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The current state of digital humanities in Italian studies
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The Orlando Furioso Atlas

E tutto il mar, senza far voti quando lampeggi il ciel, sicuro in su le carte verrò, più che sui legni, volteggiando.	<i>Over the entire ocean, without making vows when the sky flashes with lighting, safer aboard maps than aboard ships, I will come coasting.</i>
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In these famous lines from his “Satira III” Ariosto expresses his preference for the sedentary existence of the scholar over the active life of a traveler. Although the comparison places travel and reading at opposite ends of a binary, the juxtaposition of maps (*carte*) and ships (*legni*) invites us to consider the commonalities shared by traveling and reading/writing. Furthermore, although Ariosto, in a plain reading of the text, seems to intend *carte* in the sense of “maps” (he mentions the great Greek geographer Ptolemy in the tercet immediately preceding this one), we could open up the word to the full breadth of its semantic range, which encompasses the English terms *paper*, *page*, *charter*, *document*, and *map*, among others. Taking *carte* to mean *paper* or *page*, we can interpret Ariosto as expressing his preference for writing about far-off lands over actually traveling there.

From this intersection of maps and narrative, of cartography and literature, I took the inspiration to conduct a topographic analysis of Ariosto’s masterpiece, the *Orlando furioso*. I am not the first to see in this sprawling work of adventurous wanderings the need to trace it out geographically. The major work in this field, *Studi critici sopra la geografia nell’Orlando furioso*, was published by Michele Vernero in 1913, and it remains the main reference for scholars. Since then, major critics have intermittently been drawn to the topic, including Massimo Bontempelli, Cesare Segre and Italo Calvino. The most recent

significant contribution to the field is the 1998 monograph, *Ptolémée et l'hippogrieffe: La géographie de l'Arioste soumise à l'épreuve des cartes*, by Alexandre Dorozlaï. However, my project differs from these studies in format, intended readership and theoretical approach.

Brief Background on the *Orlando furioso*

Ludovico Ariosto published the first edition of his *Orlando furioso* in Ferrara in 1516. He followed this with two corrected and expanded editions in 1521 and 1532. The plot of the *Furioso* begins where another Ferrarese poet, Matteo Maria Boiardo, had left his unfinished *Orlando innamorato* (1494). The novelty of the *Innamorato* lies in Boiardo's integration of the medieval Carolingian cycle – which narrates the epic *gestes* of Charlemagne and his knights – with the chivalric romance tradition of the British Arthurian cycle, with its emphasis on the fantastic adventures of errant knights and courtly love. Ariosto expanded upon Boiardo's scheme, refining and ironizing it, creating a poetic masterpiece at once humorous and wistful that became one of the most influential works in European literature, constituting a bridge between medieval romance and what would become the modern novel.

In its definitive form, the *Furioso* stretches across 46 cantos to reach over 38,000 lines of rhymed and metered text. Its mere length together with its narrative structure, which intertwines numerous story lines involving dozens of characters, makes of the *Furioso* an immense tapestry of interconnected tales. Ariosto's favored narrative technique of *entrelacement* allows him to weave in and out of various plot lines, creating the impression of a seamlessly wide theater of simultaneous actions that stretch across the globe (and beyond).

Intended readership and format

The length, breadth and complexity of the *Furioso* contribute to its enchanting nature, but also make the poem difficult to follow, especially for students confronting the work for the first time. These qualities also present obstacles for scholars, as the magnitude of the poem obscures patterns that would be more easily perceptible in a more compact work. The *Orlando Furioso Atlas* is designed for both first-time readers and long-time scholars, and as a web-based project, it is accessible to everyone.

The *Orlando Furioso Atlas* is built around two interactive *carte*: one literary and one cartographic (fig. 1). The text of the poem appears on the right-hand side of the screen. At the center and left of the screen is a high-resolution digital scan of the 1507 world map by

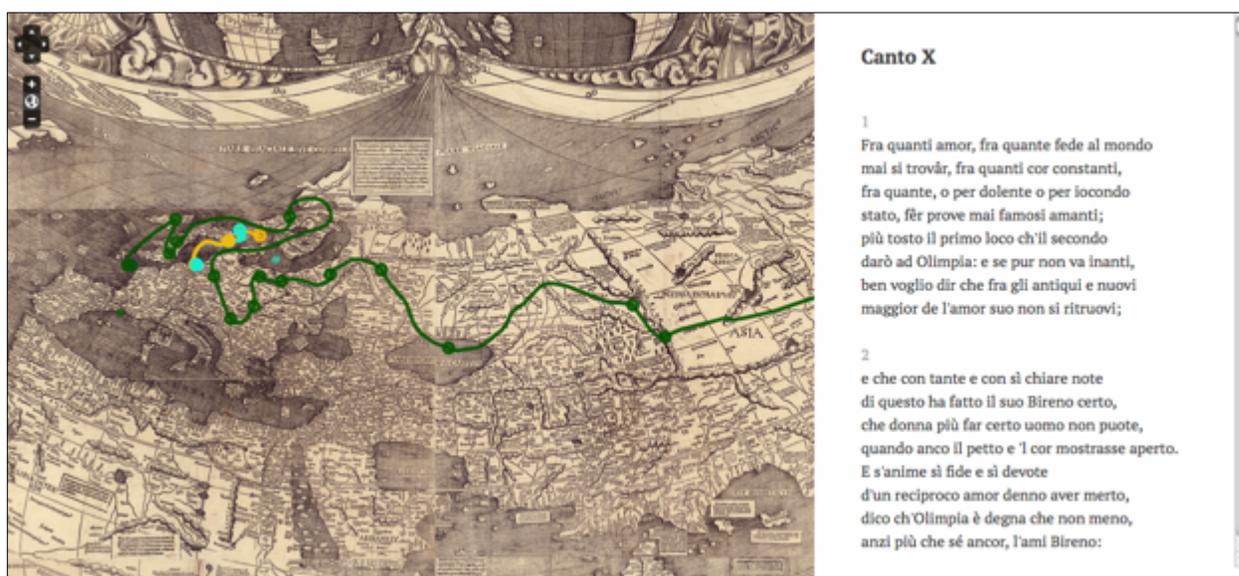


fig. 1

Martin Waldseemüller. These two texts are integrated via a series of hyperlinks in the marked-up text of the poem, which correspond to points and lines which have been traced onto the map. Each place-name or description of a place that refers to a character's journey has been assigned a mark-up code which corresponds to a unique position on the map. This is signaled on the map by a point and in the text by a highlight. The integration of the text

and the map allows users to *volteggiare* simultaneously both *carte* (map and poem), to adopt Ariosto's turn of phrase. As readers follow the text of the poem, they can click on a highlighted toponym (fig. 2); the map will then zoom in on the corresponding point, turning it red, along with the route that brought the character there (fig. 3). Conversely, a reader can begin by examining the map; by clicking on any line or point on the map (fig. 3), the

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 Quinci il Cataio, e quindi Mangiana
 sopra il gran Quinsai ; vide passando:
 volò sopra l'Imavo , e Sericana
 lasciò a man destra; e sempre declinando
 da l'iperborei Sciti a l'onda ircana ,
 giunse alle parti di Sarmazia : e quando
 fu dove Asia da Europa si divide,
 Russi e Pruteni e la Pomeria vide.

fig. 2



fig. 3

text column (fig. 2) will automatically scroll to the place in the poem that corresponds to that point on the map. Each character is assigned a color using the hexadecimal color value system to allow users to easily distinguish between the trajectories of different characters on the map.

We decided to map out the *Furioso* on a map contemporary to the poem's composition, because we thought it most interesting to attempt to re-conceive of the world as Ariosto and other 16th-century European humanists were imagining it, rather than how we now imagine it. The early 1500s was a moment which saw the explosion of common beliefs about the size and shape of the earth, which had been accepted as fact since the astronomers of Ancient Greece. With the "discovery" of the American continents and the

exploration of Africa and Asia, European intellectuals engaged in a major reevaluation of our entire cosmos. Ariosto inlaid his fictional world within this rapidly expanding understanding of the globe, creating a fictional world-geography that is both remarkably accurate and astoundingly fantastical. By plotting the poem onto a 16th-century map that portrays this world-view in flux, we hope to better understand the interaction of the real and the fantastic in the poetic text.

In addition to our choice of map we also had to determine how to plot imaginary or ambiguous places onto a map that purports to represent the real world. The mechanics of the map dictate that a *place* must be *placed* in a precise *place*. How then to account for ambiguity? How to allow real and imagined places to coexist on the same surface?

Waldseemüller's map helped us in this, too, because a modern reader may more readily keep in mind that this imperfect map is a mere representation of the world, and not the world itself, as modern satellite images can lead us to believe. This softens the ontological distinction between real and imagined. The map is rich in topographical data, though the farther one gets from Western Europe the more approximate the information becomes. Waldseemüller retains a basically Ptolemaic understanding of the world, though he manages to incorporate the reports of explorers to Africa, Asia and the Americas, creating a hybrid world based on traditional theories and modern experience (gleaned from narrative accounts). The complete title of the map – *Universalis cosmographia secundum Ptholomaei traditionem et Americi Vespucii aliorumque lustrationes* – makes this hybridity explicit, and this hybridity opens up room for imagined spaces and places, even if they appear in the guise of real-world fact. Nonetheless, imagined places from Ariosto's text, such as Alcina's Island, the city of Nubia, and others, still need to be plotted somewhere. Therefore, we have had to

make editorial decisions about where to locate fictive places, and have then explained our decisions through annotation.

We have so far limited our representation to characters and places; however, we plan to expand our iconography to afford us to communicate a richer data-set. We have experimented, for instance, with how to represent aborted journeys, i.e. journeys that characters intend to take, but then fail to. This kind of errancy is fundamental to the narrative, and seems to us a potentially fruitful avenue of research. However, we have not yet come to a satisfactory solution for how to represent aborted journeys (figs. 4 and 5).



fig. 4: When unselected, an abandoned destination appears as an unconnected dot on the map.

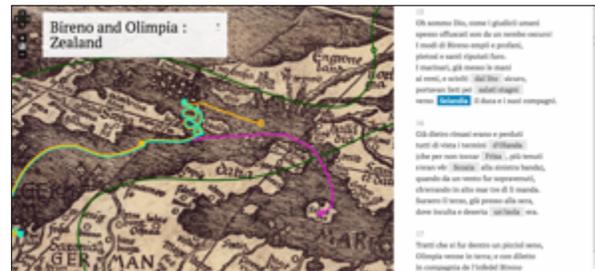


fig. 5: When selected, an abandoned destination turns purple, and a line appears tracing the intended journey.

Theoretical approach

These kinds of practical questions lead to consideration of our theoretical approach. We were never interested in pursuing a positivist project *à la* Verner; however, our research clearly entails mapping a fictional text onto a representation of reality, which necessitates confrontation with reality at some level. Rather than keep the realms of imagination and reality artificially separate, we have sought to flatten that distinction and concentrate on the “*representation of a reality,*” rather than the “*representation of reality.*” Representation, whether cartographic, literary or otherwise, always entails a translation of a referent into

reproduction through the use of signs. We therefore needed a theoretical framework that would allow us to read maps as literary fictions and epic romances as world maps.

Geocriticism, as laid out most succinctly by Bertrand Westphal in his 2007 volume, *La Géocritique: Réel, Fiction, Espace*, seemed best suited for our needs. Westphal emphasizes the “transgressive” nature of fictional representations of space, which allows fiction to cross borders and make connections which are impossible in the real world. This leads to an opening up of various levels of *possible worlds*, which are connected to, but not determined by, the real world as we experience it. This decidedly post-modern methodology promotes an ontologically weak approach that renders the world flexible, and the boundaries between fiction and the real much more fluid. This approach not only affords us freedom of movement and thought, but it also seems particularly suited to the *Furioso*, as its narratives sprawl effortlessly across impossible distances and its narrator plays ironically with the distance between the mythic past and the degraded present.

Place within Italian DH

As for the place of the *Orlando Furioso Atlas* within Italian Digital Humanities (and Digital Humanities as a whole), I am not qualified to give a holistic expert opinion, as I am new to the field. As Crystal Hall laid out in detail in her paper “Digital Humanities & Italian Studies: Intersections and Oppositions,” delivered at *The State of the Discipline* conference at Wellesley College in October 2016, Italians and Italianists have been involved in the Digital Humanities since before there was a name for it. Perhaps the most well-known digital humanist is Franco Moretti, whose early contributions to the field have helped to shape the course of the Digital Humanities until this day. Our project, however, is

decidedly not an exercise in Moretti-style “distant reading”; nor does it involve the heavy data approach of computational linguistics. Rather, it takes advantage of digital mapping technology as well as other web technologies in order to build what essentially amounts to a 21st-century, interactive, digital, selective, annotated translation and interpretation (as all translations inevitably are) of a 16th-century epic romance.

The language into which we have chosen to translate the *Orlando furioso* has two forms. At its elemental level, of course, it is a digital code of 0’s and 1’s, which I cannot read. Expressed through the mediation of technology into a cartographic model, it plots out the characters’ movements in space and narrative time. We hope to augment this foundational element with a deeper scholarly apparatus, as well as forums for allowing users to exchange ideas and contribute to the project and to an ongoing discussion of the *Furioso*.

There are other projects of this kind both within and outside of Italian Studies. The most similar that I am aware of is the recently launched *Mapping Dante Project*, out of the Price Lab for Digital Humanities at the University of Pennsylvania. To my knowledge there do not exist any other mapping projects on the *Orlando furioso*, but there are DH projects that investigate other aspects of the *Furioso*, including the fascinating *L’Orlando furioso e la sua tradizione in immagini*, which allows users to view a rich collection of 16th-century iconography that accompanied the early printed editions of the poem. Last year’s quincennial anniversary of the first edition of the *Furioso* inspired a series of conferences and studies across Europe and North America; however, I am not aware of any digital exhibitions or projects other than a series of intriguing video shorts designed to promote the exhibit at Ferrara’s Palazzo dei Diamanti, “Orlando Furioso 500 anni: Cosa vedeva Ariosto quando chiudeva gli occhi.”

Problems

This project is not without its problematic aspects. The first was my own ignorance of the digital technology needed to carry out this research. I have, therefore, been obliged to learn basic technological skills (html, css, basic web design), which requires a great deal of time. I have also had to rely on the expertise of others, which is not easy, since, although traditional scholars are accustomed to relying on the opinions and research of other scholars, I am used to believing (no doubt sometimes erroneously) that I can correctly assess their opinions based on my own knowledge of the subject. This is not the case with regard to digital technology.

The other major problem has been working within the technical limitations that are determined by the current availability of software. Working, as I do, at a smaller institution, I have had to rely almost entirely on free open-access software, and although we were able to find applications that more or less fit our needs, we have had to compromise our ambitions relative to what the technology will allow us to do. I found this, too, difficult to deal with, since I had simply always taken the limitations inherent in traditional print scholarship for granted, while assuming that digital technology makes everything possible.

The third limitation that I have encountered is the nagging worry that I am spending entirely too much time and effort on a project which will not be weighed as heavily in consideration for tenure as would a traditional research project. This discrepancy is destined to change eventually, but in the meantime it presents a serious obstacle to scholars interested in pursuing DH projects, but who often quite logically decide against it for fear that it will be time and effort wasted in the eyes of an evaluation committee.