2003), vol. 2, fig. 49. There are reproductions of all of the manuscript's miniatures in Beatus of Liébana, *El Beato de San Miguel de Escalada: manuscrito 644 de la Pierpont Morgan Library de Nueva York* (Madrid: Casariego, 1991); there is also a facsimile of the manuscript, Beatus of Liébana, *Apocalipsis de San Juan* (Valencia: Scriptorium, 2000–2001).

129 This image of the world does fulfill the definition of 'map' supplied by Harley and Woodward in *The History of Cartography* (Chicago: University of Chicago Press, 1987–), vol. 1, p. xvi (see Ch. 5, n. 75 for the text of their definition). On medieval maps as stages for the playing out of Christian history see Anna-Dorothee von den Brincken, "Mappa mundi und Chronographia: Studien zur 'Imago mundi' des abendländischen Mittelalters," *Deutsches Archiv für Erforschung des Mittelalters* 24 (1968), pp. 118–186; and Harley and Woodward *The History of Cartography*, vol. 1, p. 334.

130 There are some general remarks on these illustrations in Peter K. Klein, "La tradición pictórica de los Beatos," in *Actas del Simposio para el estudio del los códices del 'Comentario al Apocalipsis' de Beato de Liébana* (Madrid: Joyas Bibliográficas, 1980), vol. 2, pp. 83–106, at 92–93.

131 The *mappamundi* in BnF MS lat. 8878, f. 119r, is reproduced in Williams, *The Illustrated Beatus* (see Ch. 5, n. 128), vol. 3, fig. 406; the manuscript has been reproduced in facsimile as *Comentarios al Apocalipsis y al Libro de Daniel = Commentaires sur l'Apocalypse et le Livre de Daniel* (Madrid: Edilán, 1984).



FIGURE 5.17 A mappamundi illustrating Revelation 7:1–3, the restraining of the winds at the four corners of the earth, in a manuscript of Beatus of Liébana's Commentary on the Apocalypse, late eleventh century (PARIS, BNF, MS LAT. 8878, F. 119R, BY PERMISSION OF THE BIBLIOTHÈQUE NATIONALE DE FRANCE).

least diverted; and there are more explanatory texts incorporated into the image. While some of the Beatus manuscripts thus use a *mappamundi* to illustrate Revelation 7:1–3, they do not employ *mappaemundi* to illustrate any other part of the Apocalypse.

Some English Apocalypse manuscripts use *mappaemundi* to illustrate Revelation 7:1–3.¹³² One such image in which the *mappamundi* is more elaborate than in others is that on Douce Apocalypse, made c. 1270 (Oxford, Bodleian Library, MS Douce 180).¹³³ Here, as in corresponding images in other English manuscripts of the Apocalypse, the servants of God are not represented. In the lower right, St. John looks on while an angel descends from the heavens towards earth; we expect this angel to be carrying the sign of the Living God, but his hands are empty. The image of the earth is on the left; the *orbis terrarum* is square, surrounded by the circumfluent ocean which has fish swimming in it, and on the four corners stand four angels, each looking toward the descending angel, and holding in his hands a winged wind-head, with his hand over the wind-head's mouth. On the earth there are trees, rivers, buildings at least some of which are churches, a bull, and some sheep. There are similar images in other thirteenth-century English Apocalypse manuscripts, such as Lambeth Apocalypse,¹³⁴ the Gulbenkian Apocalypse,¹³⁵ and a closely related early

132 For general discussion of illustrated English manuscripts of the Apocalypse see Suzanne Lewis, *Reading Images: Narrative Discourse and Reception in the Thirteenth-Century Illuminated Apocalypse* (Cambridge and New York: Cambridge University Press, 1995). For discussion of the illustrations of Revelation 7:1 see Sammye Lee Justice, "The Illustrated Anglo-Norman Metrical Apocalypse in England," Ph.D. Dissertation, Princeton University, 1993, pp. 231–233, and p. 418 for a list of the folios on which this scene occurs in the manuscripts the author considers.

133 The Douce Apocalypse has been reproduced in facsimile as *Vollständige Faksimile-Ausgabe im Originalformat der Handschrift Ms. Douce 180, Apokalypse, aus dem Besitz der Bodleian Library, Oxford* (Graz: Akademische Druck- u. Verlagsanstalt; Paris: Club du Livre, 1981), with a volume of commentary by Peter Klein. This material (facsimile and commentary) is published in one volume in Peter Klein, *Endzeiterwartung und Ritterideologie: die englischen Bilderapokalypsen der Frühgotik und MS Douce 180* (Graz: Akademische Druck- u. Verlagsanstalt, 1983), which was reviewed by Yves Christe, "Apocalypses anglaises du XIII^e siècle," *Journal des savants* 1984.1–2 (1985), pp. 79–91. There is also a version of the 1981 facsimile published in Spain with commentary by Jean Grosjean, Yves Christe, and Montague Rhodes James as *Apocalipsis: manuscrito Douce 180* (Madrid: Ediciones de Arte y Bibliofilia, 1982). The manuscript has been studied more recently by Nigel J. Morgan in *The Douce Apocalypse: Picturing the End of the World in the Middle Ages* (Oxford: Bodleian Library, 2006), but Morgan offers no detailed discussion of the illustration of Revelation 7:1–3.

134 The image is in London, Lambeth Palace Library, MS. Lat. 209, f. 7v; the manuscript is reproduced in facsimile as Nigel J. Morgan, *The Lambeth Apocalypse: Manuscript 209 in Lambeth Palace Library* (London: Harvey Miller, 1990).

135 The image is in Lisbon, Museu Calouste Gulbenkian, MS LA 139, f. 13v; the manuscript is reproduced in facsimile as *Apocalipsis Gulbenkian* (Barcelona: M. Moleiro, 2001), and the image is discussed on p. 263 of the accompanying commentary volume.

fourteenth-century manuscript, the Cloisters Apocalypse.¹³⁶ But as with the manuscripts of Beatus's *Commentary*, none of these English manuscripts uses maps to illustrate other phases of the apocalyptic drama. The artists were content to illustrate with a map the one scene where the text suggested this, and did not explore other ways in which maps might be used to illustrate the narrative. It is worth emphasizing that there is no map illustrating Revelation 7:1–3 in either HM 83 or Wolfenbüttel 442 Helmst.: the cartographic program of illustration in those manuscripts is based on a completely fresh consideration of how to illustrate the apocalyptic narrative.

Mappaemundi are also used to illustrate Revelation 7:1–3 on some late medieval Central and Eastern European icons of the Last Judgment,¹³⁷ and for example in a hand-colored German block-book of c. 1470,¹³⁸ but again in these cases, only the one scene is illustrated with a *mappamundi*.

There are also medieval maps that incorporate elements of the Last Days, rather than being themselves part of a program illustrating the Apocalypse; these works show clearly how some medieval maps are as much about the

136 The image is in New York, The Cloisters Collection, 1968 (68.174), f. 10v. The manuscript is reproduced and discussed in Florens Deuchler, Jeffrey Hoffeld, and Helmut Nickel, *The Cloisters Apocalypse* (New York: Metropolitan Museum of Art, 1971).

137 See John-Paul Himka, *Last Judgement Iconography in the Carpathians* (Toronto and Buffalo: University of Toronto Press, 2009), pp. 57–58; *Novgorod Icons, 12th–17th Century*, trans. Kathleen Cook (Leningrad: Aurora Art Publishers, 1980), plate 72 with pp. 293–294, on a mid-fifteenth-century icon of the Last Judgment in Moscow, Tretyakov Gallery, Inv. No. 12874; Luidmila Miliayeva, *The Ukrainian Icon* (Bournemouth, England: Parkstone Publishers; and St. Petersburg: Aurora Art Publishers, 1996), p. 120, fig. 112, with p. 233, icon of the Last Judgment, late fifteenth- or early sixteenth-century, Lvov, National Museum, Inv. No. 34505/i–1181, and p. 29, fig. 27 with p. 229, mid-sixteenth-century icon of the Last Judgment, Lvov, National Museum, Inv. No. 36454/–2122; and L. V. Nersesian and S. E. Blazhevskaya, *Ikony Iaroslavlia XIII-serediny XVIII veka: shchedry drevnerusskoi zhivopisi v muzeiakh Iaroslavlia = Yaroslavl Icons of 13- mid 17th Century: The Masterpieces of Ancient Russian Painting in the Museums of Yaroslavl* (Moscow: Severnyi Palomnik, 2009), vol. 1, p. 288 text, and p. 289 illustration of a mid-sixteenth-century icon of the Last Judgment, Yaroslavl Museum of Art, Inv. No. И–13, КП–53403/13. The authors have not been able to see Liliya Berezhnaya and John-Paul Himka's book *The World to Come: Ukrainian Images of the Last Judgment*, forthcoming from Harvard University Press.

138 The book is titled *Apocalypsis Sancti Johannis*, and the hand-colored copy which is in the Rosenwald Collection at the Library of Congress has been digitized and is available at <<http://hdl.loc.gov/loc.rbc/rosenwald.0023>>, where the image illustrating Revelation 7:1–3 is number 21 in the sequence. For discussion of the sources of the imagery in block-books of the Apocalypse see Gertrud Bing, "The Apocalypse Block-Books and Their Manuscript Models," *Journal of the Warburg and Courtauld Institutes* 5 (1942), pp. 143–158, esp. the chart following p. 146, no. 4, and p. 147 note 7.

playing out of Christian history as they are about geography. One map that places a particular emphasis on the Last Days is the Hereford *mappamundi* of c. 1300. In the far northeast of the map, on a peninsula that juts into the circumfluent ocean, and which is separated from the *orbis terrarum* proper by a wall, there is a long legend that relates to Gog and Magog, evil peoples who in medieval accounts were thought to have been confined by Alexander the Great, and who will burst forth in the Last Days to ravage the earth before their final destruction (Ezekiel 38:1–39:16; Revelation 20:7–10).¹³⁹ The legend continues on the mainland. The legend does not refer to the confined peoples by the names Gog and Magog, but we can be certain of their identity through the similar location and description of Gog and Magog on other maps.¹⁴⁰ That legend runs:¹⁴¹

Omnia horribilia plus quam credi potest. Frigus intollerabile, omni tempore ventus acerimus a montibus, quem incole 'bizo' vocant. Hic sont homines truculenti nimis, humanis carnibus vescentes, cruorem potantes, filii Caim maledicti. Hos inclusit Dominus per magnum Alexandrum, nam terre motu facto in conspectu principis montes super montes in circuitu eorum ceciderunt. Ubi montes deerant, ipse eos muro insolubili cinxit.

Isti inclusi esse creduntur qui a Solino 'Antropophagi' dicuntur, inter quos et Essedones numerantur; nam tempore antichristi Erupturi, et omni mundo persecucionem illaturi.

¹³⁹ On Gog and Magog see Andrew Runni Anderson, *Alexander's Gate, Gog and Magog, and the Inclosed Nations* (Cambridge, MA: Medieval Academy of America, 1932); Raoul Manselli, "I popoli immaginari: Gog e Magog," in *Popoli e paesi nella cultura altomedievale: settimane di studio del Centro Italiano di Studi sull'Alto Medioevo, Spoleto, 23–29 aprile 1981* (Spoleto: Centro Italiano di Studi sull'Alto Medioevo, 1983), vol. 2, pp. 487–521; and Debra Higgs Strickland, *Saracens, Demons, & Jews: Making Monsters in Medieval Art* (Princeton, NJ: Princeton University Press, 2003), pp. 228–239.

¹⁴⁰ On the representation of Gog and Magog on maps see Danielle Lecoq, "L'image d'Alexandre à travers les mappemondes médiévales (XIIe–XIIIe)," *Geographia Antiqua* 2 (1993), pp. 63–103, at 92–103; Andrew Gow, "Gog and Magog on *Mappaemundi* and Early Printed World Maps: Orientalizing Ethnography in the Apocalyptic Tradition," *Journal of Early Modern History* 2.1 (1998), pp. 61–88; Westrem, "Against Gog and Magog" (see Ch. 4, n. 25); and Michele Castelnovi, "Gog e Magog: le metamorfosi di una metafora geografica," *Bollettino della Società Geografica Italiana* 13.2 (2008), pp. 421–448.

¹⁴¹ Westrem, *The Hereford Map* (see Ch. 4, n. 39), pp. 69–71, nos. 141 and 142. On the sources of the legends see Westrem, pp. 68 and 70, and Naomi Reed Kline, "Alexander Interpreted on the Hereford Mappamundi," in P. D. A. Harvey, ed., *The Hereford World Map: Medieval World Maps and their Context* (London: British Library, 2006), pp. 167–183, at 176 and 179.

<Here are> all kinds of horrors, more than can be imagined: intolerable cold, a constant blasting wind from the mountains, which the inhabitants call 'bizo'. Here are exceedingly savage people who eat human flesh and drink blood, the accursed sons of Cain. The Lord used Alexander the Great to close them off, for within sight of the king an earthquake occurred, and mountains tumbled upon mountains all around them. Where there were no mountains, Alexander hemmed them in with an indestructible wall.

These enclosed <people> are believed to be the same <ones> who were named Anthropophagi by Solinus, among whom are to be numbered the Essedones. Indeed, at the time of Antichrist they will be bursting forth and inflicting persecution on the whole world.

At the top of the map is an image of the Last Judgment, with Christ in the clouds looking on as the elect, to his right, rise from their graves and an angel leads them to Heaven, while a demon holds the damned together with a rope and leads them to Hell.¹⁴² The prominent position of the scene clearly indicates that it was important to the creator of the map, and we are to understand a connection between that scene and the letters M-O-R-S ('death') that encircle the earth.¹⁴³ The artist wants the viewer to remember that the things of this world and the world itself are transient, and to think of his or her soul and the fate that awaits it. Thus the map's intended function is not so different from that of the apocalyptic maps in HM 83: on f. 12v, the author declared "I believe therefore that a firm faith in and frequent contemplation of these diagrams will more effectively restrain a man from sins than would many good words."

The Catalan Atlas of 1375, one of the most elaborately decorated medieval nautical charts that survives, prominently features elements related to the Last Days: these elements, painted at a large scale, occupy much of northeastern Asia (see Fig. 5.18).¹⁴⁴ That whole part of the continent is cordoned off by a mountain chain, and mountains surround this area along the coast as well, and

¹⁴² The depiction of the Last Judgment on the Hereford map is discussed by Alessandro Scafi, "Mapping the End: The Apocalypse in Medieval Cartography," *Literature & Theology* 26.4 (2012), pp. 400–416. The Hereford map has been reproduced in facsimile as *The Hereford World Map: Mappa Mundi* (London: The Folio Society, 2010).

¹⁴³ On the word *MORS* on the Hereford *mappamundi* see Westrem, *The Hereford Map* (see Ch. 4, n. 39), pp. 4–5.

¹⁴⁴ For bibliography on the Catalan Atlas see Ch. 4, n. 14. For discussion of the elements on the map that are related to the Last Days see Sandra Sáenz-López Pérez, "La representación de Gog y Magog y la imagen del Anticristo en las cartas náuticas bajomedievales," *Archivo Español de Arte* 78 (2005), pp. 263–276.

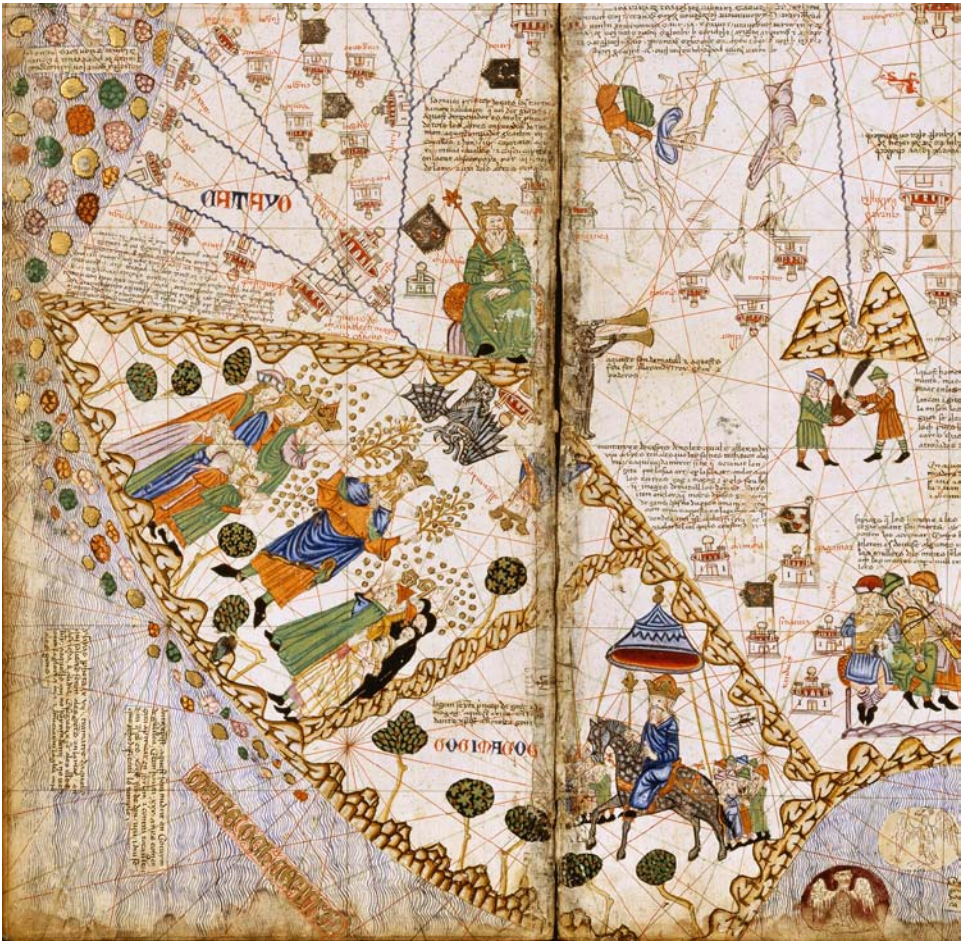


FIGURE 5.18 *Northeastern Asia (oriented with south at the top) on the Catalan Atlas of 1375, showing Antichrist, Gog and Magog, Alexander the Great directing a demon to enclose them, and the two metal trumpeters* (PARIS, BNF, MS ESPAGNOL 30, BY PERMISSION OF THE BIBLIOTHÈQUE NATIONALE DE FRANCE).

also divide the area into two parts. Just outside the mountains there is a long legend about them, which runs:¹⁴⁵

Muntanyes de Caspis dins les quals Allexandri viu arbres ten alts que les saines tohaven a les nuus e aquí cuidà morir, sinó que Setanat l'en gità per la sua art e per la sua art endoy aquí los tartres Gog e Magog e per els féu les ·II· images de matall, los demunt scrits. Ítem encloy aquí molts

¹⁴⁵ The transcription comes from *Mapamundi del año 1375* (see Ch. 4, n. 14), p. 81; the translation is ours.

diverses generacions de gens qui no dupten a manjar tota carn crua, e aquesta és la generació ab què vendrà Antichrist e la lur fi serà foc qui avalar<à> del cel qui-ls confondrà.

The Caspian Mountains in which Alexander <the Great> saw trees so tall that their tops touched the clouds. He was close to death here, except that Satan got him out of there with his power, and by his power he enclosed here the Tartars Gog and Magog and for them had made the two metal figures drawn above. He also enclosed here very diverse peoples who do not hesitate to eat all kinds of raw meat: for this is the people from which Antichrist will come, and their end will be caused by fire that will fall from Heaven and confound them.

The two metal figures mentioned here are a pair of trumpeters depicted on the map, just to the right of the gap between the two panels in Fig. 5.18, and just outside the mountains that enclose Gog and Magog and Antichrist. They were intended to play trumpet blasts when the winds blew, and thus convince Gog and Magog that an army was on the far side of the mountains, discouraging any attempt to break free.¹⁴⁶ Near the trumpeters is an image of Alexander the Great directing a demon to compete the construction of the barrier that will enclose the evil forces to the north of the Caspian Mountains.

In the northern section of the area surrounded by the Caspian Mountains there is a king riding a horse and closely surrounded by his followers, who are drawn on a much smaller scale. The text beside him reads, *Lo gran senyor princep de Gog e de Magog. Aquest exirà en temps d'Antechrist ab molta gent*, "The great lord, prince of Gog and Magog. He will appear in the time of Antichrist with many people."¹⁴⁷ In the southern section of the area cordoned off by the Caspian Mountains there is a large image of Antichrist deceiving people with false miracles.¹⁴⁸ The accompanying legend reads:¹⁴⁹

Antechrist. Aquest serà nudrit en Goraym de Galilea e con haura .xxx. anys començarà a preicar en Jherusalem e contra tota veritat dirà que ell és Christ fill de Déu viu. e diu-se que rehedificarà lo Temple.

¹⁴⁶ See Anderson, *Alexander's Gate, Gog and Magog* (see Ch. 5, n. 139), pp. 82–85.

¹⁴⁷ The transcription comes from *Mapamundi del año 1375* (see Ch. 4, n. 14), p. 87; the translation is ours.

¹⁴⁸ For discussion of the image of Antichrist on the Catalan Atlas see Sáenz-López Pérez, "La representación de Gog y Magog" (see Ch. 5, n. 144).

¹⁴⁹ The transcription comes from *Mapamundi del año 1375* (see Ch. 4, n. 14), p. 87; the translation is ours.

Antichrist. He will be raised in Chorazin in Galilee, and when he is thirty years old he will begin to preach in Jerusalem, and contrary to the truth he will proclaim that he is Christ, Son of the Living God, and he will say that he will rebuild the Temple.

The Catalan Atlas thus devotes considerable attention to important actors in the Apocalypse, but there is no explicit moral message associated with these figures, no urging of the viewer to think upon the fleeting nature of worldly things, or the state of his or her soul, and we do not detect any such implicit message either, as there is on the Hereford *mappamundi*. The presence of Gog, Magog, and Antichrist on the Catalan Atlas seems to be supplied purely for informational purposes.

Gog and Magog appear on many medieval and Renaissance maps,¹⁵⁰ and there is a legend about Antichrist on the so-called Genoese world map of 1457.¹⁵¹ consciousness of the world's apocalyptic future is indicated on many of the more elaborate *mappaemundi* and nautical charts. But the Hereford *mappamundi* and the Catalan Atlas have the most detailed depictions of the actors of the Last Days of any surviving medieval maps—aside from those in HM 83 and Wolfenbüttel 442 Helmst.

We have record of another medieval map, unfortunately no longer extant, that contained a particularly detailed image of the playing out of Christian history, namely a map made by Hugh of Saint-Victor, the mystical theologian active in the twelfth century.¹⁵² Although the map itself has not come down to us, Hugh described it in his *De Arca Noe Mystica* or *Libellus de formatione*

¹⁵⁰ For bibliography about Gog and Magog on maps see Ch. 5, n. 140.

¹⁵¹ The 'Genoese' map is in Florence, Biblioteca Nazionale Centrale, Portolano 1; the legend about Antichrist runs *De hac gente, hoc est ex tribu Dan nascetur is est anticristus qui magica arte montes istos apperens ad christocolas subvertendos accedet*, "From this race, that is, from the tribe of Dan, Antichrist is to be born, who, opening these mountains by magic art, will come to overthrow the worshipers of Christ." The legend is transcribed and translated into English by Stevenson, *Genoese World Map, 1457* (see Ch. 4, n. 16), p. 38. For additional bibliography on the map see Ch. 4, n. 16.

¹⁵² On Hugh of Saint-Victor generally see F. Vernet, "Hugues de Saint-Victor," in Alfred Vacant, Eugène Mangenot, and Emile Anriann, eds., *Dictionnaire de théologie catholique* (Paris: Librairie Letouzey et Ané, 1903–50), vol. 7, no. 1, cols. 240–308; F. E. Croydon, "Notes on the Life of Hugh of St. Victor," *The Journal of Theological Studies* 40 (1939), pp. 232–253; Michael J. Gorman, "Hugh of St. Victor," in Jorge J. E. Gracia and Timothy B. Noone, eds., *A Companion to Philosophy in the Middle Ages* (Malden, MA: Blackwell, 2003), pp. 320–325; and George L. Scheper, "Hugh of Saint Victor (End of Eleventh Century–1141)," in George Thomas Kurian et al., eds., *The Encyclopedia of Christian Literature* (Lanham, MD: Scarecrow Press, 2010), vol. 2, pp. 375–378.

arche.¹⁵³ The map was a grandly conceived and complex diagrammatization of history, structured on the rectangular framework of Noah's Ark, superimposed on a *mappamundi*, with its stern in the east, and its prow in the west (see Fig. 5.19). In many medieval *mappaemundi*, the role of the image of the earth as a stage for the playing out of Christian history is almost as important as the geographical information they convey, but the elaborate image Hugh created was certainly one of the fullest geographical interpretations of history ever produced.¹⁵⁴ Hugh envisioned a progression of history from east to west:¹⁵⁵ Adam and Eve were created in Eden in the east, and then fell there. The six ages of human history are depicted successively down the middle of the image, with Christ, the Second Adam, at the very center, who effected the salvation of humankind. At the far western edge of the world, the Last Judgment will take place, bringing history of a close.

At the end of the *De Arca Noe mystica* or *Libellus de formatione arche*, Hugh indicates the effect he intends the image he just described to have:¹⁵⁶

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- 153 The *De Arca Noe mystica* or *Libellus de formatione arche* is published in *Patrologia Latina* 176.681–702, and in Hugh of Saint-Victor, *Hugonis de Sancto Victore De archa Noe; Libellus de formatione arche*, ed. Patrice Sicard (Turnhout: Brepols, 2001) (= Corpus Christianorum Continuatio Mediaevalis, 176, 176A), vol. 1, pp. 119–162. It is translated into English by Jessica Weiss as “A Little Book about Constructing Noah's Ark” in Mary Carruthers and Jan M. Ziolkowski, eds., *The Medieval Craft of Memory: An Anthology of Texts and Pictures* (Philadelphia: University of Pennsylvania Press, 2002), pp. 41–70. A new English translation is supplied by Conrad Rudolph, *The Mystic Ark: Hugh of Saint Victor, Art, and Thought in the Twelfth Century* (Cambridge and New York: Cambridge University Press, 2014), pp. 393–502.
- 154 For discussion of Hugh's image of the Ark superimposed on a *mappamundi* see Barbara Obrist, “Image et prophétie au XII^e siècle: Hugues de Saint-Victor et Joachim de Flore,” *Mélanges de l'Ecole française de Rome. Moyen-Age, Temps modernes* 98.1 (1986), pp. 35–63, esp. 35–49; Marcia Kupfer, “Medieval World Maps: Embedded Images, Interpretive Frames,” *Word and Image* 10 (1994), pp. 262–288, esp. 269–271; and Patrick Gautier Dalché, “‘Réalité’ et ‘symbole’ dans la géographie de Hugues de Saint-Victor,” in *Ugo di San Vittore. Atti del XLVII Convegno storico internazionale, Todi, 10–12 ottobre 2010* (Spoleto: Fondazione Centro italiano di studi sull'alto Medioevo, 2011), pp. 359–382.
- 155 For discussion see Stephen McKenzie, “The Westward Progression of History on Medieval Mappaemundi: an Investigation of the Evidence,” in P. D. A. Harvey, ed., *The Hereford World Map: Medieval World Maps and their Context* (London: The British Library, 2006), pp. 335–344.
- 156 *Patrologia Latina* 176:702; the translation is our own, relying on those of Weiss, “A Little Book about Constructing Noah's Ark” (see Ch. 5, n. 153), p. 70; and Rudolph, *The Mystic Ark* (see Ch. 5, n. 153), pp. 501–502.

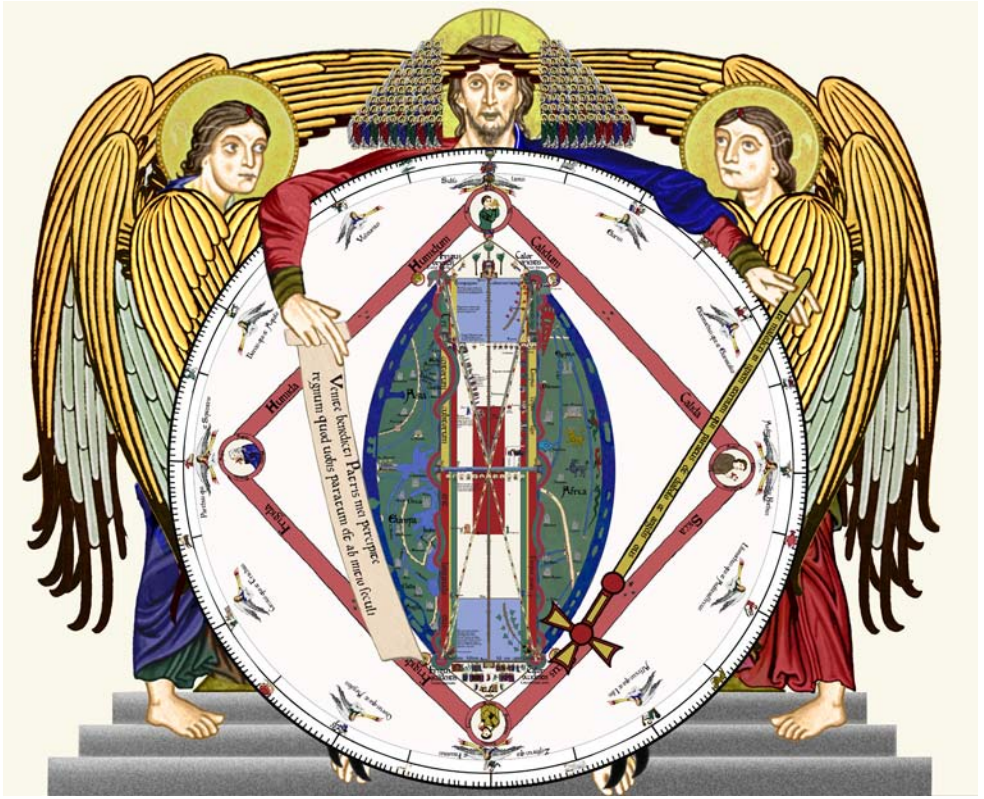


FIGURE 5.19 A reconstruction by Conrad Rudolph of the image of the world described by Hugh of Saint-Victor in his *De Arca Noe Mystica*: an image of the Ark is superimposed on a mappamundi oriented with east at the top that shows history progressing from Eden at the top to the Last Judgment at the bottom (BY PERMISSION OF CONRAD RUDOLPH).

Haec de arcae nostrae figuratione dicimus, ut si cuilibet decoram domus Domini, et mirabilia ejus (quorum non est numerus) intueri, hoc interim exemplari affectum suum provocet.

We have said these things about the representation of our Ark, so that if anyone might wish to contemplate the elegance of the Lord's house and its wonders, which are without number, he might rouse his emotion for a time with this exemplar.

The image is intended, then, to provide spiritual inspiration to the viewer. In Hugh's *De Arca Noe morali* he encourages the reader to create a dwelling for

God within himself that is modeled after the Ark.¹⁵⁷ There is a passage near the beginning of that work in which Hugh indicates his purpose, and it seems plausible that Hugh intended some of this same effect for the image of the world and Ark he describes in the *Libellus de formatione arche*.¹⁵⁸

Hujus vero spiritualis aedificii exemplar tibi dabo arcam Noe, quam foris videbit oculus tuus, ut ad ejus similitudinem intus fabricetur animus tuus. Videbis ibi colores quosdam, formas et figuras, quae delectent visum. Sed scire debes, ideo haec posita esse, ut in eis discas sapientiam, disciplinam atque virtutem, quae exornent animum tuum.

Now the figure of this spiritual building which I am going to present to you is Noah's ark. This your eye shall see outwardly, so that your soul may be fashioned to its likeness inwardly. You will see there certain colors, shapes, and figures which will be pleasant to behold. But you must understand that these are put there, that from them you may learn wisdom, instruction, and virtue, to adorn your soul.

The elaborate *mappamundi* in the *Libellus* is certainly intended to provide spiritual inspiration, and probably also moral instruction. The maps in HM 83, as the author declares on f. 12v, were intended to dissuade the viewer from sin: in both cases the purpose of the maps is moral, but the emphasis is different: Hugh seeks to inspire, while the author of HM 83 seeks to restrain.

Hugh described his image of the world in detail so that it could be recreated by others as a tool for religious instruction, and though many manuscripts of Hugh's work survive, none of them includes even a reduced or simplified image of his map. However, four different scholars, Joachim Ehlers, Danielle Lecoq, Patrice Sicard, and Conrad Rudolph, have reconstructed Hugh's map from his writings.¹⁵⁹ Both Hugh's description of his image and these recreations of it

¹⁵⁷ The text of the *De Arca Noe morali* is supplied in *Patrologia Latina* 176.617–680, and an English translation is available in *Hugh of Saint-Victor: Selected Spiritual Writings* (New York: Harper & Row, 1962), pp. 45–153.

¹⁵⁸ *Patrologia Latina* 176.617, and in *Hugh of Saint-Victor: Selected Spiritual Writings* (see Ch. 5, n. 157), p. 52. This passage is cited in J. A. H. Lewis, "History and Everlastingness in Hugh of St Victor's Figures of Noah's Ark," in Gerhard Jaritz and Gerson Moreno-Riaño, eds., *Time and Eternity: The Medieval Discourse* (Turnhout: Brepols, 2003), pp. 203–222, at 206.

¹⁵⁹ See Joachim Ehlers, "Arca significat ecclesiam. Ein theologisches Weltmodell aus der ersten Hälfte des 12. Jahrhunderts," *Frühmittelalterliche Studien* 6 (1972), pp. 171–187; Lecoq, "La 'mappemonde' du *De Arca Noe Mystica*" (see Ch. 5, n. 39); Patrice Sicard, *Diagrammes médiévaux et exégèse visuelle: le 'Libellus de formatione arche' de Hugues de*

have many more details than we have space to explore here, but we would argue that the maps in the treatise on the Apocalypse in HM 83 are a more imaginatively cartographic interpretation of the drama of salvation than Hugh's. Hugh superimposes the progression of history on a static *mappamundi*, but the author of HM 83 shows how the drama of the Last Days changes the configuration of the world in a series of maps, each showing the shape of the world during a precise date range. The maps in HM 83 are certainly one of the most elaborate and important fusions of cartography and religious history that survives from the Middle Ages.

Saint-Victor (Turnhout: Brepols, 1993), plates 7 and 8; Hugh of Saint-Victor, *Hugonis de Sancto Victore De archa Noe; Libellus de formatione arche*, ed. Patrice Sicard (Turnhout: Brepols, 2001), in volume 2; Conrad Rudolph, 'First, I Find the Center Point': Reading the Text of Hugh of Saint Victor's 'The Mystic Ark,' (Philadelphia: American Philosophical Society, 2004) (= *Transactions of the American Philosophical Society* 94.4); and Rudolph's *The Mystic Ark* (see Ch. 5, n. 153).

Conclusions

The maps illustrating the folios on geography in Huntington Library MS HM 83 are works of startling originality. While the anonymous author probably drew inspiration for his maps from those that illustrate the thematic books of Bartholomaeus Anglicus's *De proprietatibus rerum*, his thematic maps give the impression of having been created by someone who understood the genre, rather than by artists who happened to illustrate some manuscripts of Bartholomaeus using maps. The thematic maps in HM 83 seem to have been created with a programmatic intention, and while they had no influence on other cartographers, they are a fascinating case study in the cartographic developments that were possible in the late fifteenth century in the hands of a brilliant mapmaker.

We see the same originality in the use of maps to illustrate the Apocalypse. In other programs illustrating the Last Days, Revelation 7:1–2 is sometimes illustrated with a *mappamundi*, but in HM 83 the whole sequence of changes to the earth wrought by the end of history is illustrated with maps, a wonderfully creative solution to the artistic problem of how to portray those cataclysmic events. The apocalyptic maps not only show again the author's firm grasp of the value of thematic maps, but also represent an early systematic use of historical maps, and contain bold examples of symbolic cartography. What the anonymous author in fact created is the most cartographically pioneering fusion of cartography and religious history that survives from the Middle Ages.

The author's distinct character is also on display in other aspects of his treatise on the Apocalypse. While other works of fifteenth-century German Apocalypticism focus on political interpretations that identify the principal actors of the drama of the Last Days with contemporary leaders of the Church and nation-states, the author of HM 83 chooses not to indulge in partisan fantasies of that nature. We see in his treatise none of the anti-clerical fervor of several other contemporary works on the Apocalypse; we find instead a more dispassionate and analytic approach to the Apocalypse.

Perhaps in part because of its very originality and its lack of engagement with contemporary politics, the treatise in the Apocalypse in HM 83 had no significant influence on later German discussions on the Apocalypse, but evidence from Wolfenbüttel, Herzog August Bibliothek, Cod. Guelf. 442 Helmst. demonstrates both that the treatise continued to undergo revision, and that it did circulate.

The best candidate we have found for the author of the remarkable works in HM 83 is Baptista, a man from Lübeck who was appointed by Pope Pius II to

care for pilgrims at the Franciscan monastery on Mount Zion between 1458 and 1464 (when Pius II was Pope), and apparently served there through at least 1482, when he attended to the traveler Felix Fabri. We have precious little information about Baptista, and more would be very welcome, as it might confirm or disprove that Baptista was the author of these works, and if he was, provide additional insights about one of the most original cartographers of the fifteenth century.

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