



John Bryant\*

## ARCHIVE, EDITION, PROJECT: MAPPING MELVILLE AND NETWORKS OF CORRESPONDENCE

### 1. Introduction

The idea of “mapping Melville”—however narrow or broad that prospect may be conceived—seems simple enough, if only because Herman Melville’s life and works seem so “mappable.” But in unpacking this tautology, we run into complications. First, it helps to know which Melville we are talking about: his life in travel, or the travel implied in his fictions? his body of texts, in manuscript as well as in print? the writing in letters by him but also to him? or in correspondence by relatives surrounding him? the Melville of his journals? or concealed in his sources? To touch upon one of these Melvilles is to inquire about all, and each is to some degree mappable on its own terms; thus, the scope of mapping Melville looms increasingly larger in contemplation. Equally problematic are the potentials and limits of digital visualization. Given current technologies, linking a text—say *Moby-Dick*—to places on a map, both real and fictional, over time, with scholarly commentary is complicated but doable. More challenging is mapping networks of correspondence, locally and globally, over time, and among numerous writers. This kind of social mapping has more to do with interrelated groups of family and friends than geographical locations, and yet the two are tied together and integrating place and group requires different strategies of visualization and of user interactivity, in addition to regular transcription, editing, and annotation.

Both social and geographic mapping can advance scholarship and interpretation, but if they are to work at all and together, they require a digital infrastructure that enables interoperability. The kind of mapping we hope to perform in the Melville Electronic Library (MEL) is sustained by a three-part platform: Archive, Edition, and Project.

An Archive contains the raw data for any digital map: images of relevant objects, artworks, persons, places, source materials, manuscripts, books, journals, letters, and most certainly historical maps. If your map is to “speak” (so to speak) with other maps in MEL or in other archives, these archival materials should adhere to such standards of interoperability as the International Image Interoperability Framework (IIIF), which enables reliable sharing of scalable images and the metadata of source works, as well as the Linked Open Data (LOD) movement, which uses protocols such as Resource Description Framework (RDF) to enable the interactions of otherwise independent “big data” archives.

If passages of an archived written work are to be associated with a map, those texts, whether in manuscript or print form, must be reliably transcribed, edited, and stored in an Edition so that users can inspect excerpts that appear in a map in the context of the fully-edited version of the mapped work. And if your map aspires to mingle texts from your Edition with those of other digital editions, both should follow the coding practices of the Text Encoding Initiative (TEI).

If your Archive and Edition are to have critical applicability, your platform would profit from a Projects section. Here, users—including researchers, critics, instructors, students, citizen-readers of the world—will find tools and workspaces that enable them to draw upon archival and edited materials to create articles, presentations, classroom assignments, edited works, and maps of their own. Their scholarly Projects are meant for display and therefore will expand the databases of the Archive and Editions sections. Much is needed to sustain a digital map, so before embarking on an ambitious project to map Melville, we need to ask if mapping Melville is worth doing. Will it open new ways of knowing and reading Melville?

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## 2. Opening Melville

Melville is mappable if only because travel informs nearly all of his writings. His early travels, on merchant, whaling, and naval vessels in 1841 to 1844, provided material for his first six novels, including *Moby-Dick*. During subsequent years as a professional writer, beginning in 1846 and ending with his death in 1891, he traveled to England, the Mediterranean, the Middle East, and San Francisco, keeping journals that record, in an elliptical and fragmentary style, his itineraries and abbreviated commentary on places and life. These entries are verbal touchstones designed to reanimate past thoughts associated with certain places at certain times. Only seldom do they sprout into broader commentary. Like pomegranates, Melville's journals seem all seeds, seemingly disconnected. But in his later writings, during his last three decades, he drew upon these notes, and in the process, he replayed earlier versions of himself to reinvent newer selves. A digital map enables us to use geographical places, over time, to visualize Melville's self-formations.<sup>1</sup>

More compelling is that mapping Melville's writing against his travels and journals also opens up the idiosyncratic and revealing mental leaps in the writer's creative process. In Melville's imaginative writings, place evokes place. The same can be found in his journals, where he unexpectedly links Egyptian tombs to Kentucky's Mammoth Cave and the Tiber to the Ohio River. Place also triggers identity, and, as we shall see, this kind of fictional mental time travel back to earlier touristic itineraries help us track unanticipated links in sexual, racial, political, and metaphysical strands of thought in his evolving consciousness. Melville's "geographical imagination"—as we call it in MEL—is itself a touchstone for critical interpretation, and how one might map Melville's life, creativity, and writing together, in a digital platform, is worth the labor if only to open us to more versions of Melville.

For instance, in "Aurora-Borealis," one of several memorial poems that conclude *Battle-Pieces*—Melville's 1866 collection of Civil War poetry—Melville describes a display of the so-called "Northern Lights" as an ambiguous omen of peace. Typically, aurora borealis appears only in the northern reaches of the northern states, but in 1862 unusual displays were reported as far south as Fredericksburg, Virginia. Two years later, Melville had been given permission to scout behind enemy lines in Virginia, and he might have witnessed, then and there, the phenomenon that would appear in his poem about war in the south. But Melville probably did not witness the aurora borealis of his poem in the South, or even during the Civil War. Having read about the unusual southern display in researching for his *Battle-Pieces* poems, he could have learned about the southern displays of Northern Lights in his source reading. But the reports would have also triggered memories of his own experience with these celestial lights from his youth in Albany, New York. On 29 May 1840 and not yet twenty-one, on the eve of his job-seeking trip to Illinois, Herman witnessed the midnight skies blazing with waves of Northern Lights, as reported by local meteorologists. The heavens seemed to be a luminous omen for young Herman, who was leaving home, once again, this time perhaps for good. Twenty-six years later, the older poet would transform his personal witnessing of the Northern Lights into an omen for America, calling the waves of light "Retreatings and advancings" that elicit "Splendor and Terror," at dawn (2009, 111). Melville's post-war speaker in "Aurora-Borealis" is caught up in the spatial Now of an imagined Civil War event that evokes Milton's heavenly clashings even though the poem's central image of the Northern Lights is rooted in the Then of upstate New York.

Uniting these linked scenarios is Melville's projection of himself as "a lonely watcher," a revealing self-projection that quietly evokes an earlier self. And mapping this poem affords us a new critical perspective that asks how a nation embarking upon a disastrous peace on the heels of a disastrous war is like an alienated boy heading into an uncertain West. Finding this hidden link has required biographical research,

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<sup>1</sup> Travel was often a template for scene, plot, symbol, and narrative in Melville's works. In such autobiographical narratives as *Typee* (1846), *Omoo* (1847), *Redburn* (1849), and *White-Jacket* (1850), Melville transformed his biographical travel experiences into fiction. His Pacific whaling years (1841-1844) dominate the symbolism of *Moby-Dick* (1851); his urbanizing in the streets of New York City (1838, 1840) sets the darkening tone of *Pierre* (1852), and his Grand Tour itineraries of 1856-57 shape the Jerusalem narrative of his epic poem *Clarel* (1876) and serve as spatial and temporal settings for later poems, in particular those in *Timoleon, Etc.* (1891).



but making it come critically alive for readers, in the immediacy of their interaction with Melville's text, is facilitated by digital mapping.

But pronouncing the mantra of Digital Mapping to imagine a critically useful visualization of this single moment in a short poem you have probably never heard of by a great writer you might not have known was a poet sounds like a lot of effort to achieve a minor goal. In digital mapping, we want to be able to layer such local moments on top of a global perspective, and to do so requires tools flexible enough to enable multiple visions of the data and of Melville's fluid texts. A moment in *Moby-Dick* indicates the scope that is needed.

In "The Whiteness of the Whale"—the pivotal Chapter 42 in Melville's masterpiece—Ishmael seeks to learn why the albino Moby Dick evokes an instinctual fear in the crew, a fear that enables Ahab to persuade the crew to enlist in his quest to kill the whale. As "one of that crew," Ishmael locates this fear in the animal's whiteness and systematically travels through a world of cultural associations to extract the primal source of fear in that color, concluding that it is "a dumb blankness, full of meaning, in a wide landscape of snows—a colorless, all-color of atheism from which we shrink" (2007, 184-185). Melville's chapter reads almost like a psychological and cultural gazetteer of places—including those that Melville had already visited, such as the American Prairie, the Rockies, the Alleghenies; the Ohio River, Cape Horn, the White Mountains of New Hampshire, and "the snow-howdahed Andes" as well as places unknown to him, such as China, Lapland, and the Hartz forests of Germany. Melville's strategy is to free associate whiteness with place after place, until a kind of excess of geographical association pushes Ishmael to the one turning-point place that lands him in the deeper nihilism of his symbolic pursuit. Unexpectedly, that turning point place is Lima, Peru.

In 1843-1844, while stationed aboard the US frigate *United States* in Callao, the port of Lima, Melville and his shipmates on leave traveled the eight-mile road to Peru's capital city, which had been devastated, over an eighty-year period, first by repeated earthquakes and then by ongoing bloody political upheavals. Years earlier, the liberal-minded missionary Charles Stewart, serving as chaplain on the US frigate *Essex*, witnessed an even more disturbing Lima whose urban landscape of ruined buildings was the backdrop for uncleared blocks littered with the skeletal remains and mummifying corpses of victims of earthquake and revolutionary violence. In his 1831 travel memoir *Visit to the South Seas*—generally known today as an important source book for Melville's *Typee*—Stewart wrote that Lima's "confusion and deformity" were "too horrible to witness." Lima's streets were an extension of its cemetery, which was in itself an appalling boneyard, "white with fragments of the human form." So disturbed by Lima was Stewart that upon returning to his ship, he could not resolve how he would sermonize the crew that evening. Given the wasteland he had witnessed, how could he share with the sailors in his congregation the promise of Revelation that, when the Apocalypse comes, "there shall be no more death, neither sorrow, nor crying, neither shall there be any more pain," and that "God shall wipe away all tears" (Revelation 21.4). Lima's white, ashen corpses amidst its white ruins was a form of death so gruesome as to shake the chaplain's faith. Indeed, the shaken chaplain could not preach without tears, despite scripture telling him to be tearless.

In re-reading Stewart's description of Lima, if only to jog his own memory of the city, Melville adopted a similar, shaken tone in "The Whiteness of the Whale," figuring Lima itself as a body distorted by apoplexy, like Stewart's contorted mummies in Lima's ashen streets. But inverting Stewart's tearfulness, Melville repeatedly refers to "tearless Lima" and the "tearlessness" of Lima's "arid skies that never rain," as if to make the white city wasteland a desert scene of a godless Armageddon, without resurrection. Ishmael concludes: "it is not these things alone which make tearless Lima, the strangest, saddest city thou can'st see. For Lima has taken the white veil; and there is a higher horror in this whiteness of her woe" (2007, 183). From this point on, Ishmael's "dim, random way" skirting the world has found its direction toward the "higher horror" of his final lines about the instinctive "colorless, all-color atheism"—not a symbol of death and destruction but of nothingness—that hides out within us all.

How might we map a chapter like "The Whiteness of the Whale"? First, we can chart Melville's fourteen months in the US Navy when he visited Mexico and Rio as well as Lima. We can chart Peruvian political history during this period and the revolutionary events as witnessed in Lima. We can add images of ships, harbors, roads, streets, people, landscapes, and cityscapes to these places. We would want as well to add relevant texts associated with time and place: Stewart's descriptions of Lima's "confusion and deformity," the journal entries of Melville's shipmates describing shore leave in Lima, and Ishmael's tearless paragraph on Lima in "The Whiteness of the Whale." We would also want to layer on top of these textual commentaries a



mapping of the chapter itself: not only its wide-ranging global references but also the seeming randomness of Melville's excursion from one to another association in Ishmael's geographical imagination to its dramatic culmination in the Lima paragraph.

The digital map we desire would afford us the visualized integration of texts, sources, and cultural contexts that we imagine, which if made easily navigable would also open to us the pathways of the “dim, random way” of Melville's creative process. In MEL, we also imagine users being able to add scholarship to the map's environment through critical projects drawing upon and interpreting the data. Therefore, in addition to an Archive that contains images for mapping and an Edition that offers reliable transcriptions of edited texts, we envision a Projects workspace enabling you to interact with the map and generate new scholarship based on it. Otherwise, without this crucial functionality, the multilayered map we imagine will be only a static display of our own scholarship and not the kind of growing field of discourse that will sustain itself because of its capacity to include other scholarly visions. MEL's mapping tool Itinerary aims for this kind of critical interactivity.

### 3. Itineraries

Itinerary is a mapping / timeline / annotation tool developed at Hofstra University's Digital Research Center (DRC) to address research problems shared by faculty in their digital projects.<sup>2</sup> Initially conceived in 2015 to track Melville's travels, its first deployment in the following year was in Adam Sill's “A Frightful Number”, which visualizes the spread of the 1665 London plague, on historical maps from 1658 and 1720, parish by parish, over a two-year period of the plague. The project draws its data from Daniel Defoe's semi-fictional 1720 *Journal of the Plague Year* and additional municipal sources.<sup>3</sup>

With Itinerary, the map maker can draw points, lines, and polygons directly on the image of a historical map, which has been “geo-rectified” over a satellite map to ensure consistency of place. These places on the layered maps can also be annotated, over a designated time period, with statistics, texts, images, and commentary stored in the project's database. As the viewer moves through the Plague Year project's timeline indicator, mortality data associated with time and place pop-up on the map, with the relevant parishes highlighted in red. Sill's prototype Itinerary project prepared the way for other projects requiring additional functionality.

To develop Wyn Kelley's 2017 project titled “Melville in London”—based on Melville's journal recording his 1849 visit to England—Hofstra's DRC team “generalized” the open source tool, making it usable for any scholar creating any critical mapping project. To do this, we used MEL's content management tool called MELCat, as a platform for map and data entry. Any map maker can now upload maps, automatically enter geo-coordinates for waypoints, routes, and polygonal regions, and link sites and routes to images of people, place, artworks, source texts, and MEL's editions of Melville works. They can also supply editorial commentary and “route narratives” explaining alternate routes.

Of obvious importance is the ability to link each site that Melville visited to the words in his 1849 journal describing those sites. Long ago, editors transcribed all of Melville's travel journals for scholarly print editions. However, for the “Melville in London” project, MEL editors used MEL's fluid-text transcription tool TextLab—which facilitates the editing of revision and manuscripts—to generate a new, digital edition of the journals.<sup>4</sup> In its current phase of development, Itinerary enables scholars to link images of journal leaves and their TextLab transcriptions directly to points and lines on Itinerary's map of Melville's London.<sup>5</sup> Now, users can read Melville's journal entries alongside images of his writing and of the site itself. As with the Sills's

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<sup>2</sup> For other projects and links on DRC's website, go to <https://hofstradrc.org/>

<sup>3</sup> Itinerary is an open-source mapping / timeline / annotation tool, first developed by John Bryant and programmer Jamie Folsom, and upgraded by Nick Laiacona of Performant Software. For Adam Sill's “A Frightful Number: Mapping Daniel Defoe's *A Journal of the Plague Year*,” visit <http://hofstra.github.io/itinerary/plague-year/> <http://hofstra.github.io/itinerary/plague-year/>

<sup>4</sup> TextLab is an open-source tool for editing texts in revision. It was developed initially at Hofstra University by John Bryant and Hofstra programmer Brian Ferris, then augmented and upgraded by Nick Laiacona of Performant Software Solutions. Visit the TextLab website at <http://www.textlab.org/> Last Visited December 1, 2018

<sup>5</sup> For Wyn Kelly's “Melville in London,” visit <http://hofstra.github.io/itinerary/melville-in-london/> Last Visited December 1, 2018



prototype, the map's timeline feature moves us from one day's touring of London to the next, and even layer any number of days' itineraries on top of each other. By clicking on the thumbnail of any given journal leaf image, you are taken into TextLab to peruse the selected entry in the context of the full edition of the journal. Just as TextLab provides a forum for scholars to discuss Melville's revisions and creative process, Itinerary—as a workspace that combines data, images, edited texts, sources, and critical commentary—offers an environment for critical discourse on Melville's geographical imagination.

In my own 2016 Itinerary prototype project titled “Melville in Rome,” I wanted to track Melville's daily wanderings through the city as indicated in Melville's 1857 journal.<sup>6</sup> Melville's four-week stay in Rome in February and March of 1857 was part of an extended Grand Tour of the Mediterranean (including Jerusalem) and Europe. Melville's journal entries for this period—written in his typically fragmented style—offer bursts of information about sites visited, usually in the order in which he visited them, with rare discursive notes—perhaps only a few words—on his impressions of ruins, churches, palazzi, paintings, sculptures, and people. As already noted, some of these fragments reflect back on past travels and writings; others seem to suggest ideas for future work.

To map Melville's 1857 pathways, I used Giambattista Nolli's 1748 map of Rome. Given the city's minimal development since that time and throughout most of the nineteenth century, Nolli's remarkably detailed representation became the template for most other modern Roman maps, even into the twentieth century. Though more than a hundred years old when Melville toured Italy, the Nolli map accurately depicts the urban grid of Rome that Melville experienced. Layered onto MEL's digital rendering of this map, I added waypoints for sites mentioned in Melville's daily journal entries and then drew lines between them, zigzagging along Rome's streets, in order to represent Melville's likely routes from one waypoint to the next. Since Melville does not mention the exact streets he traveled, we can only speculate on how he got from site A to B to C. Fortunately, Nolli's grid allows us to narrow our field of speculation to only those *viale*, *vicoli*, and *piazze* mapped out for us between Melville's designated waypoints. With these possibilities visualized on a map, we are better prepared to “see” Melville's daily options as a tourist and to consider sites he could have seen but did not mention. A case in point occurred on 27 February 1857, his fourth day in Rome, when Melville got lost.

Day 4 in Rome was Melville's Shelley Day, a personal tour devoted to British poet Percy Bysshe Shelley. Though Melville does not explicitly designate Shelley as the organizing principle of this day trip, we can infer it from the sites famously associated with Shelley that he chose for his itinerary. He hired a carriage to take him to the Baths of Caracalla, where Shelley said he composed “Prometheus Unbound.” His next stop was the Protestant Cemetery in nearby Piazza San Paolo, where Keats and Shelley are buried. Next was the Palazzo Cenci, in the ghetto, the site of Beatrice Cenci's murder of her incestuous father and the setting of Shelley's tragedy, *The Cenci*. A final stop before returning to his hotel was Castel Sant'Angelo, where Beatrice was executed. But early on that day Melville was thwarted in his itinerary. Standing on one side of the so-called Little Aventine hill overlooking the imposing ruins of Caracalla, with the Caelian hill, also called Celio, across the valley before him, he would have turned in the opposite direction, and could see the odd Pyramide Cestia—a familiar Roman tourist spot—looming in the distance at the bottom of the other side of Little Aventine. The pyramid, which dominates both Piazza San Paolo and the Protestant Cemetery, gave this “lonely watcher” a clear visual fix on his next destination. Then, Melville made a fatal Roman mistake: he dismissed his driver.

Setting out alone on foot in what was then Roman countryside, Melville headed for Cestius's pyramidal tomb and the Protestant Cemetery behind it. The way was easy enough because then as now a well-maintained roadway, following the Aurelian Wall, swerves gently down the slope of Little Aventine, to Piazza San Paolo, Pyramide, and Cemetery. You can make this leg of Melville's trip today blindfolded, with your left hand feeling along the wall, and with faith in the benevolence of Roman motorists. But in his journal entry for 27 February 1857, Melville also notes that he reached Shelley's grave only “after much trouble & sore travel.” We do not know precisely why or how Melville got lost trying to get from the Baths of Caracalla to the Protestant Cemetery, but Nolli's map gives us a fair indication.

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<sup>6</sup> For John Bryant's “Melville in Rome,” visit <http://hofstra.github.io/itinerary/melville-in-rome/> Last Visited December 1, 2018



The map clearly indicates the ancient, Byzantine Chiesa di San Saba and its bell-tower, situated on the brow of the Little Aventine, surrounded by farmland and vineyards, divided by rural pathways, and sloping down the hill toward Piazza San Paolo. Today, mid-rise apartment buildings, a market green, and regularized streets (named for Italian artists) have replaced the church's irregularly plotted fields, and they obscure the view that Melville would have had of the church from the Aurelian Wall.

A lifelong skeptic but inveterate frequenter of churches, Melville apparently saw the church's bell tower over the fields, and like a mariner sighting an island, he headed for it, leaving the easy Aurelian roadway and following the maze of paths dividing the rural properties surrounding the church. The wall, paths, vineyards, and church are all clearly marked on Nolli's map, and we can draw alternate routes, and compose alternate route narratives of how Melville was drawn off course. Getting from the wall to the church was not difficult; the multiple rural paths are on relatively even ground. The "sore travel" awaiting Melville would have occurred when he left San Saba and resumed his itinerary down the Little Aventine toward the piazza. However, this downhill terrain is precipitous. Today, the now-regularized residential streets surrounding the church dead end at this precipice; walkways between apartment buildings end in steep stairways that take pedestrians back to the Aurelian wall and further down to the piazza. But what Melville confronted in 1857 was an undeveloped, overgrown cliff. In short, Melville's random decision to take a detour in order to visit an ancient church most likely resulted in the "much trouble & sore travel" he experienced in getting from the church to the Protestant Cemetery.

One other telling detail: on an excursion made earlier that year, not in Rome, but outside of Jerusalem, Melville had spent a night in the Greek Orthodox monastery Mar Saba, named for the same Saint Saba whose ancient basilica still sits atop the Little Aventine hill. For Melville, the coincidence of the two visits brought Palestine to the hills of Rome, in Melville's geographical imagination, and the impact may have hid away for twenty years, emerging in Melville's choosing to set the turning point of his epic poem *Clarel* in a book of cantos titled "Mar Saba." In his 1857 journal, Melville does not disrupt his Shelley Day entries with any mention of Mar Saba's sister church of San Saba in Rome; its significance goes unrecorded, and perhaps the coincidence held no immediate meaning for Melville that night as he wrote up the travel events of his day. And yet other details encourage us to look more into the link, in Melville's mind, between Jerusalem and Rome. For instance, the Caelian hill on the other side of Caracalla and next to San Saba's Little Aventine is also called Celio, which is also the name of an early central figure in *Clarel*.

Such details are enough to want us to ask more about the relationships of time and place in Melville's travel and in *Clarel*. But, more important for our focus here on digital scholarship, the use of Itinerary to track Melville's fourth day in Rome affords us unprecedented critical openings into Melville's creative process. Like literary research in general, mapping Melville enables us to make visible what is otherwise invisible in a life or a text. By being able to visualize what Melville meant by "much trouble & sore travel," we find links in a geographical imagination that are heretofore unexplored, even unknown. In this regard, Itinerary serves not just as a visualization of what we already knew but also as a tool that facilitates discovery, and, if developed into its own interactive potential, it can also be the locus for critical interpretation and cultural discourse.

For instance, like any nineteenth-century traveler in Europe, Melville travelled to add himself to the tradition of the Grand Tour, and he went abroad with his guidebook in hand, specifically John Murray's *Handbook for Travellers in Central Italy*. John Murray III, son of Byron's editor John Murray II, had published *Typee* and *Omoo*, in 1846 and 1847 and was issuing a series of travel guides that categorized sights and encouraged a kind of pick-and-choose wandering among them, but it also offered programmed tours. As we have seen, Melville was inclined to improvise his itineraries; to make them up as he went along, to let his "dim, random way" lead him to personal discoveries of ancient sights known to others but not to him, until he experienced them on his own. With further development, Itinerary could be used to compare Melville's random way to Murray's ways, placing his off-track touring in the context of the standard Grand Tour.

What Itinerary can do in mapping Melville and Murray can be done for any single writer or traveler. The very fact that Melville spent a day devoted to Shelley, himself an Italian tourist, immediately encourages us to map that poet's itineraries, and his wife Mary's, and those of his contemporaries Keats and Byron, or Goethe before them, or Ralph Waldo Emerson, who doubted the efficacy of travel, or Margaret Fuller, who reported on the Risorgimento, or Nathaniel Hawthorne, or Henry James. By layering these map sets, chronologically,



one atop the other, Itinerary, with further development, could enable us to map the phenomenon of Grand Touring itself.

#### 4. Snowballing Database

Mapping is a biographical, historical, critical act of linking moments in life and writing to places over time as a way of disclosing networks of association that can trigger new scholarship and unexpected interpretation. Evidently, no one kind of map is likely to fit all scholarly needs, and the prospect of Mapping Melville, as we have witnessed it so far, has snowballed. It snowballs even more when we consider Melville's and his family's letters. The challenge of mapping correspondence takes us to the limits of database and effective map visualization.

We began with the idea of a map that could layer a local meteorological display of aurora borealis in Civil War Virginia atop an adolescent past in upstate New York. We then broadened our scope by mapping a chapter from *Moby-Dick* involving Ishmael's global research into the universal fear of whiteness, which takes us worldwide but lands us, unexpectedly, in Lima where Melville had served in the US Navy. Then, taking a different urban experience we tracked Melville's search for Shelley on his fourth day in Rome, determined how the writer got lost, then speculated on how a Roman church he never mentions in his journal but probably witnessed reinforces associations he made on his earlier trip to Jerusalem. We also recognized that what we do in digitally mapping Melville in Rome, with Itinerary, could be a model for mapping not just Melville but the Grand Tour.

What seems painfully clear is that you cannot map one writer without mapping that writer's world, or the many worlds of other writers; you cannot map one moment without mapping an era. You cannot map a place without mapping a field or one text without mapping a library. The doom of digital humanities projects, like a deceptively simple map, is that they are built upon databases that are destined to grow as one node of interest links to other nodes, and so on, *ad infinitum*. Mapping Melville in Rome pushes the limits of "Melville" as a single, isolated author. It suggests we must compare his travel, at the very least, with John Murray's *Handbook for Travellers*, or create links with Shelley. It urges us to ask who else was in Rome in 1857, or what was happening in Italy during Melville's personal witnessing of the Risorgimento.

Must we become encyclopedists in order to draw a map? Apparently, inevitably so.

The consequence of mapping Melville has been that we are inexorably drawn to examine overlapping spheres of affiliation that take us outside of the purview of a strictly Melville archive. But no single-author venture should have to expand its archive to encompass affiliated fields, nor is it equipped with a scholarly work-force or blessed with funding that can design, fill, and maintain such a Big Data archive. Indeed, a fundamental of digital design is to establish a clearly defined scope for a project to keep development focused on the achievable. It is enough to map Melville; let others map Shelley. That said, the limited scope of an archive should not be a barrier to inter-archival research, and another fundamental goal in the digital humanities is the interoperability of separate archives. To this end, projects such as *NINES: Nineteenth-century Scholarship Online*, which indexes 144 federated British and American sites, begun at the turn of this century, provides users access to almost 900,000 digital objects, including text images and transcriptions of both primary and secondary sources.<sup>7</sup> Though *NINES* has been a model for other sites that index digital projects for other periods, additional interactive and interpretive tools are still required if we want to compare different authors or to map data from multiple author archives.

American transcendentalist Margaret Fuller is a case in point. In April 1846, just as she became a foreign correspondent in Italy for the New York *Tribune*, Fuller wrote a favorable review of Melville's first book, *Typee*. Thereafter, she sent almost forty reports home delivering to American readers her observations of the mounting conflicts during this period of the Italian Risorgimento. Tragically, she and her young family were drowned while returning to the States in an 1850 shipwreck off Long Island. Because Melville's tour of Italy came seven years after Fuller's untimely death, these two writers' separate experiences of the Risorgimento overlap in terms of mappable places but not with respect to time and event. Even so, as Americans in Italy—Melville (like Fuller) toured Naples, Florence, Milan, and Venice as well as Rome—their journals, letters, and publications are linkable to shared and overlapping spheres of influence, so that a mapping of the two writers—including Fuller's news reports and Melville's journal entries—could readily generate new critical

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<sup>7</sup> For *NINES*, see <http://www.nines.org/> Last Visited December 1, 2018



insights about each writer, their witnessing of revolution, and the impact of Italy on their writing. Happily, Northeastern University's NULab is assisting Italian scholar of American studies Sonia Di Loreto in building the *Margaret Fuller Transnational Archive*, which will map networks of publication involving Margaret Fuller and circles of European and American political and cultural figures, including Horace Greeley, Giuseppe Mazzini, and Cristina Trivulzio di Belgiojoso.<sup>8</sup> But, given that Fuller's Italian writings include articles in the form of letters home as well as conventional letters to family and Italian associates, we are naturally tasked by the challenge of mapping correspondence. Indeed, the letter as a genre and letter-writing as a practice in the nineteenth century are fields of metadata and content that push the limits of digital mapping.

## 5. Correspondence and the Mapping of Networks

In literary scholarship, the advent of digitization has sparked controversy over distant versus close reading. In fact, there has been more critical advancement than controversy. Much of postwar literary criticism—from the new criticism to poststructuralism and even the new historicism—has focused on the close reading of single texts by conventionally defined authors and other kinds of writers. Digital technologies focusing on textual analysis, word frequencies, generic classifications, and the like have facilitated the study of Big Data corpora that include the scanned texts of hundreds of works, by numerous writers of all stripes, published throughout a century or more.<sup>9</sup> Asking the right kinds of “distant reading” questions to such databases can yield useful results for cultural analysis and the sociology of writing and quantitative analysis of literary texts, and in this distant dimension, digital technologies enhance our critical thinking about texts.<sup>10</sup> Similarly, digital applications have given us contact with more kinds of texts and helped us read them more closely. For instance, what might be called postmodern scholarly editing has challenged the idea of the stability of any given literary work, prompting new theories of social text, genetic text, and fluid text.<sup>11</sup> In particular, works by Jerome McGann, Peter Shillingsburg, and myself have called for more consistent ways of reading version against version.<sup>12</sup> Digital technology, such as the fluid-text editing tool TextLab, is crucial for the close-reading of texts in revision. Moreover, by mapping Melville, we can combine distant and close reading by placing the texts of multiple versions of works—ranging from poems like “Aurora-Borealis” to chapters in *Moby-Dick* or entries in a journal—in some broader context—say, the Civil War, a life in the Navy, a grand tour of Rome—as represented on a digital map. A writer's correspondence seems a natural project for mapping, as it also combines distant and close reading, but the prospect of assembling, editing, and displaying letters is a challenge to our standard notion of digital mapping.

By its very nature, a letter involves at least two people, the sender and receiver—typically, the author and his or her co-respondent—each occupying separate places. Therefore, mapping a letter requires an automatic doubling of our metadata, which in itself is not a problem. Nor is it a challenge to database expansion when we consider the frequent phenomenon of family letters in which multiple relatives in one house may cram

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<sup>8</sup> For the Fuller Transnational Archive, see <http://margaretfullerarchive.neu.edu/home> Last Visited December 1, 2018

<sup>9</sup> Essays in *A Companion to Digital Humanities*, ed. Susan Schreibman, Ray Siemens, and John Unsworth (Oxford: Blackwell, 2004)—at <http://www.digitalhumanities.org/companion/view?docId=blackwell/9781405103213/9781405103213.xml&ch.unk.id=ss1-2-1>— (Last Visited December 1, 2018) provide a useful overview of the beginnings of digital humanities scholarship as it was rooted early on in statistical and stylistic analysis. In particular, see Susan Hockey's “The History of Humanities Computing.”

<sup>10</sup> This approach is most clearly articulated in Franco Moretti, *Distant Reading* (London: Verso, 2013).

<sup>11</sup> A useful (though not exhaustive) overview of developments in textual editing since the 1970s can be found in MLA's annotated bibliography: *Key Works in the Theory of Textual Editing* (<https://www.mla.org/Resources/Research/Surveys-Reports-and-Other-Documents/Publishing-and-Scholarship/Reports-from-the-MLA-Committee-on-Scholarly-Editions/Annotated-Bibliography-Key-Works-in-the-Theory-of-Textual-Editing> Last Visited December 1, 2018). For an overview of traditional and post-modern textual editing, see David C. Greetham, *Theories of the Text* (Oxford UP, 1999).

<sup>12</sup> See Jerome J. McGann, *The Textual Condition* (Princeton: Princeton University Press, 1991); Peter Shillingsburg, *Scholarly Editing in the Computer Age: Theory and Practice*. 3rd edition (Ann Arbor: University of Michigan Press, 1996); and John Bryant, *The Fluid Text: A Theory of Revision for Book and Screen* (Ann Arbor: University of Michigan Press, 2002).



individual messages on a single leaf to be circulated to a bevy of cousins, living either at one household address or in multiple homes. The real problem arises when we recognize that each recipient of a letter is in turn the sender of letters to multiple other recipients, in other locations.

Thus, in order to situate Melville's professional letter writing—evidence of his creativity and career—in the context of his family life, we would, naturally enough, want to store all surviving Melville letters and Melville family letters in the MEL Archive with uniform metadata, then use TextLab to edit those letters consistently for the MEL Editions, and provide tools like Itinerary in MEL's Project section so that users can map the correspondence for critical interpretation. A map of these letters would visualize various overlapping spheres of affiliation. But network begets network. If we shift the focus from Melville to one of his recipients—say Nathaniel Hawthorne—we find an array of other correspondents that Melville knew or knew of but never wrote to. And yet, by adding Hawthorne's sphere of affiliation to Melville's we gain a richer, distant purview of the letter-writing world of both artists. And if Hawthorne, why not the publisher John Murray, or Melville's friend and editor Evert Duyckinck? And through Duyckinck, we also must acknowledge that Melville's sister Augusta, brother Allan, and mother Maria also wrote to Herman's editor, thus one literary network doubles back into a family network. But the "distant" mapping of the metadata of overlapping spheres of correspondence becomes more complicated when we consider adding "close" reading functionality for a given, retrievable letter. In this regard, traditional literary scholarship leads the way.

A writer's correspondence is a fundamental in literary research. Scholarly editions necessarily include transcriptions of a writer's letters, based on uniform editorial strategies that include (for starters) metadata such as name, place, time, and addressee. Editorial notes on these data regarding the physical documents of letters routinely accompany textual transcriptions. But what about letters that no longer physically exist? Fortunately, some such ghosts were previously transcribed before the original was somehow lost, and these transcriptions can stand for the actual letter. Others, however, have been lost and never transcribed, but we know they existed because they are mentioned indirectly in letters that do survive. For instance, in an extant letter, Melville's mother Maria Melville reports news about her son Herman to a younger son Allan that she had received in a no longer extant letter from Herman then in Liverpool.<sup>13</sup> The text of Gansevoort's letter, indeed the document itself, is lost but the news in it is paraphrased in Maria's report of it, and we can infer from Maria certain bits of metadata about the lost letter to her from Gansevoort: the sender (obviously), his probable location, a likely postal date. Our digital correspondence database would have to represent these ghost letters as well as those that exist physically or in transcription.

The database might also snowball to include letters from anyone to anyone else that report on Melville's life, whereabouts, or writing. Melville biographer Hershel Parker was able to speculate on the existence of a version of a Melville work because its title was mentioned, off hand, in a cousin's letter to another family member.<sup>14</sup> Surely, we would include these items in the MEL Archive, and if the letters exist, we would want to edit them as part of MEL's Edition of Melville's works, even though a Melville associate composed the letters, not Melville himself. And assuming that discoveries like Parker's can and would happen if more scholars have fuller access to all such letters, we would want to store and transcribe all of the available Melville family correspondence, not just selected letters already known to contain important information.

The editing of letters is standard in traditional scholarly editions rendered in print. In editing letters *from* and *to* Melville, the Northwestern-Newberry editors created a "calendar" or timeline of correspondence that registers all verifiable postings. Alongside notes on physical letters, they provide notes on non-extant letters, placing them in their proper chronology and explaining relevant details. Given the potentially expansive capacity of a correspondence database, we can imagine a digital map of places and times that encompasses the range of Melville's correspondence as we have briefly sketched it here. On this map, we would layer nodes of letter-writers atop postal addresses and send out radiating lines to other recipient nodes representing lines of correspondence, over time. Toggling the timeline would show how recipients become letter-writers in their responses. Another toggling might layer all correspondence over a selected

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<sup>13</sup> A model in Melville studies for editing the network of literary and family letters is Herman Melville, *Correspondence*, ed. Lynn Horth (Evanston and Chicago: Northwestern University Press and The Newberry Library, 1993). For the editing of Melville's unfound letter to his mother Maria, see p. 22.

<sup>14</sup> Hershel Parker, *Herman Melville: A Biography*, Volume 2 (Baltimore: Johns Hopkins University Press, 2002), 147.



period of time so that all lines associated with all correspondents would appear to be a network of nodes and interlinking lines.

Such a visualization focusing on the networks associated with a single author only, such as Herman Melville, requires a large and well-formed database, and considerable work for those building the map. Imagine, then, the database demands of a project modeled on Stanford's excellent "distant" digital project *The Republic of Letters* (ROL), which uses the same nodes-and-line visualization to trace the lines of correspondence of not one but multiple Enlightenment era philosophes on a transatlantic map.<sup>15</sup> Each node in the display is a city where letters were written between individuals such as Kant, Hume, Voltaire, and Franklin. The letter-writers, recipients, and addresses are named; the dates of letters are noted, and lines between the nodes represent threads of letter writing between the correspondents. It is an impressive visualization of the networks of correspondence. In "case studies" and publications linked to the ROL site, scholars have played with the indexed metadata, linking correspondence texts and scholarly commentary to the site's display. The site is an invitation to dig further and, as such, is a model for mapping networks of correspondence, but it is only a start. While you can "see" lines of correspondence between nodes in this metadata visualization, you cannot access the content of the letters themselves for a close reading. Though a seminal mapping project, *The Republic of Letters* is limited to its "distant" perspective; it does not enable scholars within the platform to drill down to a "close" reading of what the correspondents were saying to each other.

To create a map that enables the display of the images and texts of letters is easy enough because, as we have seen earlier, Itinerary (for mapping) and TextLab (for transcription) are interactive. Additionally, both tools are linked to MEL's content and metadata indexer MELCat. TextLab is a robust tool that automates most of the necessary yet repetitive TEI codes so that scholars can concentrate on deciphering handwritten documents, including drafts of works, journal entries, and letters. It automates the uploading of images, the linking of them to transcriptions, and the coding of complex revision sites. It can also be configured for marking directly on the letter image individual zones around basic letter elements, such as name, place, date, addressee, address, and salutation, all automatically linked to the transcription of the letter text. TextLab also displays the linked image and coded transcription side-by-side so that scholars can inspect the transcribed text against the original.

But when we imagine all of this information accessed initially or solely through a digital map, we readily recognize the need for a separable workspace that facilitates the close textual analyses of multiple selected letters that are in turn linked to a distant visual display of the entire corpora. We can imagine, too, being able to enter the correspondence project through either the distant map visualization or the close reading workspace. That is, a user could begin by inspecting a single letter, then click on a map icon to see its placement in the larger network of correspondence; or, vice versa, begin with the map and select a line of correspondence, or letters on the same day or week among all correspondents in the database.

## 6. Interoperability

This kind of functionality requires the smooth interoperability of separate yet affiliated archives, but given the fact that digital humanities archives have grown over the years, as best they can with limited resources and evolving protocols, hurdles to interactivity need to be surmounted.

A case in point is the naturally expected integration of two Melville archives: MEL and *Melville's Marginalia Online* (MMO).<sup>16</sup> MMO indexes books Melville is known to have read, collects images of books in Melville's library dispersed at his death, transcribes Melville's marginalia in books he annotated, and adds scholarly commentary. MEL and MMO share complementary research agendas: users of MMO naturally want to link to MEL letters and other texts and images in the MEL Archive and Edition; similarly, MEL users seeking to find connections between Melville's correspondence and his source books want to be able to draw directly upon MMO materials. But these platforms developed in the mid-2000s as separate initiatives, and currently no mechanisms exist to enable them to talk to each other. Happily, programmers are now working on database, coding, and display strategies that would facilitate the kind of archival integration we desire.

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<sup>15</sup> For Mapping the Republic of Letters, visit <http://republicofletters.stanford.edu/> Last Visited December 1, 2018

<sup>16</sup> Directed by Steven Olsen-Smith, MMO can be reached at <http://melvillemarginalia.org/> Last Visited December 1, 2018



Different hurdles to interoperability arise with archives of differing or broader missions. For instance, MEL has negotiated with the New York Public Library (NYPL) for the digitization of its collections of Melville Letters (in the Duyckinck Collection) and of Melville Family Correspondence (Gansevoort-Lansing). NYPL has generously committed time and effort to this project, and MEL's challenge is to find ways to automate the necessary configuration of NYPL's images so that MEL researchers can perform complex interactions with these letters, add metadata with MELCat, and use TextLab to transcribe each letter's text, in order to situate Melville's more famous, professional letters in the context of his family's correspondence. In a third effort at archive interoperability, we are seeking funding that would enable MEL and Lynda Pratt's *Collected Letters of Robert Southey* digital project to share TEI coding for correspondence and to develop new mapping strategies that would enable the integration of distant and close reading perspectives mentioned above.<sup>17</sup>

In conjunction with Performant Software Solutions, Hofstra DRC is exploring technologies for realizing ever-broader dimensions of archival interoperability. Tools like DRC's Itinerary and Neatline, developed at University of Virginia Scholars' Lab, are being upgraded in tandem to accommodate more ambitious mapping projects. Blacklight—a user interface for a widely used open source index—enables robust faceted searches of digital collections and works in concert with a self-service exhibit building tool called Spotlight. Together, these components make it possible to create compelling, searchable collections. DRC programmers are now working on ways to adapt Blacklight to facilitate searches of multiple “Big Data” archives in archaeology,<sup>18</sup> but the same advancements in the Blacklight / Spotlight platform could be used to search, assemble, display, and compare for close reading any selected letters from the MEL and Southey networks of correspondence, which would, in addition, be linked to an Itinerary / Neatline map that offers a distant visualization of the networks.

MEL developers are also engaging database structures and coding schemes that enhance interoperability. Linked Open Data (LOD) standards are designed to support the capture and discovery of data from related, but otherwise insulated archives. For instance, Resource Description Framework (RDF) codes can be used to identify digital objects (images and texts) for enhanced interoperability. The International Image Interoperability Framework (IIIF), provides standard ways for images in separate archives to be served and viewed, to ensure ease of sharing (regardless of updates), high quality display, reliable zooming, and, importantly, consistency in side-by-side displays of images from different repositories. Since images of handwritten works (such as Melville's journals) are indecipherable without edited transcriptions, and, conversely, since transcriptions are most reliable when linked to images of the originals from which they are derived, the manuscript revision transcription tool TextLab uses the Text Encoding Initiative (TEI) set of Extensible Mark-up Language (XML) codes for digital humanities editing, not only to link transcription and original image but also to ensure consistency of display across platforms. The database program eXist can be used in the searching of TEI-XML documents within an archive and between archives. With these technologies working together, we come closer to realizing the kinds of interoperability needed to generate and interact with the kinds of digital maps of Melville's and Fuller's Italy, or the Grand Tour that we have imagined here.

Digital humanists have long envisioned a broad online community in which users can easily share research and pedagogy. The development of open source tools and databases has as its goal the kinds of interoperability that would support such communities. But the terrain of digital humanities still resembles a vast plain populated by individual farms and their siloed information. By sharing in the LOD, TEI, IIIF, uniform mapping conventions, and other movements, digital humanists can make significant progress toward the vision of a community of shared scholarship.

Probably the most exciting benefit of the interoperable mapping of networks of correspondence is the simple act of discovery. Discovering how Melville got lost in Rome in 1857 revealed an unknown likely moment of

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<sup>17</sup> The Southey Letters, housed in the Romantic Circles platform, [https://www.rc.umd.edu/editions/southey\\_letters](https://www.rc.umd.edu/editions/southey_letters) Last Visited December 1, 2018, is edited by Lynda Pratt, Tim Fulford, and Ian Packer.

<sup>18</sup> See Anne Chen's SEEDD project in the DRC platform at <https://hofstradrc.org/projects/seedd.html> Last Visited December 1, 2018



inspiration that would not manifest itself until the writing of *Clarel*, almost twenty years later. But this discovery occurred within the MEL silo only. Imagine the potential for discovering previously undisclosed nodes of affiliation when we allow multiple silos to mingle. Because the famed Robert Southey died in 1843 before the unknown Herman Melville published *Typee* in 1846 and became suddenly much admired among British and American readers, there is no chance of direct correspondence between the two writers. Nevertheless, the two existed within overlapping literary circles and corresponded with the same people and travelled in the same places, though at different times. The publishers, artists, and writers Melville called upon in his 1849 visit to England and his 1857 visits to Europe could well have been associates of the well-connected Southey. For instance, Melville and Southey were well-acquainted with the publishing firm run by John Murray II and his son John Murray III, whose travel “hand-book” Melville used. This venerable publishing firm has been studied but the networks of affiliation it engendered will remain undiscovered until we are able to map the lines correspondences sprouting out of writers like Southey and Melville.

## 7. Conclusion

Conceiving, building, and launching a map is labor enough. But to sustain a project like a map—to preserve its links to its own expanding Archive and Edition, not to mention other archives and editions, and to ensure its viability by perpetuating its community of scholars beyond the commitment of any single individual—requires the concerted efforts of a self-evolving community of scholars, librarians, and programmers. And yet who among those of us grayer than most, receiving our degrees in the 1970s, 1980s, or even 1990s, realized at the beginning of our careers the vision, exertion, and strategic planning in collaboration and interactivity required to actualize the digital projects we then imagined to be the future of our profession? Even so, the promise of discoveries, like those found in mapping Melville, and the potentials of digital mapping in general, should encourage us to rise to the effort required.

Indeed, if one goal in the humanities is to make the invisible visible, we can do no better than to find ways to adapt humanistic modes of research, critical thinking, interpretive discourse, and interactive pedagogy to the digital idiom.

How is that humanly possible? As Ishmael puts it in his failed attempt to categorize whales, all that is needed is “Time, Strength, Cash, Patience.” The effort to build the Archive, Edition, and Project sections of the Melville Electronic Library has required hundreds of thousands of dollars in grant funding, the strategic development of a team of programmers, the infrastructure of a University’s IT department and its Digital Research Center, the leadership of myself, my associate director Wyn Kelley, and several other co-editors, and the volunteer labor of committed scholars working in collaboration since 2009; and we are only just beginning to launch our first digital editions and share, with scholars and students, such workshopping tools as TextLab and Itinerary. But MEL became a model for development of other projects at Hofstra, which in turn gave birth to Hofstra’s Digital Research Center, which now supports technological developments that serve multiple agenda and ambitions. As digital communities like this grow and share technologies, the likelihood of achieving fuller interoperability in the digital humanities grows. And with this newly born, ever-expanding digital humanities community in place, the work load has diminished for new scholars seeking development of their projects.

Going forward, the only real effort remaining to us is to design our digital tools and projects so that they will expand the categories of knowledge and sharpen not delimit the thinking, research, and critical skills that are endemic to humanistic endeavor.

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