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# Changing Ideas about the Oceans Reflected in the World Maps of Martin Waldseemüller

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- 1 The Romans were very suspicious of the sea in general: the poet Propertius curses the man who first invented sailing vessels,<sup>1</sup> and Pliny calls the sea “the most savage part of nature,” and talks about how there are many monsters in the sea because the sea mixes the “seeds and first principles” of things, resulting in many dangerous hybrid creatures.<sup>2</sup> And the Romans were particularly wary of the Atlantic. The poet Albinovanus Pedo left an evocative description of the voyage of Germanicus to the Northern Ocean early in the first century CE, where he was overtaken by a storm:<sup>3</sup>

(...) banished from the familiar limits of the world they dare to pass through forbidden shades to the bounds of things, the remotest shores of the world. Now they think Ocean, that breeds beneath its sluggish waves terrible monsters, savage sea-beasts everywhere, and dogs of the sea, is rising, taking the ships with it (the very noise increases their fears): now they think the vessels are sinking in the mud, the fleet deserted by the swift wind, themselves left by indolent fate to the sea-beasts, to be torn apart unhappily.

- 2 This passage depicts the Atlantic as both forbidden and a place of terrors, filled with dangerous sea monsters. In the fourth century Saint Ambrose indicates that the Atlantic is unknown and violent, and that mariners do not even attempt to sail on it:<sup>4</sup>

Who knows, after all, how far this great sea extends, onto which sailors do not dare to sail, and, up till now, have not attempted to do so, and which surrounds Britain with furious waves and which reaches even further places that are not even accessible in legends.

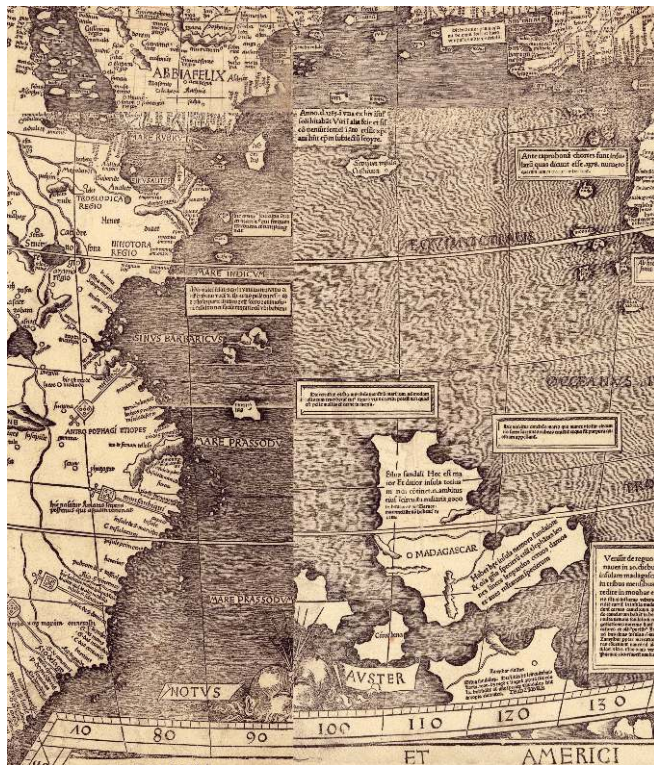
- 3 The impossibility of navigating in the Atlantic often took concrete representation on maps in the form of the Pillars of Hercules at the mouth of the Strait of Gibraltar, which were thought to represent the furthestmost western limit of travel.<sup>5</sup> On the nautical chart made in 1367 by the Pizzigani brothers, there is a statue of Hercules outside the Strait with a legend that reads: “Here is the statue that was in the time of Hercules that Zirquo

[?] founded for the safety of mariners. It was built by the sea that one can navigate, but beyond the statue is a shallow sea that cannot support ships.”<sup>6</sup>

- 4 European conceptions of the Atlantic and other oceans began to change in the fifteenth century,<sup>7</sup> and they began to be thought of as a space that men in ships could successfully cross, and across which trade could be conducted. This change can be seen with striking clarity in two famous large world maps made by one cartographer at the beginning of the sixteenth century, namely the world maps made in 1507 and 1516 by the German cartographer Martin Waldseemüller (c. 1470-1520). Specifically, the change can be seen in the treatment of sea monsters on the two maps, which often serve as proxies for ideas about the oceans.<sup>8</sup>
- 5 On his world map of 1507, which is printed on twelve sheets and is famous for being the first to apply the name “America” to the New World, Waldseemüller does not depict any sea monsters, but he has several legends describing them in the Indian Ocean (fig. 1).<sup>9</sup> Most of the sea monsters on the 1507 map are dangerous, or are at least of a nature that would discourage navigation. One of the legends off the eastern coast of Africa reads: “Here is seen the leviathan or sea-dragon which frequently fights against the whale.” West of the island of Java Major there is a legend about a sea monster which reads “Here is seen the *granus*, a very large fish that has only one eye in its face,” and north of Java Major there is another that reads “Here is seen the siren, a horrible sea monster”.<sup>10</sup>
- 6 Waldseemüller’s legends about these sea monsters derive from the *Hortus sanitatis* (or *Ortus sanitatis*), an anonymous illustrated encyclopedia of plants, animals, reptiles, birds, fish, and stones, which was first published in 1491 in Mainz by Jacob Meydenbach (not to be confused with a shorter herbal with the same title that was first published somewhat earlier).<sup>11</sup> Much of the material about sea monsters in this encyclopedia comes from the *Etymologies* of Isidore of Seville (c. 560-636) and the *De natura rerum* of Thomas of Cantimpré (1201-1272)—that is, from medieval sources.
- 7 The situation on Waldseemüller’s *Carta marina*, printed in 1516 just nine years after his 1507 map, is completely different.<sup>12</sup> The cartographer has abandoned these medieval texts about sea monsters, and now has just one image of a sea monster, off the southeastern tip of Africa, which shows King Manuel of Portugal riding a sea monster (see fig. 2). Following Vasco da Gama’s successful return from his voyage to India by sailing around Africa in 1499, King Manuel adopted a new title, “Lord of the conquest, and navigation, and commerce of Ethiopia, Arabia, Persia and India.” His adoption of this title is recorded in two sources that we know Waldseemüller consulted.<sup>13</sup> I would suggest that Waldseemüller created this image of Manuel riding the sea monster as a way to express this title graphically.
- 8 While the sea monsters on Waldseemüller’s 1507 map are dangerous, and thus would discourage navigation, the image on the *Carta marina* shows a human controlling a sea monster, and thus boldly proclaims human control over the dangers of the sea, and by extension, dominion over the oceans themselves. The ocean is thus no longer so much a place of danger, as an element that can be conquered by humans, and across which trade can be conducted. This emphasis on the economic possibilities offered by control of the seas is evident elsewhere on the *Carta marina*: in the southeastern corner of the map there is a large text box that supplies the prices and sources of the spices and other merchandise available in the great emporium of Calicut (Kozhikode), India.<sup>14</sup>

- 9 The sea monsters on the two maps thus show that in the short space of nine years, Waldseemüller set aside an essentially medieval view of the ocean, and adopted a much more modern conception. The sea monster on the *Carta marina* is also artistically a product of the Renaissance: the texture of the creature's skin, its teeth, and the folds of skin on its neck are rendered naturalistically, the monster is clearly depicted as three-dimensional, and it is in motion, apparently struggling against the bit in its mouth.
- 10 We saw earlier that the Pillars of Hercules in the Strait of Gibraltar had once marked the westernmost limit of travel for Europeans, a point beyond which travel into the ocean would be very dangerous. The tremendous change in conceptions of the oceans from the idea that the ocean was unnavigable and that the Pillars of Hercules marked the western limit of what was geographically knowable, and that the oceans represented a traversable space full of opportunities—the change marked in Waldseemüller's two large world maps—is confirmed by another map, namely Battista Agnese's world map that appears, with minor variations, in his manuscript atlases.<sup>15</sup> The map shows the route of Ferdinand Magellan's fleet around the world, departing from Sanlúcar de Barrameda, just outside the Strait of Gibraltar, in 1519, and returning to Seville in 1522. That is, the Strait of Gibraltar had changed from being the westernmost limit of human travel to being a portal for the discovery of the world by sea.

Fig. 1. Detail of texts describing sea monsters off the eastern coast of Africa on Martin Waldseemüller's world map of 1507



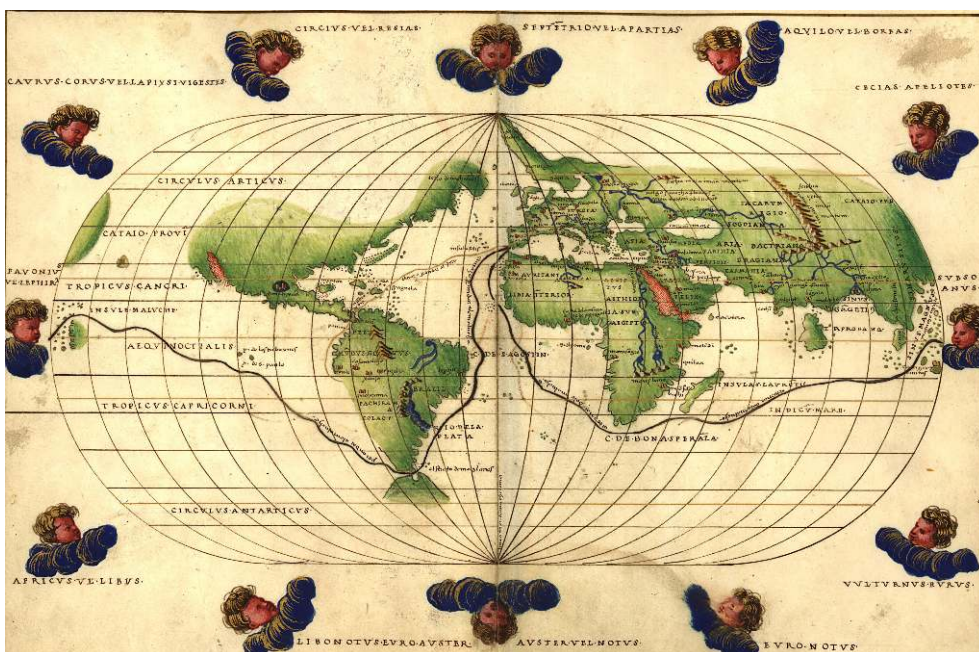
Source: Courtesy of the Library of Congress. Available online at <https://www.loc.gov/resource/g3200.ct000725>

Fig. 2. Detail of King Manuel of Portugal riding a sea monster off the southern tip of Africa, symbolizing Portugal's control of the sea route around Africa to Asia, on Martin Waldseemüller's *Carta marina* of 1516



Source: Courtesy of the Library of Congress. Available online at <https://www.loc.gov/resource/g3200m.gct00046/?sp=11>

Fig. 3. World map in the atlas by Battista Agnese, c. 1544, at the Library of Congress (G1001.A4 1544), showing the route of Magellan's fleet around the world



Source: Courtesy of the Library of Congress. Available online at <https://www.loc.gov/resource/g3200m.gct00001/?sp=14>

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## NOTES

1. Propertius 1.17.13-14, *ah pereat, quicumque rates et vela paravit / primus et invito gurgite fecit iter!*, “Ah, may he perish whoever it was who first made boats and sails and journeyed on the unwilling sea!”
2. Pliny *Naturalis historia* 36.1.2 and 9.1.2; also see 19.1.6.
3. M. Winterbottom, ed., *The Elder Seneca* (Cambridge, MA, 1974), vol. 2, Sen., Suas. 1.15; quoted and discussed in some detail by Michael von Albrecht, *Roman Epic: An Interpretative Introduction* (Boston: Brill, 1998), pp. 209-215.
4. St. Ambrose, *Hexameron* 3.3.15, translated in Sebastian I. Sobceki, *The Sea and Medieval English Literature* (Cambridge, UK ; Rochester, NY: D.S. Brewer, 2008), p. 72.
5. See my article “Rebasando los Pilares de Hércules: El Estrecho de Gibraltar en la cartografía histórica,” in Virgilio Martínez Enamorado, ed., *I congreso internacional: Escenarios urbanos de al-Andalus y el Occidente Musulmán (Vélez-Málaga, 16-18 de junio de 2010)* (Malaga: Ayuntamiento de Vélez-Málaga and Fondo Europeo de Desarrollo Regional de la Unión Europea, 2011), pp. 257-292.
6. The Pizzigani chart is in Parma, Biblioteca Palatina, Carta nautica no. 1612; There is a good hand-drawn facsimile of the 1367 Pizzigani chart in M. Jomard, *Les monuments de la géographie* (Paris: M. Duprat, 1862), nos. 44-49; and a photographic reproduction in Guglielmo Cavallo, ed., *Cristoforo Colombo e l'apertura degli spazi: mostra storia-cartografia* (Rome: Istituto Poligrafico e Zecca dello Stato, Libreria dello Stato, 1992), vol. 1 pp. 432-433. There is a good digital reproduction of the chart in Ramon J. Pujades i Bataller, *Les cartes portolanes: la representació medieval d'una mar solcada* (Barcelona: Institut Cartogràfic de Catalunya, 2007), on the accompanying CD, number C13. This text is transcribed by Mario Longhena, “La carta dei Pizigano del 1367 (posseduta dalla Biblioteca Palatina di Parma),” *Archivio storico per le province Parmensi*, series 4, vol. 5 (1953), pp. 25-130, at 57.
7. Josef Konvitz, “Changing Concepts of the Sea, 1550–1950,” *Terrae Incognitae* 11.1 (1979), pp. 1-17
8. For a broad discussion of sea monsters on early maps see my *Sea Monsters on Medieval and Renaissance Maps* (London: British Library, 2013).
9. The unique surviving exemplar of Waldseemüller’s 1507 world map is on permanent display at the Library of Congress; it is discussed and reproduced sheet by sheet in John W. Hessler and Chet Van Duzer, *Seeing the World Anew: The Radical Vision of Martin Waldseemüller’s 1507 & 1516 World Maps* (Washington, DC: Library of Congress and Delray Beach, FL: Levenger Press, 2012), pp. 3-47. There are two excellent high-resolution scans of the map available on the internet site of the Library of Congress, at <https://lccn.loc.gov/2003626426>.
10. I discuss these texts in more detail in my *Sea Monsters on Medieval and Renaissance Maps* (London: British Library, 2013), pp. 71-76.
11. On the *Hortus sanitatis* see Arnold C. Klebs, “Herbals of 15th Century,” *Papers of the Bibliographical Society of America* 11 (1917), pp. 75-92, and 12 (1918), pp. 41-57, esp. pp. 48-51 and 54-57; and Joseph Frank Payne, “On the ‘Herbarius’ and ‘Hortus sanitatis,’” *Transactions of the Bibliographical Society* 6.1 (1901), pp. 63-126, esp. pp. 105-124.
12. The unique surviving exemplar of Waldseemüller’s *Carta marina* is in the Kislak Collection at the Library of Congress, and high-resolution images of it are available at <http://hdl.loc.gov/loc.gmd/g3200m.gct00046>. For discussion of the map and a sheet-by-sheet reproduction see Hessler and Van Duzer, *Seeing the World Anew*, pp. 49-95. For a transcription, translation and commentary on all of the descriptive texts on see my book *Martin Waldseemüller’s Carta marina of 1516: Study and Transcription of the Long Legends*, forthcoming from Springer, 2019.
13. See the anonymous collection of travel narratives *Paesi nouamente retrouati et Nouo Mondo da Alberico Vesputio Florentino intitulato* (Vicenza: Henrico Vicentino, 1507), chapter 62; and *Epistola*

*potentissimi ac inuictissimi Emanuelis Regis Portugaliae & Algarbiorum &c. De victoriis habitis in India & Malacha: ad S. in Christo Patrem & D[omi]n[u]m nostrum D[omi]n[u]m Leonem X. Pont. Maximum* (Rome: Imprensa per Iacobum Mazochium, 1513). For an excellent discussion of Manuel's title see Luís Filipe F. R. Thomaz, "L'idée imperiale manueline," in Jean Aubin, ed., *La découverte, le Portugal et l'Europe: actes du colloque, Paris, les 26, 27 et 28 mai 1988* (Paris: Fondation Calouste Gulbenkian, Centre Culturel Portugais, 1990), pp. 35-103, at 41-47.

14. I transcribe and translate this list of the sources and prices of spices in Calicut in my *Martin Waldseemüller's Carta marina of 1516: Study and Transcription of the Long Legends*, forthcoming from Springer, 2019.

15. On Agnese's atlases see Henry R. Wagner, "The Manuscript Atlases of Battista Agnese," *The Papers of the Bibliographical Society of America* 25 (1931), pp. 1-110. Agnese's manuscript illustrated here, which is at the Library of Congress, has been digitized in high resolution and is available at <http://hdl.loc.gov/loc.gmd/g3200m.gct00001>.

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## ABSTRACTS

The article opens with a brief look at evidence that in classical antiquity and the Middle Ages the ocean was seen as a place of great danger. It then proceeds to look at changes in ideas about the ocean in the early modern period through world maps made by Martin Waldseemüller in 1507 and 1516. His earlier map has a number of texts about sea monsters, suggesting that the cartographer still saw the ocean as dangerous, while his later map has an image of King Manuel of Portugal riding a sea monster to indicate Portugal's control of the sea route around Africa to Asia, indicating that the ocean was thought of rather as a space that humans could master, and across which trade could be conducted.

## INDEX

**Keywords:** oceans, sea monsters, Martin Waldseemüller, cartography

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