

# THE KING-HAMY CHART AT THE HUNTINGTON LIBRARY: A HISTORICAL MAP MADE BY BATTISTA AGNESE

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## ABSTRACT

The anonymous manuscript world map known as the King-Hamy chart (San Marino, California, Huntington Library, HM 45) was ascribed a date of c. 1502 by one of its early owners, Ernest Hamy, in 1886, and a similar date has been accepted for the chart ever since. Yet a number of the chart's features raise questions about this date. In fact, handwriting and other stylistic cues show it to have been made by the prolific Italian cartographer Battista Agnese, active from about 1536 to 1564. Agnese had made some historical maps in his manuscript atlases of the 1550s, and the King-Hamy map is revealed here to be not a map of the world made c. 1502 in the early stages of European expansion, as a historical map made by Agnese to show the image of the world held by Europeans in the early stages of the European expansion<sup>1</sup>.

## KEYWORDS

King-Hamy chart, Cartography, Huntington Library, Battista Agnese, Attribution.

## CAPITALIA VERBA

Mappa King-Hamy, Cartographia, Bibliotheca Huntington, Battista Agnese, Adtributio.

The King-Hamy chart at the Huntington Library, an anonymous manuscript world map generally assigned a date of c. 1502, is an enigma.<sup>2</sup> It would seem to be one of the earliest surviving maps to depict the New World, yet it reveals nothing new in South America, not in terms of coastlines, place names, inscriptions, or decoration. It is declared to be a pure nautical chart and based on a Portuguese model, but includes elements that appear neither on Portuguese nautical charts nor on those of other nations. It has a double equator—that in the west is about 5° south of that in the east—which is thought to be a way to compensate for navigational errors due to magnetic declination while crossing the Atlantic, yet the extant charts that have a double equator are from the 1550s. It is thought to be the earliest surviving map to name Cape Race, the southeastern point of Newfoundland, but the name *Cabo raso* appears on the map without any evidence of other new discoveries on Newfoundland. The map's unusual features call for a fresh look.

The King-Hamy chart is named for two of its early owners, Richard King (1810-1876), the British doctor, explorer, and ethnographer;<sup>3</sup> and Ernest Hamy (1842-1908), the French doctor, ethnographer, and map collector.<sup>4</sup> From King the chart had passed to Alphonse Pinart (1832-1911), and he sold it to Hamy in 1885, who published the first study of the map in 1886;<sup>5</sup> after Hamy's passing it was sold at auction to James William Ellsworth (1849-1923).<sup>6</sup> Ellsworth's library was purchased

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1. The article presented here was generously supported by Dr. and Mrs. James C. Caillouette Fellowship at the Huntington Library in 2014, for which I am grateful. I also wish to thank Corradino Astengo, Šima Krtalić, Gregory McIntosh, and Benedicte Gamborg Briså for their discussions with me about the King-Hamy chart. Used Abbreviations: BL, British Library; BML, Biblioteca Medicea Laurenziana; BM, Biblioteca Marciana (Venice); BnF, Bibliothèque Nationale de France; BS, Bayerische Staatsbibliothek (Munich); HL, Huntington Library (San Marino); MMB, Museu Marítim de Barcelona; MMR, Maritiem Museum Rotterdam, NMM, National Maritime Museum (Greenwich); UP, University of Pennsylvania.

2. The King-Hamy chart is in San Marino, California, Huntington Library, HM 45. For discussion of the map see Hamy, Ernest-Théodore. "Notice sur une mappemonde Portugaise anonyme de 1502, récemment découverte à Londres". *Bulletin de géographie historique et descriptive*, 1 (1886): 147-160 and 5 plates; Marcel, Gabriel. *Reproductions de cartes et de globes relatifs à la découverte de l'Amérique du XVIe au XVIIIe siècle*. Paris: Ernest Leroux, 1893-94: II, 37-39; Nordenskiöld, Adolf Erik. *Periplus: An Essay on the Early History of Charts and Sailing Directions*. Stockholm: P. A. Norstedt & Söner, 1897: 128-129 and plate 45; HARRISSE, Henry. *La découverte et évolution cartographique de Terre-Neuve et des Pays Circonvoisins, 1497-1501-1769*. Paris: H. Welter; London: Henry Stevens, Son & Stiles, 1900: 39-42, 196-197, 250-251, 359; Hamy, Ernest- Théodore. *Portolan Charts of the XVth, XVIth, and XVIIth Centuries Collected by the late Dr. Theodore Jules Ernest Hamy*. New York: The Anderson Auction Company, 1912: No. 3 (the description runs seven unnumbered pages) with plates 4 and 5; Hoffman, Bernard G. *Cabot to Cartier: Sources for a Historical Ethnography of Northeastern North America, 1497-1550*. Toronto: University of Toronto Press, 1961: 52-56; Skelton, Raleigh Ashlin. "The Cartography of the Voyages," *The Cabot Voyages and Bristol Discovery under Henry VII*, James A. Williamson, ed. Cambridge: The Hakluyt Society, 1962: 295-325, especially at 308-310 and 316. A high-resolution image of the chart is available at <https://digital-scriptorium.org/> and <https://hdl.huntington.org/>.

3. Wallace, Hugh N. "Richard King (1810-1876)". *Arctic* 4/40 (1987): 350-351.

4. Théodore Reinach, "Notice sur la vie et les travaux de M. le Dr Hamy," *Comptes-rendus des séances de l'Académie des Inscriptions et Belles-Lettres* 55/1 (1911): 55-142.

5. Hamy, Ernest-Théodore. "Notice sur une mappemonde Portugaise...": 147-160.

6. Hamy, Ernest-Théodore. *Portolan Charts* (see note 1), No. 3 (7 unnumbered pages) with plates 4 and 5.



by A. S. W. Rosenbach, the famous dealer in rare books and manuscripts, and Henry E. Huntington bought it from him in 1923.<sup>7</sup>

The chart is on a single piece of parchment that measures 585 × 942 mm, including the neck (see illustration 1). Its upper and lower edges have a border with a latticework design painted in gold; at the left and right ends of these borders there are vertical scales of latitude, marked in increments of 5 degrees that run from 90° south to 90° north on the eastern scale. The rhumb line network has 32 nodes in a single circle. The northernmost and southernmost points of the rhumb line network coincide with the northern and southern edges of the map proper and are labeled *POLUS ARTICUS* and *POLUS ANTARTICUS*, respectively. No land is indicated on the map south of 33° south. There is no scale of longitude. The chart runs from the western tip of Cuba in the west to the eastern tip of mainland Asia in the east. Along the lower right edge of the map there is a string of dots in small circles that constitute a scale of miles. The coasts of Western Europe, the Mediterranean, and Africa are very dense with place names, but names are sparse elsewhere on the map: while South America is labeled *TERRA SANCTAE CRUCIS*, for example, it bears not a single coastal place name or interior feature. The chart has a low level of decoration, and the few decorations that it does display are distributed among several categories: there are two ships, four sovereigns, five rivers, three mountain ranges, and one large city (Quinsay in eastern Asia).

The vast majority of the place names in Africa are Portuguese: as Hamy pointed out, the words used to name geographical features —*ilha, cavo, porto, baixa, praia*, and so on— are Portuguese.<sup>8</sup> However, the visual style of the map is Italian,<sup>9</sup> and its Italian origin is confirmed by the fact that an important text on the coast of Africa is in Italian. On the eastern coast of Africa south of Mozambique, between the place names *padro de san rafaell* and *insulas primeras*, there is the phrase *questo avemo visto*,

7. Dutschke, Consuelo W; Rouse, Richard H; Dunn, Richard S. *Guide to Medieval and Renaissance Manuscripts in the Huntington Library*. San Marino, CA: The Library, 1989, I: 103-104.

8. Hamy, Ernest-Théodore. "Notice sur une mappemonde Portugaise...": 148. Hamy actually says that all of the nomenclature on the chart is Portuguese, and concludes that the chart was made in Portugal, but this claim ignores the Ptolemaic nomenclature, which is in Latin, and the evidence shortly to be discussed that the map was made in Italy. The African place names on the King-Hamy chart from the Cape of Good Hope to the east are supplied by Ravenstein, Ernst G. *A Journal of the First Voyage of Vasco da Gama, 1497-1499*. London: Printed for the Hakluyt Society, 1898: 214-222, indicated with the number "3." McIntosh, Gregory C. *The Vesconte Maggiolo World Map of 1504 in Fano, Italy*. Long Beach: Plus Ultra Publishing, 2013: 53-76, includes the coastal place names in both western and eastern Africa.

9. In fact Alberto Magnaghi goes so far as to attribute the King-Hamy chart to Amerigo Vespucci: see his *Amerigo Vespucci, studio critico, con speciale riguardo ad una nuova valutazione delle fonti, accompagnato dai documenti non ancora pubblicati del Codice Vaglianti (Riccardiano 1910)*. Rome: Fratelli Treves, 1926: 214-218; he repeats the claim in his *Il planisfero del 1523 della Biblioteca del re in Torino, la prima carta del mondo costruita dopo il viaggio di Magellano*. Florence: O. Lange, 1929: 27, and was followed by Caraci, Giuseppe. *Tabulae geographicae vetustiores in Italia adservatae*. Florence: O. Lange, 1926-32: III, 62. This claim is disputed in Van Duzer, Chet. "New Insights on the Maps of the Vespuccis: Giorgio Antonio, Amerigo, and Giovanni". *Shores of Vespucci: A Historical Research of Amerigo Vespucci's Life and Contexts*, Angelo Cattaneo and Francisco Contento Domingues, eds. Frankfurt am Main: Peter Lang, 2018: 73-86 and plates 6-10, at 78-79.





ILLUSTRATION 1. THE KING-HAMY CHART, HUNTINGTON LIBRARY HM 45. COURTESY OF THE HUNTINGTON LIBRARY.



“This we saw.”<sup>10</sup> Ravenstein argues that this phrase shows that the map is based on a chart from da Gama’s voyage of 1497-99.<sup>11</sup> However, if the phrase refers to the Padrão de San Rafael, which seems likely, then the source map was not from da Gama’s voyage, as da Gama himself set up that pillar on January 22, 1498,<sup>12</sup> and it would not make sense to emphasize that one had seen a pillar that one had set up. Nonetheless, the phrase does show that the source map for Africa included information from an early Portuguese voyage up the eastern coast of Africa, and the fact that it is in Italian confirms that the King-Hamy chart was made in Italy.<sup>13</sup>

A section of the coast of northeastern South America is missing on the King-Hamy chart, and this is a feature shared by only two surviving maps: Vesconte Maggiolo’s world map of 1504;<sup>14</sup> and the so-called Kunstmann II map, usually dated c. 1506 and thought to be an Italian map based on Portuguese sources (see illustration 2).<sup>15</sup> So the cartographer of the King-Hamy map was influenced by a map of this family.

10. See Ravenstein, Ernst G. *A Journal...*: 218; and McIntosh, Gregory C. *The Vesconte Maggiolo...*: 70. McIntosh does not transcribe the phrase *questo avemo visto* because it is not a place name. First-person statements by cartographers about place names on their maps are unusual in the fifteenth century. One other example that comes to mind is the nautical chart of Bartolomeo Pareto of 1455 (Rome, Biblioteca Nazionale Centrale, Cart. naut. 1), on which the phrase *Alborame unde ego sic vidi*, “Alborán, where I saw it,” is written beside the island of Alborán in the Mediterranean. This map is reproduced in Cavallo, Guglielmo, ed. *Cristoforo Colombo e l’apertura degli spazi: Mostra storico-cartografica*. Rome: Istituto Poligrafico e Zecca dello Stato, Libreria dello Stato, 1992: I, 314-315; Pujades i Batller, Ramon J. *Les cartes portolanes: la representació medieval d’una mar solcada*. Barcelona: Institut Cartogràfic de Catalunya, 2007: on the accompanying CD, no. C57; and in a hand-drawn facsimile in Kretschmer, Konrad. *Die Entdeckung Amerika’s in ihrer Bedeutung für die Geschichte des Weltbildes*. Berlin: W.H. Köhl, 1892: plate 5. Martin Behaim on his globe of 1492 names an African river and island after himself, and indicates how far down the coast he came: see Ravenstein, Ernst Georg. *Martin Behaim, His Life and His Globe*. London: G. Philip & Son, 1908: 100-101. First-person statements by cartographers are discussed by Chet Van Duzer, “The Cartographer Sets Sail: Eyewitness Records and Early Modern Maps,” forthcoming in 2022 in a special issue of *Culture & History* titled *Mapas e ideas cartográficas en movimiento: circulación, transferencias y redes / Maps and Cartographic Ideas in Motion: Circulation, Transfers and Networks*, edited by José María García Redondo and José María Moreno Martín.

11. Ravenstein, Ernst G. *A Journal...*: 207 and 221.

12. Ravenstein, Ernst G. *A Journal...*: 21.

13. Hoffman, Bernard G. *Cabot to Cartier: Sources for a Historical Ethnography of Northeastern North America, 1497-1550*. Toronto: University of Toronto Press, 1961: 52 and 54, argues that the King-Hamy chart was made in Italy on the basis of the place name *Cabo raso* (Cape Race at the southern tip of Newfoundland): the spelling is Italian rather than Portuguese or Spanish.

14. Vesconte Maggiolo’s world map of 1504 is in Fano, Biblioteca Comunale Federiciana, Sala dei Globi. On this map see Giuseppe Caraci, “Sulla data del planisfero di Vesconte Maggiolo conservato a Fano,” *Memorie geografiche* 3 (1956): 109-128; Caraci, Giuseppe. “Ancora sulla data del planisfero di Fano,” *Memorie geografiche*, 6 (1960): 91-126; Cavallo, Guglielmo, ed. *Cristoforo Colombo e l’apertura degli spazi: Mostra storico-cartografica*. Rome: Istituto Poligrafico e Zecca dello Stato, Libreria dello Stato, 1992: II, 643-647; and McIntosh, Gregory C. *The Vesconte Maggiolo..* The map has been reproduced in facsimile in Corradino Astengo, *Il planisfero di Vesconte Maggiolo di Fano (1504)*. Ancona: Collezione inFolio, 2004.

15. The Kunstmann II map is in BS, Cod. icon. 133. For discussion see Kupčák, Ivan. *Münchener Portolankarten: Kunstmann I-XIII und zehn weitere Portolankarten-Munich Portolan Charts: Kunstmann I-XIII and Ten Other Portolan Charts*. Munich: Deutscher Kunstverlag, 2000: 28-34; and Scafi, Alessandro. “The African Paradise of Cardinal Carvajal: New Light on the ‘Kunstmann II Map,’ 1502-1506,” *Renaissance and Reformation- Renaissance et Réforme*, 31/2 (2008): 7-28. On the connections between the King-Hamy chart and Kunstmann II see Hoffman, Bernard G. *Cabot to Cartie...*: 52-56.





ILLUSTRATION 2. DETAIL SHOWING THE GAP IN THE COAST OF SOUTH AMERICA, AND ALSO WEST AFRICA, ON THE “KUNSTMANN II” OF C. 1506, MUNICH, BAYERISCHE STAATSBIBLIOTHEK, COD. ICON. 133. WITH THE PERMISSION OF THE BAYERISCHE STAATSBIBLIOTHEK.

At the same time, he was certainly using other sources as well: the coastal African place names on Vesconte Maggiolo’s 1504 map and the King-Hamy chart are very different, the shapes of Africa and of the Red Sea are very different on the Maggiolo and Kunstmann II maps than they are on the King-Hamy, and the orientation of the Caspian Sea is totally different on Kunstmann II and Vesconte Maggiolo’s 1504 map than on the King-Hamy chart.

One of the other sources the cartographer was using was Ptolemy’s *Geography*, specifically for the Nile and the Red Sea, the southern Arabian Peninsula, the Persian Gulf and its shores, and all of southern Asia east to the Ptolemaic *Magnus Sinus*. The island of Taprobana in particular is clearly Ptolemaic in its location and form. Analysis of the spellings of the Ptolemaic place names in these regions indicates that the cartographer was using the 1478 Rome edition of Ptolemy, or else a manuscript

with spellings very similar to those of that edition.<sup>16</sup> For example, east of Hormuz on the coast of the Indian Ocean the King-Hamy chart has *tesa*, and the 1478 edition of Ptolemy also has *tesa*. The 1477 Bologna edition has *tesa* as well, but the 1482 Ulm edition has *tisa*, as do the 1490 Rome edition, the 1508 Rome edition, and the 1513 Strasbourg edition (to cite just a few others). Further east the King-Hamy chart has *deranoebilla*, very similar to the spelling in the 1478 Ptolemy, *Deranoebila*, while the 1477 Bologna edition has *deranoeuila*, and the 1482 Ulm edition has *Derrana villa*, as do the 1490 Rome edition, 1508 Rome edition, and the 1513 Strasbourg edition.<sup>17</sup> Similarly in the southeastern part of the Arabian Peninsula, the King-Hamy chart has *ambisagi*, and the 1478 Ptolemy has the similar *Abisagi*, while the 1477 has *abissa*, as do the 1482, the 1490 Rome edition, the 1508 Rome edition, and the 1513 Strasbourg edition.<sup>18</sup>

The King-Hamy chart depicts lands further to the east than Ptolemy knew, and this part of the map shows the influence of Marco Polo, both in the islands in the Indian Ocean (*Seilan*, *Iava Minor*, *Iava Maior*), and in the representation of the city of Quinsay and the Great Khan (*M Canis de Cataio*).<sup>19</sup> Moreover, the map shows clear evidence of which cartographic interpretation of Polo's geography the cartographer was using. The large peninsula jutting southward in eastern Asia, and the large triangular peninsula jutting eastward from the eastern coast of the continent, indicate that this part of the map derives, directly or indirectly, from a map by Henricus Martellus similar to that now in the Beinecke Library at Yale, which was made c. 1491.<sup>20</sup>

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16. On the Rome 1478 edition of Ptolemy see Sanz, Carlos. *La Geographia de Ptolomeo, ampliada con los primeros mapas impresos de América, desde 1507*. Madrid: Librería General V. Suárez, 1959: 73-79; and the introduction by R. A. Skelton to the facsimile of that edition, Ptolemy, Claudius. *Cosmographia: Roma, 1478*. Amsterdam: Theatrum Orbis Terrarum, 1966.

17. The 1478 edition of Ptolemy is not foliated, does not bear signature marks, and does not have chapter numbers, but these place names are in Book 6, towards the end of the text describing the sixth map of Asia, in the section on *Carmanie situs*. In the 1477 Bologna edition this section is on [b6<sup>r</sup>]; in the 1482 Ulm Ptolemy this section is on [g7<sup>r</sup>]; in the 1490 Rome edition this section is in Book 6, chapter 9, on g[1]; in the 1508 Rome edition, they are in Book 6, chapter 9; and in the 1513 Strasbourg edition they are in Book 6, chapter 9, f. 45v.

18. In the 1478 Ptolemy this place name is in Book 6, in the section on *Arabie felicis situs*; in the 1477 Bologna Ptolemy, it is on [b5<sup>r</sup>]; in the 1482 Ulm Ptolemy, on [g7<sup>r</sup>]; in the 1490 Rome edition in Book 6, chapter 8, on [f8<sup>r</sup>]; in the 1508 Rome edition, in Book 6, chapter 8; and in the 1513 Strasbourg edition, they are in Book 6, chapter 8, f. 44v.

19. On Polo's description of Quinsay see A. C. Moule, "Marco Polo's Description of Quinsai," *T'oung Pao*, 33 (1937): 105-128.

20. The shelfmark of Henricus Martellus's map in the Beinecke is Art Store 1980.157; for discussion of it see Sanz, Carlos. "Un mapa del mundo verdaderamente importante en la famosa Universidad de Yale," *Boletín de la Real Sociedad Geográfica*, 102 (1966): 7-46; Caraci, Ilaria Luzzana. "Il Planisfero di Enrico Martello della Yale University Library e i Fratelli Colombo," *Rivista Geografica Italiana*, 85 (1978): 132-143, translated into English as "Henricus Martellus' Map in the Yale University Library and the Columbus Brothers," in the author's *The Puzzling Hero: Studies on Christopher Columbus and the Culture of his Age*. Rome: Carocci, 2002: 281-291; and my study of the map, *Henricus Martellus's World Map at Yale (c.1491): Multispectral Imaging, Sources, Influence*. New York: Springer, 2019.





ILLUSTRATION 3. THE WORLD MAP BY HENRICUS MARTELLUS (c. 1491) IN THE BEINECKE RARE BOOK AND MANUSCRIPT LIBRARY, YALE UNIVERSITY (ART STORE 1980.157.). IMAGE BY LAZARUS PROJECT, MEGAVISION, RIT, EMEL. WITH THE PERMISSION OF THE BEINECKE LIBRARY (YALE UNIVERSITY).

Martellus's depiction of eastern Asia was very influential, and early maps that depict the southern peninsula, sometimes called the "Tiger-Leg" peninsula,<sup>21</sup> include Giovanni Contarini's world map of 1506,<sup>22</sup> Martin Waldseemüller's world

21. For discussion of the cartographic history of the "Tiger-leg" peninsula see Nunn, George E. *The Columbus and Magellan Concepts of South American Geography*. Glenside: Privately printed, 1932: 44-45; and Olshin, Benjamin. "India Meridionalis: The Dragon's Tail," in his "A Sea Discovered: Pre-Columbian Conceptions and Depictions of the Atlantic Ocean," (Ph.D. Dissertation) University of Toronto, 1994: 319-377.

22. Contarini's map is well reproduced in Nebenzahl, Kenneth. *Atlas of Columbus and the Great Discoveries*. Chicago: Rand McNally, 1990: 45-47, and there is a good brief discussion of the map with an illustration Shirley, Rodney W. *The Mapping of the World: Early Printed World Maps, 1472-1700*. London: Holland Press,



map of 1507,<sup>23</sup> Francesco Rosselli's world map of c. 1508,<sup>24</sup> and many others. Maps that include both the southern and the eastern peninsulas of Martellus's map at Yale include Martin Behaim's globe of 1492;<sup>25</sup> Martin Waldseemüller's map of 1507; Louis Boulengier's globe gores of c. 1514;<sup>26</sup> Sebastian Münster's *Typus cosmographicus universalis* of 1532,<sup>27</sup> and many others.

It is important to emphasize that not all the Ptolemaic place names on the King-Hamy map appear on even the most detailed expressions of Martellus's cartography—namely his map now at Yale, and Waldseemüller's 1507 map—so it is clear that the cartographer of the King-Hamy map was using as sources either the 1478 Ptolemy or a map that depended on it, in addition to a map in the Martellus tradition.

The King-Hamy chart, then, relies on a wide variety of cartographic sources: a map similar to the Vesconte Maggiolo map of 1504 and the Kunstmann II map for its depiction of the New World; an early Portuguese map for its depiction of Africa and the Mediterranean basin; the 1478 edition of Ptolemy or a map derived therefrom; and a map in the tradition of the Yale Martellus map. Hamy argued that the chart was *un vrai portulan, une carte de navigation côtière*, “a true nautical chart, a map for coastal navigation,” and that it was designed to show the route around India to

1983: No. 24, 23-25; there is also a facsimile published as Contarini, Giovanni Matteo. *A Map of the World, Designed by Gio. Matteo Contarini, engraved by Fran. Roselli 1506*. London: Printed by order of the Trustees, sold at the British Museum, 1924; for discussion of the map see Heawood, Edward. “A Hitherto Unknown World Map of A. D. 1506,” *Geographical Journal*, 62/4 (1923): 279-293.

23. Waldseemüller's 1507 map has been published in facsimile in Fischer Joseph; and Von Wieser, Franz Ritter. *Die älteste Karte mit dem Namen Amerika aus dem Jahre 1507 und die Carta marina aus dem Jahre 1516 des M. Waldseemüller (Ilacomilus)*. Innsbruck: Wagner'schen Universitäts-Buchhandlung, 1903; Amsterdam: Theatrum Orbis Terrarum, 1968; and in Hessler, John W.; Van Duzer, Chet. *Seeing the World Anew: The Radical Vision of Martin Waldseemüller's 1507 & 1516 World Maps*. Washington: Library of Congress, and Delray Beach, Florida: Levensger Press, 2012. There are two excellent high-resolution scans of the map available on the internet site of the Library of Congress, <https://www.loc.gov>.

24. On Rosselli's map of c. 1508 see Almagià, Roberto. “On the Cartographic work of Francesco Rosselli”. *Imago Mundi*, 8 (1951): 27-34; Woodward, David. “Starting with the Map: The Rosselli Map of the world, ca. 1508”, *Plantejaments i objectius d'una història universal de la cartografia. Approaches and Challenges in a Worldwide History of Cartography: 11è curs. 21, 22, 23, 24 i 25 de febrer de 2000*. Barcelona: Institut Cartogràfic de Catalunya, 2001: 71-90; Van Duzer, Chet. “A newly Discovered fourth exemplar of Francesco Rosselli's Oval Planisphere of c. 1508”. *Imago Mundi*, 60/2 (2008): 195-201.

25. On Behaim's globe see Ravenstein, Ernst Georg. *Martin Behaim, his life and his globe*. London: G. Philip & Son, Ltd., 1908. On the influence of Martellus on Behaim see Van Duzer, Chet. *Henricus Martellus's World...*: 167-175.

26. On Boulengier's globe gores see Marcel, Gabriel. “Louis Boulengier d'Albi, astronome, géomètre et géographe,” *Bulletin de géographie historique et descriptive*, 4 (1889): 163-172; and Shirley, Rodney W. *The Mapping of the World* (see note 21): 43, No. 38.

27. Münster's *Typus cosmographicus universalis*, which was published in Grynaeus, Simon; Huttich, Johann. *Novus orbis regionum ac insularum veteribus incognitarum*. Basel: Apud Io. Heruagium, 1532, is well reproduced in Nordenskiöld, A.E. *Facsimile-Atlas to the Early History of Cartography*. Stockholm: Norstedt, 1889; New York: Dover Publications, 1973: plate 42; for discussion of the map see HARRISSE, Henry. *Bibliotheca americana vetustissima*. New York: G. P. Philes, 1866: 291-296; and Shirley, Rodney W. *The Mapping of the World...*: No. 67, 74-75.



Calicut.<sup>28</sup> In fact the map is of a mixed genre, with elements from different mapping traditions, and while the whole western half of the map depends on maps in the nautical chart tradition, the whole eastern half depends on maps in the Ptolemaic tradition, including Martellus's expansion of Ptolemy with data from Marco Polo. The chart was not specifically designed to show the route to Calicut; if it were, there would be no point in including eastern Asia, the New World, and the northern and southern reaches of the world in the map. The cartographer had a larger and more philosophical purpose in mind than guiding a ship on a specific route.

## 1. The Cartographer of the King-Hamy Chart: Battista Agnese

An essential step in understanding the purpose and nature of the King-Hamy chart is the recognition that it was made by the prolific Italian cartographer Battista Agnese, who was active from about 1536 to about 1564. This is a surprising result—that a map generally thought to have been made c. 1502 was in fact made decades later—but it is amply supported by the evidence, and enables an explanation of the map's nature that is perhaps just as interesting as if it were one of the earliest surviving maps to depict the New World.

We have no significant documentary evidence about Agnese aside from his works. He was born in Genoa, probably around 1500, and worked in Venice, where he produced more than seventy manuscript atlases of nautical charts that survive today.<sup>29</sup> The earliest dated work of his that we have is an atlas he made in 1536.<sup>30</sup> He also made several separate nautical charts, most of which are unsigned and undated, and these have received less study. These show the part of the world usually depicted on a European nautical chart, which is to say Western Europe north to Scandinavia, the Mediterranean, North Africa, some of the Atlantic in the west, and the Holy

28. Hamy, Ernest-Théodore. "Notice sur une mappemonde...": 148, 152, and 159.

29. The standard study of Agnese's atlases is Wagner, Henry R. "The Manuscript Atlases of Battista Agnese". *Papers of the Bibliographical Society of America*, 25 (1931): 1-110; with "Additions to the Manuscript Atlases of Battista Agnese," *Imago Mundi*, 4 (1947): 28-30. Other atlases by Agnese have come to light or been identified as his work since Wagner's studies. There is a list of Agnese's known manuscript atlases in Carmen Litér Mayayo, Amadeo Serra Desfilis, and Francisca Sanchis Ballester, *La cartografía de Agnese: la primera vuelta al mundo de Magallanes financiada por Carlos V* (Valencia: Patrimonio, 200: 109-133) (in Spanish), 229-254 (in English), and 445-471 (in Italian); Agnese's atlases are also included in Corradino Astengo, "Appendix 7.1. Charts of the Mediterranean in Public Collections, 1500-1700," *The History of Cartography, Cartography in the European Renaissance*, David Woodward, ed. Chicago-London: University of Chicago Press, 2007: I, 238-261; the most recent list is in Ingrid Baumgärtner, "Battista Agnese e l'atlante di Kassel. La cartografia del mondo nel Cinquecento," in Ingrid Baumgärtner and Piero Falchetta, eds., *Venezia e la nuova oikoumene: cartografia del Quattrocento = Venedig und die neue Oikoumene: Kartographie im 15. Jahrhundert* (Rome: Viella, 2016), pp. 245-270, at 268-270.

30. His atlas in London, British Library, Add. MS 19927, is dated October 13, 1536, see Wagner, Henry R. "The Manuscript Atlases...": 21 and 51. A chart by Agnese in the Herzog August Bibliothek, Wolfenbüttel, bears the date 1514, but as I will suggest below, this date is erroneous.



Land in the east —charts of this type have been called “normal portolans.” The nautical charts that are either signed by Agnese or have been attributed to him are:<sup>31</sup>

1. Paris, Bibliothèque nationale de France (hereafter BnF), Rés. Ge. B. 1134, measuring 90 × 146.6 cm, and showing the eastern Mediterranean, with a low level of decoration.<sup>32</sup>
2. Paris, BnF Rés. Ge. B. 9945, measuring 71.5 × 100 cm, and showing the lands surrounding the Mediterranean and some of the Atlantic (the area depicted in a “normal portolan”), with a medium level of decoration.<sup>33</sup>
3. Wolfenbüttel, Herzog August Bibliothek, Cod. Guelf. 100 Aug. 2°, measuring 55 × 86 cm, and signed *Baptista Ianuensis f. Venetiis MCCCCXIII. F. Iulii*, a “normal portolan” with a high level of decoration. The date, 1514, indicated in the signature has occasioned discussion<sup>34</sup>; in addition to the fact that we have no other evidence of activity by Agnese till about two decades later, the depiction of the northern coast of Scotland accords with a style Agnese adopted in the late 1540s or early 1550s.<sup>35</sup> The date on the chart is likely an error for 1554, assuming that the “X” should be an “L.”<sup>36</sup>

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31. The charts are listed based on at least a few hints indicating chronological order. In particular, as Wagner has indicated in “The Manuscript Atlases of Battista Agnese”, Wagner, Henry R. “The Manuscript Atlases...”: 27-28, in 1552 or 1553 Agnese changed his depiction of the British Isles in his atlases: before that time he painted a channel separating England and Scotland, but afterward he no longer indicated that channel. The Wolfenbüttel, Göttingen, Munich and Helsinki charts include the channel, and thus were likely made in 1552 or earlier, while the BnF Rés. Ge. B. 2131, Budapest, Parma, and Catania charts do not show such a channel, and thus were most likely made in 1552 or later.

32. Foncin, Myriem; Destombes, Marcel; de La Roncière, Monique. *Catalogue des cartes nautiques sur vélin conservées au Département des cartes et plans*. Paris: Bibliothèque nationale, 1963 : 53-54, No. 29). An image of the chart is available through the online catalog of the BnF, and also through <https://gallica.bnf.fr>.

33. Foncin, Myriem; Destombes, Marcel; de La Roncière, Monique. *Catalogue des cartes...* : 54-55, No. 30. An image of the chart is available through the online catalog of the BnF, and also through <https://gallica.bnf.fr>.

34. On the Wolfenbüttel chart see Desimoni, Cornelio. “Elenco di carte ed atlanti nautici di autore genovese oppure in Genova fatti o conservati,” *Giornale Ligustico di archeologia, storia e letteratura*, 2 (1875): 41-71, especially 54; Giuseppe Caraci, “Di due carte di Battista Agnese,” *Rivista geografica italiana*, 35 (1928): 227-234; and Roberto Almagià, “Una carta del 1514 attribuita a Battista Agnese,” *Rivista geografica italiana*, 56 (1949): 167-168. A medium resolution image of the chart is available through <http://diglib.hab.de/>.

35. In maps of the British Isles in his early atlases Agnese depicts the northern coast of Scotland as almost straight and running almost west to east: see for example BL Add. MS 19927, dated 1936, f. 7, which was mentioned above, and HL, HM 26, atlas by Agnese c. 1544, ff. 7v-8r. Most of Agnese’s atlases are undated, but the earliest dated atlas in which he deploys a more accurate depiction of the northern coast of Scotland is his atlas in HL, HM 27, dated July 8, 1553. Images of the maps in both of these atlases at the Huntington are available at <https://digital-scriptorium.org/> and <https://hdl.huntington.org/>.

36. I thank Šima Krtalić for kindly calling my attention to a chart in BnF, GE C-5097 (RES), which seems to be a copy of the Wolfenbüttel chart by another hand (the BnF’s attribution of the chart to Gaspar Luis Viegas is implausible). One consequence of this apparent copying is that this chart has the Agnese-style hatching in the coloring of the Red Sea that will be discussed below. An image of the chart is available through <https://gallica.bnf.fr>.



4. Göttingen, Universitätsbibliothek, Cod. MS Mapp. 9, measuring 70 × 100 cm, a “normal portolan” with a high level of decoration (see illustration 4).<sup>37</sup>
5. Munich, Bayerische Staatsbibliothek, Cod. Icon. 131, measuring 62 × 105 cm, a “normal portolan” with a high level of decoration.<sup>38</sup>
6. Helsinki, Helsinki University Library, A. E. Nordenskiöld Collection, N.Kt.119, measuring 62 × 83 cm but with likely loss of parchment in the west, a “normal portolan” with a high level of decoration.<sup>39</sup>
7. Paris, BnF Rés. Ge. B. 2131, measuring 51 × 100 cm, a “normal portolan” with a low level of decoration.<sup>40</sup>
8. Budapest, National Széchényi Library, Cod. Lat. 353, measuring 68 × 105 cm, a “normal portolan” with a high level of decoration.<sup>41</sup>
9. Parma, Archivio di Stato, formerly 2.A.S, now m.d.62-60, measuring 57 × 96 cm, a “normal portolan” with a low level of decoration.<sup>42</sup>
10. Catania, Biblioteca Universitaria, formerly MS U. 85, now U.MS.10, measuring 60 × 82 cm but heavily trimmed, a “normal portolan” with a low level of decoration, signed *Baptista agnese fecit venetijs 1562 die 4 februarij*.<sup>43</sup>

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37. There is a very brief notice of the Göttingen chart in Schüler, Mechthild. *Weltbild - Kartenbild: Geographie und Kartographie in der frühen Neuzeit: Ausstellung aus den Beständen der Niedersächsischen Staats- und Universitätsbibliothek Göttingen; Paulinerkirche, Historisches Gebäude der SUB, 24.2.-7.4.2002*. Göttingen: Niedersächsische Staats- und Univ.-Bibliothek, 2002: 24.

38. The Munich chart had been dated to c. 1505 by several scholars who did not recognize it as the work of Agnese, including Ruge, S. “Topographische Studien zu den portugiesischen Entdeckungen an den Küsten Afrikas,” *Abhandlungen der philologisch-historischen Classe der königlich Sächsischen Gesellschaft der Wissenschaften*, 20/6 (1903): 1-110, especially 56-57; Wolff, Hans, ed. *America: Early Maps of the New World*. Munich: Prestel-Verlag, 1992: 130, who illustrates the map on his p. 129; and Kupčák, Ivan. *Münchener Portolankarten...*:115-117, who has a very good illustration of the map on his pp. 118-119. I argued briefly for an attribution to Agnese in “The History of the Azores as *Insulae solis* or Islands of the Sun in 16<sup>th</sup> Century Cartography,” *Terrae Incognitae*, 40 (2008): 29-46, at 44. The chart should certainly be dated later than c. 1505. A good image of the chart is available at [https://daten.digitale-sammlungen.de/bsb00002581/image\\_](https://daten.digitale-sammlungen.de/bsb00002581/image_).

39. I argued that the Helsinki chart should be attributed to Agnese in “The Cartographer’s Apprentices: Battista Agnese and a Manuscript Nautical Chart in the Nordenskiöld Collection,” delivered July 2, 2013, at the 25<sup>th</sup> International Conference on the History of Cartography, Helsinki, Finland, June 30 to July 5, 2013.

40. Foncin, Myriem; Destombes, Marcel; de La Roncière, Monique. *Catalogue des cartes...* : 55-56, No. 31. An image of the chart is available through the online catalog of the BnF, and also through <https://gallica.bnf.fr>.

41. On the Budapest chart see Irás, Krisztina. “Author No Longer Unknown - Maker of the NSZL’s 16<sup>th</sup>-Century Nautical Map,” *OSZK Bulletin* (2010): 30-33.

42. On the Parma chart see Caraci, Giuseppe Caraci. “Di due carte di Battista Agnese,” *Rivista geografica italiana*, 35 (1928): 227-234, especially 233-234, who attributes it to Agnese; and Frabetti, Petro. *Carte nautiche italiane dal XIV al XVII secolo conservate in Emilia-Romagna: archivi e biblioteche pubbliche*. Florence: L. S. Olschki, 1978: 106-108, No. 20 and plate 24.

43. See Uzielli, Gustavo; Amat di San Filippo, Pietro. *Studi biografici e bibliografici sulla storia della geografia*. Rome: Società geografica italiana, 1882: II, 141-142 —this second volume was reprinted as *Mappamondi, carte nautiche, portolani ed altri monumenti cartografici specialmente Italiani dei secoli XIII-XVII*. Amsterdam: Meridian Publishing Co., 1967; and *Inventari dei manoscritti delle biblioteche d’Italia*. Florence: L.S. Olschki, 1913-1954: XX, 143.





ILLUSTRATION 4. A NAUTICAL CHART RELIABLY ATTRIBUTED TO BATTISTA AGNESE (GÖTTINGEN, NIEDERSÄCHSISCHE STAATS- UND UNIVERSITÄTSBIBLIOTHEK, COD. MS MAPP. 9). WITH THE PERMISSION OF THE UNIVERSITÄTSBIBLIOTHEK GÖTTINGEN.



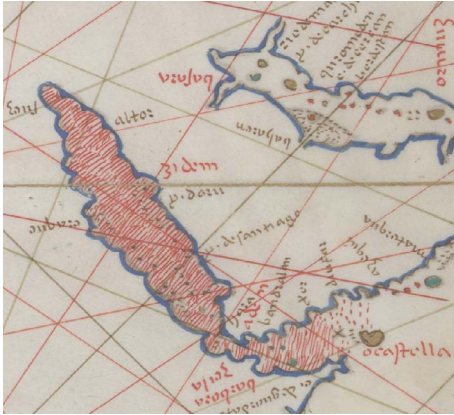


ILLUSTRATION 5. DETAIL OF THE RED SEA FROM AGNESE'S MAP OF THE ATLANTIC OCEAN IN HUNTINGTON HM 27, FF. 5V-6R, SHOWING AGNESE'S DISTINCTIVE STYLE FOR COLORING THAT SEA. BY COURTESY OF THE HUNTINGTON LIBRARY.



ILLUSTRATION 6. DETAIL OF THE RED SEA FROM THE NAUTICAL CHART IN WOLFENBÜTTEL, HERZOG AUGUST BIBLIOTHEK, COD. GUELF. 100 AUG. 2°, WHICH IS SIGNED BY AGNESE, SHOWING HIS DISTINCTIVE STYLE FOR COLORING THAT SEA. BY PERMISSION OF THE HERZOG AUGUST BIBLIOTHEK.

Thus Agnese had ample experience making nautical charts. It should be emphasized that the King-Hamy chart shows much more of the earth's surface than the charts just listed.

The task of determining whether an unsigned chart was made by Agnese is complicated by the fact that he assigned the painting of many of the decorative details on his maps to other artists. This is evident through an examination of the styles in which the decorative wind-heads are painted around the oval world maps in his atlases: the styles of the wind-heads vary greatly from one atlas to another. The same is true of other decorative elements in his atlases; however, some elements are consistent across his works.

One of the distinctive features of Agnese's maps is the way he colors the Red Sea. He does so in parallel bunches of short strokes made with a red pen, and this same style of coloring can be seen throughout his atlases, and not just in his maps of the eastern Mediterranean, but also in his world maps (see illustration 5) and on his nautical charts (see illustration 6). The same style is used to color the Red Sea on the King-Hamy map (see illustration 7). This same style is not used by other sixteenth-century cartographers: to mention just a few examples, on the Cantino map of c. 1502, the Red Sea is painted red with wavy lines in it;<sup>44</sup> Conte Ottomanno

44. The Cantino chart is in Modena, Biblioteca Estense Universitaria, C. G. A. 2, and is well reproduced in Nebenzahl, Kenneth. *Atlas of Columbus and the Great Discoveries*. Chicago: Rand McNally, 1990: 35-37; and better in Cortesão, Armando; Teixeira da Mota, Avelino. *Portugaliae monumenta cartographica*. Lisbon: Comissão Executiva das Comemorações do Quinto Centenário da Morte do Infante D. Henrique, 1960-62: I, plate 5. A high-resolution digital image of the map has been published on the CD-ROM titled

Freducci, active 1497-1539, paints the sea a solid red;<sup>45</sup> Pierre Desceliers in his world map of 1550 includes some wavy lines within the solid red;<sup>46</sup> and even Agnese's pupil Francesco Ghisolfi used a different method for coloring the sea, using elongated red dots in place of Agnese's red lines.<sup>47</sup> It is notoriously difficult to prove a negative, i.e. that no other sixteenth-century cartographer colored the Red Sea the way Agnese did, but despite considerable searching, I have found only one map by a different cartographer in which the Red Sea is colored similarly, and that is in the world map in Vesconte Maggiolo's atlas of 1511 in the John Carter Brown Library.<sup>48</sup> This same cartographer



ILLUSTRATION 7. DETAIL OF THE RED SEA ON THE KING-HAMY MAP, SHOWING THE SAME STYLE FOR COLORING THE RED SEA. BY COURTESY OF THE HUNTINGTON LIBRARY.

*Antichi planisferi e portolani: Modena, Biblioteca Estense Universitaria.* Modena: Il Bulino; and Milan: Y. Press, 2004.

45. Lists of Freducci's works are supplied by Stevenson, Edward Luther. *Portolan Atlas.* New York: Hispanic Society of America, 1915; Errera, Carlo. "Carte e atlanti di Conte Ottomanno Freducci," *Rivista Geografica Italiana*, 2 (1895): 237-241; Caraci, Giuseppe. "The Italian Cartographers of the Benincasa and Freducci Families and the So-Called Borgiana Map of the Vatican Library," *Imago Mundi*, 10 (1953): 23-45, especially at 24; Astengo, Corradino. "Appendix 7.1. Charts..."; and Van Duzer, Chet. "Nautical Charts, Texts, and Transmission: The Case of Conte di Ottomanno Freducci and Fra Mauro," *Electronic British Library Journal*, 6 (2017): 1-65, especially at 4-19.

46. Desceliers' 1550 map is in BL, Add. MS 24065, and is conveniently reproduced in Nebenzahl, Kenneth. *Atlas of Columbus and the Great Discoveries.* Chicago: Rand McNally, 1990: 114-115; for a full-size reproduction of the map with commentary see Van Duzer, Chet. *The World for a King: Pierre Desceliers' Map of 1550.* London: British Library, 2015.

47. Wagner, Henry R. "The Manuscript Atlases...": 54, lists seven atlases by Ghisolfi, and high-resolution images of his atlas in the Huntington Library, HM 28, are available via <https://digital-scriptorium.org/> and <https://hdl.huntington.org/>. Some discussion of Ghisolfi, his works, and the various spellings of his name is provided by Piersantelli, Giuseppe. *L'atlante di carte marine di Francesco Ghisolfi (ms. della Biblioteca universitaria di Genova) e la storia della pittura in Genova nel Cinquecento* (Genova: Edizioni de "L'assicurazione e La Navigazione," 1947); and Astengo, Corradino. "La produzione cartografica di Francesco Ghisolfi," *Annali di ricerche e studi di geografia*, 49/1-2 (1993): 1-16, lists four atlases by Ghisolfi that are not mentioned by Wagner.

48. Vesconte Maggiolo's atlas of 1511 is in Providence, Rhode Island, John Carter Brown Library, Z Codex 2 / 2-SIZE, and high-resolution images of the maps in the atlas are available at <http://jcb.lunaimaging.com>. For discussion of the atlas see Caraci, Giuseppe. "La produzione cartografica di Vesconte Maggiolo ed il nuovo mondo," *Memorie geografiche, Università degli Studi di Roma*, 4 (1958): 223-289, especially at 231-236; Vesconte Maggiolo and his works are discussed by Ferretto, Arturo. "I cartografi Maggiolo oriundi di Rapallo," *Atti della Società Ligure di Storia Patria*, 52 (1924): 53-83.





ILLUSTRATION 8. DETAIL OF CAPITAL LETTERING IN THE WESTERN PART OF THE OVAL WORLD MAP IN THE AGNESE ATLAS IN SAN MARINO, HUNTINGTON LIBRARY, HM 26, F. 13V. BY PERMISSION OF THE HUNTINGTON LIBRARY.



ILLUSTRATION 9. DETAIL OF CAPITAL LETTERING IN THE NEAR EAST IN AGNESE'S NAUTICAL CHART IN GÖTTINGEN, NIEDERSÄCHSISCHE STAATS- UND UNIVERSITÄTSBIBLIOTHEK, COD. MS MAPP. 9. BY PERMISSION OF THE UNIVERSITÄTSBIBLIOTHEK GÖTTINGEN.



ILLUSTRATION 10. DETAIL CAPITAL LETTERING IN TERRA LABORATORIS AND TERRA CORTEREAL ON THE KING-HAMY CHART. BY PERMISSION OF THE HUNTINGTON LIBRARY.

does not color the Red Sea this way in his other works —not in his world map of 1504, nor his nautical chart of 1516, nor his atlas of 1519, nor his nautical chart of 1541, nor his nautical chart of 1547.<sup>49</sup> So the style of coloring of the Red Sea on the King-Hamy chart may be taken as good evidence that it was made by Agnese.

The handwriting on the King-Hamy chart is also Agnese's. To begin with the capital lettering used for the names of regions and seas, some distinctive elements appear consistently in Agnese's works: there is usually a long tail on the "R", a slight forward tilt of the "S", and the lower bar of the capital "L" often (but not always) rises somewhat higher than we might expect. These elements are visible in the capital lettering both in his atlases (see illustration 8) and nautical charts (see illustration 9). Precisely these same elements are found in the capital lettering on the King-Hamy chart (see illustration 10).

Capital lettering varies less from one writer to another, and thus does not provide the strongest evidence for ascription of a map to a particular cartographer, but the evidence of the capital lettering is strengthened if we note that the capital lettering of Agnese's disciple Francesco Ghisolfi is quite different: his "S" does not lean forward at all, that his "T" has ties at the ends of the bar that Agnese does not use, and the lower bar of his capital "L" does not rise like Agnese's does.<sup>50</sup>

Moreover, the hand used for toponyms on the King-Hamy chart also matches Agnese's, as we can see in images of the same part of the southeastern coast of Africa in one of Agnese's atlases (see illustration 11) and the King-Hamy chart (see illustration 12). Many of the place names are different, but the hand is the same. One toponym on the King-Hamy chart that strongly connects the map with Agnese's work is the designation of the Azores as *Insulae solis*, or islands of the sun. This designation is frequent in Agnese's

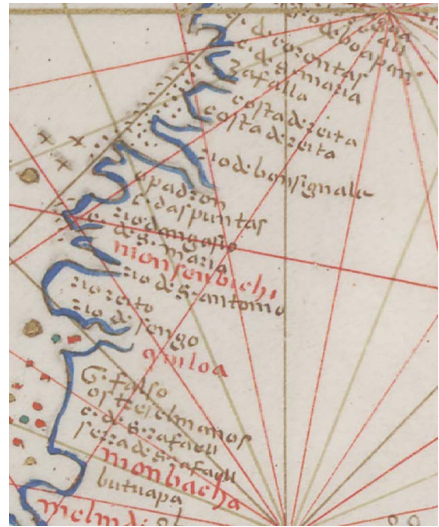


ILLUSTRATION 11. DETAIL OF HANDWRITING ON THE SOUTHEASTERN COAST OF AFRICA FROM MOMBACHA TO ZAFALLA IN ONE OF AGNESE'S ATLASES (SAN MARINO, HUNTINGTON LIBRARY, HM 27, F. 6R). BY PERMISSION OF THE HUNTINGTON LIBRARY.

49. For references on Vesconte Maggiolo's map of 1504 see note 13; his nautical chart of 1516 is in San Marino, California, Huntington Library, HM 427, and a good image of it is available via <https://digital-scriptorium.org> and <https://hdl.huntington.org/>. His atlas of 1519 is in BS, Cod. Icon. 135, and may be consulted by searching for urn:nbn:de:bvb:12-bsb00002700-1; his nautical chart of 1541 is in Berlin, Staatsbibliothek, F 31; and his nautical chart of 1547 is in NMM G230:1/4.

50. Examples of Ghisolfi's capital lettering may be consulted in HL, HM 28, good images of whose maps are available at <https://digital-scriptorium.org/> and <https://hdl.huntington.org/>.





ILLUSTRATION 12. DETAIL OF HANDWRITING ON THE SOUTHEASTERN COAST OF AFRICA FROM ILHA DE SECHAS TO SEFALLA ON THE KING-HAMY CHART. BY PERMISSION OF THE HUNTINGTON LIBRARY.

atlases and nautical charts, but appears on just a few works by other cartographers.<sup>51</sup> One of those works is the Kunstmann II map of c. 1502-06 mentioned earlier, which also shares with the King-Hamy chart a gap in the northeastern coast of South America. So it is possible that a non-Agnese cartographer made the King-Hamy chart copying both the interrupted coast of South America and the designation of the Azores as *Insulae solis* from a map like Kunstmann II. But given that the handwriting on the map is Agnese's, it makes more sense to see this designation of the Azores as yet another sign that the map was made by him.

A distinctive decorative detail also connects the King-Hamy chart with some of Agnese's nautical charts. Along the horizontal centerline of the rhumb line network on the King-Hamy chart, which coincides with the

eastern equator, there are two eight-pointed stars, one well to the west of the circle of rhumb line nodes, the other well to the east (see illustration 1 and 13). The stars are located at the intersections of rhumb lines from the fourth pairs of rhumb line nodes in towards the center, and those rhumb lines enter the stars right along their rays at 45°. I do not know of similar stars positioned thus on any other nautical charts —except for on a few of Agnese's.<sup>52</sup> Specifically, similar eight-pointed stars appear on Agnese's charts now in Wolfenbüttel, Munich, and Parma (numbers 3, 5, and 9 above) (see illustration 14). On the King-Hamy chart, where the rhumb line network has 32 nodes, the stars are located at the intersections of rhumb lines from

51. Van Duzer, Chet. "The History of the Azores as *Insulae solis* or Islands of the Sun in 16<sup>th</sup> Century Cartography," *Terrae Incognitae*, 40 (2008): 29-46. When I wrote this article I accepted the usual dating of the King-Hamy map to c. 1502.

52. The only remotely similar elements I have seen are the decorative moon and sun to indicate west and east, located on the equatorial centerline well outside the circle of the rhumb line nodes on the Caverio chart of c. 1504. The Caverio chart is in BnF, Cartes et plans, SH archives 1; it is conveniently reproduced in Nebenzahl, Kenneth. *Atlas of Columbus and the Great Discoveries*. Chicago: Rand McNally, 1990: 41-43. The map is reproduced at a larger scale in the eleven-sheet black-and-white facsimile which accompanies Edward L. Stevenson's study of the map, *Marine World Chart of Nicolo de Caneiro Januensis 1502 (circa)*. New York: American Geographical Society and the Hispanic Society of America, 1908. There is also a color facsimile, which however is smaller than the original: *Planisphere nautique sur vélin du Génois Nicolao de Caverio*. Paris: Bibliothèque nationale, 1992.





ILLUSTRATION 13. DETAIL OF THE STAR AND WESTERN PART OF THE RUMB LINE NETWORK ON THE KING-HAMY CHART. BY PERMISSION OF THE HUNTINGTON LIBRARY.

the fourth pairs of rhumb line nodes in towards the center; on the Wolfenbüttel, Munich, and Parma charts, where the rhumb line networks have 16 nodes, the stars are located at the intersections of rhumb lines from the second pairs of rhumb line nodes in towards the center. That is, in terms of angles, they are in the same positions as those on the King-Hamy chart.

Other graphic elements connect the King-Hamy chart to Agnese's nautical charts: the style of painting coastlines, heavily scalloped with breaks when there is an inlet, is the same; the style of painting rivers, with dark blue wavy lines, is the same; and the dark green, tightly-spaced mountains of the Wolfenbüttel chart are very similar to those of the King-Hamy chart. None of these features is unique to Agnese, but their concurrence in the King-Hamy chart helps to confirm that it was made by Agnese. Similarly, in all of Agnese's atlases and nautical charts, the northern and southern limits of the circle of rhumb line nodes coincide with the edges of the map, and this is also the case on the King-Hamy chart. There are many other charts on which this is the case, but it is certainly not the case with every chart, so this detail offers some minor support for the claim that the King-Hamy chart was made by Agnese.





ILLUSTRATION 14. DETAIL OF THE STAR AND WESTERN PART OF THE RHUMB LINE NETWORK ON AGNESE'S CHART IN WOLFENBÜTTEL, HERZOG AUGUST BIBLIOTHEK, COD. GUELF. 100 AUG. 2° (CC-BY-SA). BY PERMISSION OF THE HERZOG AUGUST BIBLIOTHEK.

One final graphic element that connects the King-Hamy chart to Agnese is the scale of miles, which is unusually basic, just a string of dots, each in a small circle. Agnese uses precisely this style for the scales of miles in some of his atlases,<sup>53</sup> and

53. The Agnese maps I have seen that use dots in small circles for the scale of miles are the following: UP, Schoenberg Collection, MS LJS 28, c. 1535-38, ff. 3v-4r (eastern Mediterranean); NYPL Spencer MS 5, c. 1552, ff. 18v-19r (Cyprus); Venice, Museo Correr, Port. 1, dated 1553, map 7 (Indian Ocean) and map 16 (Holy Land); BM, Ms. It. IV 62 (=5067), c. 1554-56, ff. 29v-30r (Holy Land). The Schoenberg manuscript is not listed in Wagner, but good images of it are available via <http://dla.library.upenn.edu/dla/medren/index.html>; the NYPL atlas is Wagner's No. 52: 89, and images of the manuscript's maps are available in the Digital Scriptorium at <http://www.digital-scriptorium.org>; the atlas in the Museo Correr is Wagner's No. 55: 91-92, and has been reproduced in facsimile as Battista Agnese, *Atlante nautico di Battista Agnese 1553: riproduzione in facsimile dell'esemplare conservato nel Museo Correr di Venezia*. Venice: Marsilio, 1990; and the Venice atlas is Wagner's No. 56: 93-94, and has been reproduced in facsimile in portfolio 17 of Fischer, Theobald. *Raccolta di mappamondi e carte nautiche del xiii al xvi secolo*. Venice: F. Ongania, 1871-81, and in Falchetta, Piero, ed. *Battista Agnese atlante, 1554-1556, Ms. Marc. It. IV, 62 (=5067)*. Verona: Canal Multimedia, 1996; and good images of all of the maps in the atlas are available via <http://geoweb.venezia.sbn.it/>.

I am not aware of any other cartographer who uses exactly this style, not even Agnese's pupil Ghisolfi.<sup>54</sup>

## 2. The King-Hamy Chart as a Historical Map

The fact that it was Battista Agnese who made the King-Hamy map raises an important question: why would a cartographer working between 1536 and 1564 make a map that shows what people thought the world looked like in about 1502? One possible explanation is that Agnese copied the chart from an important world map of c. 1502 in order to preserve it for posterity, in the way that the creator of the Cornaro Atlas of c. 1489 copied the maps of many earlier cartographers in order to preserve them.<sup>55</sup> This explanation seems unlikely, however. The only parts of the King-Hamy map that are rich in detail are the coasts of Western Europe, the Mediterranean, the Black Sea, and Africa; there is no important information, no indications of new discoveries, no signs of a cartographic masterpiece, in its depiction of the New World or of Asia. On the contrary, there are particularly few place names in these parts of the map.

I will argue that the King-Hamy map was created by Agnese as a historical map designed to show the European image of the world in the early stages of the European expansion. As such, the chart is a document of great importance, not only as an early example of the genre of historical maps, but also as a dramatic cartographic expression of European consciousness of the expansion.

There are historical maps earlier than the King-Hamy map. An anonymous manuscript in the Huntington Library that was made in Lübeck, Germany in 1486-1488 has a remarkable series of historical maps that show the changes in the world leading up to the Apocalypse.<sup>56</sup> The map on f. 6r shows the capitals of the most important empires of world history; the map on f. 9r shows the lordships of the

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54. For discussion and illustrations of scales of miles on nautical charts see Pujades i Bataller, Ramon J., *Les cartes portolanes: la representació medieval d'una mar solcada*. Barcelona: Institut Cartogràfic de Catalunya, 2007: 200-212 (Catalan), 220-221 (illustrations), and 477-478 (English); and Billion, Philipp. *Graphische Zeichen auf mittelalterlichen Portolankarten*. Marburg: Tektum Verlag, 2011: 68-75.

55. The Cornaro Atlas is in London, British Library, Egerton MS 73. For discussion see M. d'Avezac, "Note sur un atlas hydrographique manuscrit exécuté à Venise dans le XVe siècle et conservé aujourd'hui au Musée Britannique," *Bulletin de la société de géographie*, 14 (1850): 217-245; reprinted in *Acta Cartographica*, 14 (1972): 4-32; Cortesão, Armando, *History of Portuguese Cartography* (Lisbon: Junta de Investigações do Ultramar, 1969-71: 195-201); and Falchetta, Piero. "Marinai, mercanti, cartografi, pittori: Ricerche sulla cartografia nautica a Venezia (sec. XIV-XV)," *Ateneo Veneto*, 33 (1995): 7-109. Another early effort to preserve maps for posterity appears in Johann Schöner's exlibris in the *Sammelband* in which he preserved the only surviving exemplars of Martin Waldseemüller's world maps of 1507 and 1516, which reads "Hoc te, posteritas, Schönerus munere donat": see Fischer, Joseph; and Von Wieser, Franz Ritter. *Die älteste Karte: 5*.

56. The anonymous Huntington manuscript is HM 83; images of several of its maps are available via <https://digital-scriptorium.org> and <https://hdl.huntington.org/>.



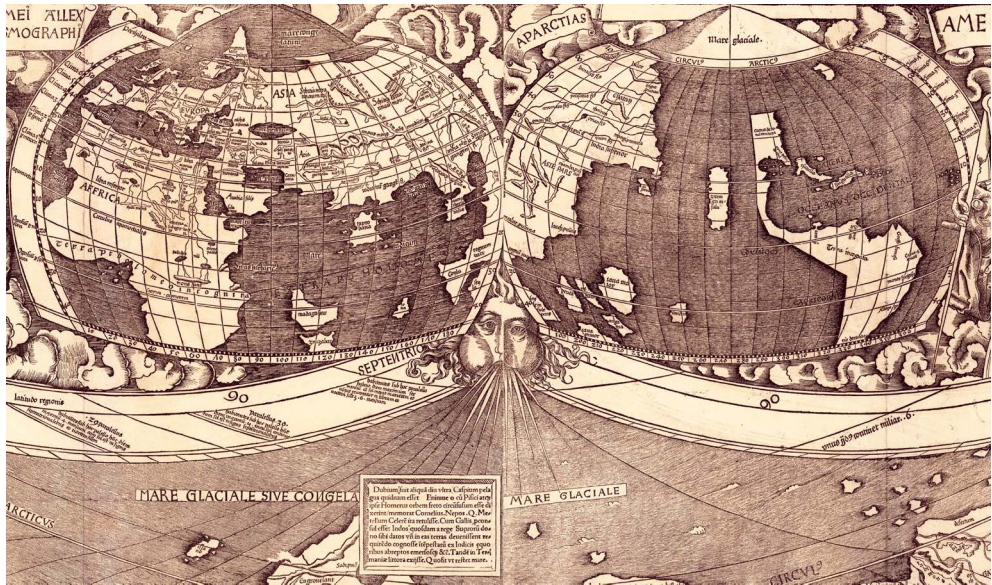


ILLUSTRATION 15. DETAIL OF THE INSET MAPS OF THE WORLD AS KNOWN TO PTOLEMY, AND THE REGIONS DISCOVERED AFTER PTOLEMY, FROM MARTIN WALDSEEMÜLLER'S WORLD MAP OF 1507. WASHINGTON, DC, LIBRARY OF CONGRESS, GEOGRAPHY AND MAP DIVISION, G3200 1507 .W3. BY COURTESY OF THE LIBRARY OF CONGRESS.

world from the year 639 to 1514, and the sequence continues from there showing —by means of maps— the historical progression leading up to the Apocalypse.<sup>57</sup>

Martin Waldseemüller also includes historical maps on his world map of 1507. In the upper margin one inset map shows the world as known to Ptolemy, and the other shows the regions discovered after Ptolemy, particularly by Marco Polo and Amerigo Vespucci.<sup>58</sup>

The Ptolemaic maps produced in the many editions of Ptolemy's *Geography* in the second half of the fifteenth century and the first half of the sixteenth century

57. On the map in Huntington HM 83 f. 64 see Van Duzer Chet; Dines, Ilya. *Apocalyptic Cartography: Thematic Maps and the End of the World in a Fifteenth-Century Manuscript*. Leiden: Brill, 2016: 106-107; on the map on f. 9r: 149-160. The maps that show the rest of the sequence leading up to the Apocalypse are discussed on the pages following there.

58. Jan ze Stobnicy found Waldseemüller's inset historical maps interesting enough that he printed copies of them, and not (for example) a reduced copy of Waldseemüller's map proper, in his *Introductio in Ptholomei Cosmographiam*. Kraków: Florianus Unglerius, 1512. For discussion of Stobnicy's copies of Waldseemüller's inset maps see Yarmolinski, Avrahim. "Bibliographical Studies in Early Polish Americana, 1: Stobnica's 'Introductio in Ptolomei Cosmographiam' (1512)," *Bulletin of the New York Public Library*, 38/4 (1934): 223-240; reprinted with additions as "The Earliest Reference to America: Stobnica's 'Introductio in Ptolomei Cosmographiam' (1512)," in Yarmolinsky, Avrahim. *Early Polish Americana: A Bibliographical Study*. New York: The New York Public Library, 1937: 15-30.

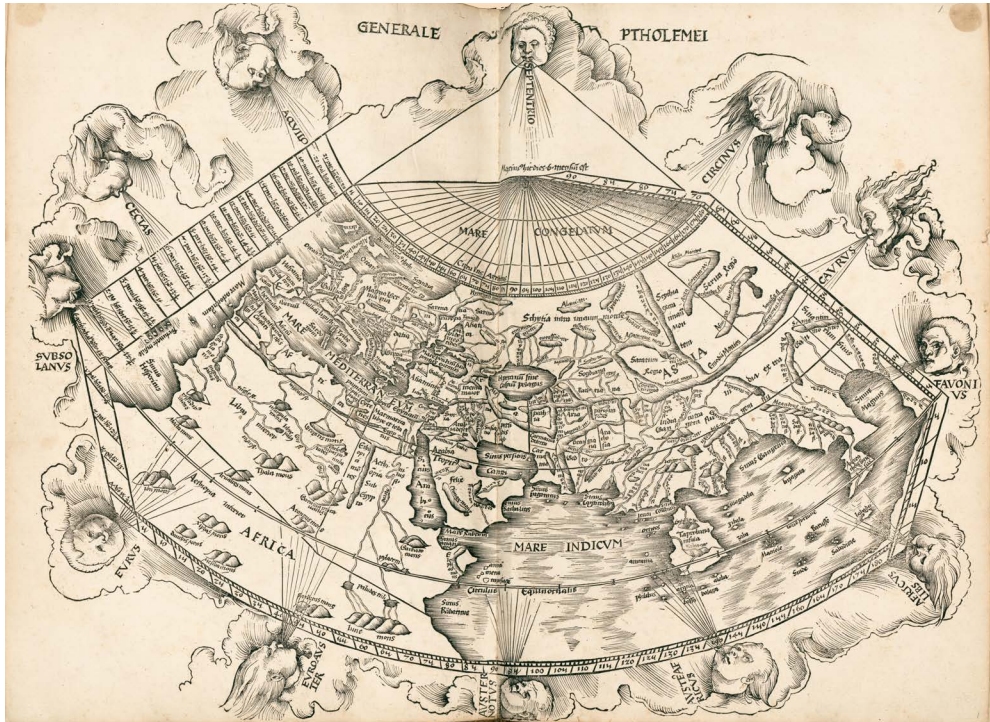


ILLUSTRATION 16. THE PTOLEMAIC WORLD MAP IN THE 1513 EDITION OF PTOLEMY'S GEOGRAPHY. WASHINGTON, DC, LIBRARY OF CONGRESS, GEOGRAPHY AND MAP DIVISION, G1005 1513 VAULT: FOL. BY COURTESY OF THE LIBRARY OF CONGRESS.

were often understood as historical maps; this is particularly clear when the editions include *tabulae modernae*, or maps of the same regions that Ptolemy depicts, but based on recent cartographic information. The labeling of these maps as *tabulae modernae* entails that the Ptolemaic maps were understood as showing an earlier state of knowledge.<sup>59</sup> In the 1513 edition of the *Geography*, whose maps were produced by Waldseemüller, and in which the twenty modern maps are grouped together in a separate section following the twenty-seven Ptolemaic maps, the introduction to the modern maps explains that *Ptolemaei Geographiam prima parte clausimus operis: ut incorruptior & selecta stet antiquitas sua*, “We confine Ptolemy’s *Geography* to the first part of this book, so that his antiquity may remain uncorrupted and separate” (see

59. For a brief discussion of the history of adding *tabulae modernae* to manuscripts and printed editions of Ptolemy see Akerman, James R. “From Books with Maps to Books as Maps: The Editor in the Creation of the Atlas Idea,” *Editing Early and Historical Atlases*. Joan Winearls, ed. Toronto: University of Toronto Press, 1995: 3-48, especially 8-13; for a more detailed discussion see Akerman’s “On the Shoulders of a Titan: Viewing the World of the Past in Atlas Structure,” (Ph.D. Dissertation) Pennsylvania State University, 1991: 228-253.



illustration 16).<sup>60</sup> Sebastian Münster, in introducing the Ptolemaic world map in his *Cosmographia*, says that Ptolemy shows half of the world's circumference, and emphasizes that since Ptolemy's time new discoveries have been made both to the north and south of what he shows, and that the other half of the world has been discovered through the voyages of the Spanish.<sup>61</sup>

In addition to historical maps that show the world according to Ptolemy, at least three maps from the first half of the sixteenth century show the world according to the Roman geographer Pomponius Mela. One of these is an anonymous printed map of c. 1520 that lacks a title, but the text at the bottom of the map begins *Ne forte quis frontem contrahat*,<sup>62</sup> and was sold by Barry Lawrence Ruderman Rare Maps in 2018. The second is a manuscript world map in a manuscript English translation of Mela's *De situ orbis* made in about 1540;<sup>63</sup> the third is a printed map showing Mela's conception of the world, titled *Orbis situs secundum Melam Pomponium fideliter representatus*, thought to have been printed in about 1550.<sup>64</sup>

Nikolaos Sophianos's *Totius Graeciae Descriptio*, printed in 1540, 1544, and 1545, was produced to function as a "repository of antiquarian information about Greece," and was part of a fashion for antiquarian mapping that gained momentum during the sixteenth century.<sup>65</sup>

60. This sentence occurs in the text "Ad Lectorem" on the verso of the description of the contents of the section of modern maps in *Claudii Ptolemei uiri Alexandrini mathematicae disciplinae Philosophi doctissimi Geographiae opus*. Strasbourg: Johann Schott, 1513; the text "Ad Lectorem" is transcribed and translated into French in M. d'Avezac, *Martin Hylacomylus Waltzemuller, ses ouvrages et ses collaborateurs*. Paris: Challamel aine, 1867: 152-153.

61. In Münster, Sebastian. *Cosmographiae uniuersalis Lib. VI*. Basel: Petri, 1552, the text introducing map 2, the Ptolemaic world map, runs thus: *Terreni orbis generalis et Ptolemaica descriptio, quae scilicet medium complectitur terrae globum, olim quidem secundum longitudinem cognintum non aut secundum latitudinem, quum succedentibus temporibus tam a septentrione quam a meridie portiones quaedam successerint: sicut & in longitudine oppositus medius globus navigationibus hispanorum est deprehensus*.

62. The full text at the bottom of the c. 1520 map of the world according to Pomponius Mela reads *Ne forte quis frontem contrahat: si a caeteris orbi[s] [n]ostri picturis: quae circumferuntur hanc diversam viderit. Sciat unusquisque impressorem imita [be]n: et quanta potuit diligentia: Pomponium melam: hanc igitur si cum auctore conferes labores su[os] fortasse comprobabis: Bene vale*, that is, "Let no one frown if this map is different from all the other world maps that circulate. Let everyone know that the printer has followed Pomponius Mela well and as carefully as possible, and if you compare this map with that author's work, perhaps you will approve his [i.e. the printer's] labors. Good-bye." Details about the map are available on <https://www.raremaps.com>.

63. The manuscript map of the world is in BL, Hargrave MS 399, ff. 2v-3r. There is a very brief mention of the manuscript in *A Catalogue of Manuscripts, Formerly in the Possession of Francis Hargrave: Now Deposited in the British Museum*. London: Sold at the British Museum, 1818: 115. An image of the map may be viewed in the British Library's Online Gallery, <http://www.bl.uk/onlinegallery/>.

64. What is apparently the only surviving copy of the printed map of the world according to Pomponius Mela is in the MMR, WAE 850. For a brief discussion of the map see Shirley, Rodney W. *The Mapping of the World...* 102, No. 90 with plate 77.

65. For discussion of Sophianos's map of Greece see Tolia, George. "Nikolaos Sophianos's *Totius Graeciae Descriptio*: The Resources, Diffusion and Function of a Sixteenth-Century Antiquarian Map of Greece," *Imago Mundi*, 58/2 (2006): 150-182; the quotation comes from p. 151. On the rise of collecting antiquities in Rome in the sixteenth century see for example Wren Christian, Kathleen. *Empire Without End: Antiquities Collections in Renaissance Rome, c. 1350-1527*. New Haven: Yale University Press, 2010. On





ILLUSTRATION 17. ANONYMOUS HISTORICAL WORLD MAP TITLED ORBIS SITVS SECVDNDVM MELAM POMPONIVM FIDELITER REPRESENTATVS, SHOWING THE EARTH ACCORDING TO POMPONIVS MELA, PRINTED IN ABOUT 1550 (MARITIEM MUSEUM ROTTERDAM, WAE 850). BY PERMISSION OF THE MARITIEM MUSEUM ROTTERDAM.

In about 1561 Giacomo Gastaldi made a set of historical maps of various parts of Europe according to Strabo, perhaps for an edition of Strabo that never came to fruition. The map of Italy according to Strabo is the best known,<sup>66</sup> and Gastaldi is explicit about the map's role as a historical map in its title, which begins *Disegno dell'italia secondo la descrizione della Geografia di Strabone nel fine del quarto libro e sequita il quinto et il sesto....*, that is, "Map of Italy According to the Description in the

the rise of "all'antica" landscape painting in the sixteenth century see Ribouillault, Denis. "Landscape all'antica and Topographical Anachronism in Roman Fresco Painting of the Sixteenth Century," *Journal of the Warburg and Courtauld Institutes*, 71 (2008): 211-237.

66. On Gastaldi's map of Italy according to Strabo see Almagià, Roberto. "An Historical Map by Giacomo Gastaldi," *Imago Mundi*, 5 (1948): 14-15; Karrow Jr., Robert W. *Mapmakers of the Sixteenth Century and their Maps: Bio-Bibliographies of the Cartographers of Abraham Ortelius, 1570*. Chicago: Published for The Newberry Library by Speculum Orbis Press, 1993: 243; and Meurer, Peter H. *The Strabo Illustratus Atlas: A Unique Sixteenth Century Composite Atlas from the House of Bertelli in Venice*. Bedburg-Hau: Antiquariat Gebr. Haas OHG; Paris: Librairie D. Le Bail & Weissert, 2004: 74.



Geography of Strabo at the end of the Fourth Book, and in the Fifth and Sixth.” The other maps in this series are very rare, but some of them survive in a Lafreri atlas in the Bayerische Staatsbibliothek.<sup>67</sup>

Thus the idea of the historical map certainly existed in the sixteenth century; moreover, Agnese himself experimented with historical maps in his atlases. Several of the more elaborate atlases that he produced beginning around 1550 contain a hemispheric map showing the world as it was known to Ptolemy, albeit with some modernization of the shape of southern Africa. The shape of the British Isles and northwestern Africa are straight from Ptolemy, and the maps show the same 180° of the earth’s circumference that Ptolemaic world maps do, they and are centered on the same meridian that Ptolemaic world maps are centered on (90° east of the Canary Islands), but the geographic data is rendered in an orthographic projection rather than one of Ptolemy’s projections for a world map (see illustration 18). These maps are:

1. San Marino, California, Huntington Library HM 10, dated by Wagner c. 1550, ff. 19v-20r, an example rich in place names.<sup>68</sup>
2. Montpellier, Bibliothèque Interuniversitaire, Section Médecine, H. 70, dated by Wagner c. 1550, ff. 18v-19r, an example rich in place names.<sup>69</sup>
3. Formerly in the collection of Henry HARRISSE (1829-1910), dated c. 1550, chart 13, for sale by Daniel Crouche Rare Books in 2021. An example rich in place names.<sup>70</sup>
4. Formerly in Äspelunda, Sweden, current location unknown; photostat in Cambridge, Massachusetts, Harvard University Map Collection, MAP-LC G1001. A46 1900z, dated by Wagner c. 1552, map 13, an example rich in place names.<sup>71</sup>

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67. The Lafreri Atlas in the Bayerische Staatsbibliothek, which has maps printed in Venice between 1545 and 1571, and has the shelfmark 2 Mapp. 464, is conveniently available in digital format by searching for urn:nbn:de:bvb:12-bsb00107640-6. The maps based on Strabo are numbers 22 through 29.

68. On Huntington HM 10 see Wagner, Henry R. “The Manuscript Atlases...”: No. 44: 82; Wagner, Henry R. “The Portolan Atlases of American Interest in the Henry E. Huntington Library and Art Gallery,” *Essays Offered to Herbert Putnam by his Colleagues and Friends on his Thirtieth Anniversary as Librarian of Congress, 5 April 1929*, William Warner Bishop, Andrew Keogh, eds. New Haven: Yale University Press, 1929: 498-509, especially at 502; and Dutschke, Consuelo W.; House, Richard H.; Huntington Library, eds. *Guide to Medieval and Renaissance Manuscripts in the Huntington Library*. San Marino, CA: The Library, 1989: I, 82-84. High-resolution images of this atlas are available via <https://digital-scriptorium.org/> and <https://hdl.huntington.org/>.

69. On the Montpellier manuscript see Wagner, Henry R. “The Manuscript Atlases...”: No. 45: 82-83; and L. Malavialle, “Notice sur un portulan manuscrit de Battista Agnese conservé à la Bib. de l’Université de Montpellier,” *Bulletin de la Société Languedocienne de Géographie*, 30 (1907): 235-297, and 31 (1908): 7-85 and 141-203, with discussion of the Ptolemaic map in 30 (1907): 294-295. Two other maps from the atlas are illustrated in Portinaro, Pierluigi; Knirsch, Franco. *The Cartography of North America, 1500-1800*. New York: Crescent Books, 1987: 71-72. This atlas is also briefly described in Tesi, Mario, ed. *Monumenti di Cartografia a Firenze (Sec. X-XVII)*. Florence: Biblioteca Medicea Laurenziana, 1981: 32, catalog No. 117, and the world map is illustrated in plate 25.

70. The Agnese atlas formerly owned by Henry HARRISSE is described in detail and illustrated in the catalog *The HARRISSE Codex*. London: Daniel Crouch Rare Books, 2020.

71. On the manuscript formerly in Äspelunda see Wagner, Henry R. “The Manuscript Atlases...”: No. 50: 87-88, who indicates that it was in the collection of Count Alex Mörner.



5. London, Royal Geographical Society, Map Room, CA15B-001, dated by Wagner c. 1552, map 13, an example with no place names, which Wagner calls “unfinished.”<sup>72</sup>
6. New York Public Library, Spencer Collection MS 5, implicitly dated by Wagner c. 1552, ff. 16v-17r, an example rich in place names (see illustration 18).<sup>73</sup>
7. Greenwich, National Maritime Museum, P/24, dated May 4, 1554, map 28, an example with no place names, and just one inscription, *dictum ptolemeum*, which indicates that the map is designed to show the world according to Ptolemy.<sup>74</sup>
8. Venice, Biblioteca Marciana, Ms. It. IV 62 (= 5067), dated October 20, 1554, ff. 33v-34r, an example with no place names.<sup>75</sup>
9. Formerly Westheim bei Augsburg, collection of Baron von Humann-Hainhofen, dated March 24, 1555, map 24; current location unknown.<sup>76</sup>
10. New Haven, Beinecke Rare Book and Manuscript Library, MS 560, dated August 8, 1559, map 22, an example with no place names.<sup>77</sup>

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72. On the Royal Geographical Society manuscript see Wagner, Henry R. “The Manuscript Atlases...”: No. 51: 88-89; Yates Thompson, Henry. *A Descriptive Catalogue of the Second Series of Fifty Manuscripts (nos. 51 to 100) in the Collection of Henry Yates Thompson*. Cambridge: Cambridge University Press, 1902: No. 96: 300-303; Yates Thompson, Henry. *Illustrations of One Hundred Manuscripts in the Library of Henry Yates Thompson*. London: Printed at the Chiswick Press, 1907-1918: III, plates 61-69; Yates Thompson, Henry. *Catalogue of Twenty-Eight Illuminated Manuscripts and Two Illuminated Printed Books, the Property of Henry Yates Thompson... which will be sold by auction by Messrs. Sotheby, Wilkinson & Hodge... the 3rd of June 1919*. London: Dryden Press, J. Davy & Sons, 1919: 55-56, and plates 38 and 39; and Crone, G.R. “A Manuscript Atlas by Battista Agnese in the Society’s Collection,” *Geographical Journal*, 108/1 (1946): 72-80, especially 76.

73. On the New York Public Library manuscript see Wagner, Henry R. “The Manuscript Atlases...”: No. 52: 89; and Alexander, Jonathan J.G.; Marrow, James H.; Freeman Sandler, Lucy. *The Splendor of the Word: Medieval and Renaissance Illuminated Manuscripts at the New York Public Library*. New York: New York Public Library, 2005: 343-344. High-resolution images of the manuscript’s maps are available via <http://www.digital-scriptorium.org> and <https://digitalcollections.nypl.org/>.

74. The National Maritime Museum manuscript is not listed in Wagner. Gillian Hutchinson of the National Maritime Museum kindly checked the records for the manuscript for me, which indicate that Sir James Caird bought the manuscript for the Museum from Maggs on May 8, 1939. Zoomable images of some images from the manuscript, including the Ptolemaic map, are available at <https://collections.rmg.co.uk>.

75. On the Biblioteca Marciana manuscript see Wagner, Henry R. “The Manuscript Atlases...”: No. 56: 93-94. This atlas is reproduced in facsimile in portfolio 17 of Theobald Fischer’s *Raccolta di mappamondi e carte nautiche del xiii al xvi secolo*. Venice: F. Ongania, 1871-81, and in Falchetta, Piero, ed. *Battista Agnese atlante, 1554-1556, Ms. Marc. It. IV, 62 (=5067)*. Verona: Canal Multimedia, 1996. Good images of all of the maps in the atlas are available via <http://geoweb.venezia.sbn.it/>.

76. On the ex-Westheim bei Augsburg manuscript see Wagner, Henry R. “The Manuscript Atlases...”: No. 57: 93-94. This atlas was in fact sold even before the publication of Wagner’s work in 1931. It is described in *Manoscritti. Miniature. Incunabvli. Libri figurati. Legetvre. Collezione di 221 rappresentazioni sacre. Esposizione dal 26 aprile al 3 maggio 1928 dalle ore 9 alle 12 e dalle 14 alle 19*. Milano: U. Hoepli, 1928: 86-87, No. 191, with plates 83-84; Sotheby’s, *Catalogue of Valuable Printed Books, Illuminated & Other Manuscripts: Autograph Letters & Historical Documents, etc. ... and a Magnificent Manuscript Portolan by Baptista Agnese, the Property of Baron Rolf von Humann....* London: Sotheby & Co., 1933: 59-60; and *Book-Prices Current: A Record of Prices at which Books Have Been Sold at Auction*. London: E. Stock, 1888-1934: LXVIII, 36-37.

77. On the Beinecke manuscript see Wagner, Henry R. “The Manuscript Atlases...”: No. 58: 95-96; Quaritch, Bernard. *A Catalogue of Illuminated and Other Manuscripts: Together with Some Works on Palaeography*. London: Printed by Waterlow, 1931: 76-78, lot 96; *Catalogue of Valuable Printed Books*,



11. Naples, Biblioteca Nazionale, MS VIII D 7, implicitly dated by Wagner c. 1560, not seen.<sup>78</sup>
12. Florence, Biblioteca Medicea-Laurenziana, Acquisti e Doni 3, implicitly dated by Wagner c. 1560, ff. 27v-28r, an example with no place names.<sup>79</sup>

In fact we can trace Agnese's interest in this style of historical maps based on Ptolemy back to 1546, when he made the atlas now in the National Library in St. Petersburg.<sup>80</sup> On ff. 19v-20r of that manuscript there is an elaborate decorative scene of Atlas holding the world (in the form of a globe) on his shoulders, while a man standing to the right clad in Roman clothes takes a measurement from the globe with dividers.<sup>81</sup> Cartographically, the globe depicted in the St. Petersburg manuscript is quite different from Agnese's maps that show the world as it was known to Ptolemy. The projection used on the globe is different, stereographic rather than orthographic; the shape of Africa is essentially modern, and Madagascar is present; the contours of southern Asia are more modern than Ptolemy's, and Taprobana is absent; the globe includes a southern continent; and the image is not centered quite on Ptolemy's meridian. But it is easy to imagine that this image—which was probably painted by specialized artists rather than by Agnese himself—of a globe in a classical setting, with Ptolemy himself taking a measurement from it, got Agnese

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*Illuminated Manuscripts, Autograph Letters and Historical Documents*. London: Sotheby & Co., 1939: 10-11, lot 58; and Kebabian, John S. *The Henry C. Taylor Collection*. New Haven: Yale University Library, 1971: No. 5: 2. High-resolution images of the manuscript's maps are available online in the Digital Collections at the Beinecke Library.

78. On the Biblioteca Nazionale di Napoli manuscript see Wagner, Henry R. "The Manuscript Atlases...": No. 59: 96-97.

79. On the Biblioteca Medicea-Laurenziana manuscript see Wagner, Henry R. "The Manuscript Atlases...": No. 60: 97-98; and the very brief notice in Enrico Rostagno, "Mostra storica di geografia inaugurata nella Laurenziana il 29 marzo 1921," *Rivista delle biblioteche e degli archivi*, 23 (1923): 27-59, especially at 30, No. 13.

80. The St. Petersburg atlas has been published in facsimile as Battista Agnese, *Vollständige Faksimile-Ausgabe des Portolan Atlas von Battista Agnese (1546) aus dem Besitz der Russischen Nationalbibliothek in St. Petersburg*, with commentary by Dürst, Arthur; Woronowa, Tamara P. Disentis: Desertina; Graz: Akademische Druck- u. Verlagsanstalt; Moscow: Verlag Avtor, 1993. The atlas is also discussed in Woronowa, Tamara P. "Der Portolan-Atlas des Battista Agnese von 1546 in der Russischen Nationalbibliothek von Sankt Petersburg," *Cartographica Helvetica*, 8 (1993): 23-31.

81. Tamara Woronowa in her commentary on the facsimile edition of the St. Petersburg manuscript—see the previous note—identifies the man measuring the manuscript as the magician and astronomer Atlantes of Carena, a character in Boiardo's *Orlando innamorato* (1483) and Ariosto's *Orlando Furioso* (1532). Wagner, "The Manuscript Atlases of Battista Agnese" (see note 28), no. 11, pp. 61-62, says that an earlier Agnese atlas, which was made in about 1541 for Philip II of Spain and later belonged to Baron Edmond de Rothschild (1845-1934) of Paris, had an image of Atlas holding the earth. The manuscript was reported lost after World War II, and a claim entered for the globe by Baron Rothchild reproduces the image of Hercules: here the globe is centered on the Atlantic and shows North and South America, and so is not a historic image of the world based on Ptolemy. On this manuscript, in addition to the pages in Wagner, see Hamel, Christopher de. "The Illuminated Manuscript Collection of Edmond de Rothschild," *Antiquaries, Book Collectors and the Circles of Learning*. Myers, Robin; Harris, Michael, eds. Winchester: St. Paul's Bibliographies; and Delaware: Oak Knoll Press, 1996: 129-151, especially at 141-142; and for the images see the US National Archives, France Claims, Alphabetical: Reichenbach-Weiss, 1945-1951: 94, with a description of the manuscript: 97-98. These pages are available in PDF via [www.fold3.com](http://www.fold3.com); I thank Margot Nishimura for this reference.



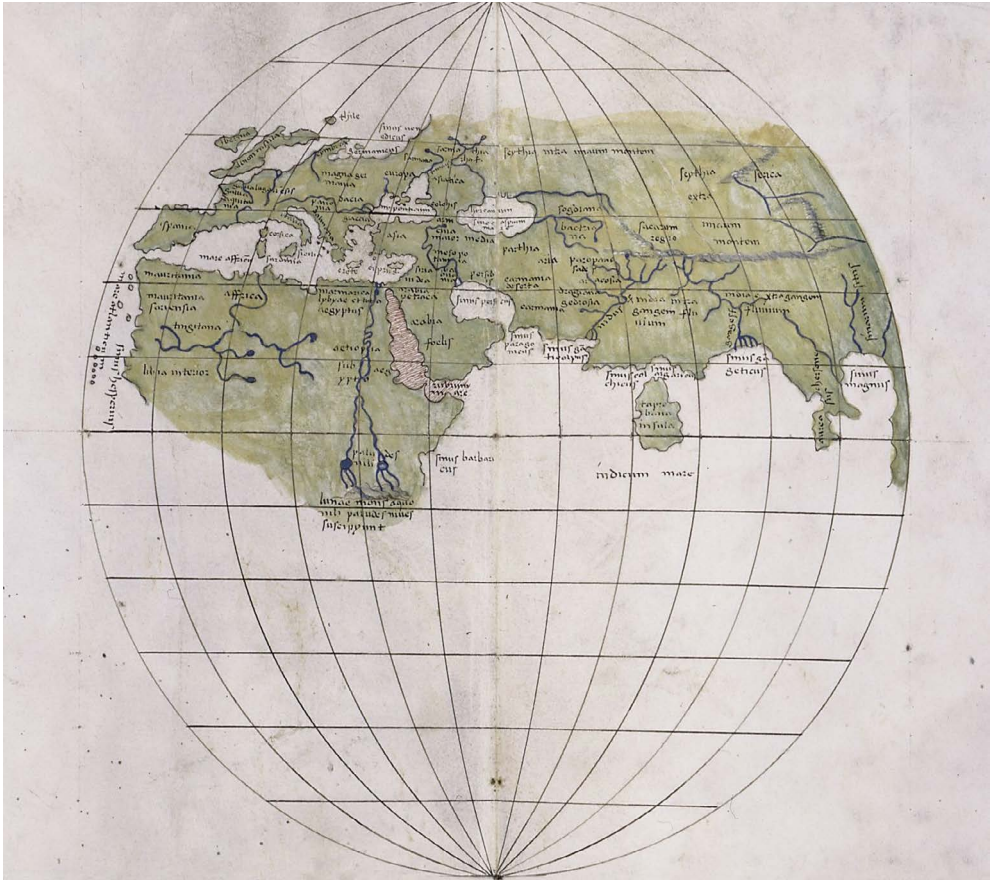


ILLUSTRATION 18. ONE OF AGNESE'S HISTORICAL MAPS OF THE WORLD ACCORDING TO PTOLEMY, IN NEW YORK PUBLIC LIBRARY, SPENCER COLLECTION MS 5, C. 1552, FF. 16V-17R. BY COURTESY OF THE NEW YORK PUBLIC LIBRARY.

thinking about the possibilities for historical maps, and inspired the historical maps that appear in his later atlases.

Following possible inspiration by the illustration in the St. Petersburg manuscript, Agnese seems to have based his Ptolemaic hemispheric maps on Ptolemy's so-called third projection, described in the *Geography* 6.6-7, which Ptolemy designed in order to represent the inhabited hemisphere of the globe on a plane surface.<sup>82</sup> A few

82. The text on Ptolemy's third projection was translated into English in Neugebauer, Otto. "Ptolemy's *Geography*, Book VII, Chapters 6 and 7," *Isis*, 50 (1959): 22-29; and in Berggren J. Lennart; Jones, Alexander. *Ptolemy's Geography: An Annotated Translation of the Theoretical Chapters*. Princeton: Princeton



editions of Ptolemy include elaborate diagrammatic illustrations of this projection without a cartographic image of the earth,<sup>83</sup> while in one manuscript a map is set within the diagram.<sup>84</sup> Agnese modified what he found in Ptolemy's account of his third projection, though, for his projection is different: his parallels are straight, while Ptolemy's instructions result in curved parallels.<sup>85</sup>

The King-Hamy chart is a development of Agnese's historical map of the world as known to Ptolemy in his atlases. One of the chart's curious features is that it shows the world from the North Pole to the South Pole, and that the uppermost and lowermost nodes of the rhumb line network coincide with the North Pole and the South Pole, respectively: this seems like a waste of parchment, given that there is no land indicated south of 33° South. The purpose of this choice is that thus the circle of the nodes of the rhumb line network covers 180° of longitude, just as it covers 180° of latitude. That is, it covers exactly the same west-to-east extent as Ptolemaic world maps, and it is centered at almost the same meridian as Ptolemaic world maps (see illustration 15). Agnese did not center the map on quite the same meridian as Ptolemy, but has shifted the center of the rhumb line network a few degrees to the east, so that his central meridian runs just east of the Strait of Hormuz, rather than just west of it as Ptolemy's does. It is tempting to think that Agnese moved this circle east (in effect) because he wanted to exclude from it the eastern tip of South America, since that continent was not known to Ptolemy, and if the circle had not been moved east, it would have included that point of land.

Regardless of the question of these few degrees, this circle formed by the nodes of the rhumb line network on the King-Hamy chart corresponds very closely indeed

University Press, 2000: 112-117. For discussion of the projection see Dilke, O.A.W. "The Culmination of Greek Cartography in Ptolemy," *The History of Cartography*, J.B. Harley, David Woodward, eds. Chicago: University of Chicago Press, 1987: I, 177-200, at 188-189; and Cattaneo, Angelo. *Fra Mauro's Mappa Mundi and Fifteenth-Century Venetian Culture*. Turnhout: Brepols, 2007: 176-178.

83. The illustrations of Ptolemy's third projection are in the 1507 (Rome) and 1508 (Rome) editions, the 1513 Strasbourg edition; and the 1525 (Strasbourg), 1535 (Lyon), and 1541 (Vienna) editions. These editions are discussed in Eames, Wilberforce. *A List of Editions of Ptolemy's Geography 1475-1730*. New York, 1886 (reprinted from Joseph Sabin's *Bibliotheca Americana*): 7-9, 9-10, 11-13, 17-18, 18-19, and 20-21; and Sanz, Carlos. *La Geographia de Ptolomeo, ampliada con los primeros mapas impresos de América, desde 1507*. Madrid: Librería General V. Suárez, 1959: 100-103, 104-115, 123-146, 156-164, 169-179, and 187-188, respectively.

84. The diagram of the third projection that includes a map is in Paris, BnF, MS lat. 4801, f. 74v. The manuscript was made before 1471, and the diagram was added to it in the early sixteenth century. For discussion of the manuscript see Pellegrin, Elisabeth. "Les manuscrits de Geoffroy Carles, Président du Parlement de Dauphiné et du Sénat de Milan," *Studi di bibliografia e di storia in onore di Tammaro de Marinis*. Verona: Stamperia Valdonega, 1964 : III, 309-327, at 313-317 and plates 1 and 3; and Mulas, Pier Luigi. "De Borso d'Este à Geoffroy Carles: l'illustration de la sphère armillaire dans un exemplaire enluminé de la *Cosmographia* de Ptolémée," *Bulletin du bibliophile*, 2000/1 : 57-72. Images of all the folios of the manuscript are available via <http://gallica.bnf.fr> by searching for "latin 4801."

85. Other experiments in depicting a Ptolemaic globe include the map in the "German Ptolemy" of c. 1493, see Rosenthal, Erwin. "The German Ptolemy and its World Map," *Bulletin of the New York Public Library*, 48/2 (1944): 135-148; and Schöner, Johann. *Luculentissima quaedam terrae totius descriptio*. Nürnberg: Johannes Stuchs, 1515: f. 16r. The New York Public Library has a copy of the German Ptolemy under the shelfmark \*KB+ 1493 (Deutsche Ptolemaeus. [Deutsche Ptolemaeus]), and a high-resolution image of the world map is available via <https://digitalcollections.nypl.org/>.



with the circular limits of the hemispheric map of the world according to Ptolemy in Agnese's atlases (compare illustrations 1 and 18). That is, the central part of the King-Hamy map, as delimited by the circle formed by the nodes of the rhumb line network, is strikingly similar to the part of the earth's surface depicted in the historic Ptolemaic maps that appear in some of his atlases.

Thus what Agnese has done in the King-Hamy map is use the circle of the rhumb line network to distinguish between the regions known to Ptolemy and those discovered in modern times, to emphasize the increase in knowledge of the world at the beginning of the European expansion. The division made by this circle between the lands known to Ptolemy and more recent discoveries on the King-Hamy map is not perfect: while Labrador, Newfoundland, South America, the Caribbean islands, and the eastern part of Asia that was unknown to Ptolemy are all outside the circle as they should be, the islands of Madagascar, Zanzibar, and Seilan (which were unknown to Ptolemy and first mentioned by Marco Polo), as well as the Cape Verde Islands and some of the Azores (both groups probably discovered in the fifteenth century, though there is some evidence of an earlier discovery of the Azores),<sup>86</sup> fall within it. Any attempt to separate the lands known to Ptolemy from those discovered later with a compass-drawn circle was bound to fail in some regions.

Agnese's method of depicting the European expansion, and also the progress of cartography, as spreading outward from a Ptolemaic core, is more dynamic than the methods used by other sixteenth-century cartographers who manifested an interest in the distinction between the areas known to Ptolemy and those discovered later. Some of these cartographers supply a separate historical map for comparison with a more modern one, for example the Ptolemaic and modern maps in editions of Ptolemy, discussed above. Others, such as Giovanni Contarini (1506) and Johannes Ruysch (1507), use Ptolemy's prime meridian through the Canary Islands to divide their world maps into two parts, with the regions known to Ptolemy in the half to the east of that line, and the more recent discoveries in the half west of it.<sup>87</sup>

86. Some of the Azores are mentioned in the *Libro del Conosçimiento* of c. 1350: see *El libro del conocimiento de todos los reinos = The Book of Knowledge of All Kingdoms*, ed. and trans. Nancy F. Marino. Tempe: Arizona Center for Medieval and Renaissance Studies, 1999: 50-51, with the discussion by Hennig, Richard. *Terrae Incognitae*. Leiden: Brill, 1944-56: III, 290-308. The islands appear in one of the nautical charts in the "Medici Atlas" usually dated c. 1351, BL (Flornece), Gaddi 9, ff. 3v-4r, which atlas is reproduced by Fischer, Theobald. *Raccolta di mappamondi e carte nautiche del XIII al XVI secolo*. Venice: F. Ongania, 1871-81, and in Pujades i Bataller, Ramon J. *Les cartes portolanes: la representació medieval d'una mar solcada*. Barcelona: Institut Cartogràfic de Catalunya, 2007, on the accompanying CD, number A25. The islands also appear in the Catalan Atlas of 1375 (BnF MS Espagnol 30). The earliest map which shows the islands in essentially their correct positions is the nautical chart of Gabriel de Valseca of 1439, MMB 3236, which reports the discovery of the islands in the following much-disputed legend: *Aquestas illes foran trobades per Diego de Sivils pelot del rey de portogall an l'ay M<sup>e</sup> cccc xxvii*, for example: "These islands were discovered by Diego de Silves, pilot of the King of Portugal, in the year 1427"; see Pujades i Bataller, Ramon J. *La carta de Gabriel de Vallseca de 1439*. Barcelona: Lumenartis, 2009: 358.

87. For references on Contarini's map see note 20; on Ruysch's map see Boyd Thacher, John. *The Continent of America: Its Discovery and Its Baptism*. New York: William Evarts Benjamin, 1896: 209-219; Swan, Bradford F. "The Ruysch Map of the World (1507-1508)," *Papers of the Bibliographical Society of America*, 45 (1951): 219-236; McGuirk Jr., Donald L. "Ruysch World Map: Census and Commentary," *Imago Mundi*, 41 (1989): 133-141; and Meurer, Peter. "Der Maler und Kartograph Johann Ruysch (†1533):





ILLUSTRATION 19. JOHANNES RUYSCHE'S WORLD MAP OF 1507, FROM THE EDITION OF PTOLEMY'S GEOGRAPHY OF THAT YEAR, WITH THE REGIONS KNOWN TO PTOLEMY EAST OF THE CENTERLINE, AND THE NEW DISCOVERIES WEST OF IT. WASHINGTON, DC, LIBRARY OF CONGRESS, GEOGRAPHY AND MAP DIVISION, G1005 1507 VAULT FOL. BY COURTESY OF THE LIBRARY OF CONGRESS.

However, two cartographers besides Agnese evidently conceived the new discoveries as radiating out from a Ptolemaic core.<sup>88</sup> Henricus Martellus, a German cartographer active in Florence in the last decades of the fifteenth century, made several manuscripts of an island book illustrated with maps. In the world map in the Florence manuscript of that work, there is a meridian—the only one marked on the map—that is located precisely so as to indicate the end of Ptolemaic data in the east, and the beginning of data

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zur abenteuerlichen Biographie eines Kölner Benediktiners an der Schwelle der Neuzeit," *Geschichte in Köln*, 49 (2002): 85-104. High-resolution images of Ruysch's world map are available at <https://jcb.lunaimaging.com> and <https://www.digitalcommonwealth.org>.

88. Very few cartographers, aside from Waldseemüller in his 1507 world map, a case I am about to discuss, retain the Ptolemaic centerline at 90° east of the Canaries in post-Ptolemaic maps. Two who do are Francesco Rosselli in his oval world map of c. 1508 and Oronce Fine in his double-cordiform world map of 1531—but in neither case is there any sign that the cartographer was thinking in terms of expansion from a Ptolemaic core. For references on Rosselli's map of c. 1508 see note 22 above; on Fine's map of 1531 Langlois, L. "Étude sur deux cartes d'Oronce Fine de 1531 et 1536," *Journal de la Société des Américanistes*, 14/1 (1922): 83-97.



from Marco Polo.<sup>89</sup> And Martin Waldseemüller on his world map of 1507, in addition to the inset Ptolemaic map of the world discussed and illustrated above, centers the main map on Ptolemy's centerline 90° east of the Canary Islands, and very subtly indicates the limits of Ptolemaic knowledge in the west and east. In the far northern part of the map, not all the meridians continue north of the Arctic Circle. In the west, the first one to do so is that through the Canary Islands, which is the Prime Meridian that marks the western limit of Ptolemy's knowledge; and in the east, only one meridian extends north of the Arctic Circle, and that is the meridian at 180° east, which marks the eastern limit of Ptolemy's knowledge (see illustration 16). Waldseemüller thus places a very subtle emphasis on the limits of Ptolemaic knowledge in his main map, and places the part of the world known to Ptolemy at the center of his map, with the recent discoveries to the west and to the east of that Ptolemaic center.

The map that is most similar to the King-Hamy chart in terms of its contrast between Ptolemaic geographical knowledge and post-Ptolemaic discoveries is Peter Apian's world map of 1530 (see illustration 20).<sup>90</sup> Apian centers the map on the meridian that was Ptolemy's 90°E, that is, the same meridian on which Ptolemy centered his world maps, and uses heavy meridians to indicate Ptolemy's Prime Meridian and 180° E, that is, the western and eastern limits of Ptolemy's geographical knowledge. And the cartographer emphasizes the contrast between Ptolemaic knowledge and more recent discoveries in smaller inset maps in the upper left and right corners of the map. The figures beside the two inset maps are Ptolemy and Vespucci, inspired of course by the figures on Waldseemüller's 1507 map, but the inset maps are more dramatic than those on Waldseemüller's map. That to which Ptolemy points in the upper left corner is a small replica of Apian's cordiform map, but shows only the part of the world that was known to Ptolemy—the rest of the map is blank. That to which Vespucci points in the upper right corner is again a small replica of Apian's map, but here the central Ptolemaic part of the map is blank, and the details of the more recently discovered areas are filled in (see illustration 21). Apian's depiction of the world as centered on the Ptolemaic regions, with the more recently discovered areas surrounding that Ptolemaic center, is very similar to what we see in the King-Hamy chart. The inset maps on Apian's chart make the

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89. The world map in the Florence manuscript of Martellus's island book is in BML, Plut. 29.25, ff. 66v-67r. The manuscript is described in Almagià, Roberto. "I mappamondi di Enrico Martello e alcuni concetti geografici di Cristoforo Colombo," *La Bibliofilia*, 42 (1940): 288-311, at 295-298; and Gentile, Sebastiano, ed. *Firenze e la scoperta dell'America: umanesimo e geografia nel '400 fiorentino*. Florence: L. S. Olschki, 1992: 237-240, with an illustration of the map in plate 45; I discuss this world map in Van Duzer, Chet. *Henricus Martellus's World...*: 10-12, with illustration. Images of all the folios of the manuscript are available via <http://teca.bmlonline.it/TecaRicerca/index.jsp> by searching for the signature "Plut.29.25."

90. The unique surviving exemplar of Peter Apian's 1530 world map is in the British Library, Maps C.7.c.16. For discussion of the map see Shirley, Rodney W. *The Mapping of the World...*: 68-69, No. 63; and Woodward, David. "Some Evidence for the Use of Stereotyping on Peter Apian's World Map of 1530," *Imago Mundi*, 24 (1970): 43-48. The map is also reproduced in Lynam, Edward. *The Mapmaker's Art: Essays on the History of Maps*. London: Batchworth Press, 1953: 33; and Meurer, Peter H. "Cartography in the German Lands, 1450-1650", *The History of Cartography*, David Woodward, ed. Chicago and London: University of Chicago Press, 2007: III, 1172-1245, especially at 1200.







ILLUSTRATION 21. DETAIL OF PETER APIAN'S WORLD MAP OF 1530: VESPUCCI POINTS TO A MINIATURE REPLICA OF APIAN'S MAP FROM WHICH THE REGIONS KNOWN TO PTOLEMY HAVE BEEN REMOVED, LEAVING THE AREAS DISCOVERED BY MODERN EXPLORERS (BRITISH LIBRARY MAPS C.7.c.16.). © BRITISH LIBRARY BOARD.

contrast between these two regions very sharp, while on the King-Hamy chart, which lacks any such supplementary illustrations, the contrast is less pronounced.<sup>91</sup>

Agnese is the only cartographer I know to incorporate these Ptolemaic boundaries into a nautical chart format; paradoxically, he indicates those Ptolemaic boundaries using the graphical tools (rhumb lines) of the nautical chart tradition. The King-Hamy chart thus represents a remarkable mixture of cartographic genres.

There is a map contemporary with the King-Hamy which, although it does not make a visual distinction between regions known to Ptolemy and those beyond Ptolemy, has a description of this distinction in its upper margin. The map is Giacomo Gastaldi's *Dell'Universale* of 1550, which survives in a single exemplar at the British Library.<sup>92</sup> That text reads:

91. Peter Apian's 1530 cordiform world map and his handling of this contrast between Ptolemaic knowledge at the center and post-Ptolemaic discoveries may be compared with Oronce Fine's cordiform world map of ca. 1536, where the Ptolemaic regions are in the eastern half of the map, and the more recent discoveries in the western half—and there are no supplementary images to emphasize the contrast. For discussion of Fine's map see Pelletier, Monique. "Die herzförmigen Weltkarten von Oronce Fine," *Cartographica Helvetica*, 12 (1995): 27-37; and her "Le monde dans un cœur. Les deux mappemondes d'Oronce Fine," in her *Tours et contours de la Terre: Itinéraires d'une femme au cœur de la cartographie*. Paris: Presses de l'École nationale des ponts et chaussées, 1999: 177-197. A much later map that divides the world into the Old World and recent discoveries—and includes an inset map of the world as known to Ptolemy—is Franciscus Verhaer's *Geographica restituta per globi trientes* of 1618. A high-resolution image of the map is available via <https://www.digitalcommonwealth.org/search/>.

92. The shelfmark of Gastaldi's *Dell'Universale* at the British Library is Maps C.7.c.17. The map is discussed and illustrated in Shirley, Rodney W. *The Mapping of the World: Early Printed World Maps 1472-1700*. London: Holland Press, 1983: 100 and plate 76.



*L'Universalle Orbe de la Terra fue divisa secondo gli antiqui in tre parti, cioè Europa, Aphrica, & Asia, i quali parti hanno di longitudine gradi.cvxvxx. principiando all'Isole canarie, il primo grado. Et e di latitudine verso Tramontana gradi seisantatre, cominciando il primo grado dall'Equinoctiale, & verso mezzogiorno gradi diece. Tutto il resto che si vede di longitudine, che sono altri gradi cento ottanta, e stato scoperto da moderni, cioè l'Inde occidentali, che oggi di il vulgo chiamano il Mondo Nuovo, perche non si a mai inteso daniuno antico che ne facesse mentione*<sup>93</sup>.

The universal circle of the lands was divided by the ancients into three parts, namely Europe, Africa, and Asia, which parts have a longitude of 180 degrees, beginning from the Canary Islands, the first degree [i.e. the prime meridian]; and in latitude 63 degrees to the north beginning at the first degree at the equator, and to the south ten degrees. All the rest that one sees of longitude, which are another 180 degrees, was discovered by the moderns, namely the West Indies, which today people call the New World, because none of the ancients knew it or made mention of it.

The distinction between regions known to Ptolemy and the *regiones extra Ptolemaeum*, “regions beyond Ptolemy,” which is indicated graphically in some of the maps just discussed, is indicated textually in early sixteenth-century geographical books. In their *Cosmographiae introductio* of 1507, printed to accompany Waldseemüller’s 1507 world map, Matthias Ringmann and Martin Waldseemüller have a section on regions that are *Extra Ptholemaeum*, “beyond Ptolemy.”<sup>94</sup> Henricus Glareanus in his *De geographia liber unus* (Basel: Ioannes Faber, 1527), following descriptions of Europe, Africa, and Asia, titles his final chapter “De regionibus extra Ptolemaeum” (“On the Regions Beyond Ptolemy”) (chapter 50, ff. 35r-35v). And in a very interesting passage in chapter 17 on how Ptolemy and his followers paint world maps, Glareanus explains that Ptolemy paints two quadrants, that is, 180° of longitude, from west to east, and modern cartographers paint the two other quadrants, that is, the other 180° of longitude, on either side of Ptolemy’s.<sup>95</sup> This is exactly how Peter Apian depicts the world in his 1530 map, and is very similar to how Agnese depicts it in the King-Hamy map. Johann Schöner uses an arrangement similar to Glareanus’s in his *Opusculum geographicum* (Nuremberg: Joannes Petreius,

93. “The Universal Orb of the earth was divided according to the ancients into three parts, namely Europe, Africa and Asia, which parts have a longitude of 115.30 degrees, starting at the Canary Islands, the first degree. And latitude towards Tramontana sixty-three degrees, starting the first degree from the Equinox, and ten degrees towards noon. All the rest that can be seen in longitude, which are another one hundred and eighty degrees, has been discovered by moderns, that is, the western India, which today people call the New World, because it was never mentioned before by any ancient”. This text from Gastaldi’s map was brought to my attention by Lois, Carla. “Plus Ultra Equinoctialem. El ‘descubrimiento’ del hemisferio Sur en mapas y libros de ciencia en el Renacimiento,” Ph.D. Dissertation, Universidad de Buenos Aires, 2008: 95, in the context of her discussion of the *regiones extra Ptolemaeum*: 94-100.

94. Fischer, Joseph; Von Wieser, Franz. *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: xxx and xxxv (Latin) and 62-63 and 75-76 (English).

95. Glareanus, *De geographia*, 1533, chapter 17. “Qua ratione Ptolemaeus ac eius sequaces pinxerint orbem,” f. 22v: *Ptolemaeus igitur duos nobis quadrantes exhibuit ab occidente in orientem. Alteros duos nostri utrimque marginibus adiecerunt.*



1533). Following his descriptions of Europe, Africa, and Asia, he has a chapter “De regionibus extra Ptolemaeum” (“On the Regions Beyond Ptolemy,” chapter 20), another “De insulis circa Asiam ac Indiam & novas regiones huius tertiae orbis partis” (“On the Islands near Asia and Indian and the New Regions of this Third Part of the World, chapter 21), followed by a paragraph on Brazil. So the distinction between Ptolemaic regions and regions beyond Ptolemy was emphasized in both maps and texts of the first half of the sixteenth century.

As far as the date of the King-Hamy map, I propose that it was made by Agnese in about 1552, a date that makes it contemporary with his closely related experiments with historical maps in his atlases, which range in date from about 1550 to about 1560. The King-Hamy map shows a channel separating England and Scotland, and as Wagner noted, sometime around 1552 to 1553 Agnese changed his depiction of the British Isles: his atlases made before that time include the channel, but his atlases made afterward do not.<sup>96</sup> A date of c. 1552 places the map on the correct side of this divide.

When the King-Hamy chart is understood as a historical map created by Agnese around 1552, many of its otherwise puzzling features make sense.<sup>97</sup> It is not the earliest map to include *Cabo raso* (Cape Race, southeastern Newfoundland).<sup>98</sup> The lack of detail in the depictions of the New World and of Asia, particularly in contrast to the numerous coastal toponyms of Europe and Africa, is deliberate, intended to show the poor state of knowledge of those distant lands at the beginning of the European expansion. This intentional archaizing is especially clear in the paucity of place names in eastern Asia and in non-Ptolemaic islands of southern Asia. As indicated above, the contours of eastern Asia demonstrate that Agnese was using a map in the tradition of Martellus’s world map now at Yale for his depiction of that area. But all of those maps show more place names in eastern Asia than the King-Hamy map does. On the King-Hamy chart there are several unnamed islands in the vicinity of *Iava Minor* and *Iava Maior*, but all of the surviving maps in the Martellus tradition are quite clear about the identities of the other islands here (Peutam, Necura, and Angama), so Agnese has deliberately created a less detailed image of this area on the King-Hamy map. The archaizing is also very clear in the predominantly Ptolemaic depiction of the northern Indian Ocean, particularly with

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96. On the change in Agnese’s depiction of the British Isles see note 31.

97. Hoffman, Bernard G. *Cabot to Cartier: Sources for a Historical Ethnography of Northeastern North America, 1497-1550*. Toronto: University of Toronto Press, 1961: 52-56, after raising questions about whether a date of c. 1502 was consistent with the King-Hamy chart’s depiction of Newfoundland and Labrador, finally decided that he would “employ the commonly recognized date of 1502 —keeping in mind that future study may drastically revise it.”

98. What is usually regarded as the second surviving map to include *Cabo raso*, the Kunstmann I chart, BS, Cod. icon. 132, has been often dated to c. 1504-05: see for example Kupčik, Ivan. *Münchener Portolankarten...: 21-27*, with bibliography. However, this chart, like the King-Hamy chart, is in fact of a somewhat later date. A date of c. 1521 is suggested for it by Ganong, William Francis. *Crucial Maps in the Early Cartography and Place-Nomenclature of the Atlantic Coast of Canada*. Toronto: University of Toronto Press and the Royal Society of Canada, 1964: 47-48 and 61-65; and Morrison, Samuel Eliot. *The European Discovery of America*. New York: Oxford University Press, 1971-74: I, 226.



its image of Taprobana straight out of Ptolemy: this vision of the region was long out of date in the 1550s.

The striking mixture of cartographic genres on the King-Hamy chart, the use of nautical charts in the west and of Ptolemy and Martellus in the east, allows Agnese to capture an important moment in the cartographic history of the European expansion, namely when cartographers realized that West Africa had been located too far north on maps with respect to the equator. The function of Agnese's double equator is to record that change, and it has nothing to do with the double equators used on mid-sixteenth-century charts to compensate for magnetic declination in voyages across the Atlantic.<sup>99</sup> Maps that show the earlier positioning of the equator with respect to Africa include the Yale Martellus map of c. 1491 (see illustration 3), the Kunstmann II map of c. 1504-06 (see illustration 2),<sup>100</sup> and Martin Waldseemüller's world map of 1507, as well as some maps derived from Waldseemüller's. Martellus corrected the shape of Africa according to the latest Portuguese explorations in the world maps in his island books, and in the London manuscript of his island book he proudly proclaims his correction in a legend, thus indicating the importance of the change:<sup>101</sup> *hec est uera forma moderna affrice' secundum descr[i]ptionem Portugalensium Inter mare Mediterraneaum et oceanum meridionalem.*

This is the modern true shape of Africa according to the description of the Portuguese, from the Mediterranean Sea to the southern ocean.

Johann Schöner also indicated the importance of this change on his terrestrial globe of 1515: he maps Africa according to modern discoveries, with West Africa well north of the equator, but also indicates the outline of Africa from Waldseemüller's map of 1507, to show the change he had made from Waldseemüller's model in this regard.<sup>102</sup>

99. On the double equator on the King-Hamy chart see Ravenstein, Ernst Georg. *A Journal of the First Voyage of Vasco da Gama, 1497-1499*. London: Printed for the Hakluyt Society, 1898: 207; for discussion of the mid-sixteenth-century charts with double equators see Cerezo Martínez, Ricardo. *La cartografía náutica española en los siglos XIV, XV y XVI*. Madrid: C.S.I.C., 1994: 205-208; Sandman, Alison. "Cosmographers vs. Pilots: Navigation, Cosmography, and the State in Early Modern Spain" (PhD Dissertation) University of Wisconsin, Madison, 2001: 181-211; Sandman, Alison. "Sea Charts, Navigation, and Territorial Claims in Sixteenth-Century Spain," *Merchants & Marvels: Commerce, Science, and Art in Early Modern Europe*, Pamela H. Smith, Paula Findlen, eds. New York-London: Routledge, 2002: 83-108, especially 92-94.

100. The inaccurate positioning of the equator on the Kunstmann II map is mentioned by Kupčák, Ivan. *Münchner Portolankarten...*: 31.

101. The world map by Martellus in question is in BL, Add. MS 15760, ff. 68v-69r, and it is well reproduced in Nebenzahl, Kenneth. *Atlas of Columbus...*: 15-17; and Cavallo, Guglielmo, ed. *Cristoforo Colombo e l'apertura degli spazi: Mostra storico-cartografica*. Rome: Istituto Poligrafico e Zecca dello Stato, 1992: I, 420-421. I discuss this map by Martellus in Van Duzer, Chet. *Henricus Martellus's World...*: 15-18, with illustration.

102. Schöner's tracing of the outline of Africa from Waldseemüller's 1507 map on his 1515 globe can be seen in Edme-François Jomard's tracing of the globe in his *Les monuments de la géographie* (Paris: M. Duprat, 1862), plates 15 and 16, which are reproduced in part in Nordenskiöld, A.E. *Facsimile-Atlas to the Early History of Cartography* (Stockholm: Norstedt, 1889; New York: Dover Publications, 1973), pp. 78-79; and in my *Johann Schöner's Globe of 1515: Transcription and Study*. Philadelphia: American Philosophical Society, 2010: 156, illustration 1.



If the King-Hamy chart was made as a historical map, we might expect that it would have some textual indication of this role, but of Agnese's several historical maps in his atlases, examined above, only one (Greenwich, National Maritime Museum, P/24, number 7 in the list above) carries any such indication. So evidently such an indication of the map's nature was not thought necessary. There is also the question of the circumstances under which such a historical map, designed to show the early stages of the European expansion, was made, and its intended audience. Who would have commissioned it, and in what context would it have been used or displayed? Unfortunately we can do no more than explore possibilities and speculate.

The clients commissioning Agnese's atlases could choose which maps were included in them, and given that eleven of his surviving atlases include his Ptolemaic historical map, there was interest in historical maps in the marketplace. One suspects that the client who commissioned a separate large historical map that showed the image of the world from fifty years earlier would need to be both more wealthy than Agnese's average customer and more cartographically sophisticated. Agnese had made an atlas for the young Philip II of Spain (1527-1598), and Philip was both very wealthy and had a strong interest in maps. Ortelius's *Theatrum orbis terrarum* of 1570 was dedicated to Philip, and later editions of the work included historical maps that came to be gathered in a separate section titled the *Parergon*,<sup>103</sup> but Philip's interest seems to have been in maps as tools for conquest and control, rather than as historical documents.<sup>104</sup> A perhaps more likely candidate is Cosimo I de' Medici (1519-1574), for whom Agnese made an atlas around 1543-45,<sup>105</sup> and who in the 1560s had the Guardaroba Nuova in Florence's Palazzo Vecchio decorated with an

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103. For discussion of the collection of historical maps in Ortelius's *Parergon* see Meurer, Peter H. "Ortelius as the Father of Historical Cartography", *Abraham Ortelius and the First Atlas: Essays Commemorating the Quadricentennial of His Death, 1598-1998*, Marcel van den Broecke, Peter van der Krogt, and Peter Meurer, eds. Utrecht: HES Publishers, 1998: 133-159; Wellens-De Donder, Liliane. "Un atlas historique: le *Parergon* d'Ortelius". *The Journal of the Walters Art Gallery*, 57 (1999): 49-72; and Tolia, George. "Glose, contemplation et méditation: Histoire éditoriale et fonctions du *Parergon* d'Abraham Ortelius, 1579-1624," *Les méditations cosmographiques à la Renaissance*. Paris: PUPS, 2009: 157-186. For additional discussion of the genre of historical maps see Goffart, Walter. "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: 30-35.

104. The atlas made for Philip II is listed by Wagner, Henry R. "The Manuscript Atlases...": 61-62; see further note 80 above. On Philip II's interest in maps see Alvar Ezquerro, Alfredo. *Relaciones Topográficas de Felipe II*. Madrid: Consejo Superior de Investigaciones, 1995; and Parker, Geoffrey. "Philip II, Maps and Power", *Success is Never Final: Empire, War and Faith in Early Modern Europe*, Geoffrey Parker, ed. New York: Basic Books, 2002: 96-121.

105. The Agnese atlas made for Cosimo is in Florence, Biblioteca Medicea Laurenziana, Med. Pal. 245, on which see Wagner, Henry R. "The Manuscript Atlases...": 71; and Malavialle, Léon. "Notice sur un portulan manuscrit de Battista Agnese conservé à la Bib. de l'Université de Montpellier," *Bulletin de la Société Languedocienne de Géographie*, 30 (1907): 235-297, and 31 (1908): 7-85 and 141-203, in 31 (1908): 10-15.



elaborate series of modernized Ptolemaic maps.<sup>106</sup> Perhaps Cosimo had been thinking about the development of modern maps from Ptolemaic maps in the 1550s?<sup>107</sup>

It would seem reasonable to expect that a map made for Philip II or Cosimo I or another noble patron would bear that noble's coat of arms, whereas there is no coat of arms on the King-Hamy chart. But in fact many nautical charts that were expensive commissions do not bear the commissioner's coat of arms. It is certainly an engaging exercise to speculate about a specific noble patron for the King-Hamy chart, and to try to fit the chart with what we know about that patron's cartographic interests, but there simply is not enough evidence to generate confidence in any such ascription. Moreover, many other wealthy clients with an interest in cartographic history might have visited Agnese's workshop—or perhaps Agnese made the chart as an experiment, to satisfy his own curiosity or to test the market. The intended function of this historical map must have been didactic, but it does not seem possible to say more about who commissioned it or why.

### 3. The Evidence of British Library Add. MS 31316

One final manuscript that needs to be addressed in connection with the King-Hamy map is British Library Add. MS 31316, an anonymous eight-folio atlas consisting mostly of nautical charts, but also containing a world map and a map of Taprobana that stand outside the nautical chart tradition. The maps are as follows; they are oriented with north at the top, except where indicated otherwise:

1. 1r, world map on a homeotheric projection with a grid of latitude and longitude, upside down on the page (for example with south at the top)
- ff. 1v-2r, nautical chart of the British Isles and northwestern Europe
- ff. 2v-3r, the eastern Atlantic with the coast of Spain and northwestern Africa
- ff. 3v-4r, the western Mediterranean, from the Strait of Gibraltar to western Italy
- f. 4v, the central Mediterranean, from Italy to western Greece
- f. 5r, the North Atlantic, including the land of the *Corte Real* and *Terra Laboratoris*, the Azores, and the northeastern coast of South America, with south at the top

106. See Fiorani, Francesca. "Maps, Politics and the Grand Duke of Florence. The Sala della Guardaroba Nuova of Cosimo I de' Medici," *Renaissance Representations of the Prince: Basilike Eikon*, Roy Eriksen, Magne Malmanger, eds. Rome: Edizioni Kappa, 2001: 73-102; in Fiorani's *The Marvel of Maps: Art, Cartography and Politics in Renaissance Italy*. New Haven: Yale University Press, 2005, see "The Guardaroba Nuova," pp. 17-32 on the cartographic program for the room; "The Cosmos is Cosimo's Ornament," pp. 33-60 on Cosimo's use of images of the world; and "Ptolemy's Geographical Maps," pp. 94-98 on the Ptolemaic basis of the maps in the room. On the chronology of the room's construction and decoration see Rosen, Mark. "A New Chronology of the Construction and Restoration of the Medici Guardaroba in the Palazzo Vecchio, Florence," *Mitteilungen des Kunsthistorischen Instituts in Florenz*, 53 (2009): 285-308.

107. We can get some hints as to the maps Cosimo owned in the 1550s in an inventory of 1553 (Archivio di Stato di Firenze, GM 28), published by Gáldy, Andrea M. *Cosimo I de' Medici as Collector: Antiquities and Archaeology in Sixteenth-Century Florence*. Newcastle upon Tyne: Cambridge Scholars Publications, 2009: 211-250, especially 219-220.



- f. 5v, the central Atlantic, including West Africa and northeastern South America, with south at the top
- f. 6r, the western Indian Ocean, including the eastern coast of Africa, the Persian Gulf in the north, and India with Calicut in the east
- ff. 6v-7r, the Adriatic
- ff. 7v-8r, Greece
- f. 8v, a map of Taprobana based on Ptolemy, not a nautical chart, but without Ptolemy's grid of latitude and longitude

There are discontinuities and inconsistencies of design in the maps. Following f. 4v, which depicts the eastern Mediterranean and is oriented with north at the top, we expect its continuation on f. 5r, but instead we have the North Atlantic oriented with south at the top, and the map on f. 5r lacks the decorative border along the outside edge of the page that we find on the preceding nautical charts in the atlas. Further, in addition to the geographic and physical discontinuity between the maps on f. 5v (central Atlantic) and f. 6r (western Indian Ocean), the color schemes are different, and both maps lack the decorative border along the outside edge of the page. And the maps on f. 1r (world) and 8v (Taprobana) are not nautical charts. The atlas is a composite.

The possibility had been suggested that the atlas was made by Grazioso Benincasa,<sup>108</sup> but the strong similarities between the depictions of *Terra Laboratoris* and the land of *Corte Real* on f. 5r of the atlas (see illustration 22) with those same lands on the King-Hamy chart (see illustration 10) make it clear that the same cartographer was responsible for both.<sup>109</sup> And there are other elements of the atlas that connect it with the King-Hamy chart. First, on the map of the British Isles and northwestern Europe on ff. 1v-2r there is a decorative star very similar to those on the King-Hamy chart and Agnese's nautical charts in Wolfenbüttel, Munich, and Parma discussed above. The star in BL Add. MS 31316 is located on a node of the rhumb line network, rather than outside the circle of nodes like the stars on the King-Hamy chart and Agnese's nautical charts, but then the layout of the world map in Add. MS 31316 leaves almost no room outside the circle of nodes. Second, on f. 5r of the atlas in the British Library, the Azores are labeled *Insule solis*, which is also the case on the King-Hamy chart, and as we have seen, this toponym is a characteristic element of Agnese's cartography. Third, some of the capital lettering

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108. Thompson, E. Maunde, ed. *Catalogue of the Additions to the Manuscripts in the British Museum in the Years MDCCCLXXVI.-MDCCCLXXXI*. London: The Trustees of the British Museum, 1882: 179; and Emiliani, Marina. "Le carte nautiche dei Benincasa, cartografi anconetani". *Bollettino della Società Geografica Italiana*, 73 (1936): 485-510, especially 505.

109. Winter, Heinrich. "The Pseudo-Labrador and the Oblique Meridian". *Imago Mundi*, 2 (1937): 61-73, especially 62, plate following p. 62, and 66; and Skelton, Raleigh Ashlin. "The Cartography of the Voyages", *The Cabot Voyages and Bristol Discovery under Henry VII*, James A. Williamson, ed. Cambridge: The Hakluyt Society, 1962: 295-325, at 308-10 and 316. This association with the King-Hamy map had led to the ascription of a date of c. 1502 to the atlas, but this date is certainly too early; Pflederer, Richard L. *Census of Portolan Charts & Atlases: As Reported and Listed by the Noted Scholars of the Genre in Their Works Ranging from 1897 to 2008*, 2009, suggests a date of c. 1525.



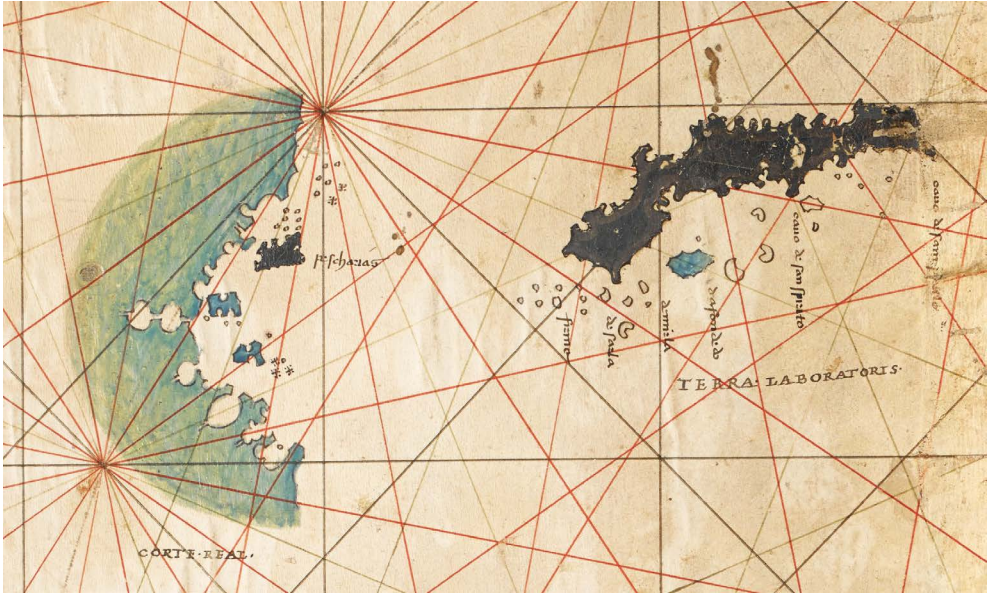


ILLUSTRATION 22. DETAIL OF THE LAND OF CORTE REAL AND TERRA LABORATORIS IN THE NORTH ATLANTIC IN BRITISH LIBRARY ADD. MS 31316, F. 5R—COMPARE ILLUSTRATION 9. © BRITISH LIBRARY BOARD.

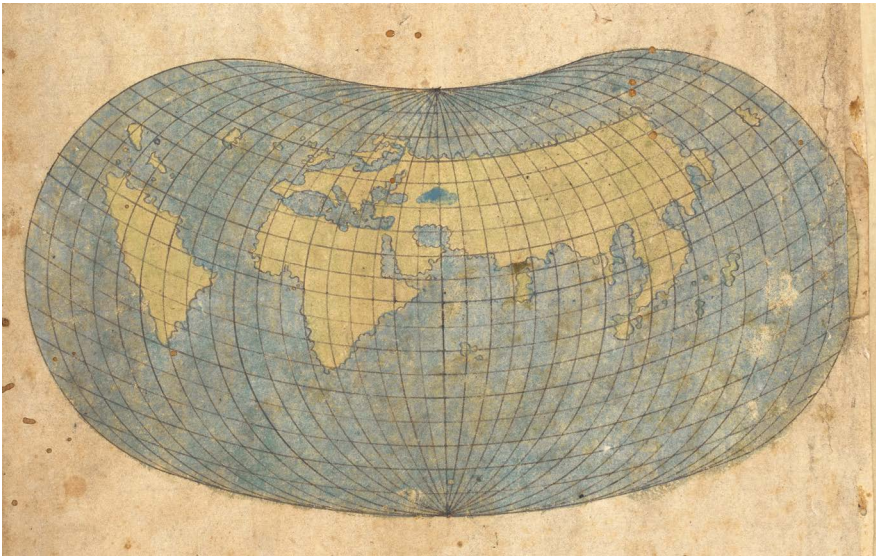


ILLUSTRATION 23. THE WORLD MAP IN BRITISH LIBRARY ADD. MS 31316, F. 1R, WHOSE CONTOURS ARE SIMILAR TO THOSE OF THE KING-HAMY CHART (COMPARE ILLUSTRATION 1). © BRITISH LIBRARY BOARD.

in the atlas matches Agnese's, particularly that on f. 5r (*Corte Real, Terra Laboratoris, Insule solis*) and on the map of Taprobana on f. 8v (*India intra Gangen Fluvium*).

Another connection between Add. MS 31316 and the King-Hamy chart that I have not seen mentioned is that the geography of the world map on f. 1r is very similar to that of the King-Hamy chart (see illustration 23 and compare it with illustration 1). Certainly there are significant differences between the two maps: that in Add. MS 31316 is on a homeotheric projection, has a grid of latitude and longitude, and covers all 360° of the earth's longitude; while the King-Hamy chart is mainly based on nautical chart cartography, and only covers about 290° of longitude. And their depictions of the Sea of Azov, the British Isles, and the northwestern corner of Africa are quite different: in the Add. MS 31316 world map these elements are much closer to their shapes on Ptolemaic maps.

But the similarities between the maps are compelling. Although the world map in Add. MS 31316 covers 70° more of longitude than the King-Hamy chart, the only additional geographical elements it includes are Japan off the eastern coast of Asia and the western coast of South America. Both maps are centered on what was Ptolemy's meridian of 90°E, that is, the central meridian of Ptolemy's world map. Both maps show the northern coast of Asia running east and west, with an almost 90° "corner" in northeastern Asia; their depictions of the islands from Seylan to Java Major are very similar, and both place Madagascar and Zanzibar—unlabeled on the world map in Add. MS 31316—well out in the Indian Ocean, far from the eastern coast of Africa and east of Ptolemy's meridian of 90°E. The shape of the Red Sea, with its western shore running almost north and south, is very similar in the two maps, and the Add. MS 31316 map has unlabeled islands that are certainly intended to represent *Terra Laboratoris* and *Corte Real*, as the King-Hamy map does. The contours of South America are similar on the two maps, and both show Cuba and Isabella (Hispaniola), but none of the North American continent.

The world map in Add. MS 31316 seems to show Agnese experimenting with essentially the same early sixteenth-century geographical dataset that found expression in the King-Hamy map, using a different projection, and including a few more Ptolemaic elements. As Add. MS 31316 is a composite, it is challenging to date. The involvement of Agnese in the making of the atlas places the atlas within his known period of cartographic activity, 1536 to 1564; the separation of England and Scotland by a channel on the map on ff. 1v-2r indicates a date before 1553, at least for that map;<sup>110</sup> the depiction of *Terra Laboratoris* and *Corte Real* on f. 5r, which is so similar to the depictions of those lands on the King-Hamy map, suggests a date of c. 1552 for that map. I do not see any evidence that militates against a date of c. 1550 for the atlas.

The depiction of the world in the map on f. 1r, particularly with regard to the lack of a representation of North America and the Ptolemy- and Martellus-based depiction of Asia, is representative of maps of the first twenty years of the sixteenth century. Thus although on this map Agnese does not delimit Ptolemaic from post-

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110. Wagner, Henry R. "The Manuscript Atlases...": 27-28.



Ptolemaic knowledge as he does on the King-Hamy map, the map is certainly designed as a historical map: made in approximately 1550, it shows the European understanding of the world some thirty or forty years earlier. Moreover, Add. MS 31316 contains at least two other historical maps. The depiction of the western Indian Ocean in the map on f. 6r is very similar to that on the King-Hamy chart, particularly with regard to the Ptolemaic shape of the Persian Gulf, which is very different from the shape of the Persian Gulf on Agnese's modern maps: compare illustration 5. And the map of Taprobana on f. 8v is clearly based on Ptolemy.

Thus Add. MS 31316 provides additional evidence of Agnese's engagement with historical maps, and in particular, shows that he had experimented with a historical world map using a dataset very similar to that in the King-Hamy map, that is, he had experimented with a historical world map that depicted the European conception of the world in the early sixteenth century, at the beginning of the European expansion, much as the King-Hamy map does.

#### 4. Conclusions

Battista Agnese has often been characterized as an unoriginal cartographer, but this investigation of the King-Hamy chart has demonstrated that he made multiple experiments with historical maps, a genre which was in the early stages of its development at the middle of the sixteenth century. The King-Hamy map is by far his most elaborate surviving example of this type, boldly mixing cartographic genres to shed light on the development of the European expansion and the history of its portrayal in maps. It is understandable that in the past the chart has been thought to date from the first few years of the sixteenth century, and to contain one of the earliest cartographic depictions of the New World, for Agnese intended for it to represent the European understanding of the world's geography at that period. I would argue that the map is much more interesting when understood as a historical map than when it is thought to include an early depiction of the New World that teaches us nothing about the early exploration of that region.

Important questions remain about the intended audience for the King-Hamy chart. We may speculate that a noble with a strong interest in cartography, history, and exploration commissioned the map, but we can do no more than conjecture. But Agnese's other historical maps from the same period, including the hemispheric historical maps in some of his atlases and a few of the maps in Add. MS 31316, show that there was indeed a market for historical maps at the middle of the sixteenth century.

