

The Melville Electronic Library (MEL):

A Digital Critical Archive

An NEH-funded, *We the People* project, The Melville Electronic Library (MEL) is a born-digital critical archive featuring interlinked primary and secondary resources for the study of American novelist and poet Herman Melville (1819-1891). The textual core of MEL's database will consist of scholarly editions of all versions of all of Melville's published and unpublished works, in manuscript and print. Each edition will be built on the principles of traditional critical editing and the protocols of fluid-text editing, in compliance with the MLA and ADE guidelines for scholarly and electronic editions. Aside from its textual core, the digital library's interface will link users to various kinds of research materials, including documents and journals related to Melville's life and travels, Melville's book and print collections, sources for his writings, and links to primary and secondary bibliography. Recognizing that a digital critical archive is also well suited to recording Melville's reputation and cultural impact, MEL will also provide access to edited adaptations of Melville's works (in writing, the arts, and film). Finally, a crucial feature is that this critical archive will include interactive workspaces—TextLab, Juxta, Annotation Studio, Locast, Simile—that will enable users to continue editing and collating versions of Melville works, to annotate passages and link them to sources, and to map Melville's travels and texts within one textual and visual environment. With its textual core in place and its innovative tools fully operational, MEL will be able to meet its goal as the principal online center for Melville editing, research, and pedagogy. MEL received an NEH Digital Start-up Grant for 2008-2009 and a two-year NEH Scholarly Editions grant for 2009-2011. At present, it is in the second year of development under a three-year, \$293,000 NEH grant for 2011-2014. The current proposal seeks a renewal of the grant for three years (2014-2017) at \$299,973.

In what follows, we briefly explain the theoretical basis for this project, lay out its editorial, research, and technological goals, and provide an update of current progress. Although MEL is not yet ready for its world-wide launch, many of its features are now available for NEH inspection on the MEL website at <http://mel.hofstra.edu/>, and we will be directing readers throughout the proposal to this URL and other links to demonstrate the technical, editorial, metadata, and content progress discussed in our proposal. This new iteration of our MEL home page is intended for use by NEH grant evaluators. Please bear in mind that the site does not contain finished editions and is not yet intended for public interaction.

SUBSTANCE AND CONTEXT

The Challenges of Reading and Editing Revision

We generally take published literary works—a novel like *Moby-Dick*, a book of poems like *Battle-Pieces*, or a novella transcribed from manuscript like *Billy Budd*—to be stable textual objects because we naturally assume that published texts represent the writer's final intentions. However, any

scholarly edition of a literary work will reveal an underlying world of textual instability. In its lists of variants, readers will find not only errors in need of correction in the work's historical editions but also evidence of revision that indicates how a writer's intentions shift during composition or after publication and how publishers alter texts or expurgate; readers, too, make changes in their adaptations of works. Written works, from the Bible to *Ulysses*, are not stable but fluid texts that exist in multiple versions.

In its consolidation of scholarly editions of Melville's published and unpublished works, MEL will help readers navigate the various kinds of revision that generate the various versions of Melville's writing, found in print editions, manuscripts, sources, and adaptations. The benefit of editing and researching the versions of a literary work is that we gain a fuller sense of how a writer writes, how editors encourage or suppress writing, and how adaptors take hold of a work and reshape it, turning it into a different text altogether that reveals the tensions of an audience. Texts evolve in remarkable, unexpected ways, revealing much about the intersections of creativity and culture, of the personal and social, and of private and public spheres. But giving access to versions and the dynamics of their textual evolution poses significant editorial challenges. One problem that textual scholars must confront is, in fact, two-fold: how might we read a fluid text and how do we edit the phenomenon of revision?

These linked challenges of reading and editing a fluid text are evident in a common enough occurrence in reading and teaching that might be called a "fluid text moment." This experience can happen when different students bring to class modern reprints based on different editions of a work. For instance, when an instructor asks the class to turn to chapter 25 of *Moby-Dick*, everyone will surely find a "chapter 25." But students with a reprint of the 1851 British text, which Melville authorized but did not oversee, will discover that their "chapter 25" is actually called "chapter 26" in their classmates' reprint of the 1851 American text. In fact, Melville's British publisher expurgated his original chapter 25. Instructor and student might also discover well over 100 other socially and sexually meaningful differences between the two versions at the word-, phrase-, sentence-, and paragraph-level. Once aware of these differences, readers naturally ask questions: Who made these expurgations and why? Was Melville complicit? If so, what editorial or audience pressures account for the change? What affect do these revisions on our reading today? In asking about textual difference, students read more closely for meaning and more contextually with creative process and cultural reception in mind. Interestingly enough, such shared fluid text moments involving the comparison of variant texts trigger a kind of collaborative and yet destabilizing reading process. Which text is the right text, or the better text, or Melville's intended text? Without knowing it, readers perform a kind of collation and pose the kind of critical questions regarding authorial intentions, forms of censorship, and expurgation that scholarly editors necessarily address. Readers confronted by textual fluidities, in effect, begin to inhabit the editor's critical thinking. MEL is designed not only to give access to versions but also to facilitate readers as they confront the problems of navigating and editing the revision processes that create the versions.

In addition to variant print editions of works like *Moby-Dick*, MEL also develops digital strategies to engage modes of critical thinking related to the more convoluted revision processes evident in manuscript. The working draft manuscript of *Billy Budd* is a case in point. Melville's last work of fiction, which the writer never submitted for publication or even completed, began as a dramatic monolog, titled "Billy in the Darbies," introduced by a short, explanatory prose note. The head note grew substantially as Melville added to it more characters, plot, and commentary, converting his original preface into the novella we know today. Melville also revised his original poem, which appears at the end of the narrative, transforming Billy from an older, sexually experienced mutineer to a young, falsely accused innocent. In Melville's manuscript, numerous revisions appear on each leaf, revealing not only the intricacies of the writer's creative process but also the growth of his ideas. In one set of revision sites over several leaves, we can see how Melville increasingly associated Billy with notions of male beauty and eventually landed on the homosocial "handsome sailor" type. In these sites, we can also follow how he added a new exemplar of this model of male strength and beauty—a black sailor—thus requiring him to revise, in fact remove, his previous conception of a white exemplar. Melville's "handsome sailor" revision, from white to black, is only one of hundreds of revisions waiting for researchers to explore. However, these revision texts cannot be read, much less explored, until they are edited into existence.

Moby-Dick and *Billy Budd* are powerful instances of two other kinds of textual fluidity: source appropriation and adaptation. When a writer "borrows" ideas or words from sources—whether it be quotation, paraphrase, or plagiarism—the appropriation is essentially a repurposing and hence a re-writing of the source text. From a fluid-text perspective, such source revision is essentially one writer's version of another writer, and MEL is also designed so that users can search source texts and link them to MEL texts. MEL will also add to its archive non-authorial versions that adapt Melville works in art works, plays, films, and operas. In this extension of the fluid text, adaptors revise in order to transform originating works into their own image or to serve different kinds of audiences (e.g. children) or to address different cultural concerns. In doing so, their announced adaptations or their more covert adaptive revisions show how Melville's work transforms and is transformed by the popular imagination.

Our goal in creating MEL is to build a comprehensive set of born-digital scholarly editions that not only will display clear and searchable reading texts of all Melville works but also will enable scholars, critics, instructors, students, and general readers to navigate the kinds of fluid texts evident in the Melville corpus: versions in manuscript, print texts, sources, and adaptations. We have already developed research tools that facilitate the kinds of critical thinking needed not only for reading, editing, and navigating texts in revision but also for sequencing and narrating revision in reliable and critically responsible ways. We will also develop tools for combining, annotating, and mapping texts and images. Each tool is designed to be interactive and collaborative. On the one hand, these features facilitate the building and administration of MEL's scholarly editions governed by an editorial board. At the same time, they permit

others to work with MEL's editions in their research, critical studies, and editorial projects, without compromising the editions themselves. By using the tools that editors use, visitors to MEL will gain a fuller understanding of Melville's creative processes and of the critical thinking that goes into the scholarly editing of fluid texts in manuscript and print. To realize these editorial, research, and pedagogical goals, we have designed MEL as a digital critical archive, which is, as explained below, an extension of the traditional critical edition.

Critical Edition and Critical Archive: The Challenge of Sustainability

Theoretically, the critical edition, as conceived by modern textual theorists, has no limits on the contents of its textual apparatus. For instance, the Northwestern-Newberry edition of Melville's writings, considered a standard for the editing of nineteenth-century American texts, includes in the back-matter for each of its volumes not only lists of textual variants and emendations as well as notes on the text, book history, creative process, and reception but also varying amounts of added materials: reproductions of relevant sources, images of documents, and manuscript transcriptions. These back-of-the-book textual and historical materials constitute a kind of dedicated reading room for Melville research. The reasons that a printed critical edition might lack a fuller representation of these kinds of resources are due largely to the limitations of print and publishing technology: page counts, bookbinding restraints, library shelf space, marketing, and so on. Because digital technologies allow for more texts and can link them in one searchable database, we can adapt the notion of the critical edition's apparatus and reading room of materials to our development of a digital Melville critical archive. Moreover, a digital archive can go beyond the collection of texts and images by providing scholars with the tools for navigating the data and generating new research. MEL is now poised in its development to actualize this theoretical potential.

Like any new editorial endeavor, MEL builds upon and complements previous Melville editions. By extending the notion of the critical edition digitally and focusing on creative process as well as literary history and cultural context, MEL will maintain its commitment to the study of books as tactile representations of our culture. By using digital technology to enable MEL users to study the intricacies of book technology and the complexities of book history, we will also show how digital thinking can be used to expand the humanities and humanistic research. MEL's critical archive will be both a scholarly edition and an arena for research and critical thinking about Melville, his creative process, and culture. Equally important is that by designing our scholarly editions as the textual core of our critical archive, we also enhance the likelihood of the project's sustainability.

Granted, digital technology is not a magic (or, for that matter, instantaneous) solution to the problems of critical editing, fluid-text navigation, and linking sources and adaptations to literary works. Melville's complaint about what it takes to complete anything, much less get a book through press, applies to digital development as well: all that is needed are "Time, Cash, Strength, and Patience." At

this still nascent stage in the history of Digital Humanities, the problem of sustaining an ambitious digital critical archive like MEL can seem daunting. What is required are well-structured metadata and a well-designed database to store all versions, sources, adaptations, criticism, and images related to Melville's life, creative process, and writing. These challenges are answered by the creation of a reliable infrastructure that includes the development of digital tools, an editorial plan, and a scholarly community.

In order to build a sustainable critical archive, MEL has been working on editorial and research tools suited to both traditional and fluid-text analysis (TextLab), version collation (Juxta), annotation (Annotation Studio), mapping (Locast), and timelines (Simile). At the same time, like any editorial project, our work is achieved through an expanding network of scholars, each with varying areas of expertise, and each gathering, coding, annotating, and uploading his or her research data to MEL. To receive such building-block content data from MEL's research associates for its textual core, we have begun building another tool, a comprehensive Administrative Site—based on MEL's metadata categories—allowing MEL researchers to upload and process data for our database. Going forward, MEL's research and administrative tools will give the critical archive a sustainable technical structure.

And to give us a format for our future editing, we focus on three model texts—*Moby-Dick*, *Battle-Pieces*, and *Billy Budd*—chosen because each helps us resolve particular challenges for digital research and scholarly editing exhibited in all other Melville works. As noted, *Moby-Dick* exists in multiple print editions, and *Billy Budd* grew in manuscript through various versions. Each prose work poses different technical, editorial, and coding problems. Moreover, both draw heavily upon different kinds of sources; both have been adapted in different media. Once fully developed, MEL's scholarly editions of these works—titled *Versions of Moby-Dick* and *Versions of Billy Budd*—will serve as templates for the editing of all other print and manuscript prose works. Equally challenging is the coding of poetry in Melville's *Battle-Pieces*. A prolific poet, Melville exercised prodigious skill, which has nevertheless remained under-acknowledged. By coding the complex metrical schemes of his Civil War poems, we will create new pathways for unprecedented research in Melville's poetics. As with our editions of *Moby-Dick* and *Billy Budd*, MEL's *Versions of Battle-Pieces* will provide a pattern for editing Melville's other poetry in print and manuscript. With all three model editions in place by the end of the proposed grant period, MEL researchers will have established its digital tools and editorial offices for the editing of the rest of Melville's works, from Melville's first publication *Typee* (which includes both manuscript and multiple print versions) to his late project *Weeds and Wildings* (which combines prose and poetry not published in his lifetime).

In sum, our strategies for structuring MEL's scholarly editions and critical archive are designed for sustained, long-term growth. But these strategies are not viable without the backing of a community of scholars, both seasoned and young. MEL's research community has grown in numbers and has also expanded through important working affiliations with Harvard University's Houghton Library, NINES,

MIT's HyperStudio, the Berkshire Athenaeum, Boise State's *Melville's Marginalia Online* project, the Initiative for Digital Humanities, Media, and Culture at Texas A&M University, and the Melville Society Archive. Importantly, Hofstra University continues to demonstrate its strong and growing support for sustaining MEL by providing the services of an expert and inventive IT staff for programming and maintenance and by funding its new Digital Research Center (DRC) to house and promote MEL and other sites like it.

In the following sections, we will report on our accomplishments in more detail and lay out a work plan for further development of MEL in the proposed 2014–2017 grant period.

HISTORY AND DURATION OF PROJECT

Genesis

The idea of the Melville Electronic Library grew out of conversations in the late 1990s between John Bryant and other scholars and librarians, including Jerome McGann, Daniel Pitti, Haskell Springer, and John Unsworth. At this time, Bryant completed work on his electronic fluid-text edition of *Typee* (UVa/Rotunda Press 2006), and with Springer, he edited a fluid-text print edition of *Moby-Dick* (Longman 2007), which is also the base version for MEL's *Versions of Moby-Dick*. In spring 2007, Bryant and MEL Associate Director Wyn Kelley, met with Houghton Library's curator of manuscripts Leslie Morris to arrange for the digitization of Harvard's Melville manuscript holdings. In the Fall of 2008, Bryant used a \$23,591 NEH Digital Start-Up grant (designated as a *We The People* project) to develop a proof-of-concept for TextLab and to hold the first of what would be a series of "MELCamps" to discuss the scope of MEL and to arrange commitments from over twenty nationally and internationally known Melville scholars to participate in its editorial ventures. In 2009, Hofstra Technical Director and MEL's Web Development Project Leader Brian Ferris wrote code to complete Phase 1 of our TextLab development plan. On the strength of work completed during our Digital Start-Up grant, Bryant received a two-year \$175,000 NEH Scholarly Editions grant (2009–2011) to begin work on the Melville Electronic Library at Hofstra University. Based on the accomplishments in the first year of that grant, MEL was awarded a second Scholarly Editions grant for three years (2011-2014) and \$293,139.

Both Scholarly Editions grants have funded not only digital development but also the acquisition of editorial and source content, transcription of manuscripts, annotation of texts, travel to conferences and affiliate homes to explain MEL and TextLab, and the last three MELCamps, which have been crucial for the building of further affiliations and a viable community of MEL scholars. The following history of MEL development focuses on the central problems confronted over the past four years of progress.

While much remains to be completed in order to give MEL its projected functionality as a born-digital scholarly edition and critical archive for Melville research, we remain on schedule in our work to create

digital editions for our three model texts—*Moby-Dick*, *Battle-Pieces*, and *Billy Budd*—during the current grant period. For a chart of MEL’s accomplishments to date, see Appendix A.

Digital Developments

MEL has focused its current technological agenda on the creation of TextLab and the planned adaptation of Annotation Studio into a research workspace tentatively called Melville ReMix. In addition, Hofstra IT is building our Administrative Site and adapting our existing MEL website to interface with our growing MEL editions. However, we are also planning to adapt other tools, such as Locast and Simile, which are discussed in the Content Acquisitions section below. The following section focuses on the two projects under active development at Hofstra.

TextLab. Crucial to the building of the textual core of all of MEL’s scholarly editions of Melville’s works is the development of our innovative tool, TextLab, into a fully functioning editorial workshop. Building on Ferris’s initial code, programmers Nick Laiacona and Ed Zavada of Performant Software Solutions completed Phase 2 of TextLab development, which included the primary editing functions. Here, users are able to mark-up a manuscript leaf image, identify revision sites on the leaf, and transcribe the leaf’s text using a built-in TEI-XML editor that automates coding. TextLab also generates, on the fly, a reading text and an accurate diplomatic transcription of each manuscript leaf. In 2012, Laiacona and Adam Hockensmith developed TextLab’s secondary editing functionality, which allows the editor to select sets of revision sites (already marked up in primary editing) and compose a Revision Sequence that encodes the steps Melville might have taken in achieving his revision at those sites. In the same process, the editor adds a step-by-step Revision Narrative that explains the sequencing. Because anyone’s sequence and narrative will differ from another’s, TextLab allows multiple Revision Sequence/Narrative sets to exist together in the database for side-by-side comparison to enhance the discussion of Melville’s creative process. For more detail, [see Appendix B, “TextLab Screen Shots.”](#) For a video demonstration of TextLab 0.9, visit <http://mel.hofstra.edu/textlab.html>.

Although TextLab’s primary and secondary functions as developed in 2012 addressed the complexities of manuscript analysis, they were not able to do the same for print versions of a work. However, in 2013, Laiacona, Hockensmith, and Lou Foster completed Phase 3 of TextLab development by adding to it an adaptation of Performant’s Juxta. This powerful collation web service displays different versions of the same work side-by-side and automatically highlights their variants, thus reducing months or even years of work to a matter of seconds. With support from NINES’s Juxta Steering Committee (of which Bryant is a member), Performant created Juxta Commons (based on the newly developed Juxta web service), and MEL also engaged Performant to integrate Juxta into TextLab, adding to it a revision sequence and narrative annotation feature to parallel TextLab’s secondary editing function. Now users can upload, collate, and compare different print versions of a Melville work. When they click

on a variant, a box containing the Revision Sequence for the two collated variants automatically appears, and users can then compose a Revision Narrative for that automated sequence. As with TextLab's manuscript features, Juxta stores multiple Revision Sequence/Narratives in its database. With this added functionality, TextLab will be able to generate fluid-text editions that track revisions of texts in manuscript and throughout subsequent print editions. MEL Research Associates are now using MEL to edit both *Moby-Dick* (using the Juxta feature) and *Billy Budd* (using TextLab's full functionality, including Juxta).

Members of MEL's TextLab team have tested the tool's most recent iteration. Bryant and Kelley have used TextLab in graduate and undergraduate courses at MIT and Hofstra, and two of Bryant's graduate students have joined the *Billy Budd* editing team. Bryant assigns individual *Billy Budd* leaves to team colleagues in order to build the manuscript segment of our *Versions of Billy Budd* scholarly edition. Bryant vets all submitted transcriptions for accuracy of textual detail, viability of coding, and proper display in our diplomatic transcription; he then uploads the approved leaf transcriptions to the edition's Official TEI file. To facilitate the process, Bryant trains individual transcribers and consults with them at his office, via email, phone, and TextLab's Share function. He has also written a manual on strategies for TEI coding in TextLab and (with Susan Holland of Performant Software) a TextLab user manual. (For links to these documents, scroll to the bottom of MEL page <http://mel.hofstra.edu/textlab.html>.)

Bryant and Kelley have used TextLab successfully in their classrooms, and the tool continues to draw interest nationally and internationally. Since our last grant application, Bryant has published four essays and made at least nine formal presentations related to MEL and TextLab. (See Appendix H, "Publications and Presentations.") TextLab's next projected phase of development is "tertiary editing." This enhanced functionality will enable editors to emend MEL's base texts derived from manuscript and/or print sources and to prepare a standard critical edition with a textual apparatus displaying variants and editorial changes and with additional contextual annotation.

Melville ReMix and Annotation Studio. A central feature of MEL's critical archive is that, in addition to TextLab, it will include research workspaces for adding contextual annotation to MEL editions and linking them to other texts and images within MEL and online. In 2010, at MELCamp2, Associate Director Wyn Kelley proposed exploring HyperStudio's internal annotation program at MIT and identified Annotation Studio (AS) as a prototype for MEL's research workspace, tentatively called Melville ReMix. HyperStudio (HS) is MIT's digital lab/center and part of the Comparative Media Studies program in the School of Humanities, Arts, and Social Sciences. During the following year, Kelley worked with HyperStudio executive director Kurt Fendt, and subsequently with HS programmer Jamie Folsom, to develop a version of Annotation Studio as a tool to facilitate close textual reading and research for use in several of her classes. Since 2010, Bryant has met with the HyperStudio team three

times at MIT (most recently on June 10, 2013) and with them and MEL's IT staff at Hofstra University (at Hofstra's inaugural Digital Research Center Forum, October 24-25, 2013) in formal discussions about linking TextLab outputs to Annotation Studio as well as adapting AS for use in MEL. Bryant now serves on the Annotation Studio consultant board. (See Appendix F, "Letters of Support: Fendt.") With TextLab achieving full functionality during the proposed grant period, MEL will focus on adapting MIT's innovative tool into the MEL environment. In the meantime, Annotation Studio has been introduced in writing courses at Hofstra, and Bryant will be using it and TextLab in his Fall 2014 classes.

Content Developments

MEL Texts: Leaves, Pages, Transcriptions. By 2011, Bryant had acquired over 2500 images of manuscript leaves and print pages. These included the relevant first editions of two of MEL's three model works, *Moby-Dick* and *Battle-Pieces*. He also arranged for Aptara, Inc. to transcribe the print edition images into TEI-XML. (For sample code, see Appendix C, "Moby-Dick TEI Coding.") In addition, Bryant acquired an electronic version of the text of the Longman Critical Edition of *Moby-Dick* for inclusion in MEL. Because *Billy Budd* was not published in Melville's lifetime, and since Melville did not prepare a final draft of *Billy Budd* for a publisher, no authorized print text of the novella exists; we have only what has been transcribed by scholars from the manuscript itself. As already noted, the manuscript text of *Billy Budd* is highly unstable. The heavily revised manuscript, discovered thirty years after Melville's death, was published in three significantly different versions throughout the twentieth century—Weaver (1924, 1928), Freeman (1948), and Hayford and Sealts (1962)—with each variant version establishing a different text for its own generation of readers and scholars. Thus, *Billy Budd* in print is as comparably unstable as the manuscript. In 2012, Bryant arranged for the Research Library at the New Bedford Whaling Museum (NBWM) to take digital images of each page of each of these principal twentieth-century print versions of the *Billy Budd* manuscript from copies in the Melville Society Archive housed at the whaling museum's library. In spring, 2013, he had Aptara, Inc. transcribe the texts of these images in TEI-XML. As with the previously mentioned transcriptions of *Moby-Dick* and *Battle-Pieces*, each page is "double-keyed"—that is, two versions are transcribed by two separate typists—and then electronically collated to find and correct typographical errors. These machine-proofed print texts now exist in MEL along with the manuscript texts of *Billy Budd* and the print texts of *Moby-Dick* and *Battle-Pieces*, and they are ready for a final round of human proofing.

The Art Group: A Gallery of Fine Art and Prints. Melville's writing is suffused with allusions to the fine arts. Since MELCamp3 (at MIT in 2011), MEL's Art Group has identified all references to the fine arts (music, painting, sculpture, etc.) in *Moby-Dick*, and the research associates in the group have been locating art images, composing annotations, linking them to their relevant texts, and storing them in group

editor Dennis Berthold's drop box. With further funding, our metadata specialists John Walsh and Michelle Dalmau will work with Hofstra's Senior Web Developer Kevin Pechin to complete our Administrative Site that will receive these images, annotations, texts, and their metadata.

As a life-long collector of art prints, Melville amassed over 400 items in a collection that has now been dispersed among descendants throughout the nation. A long-term goal for MEL is to assemble digital images of Melville's dispersed art print collection for MEL's Gallery room. This retrieval would enable users to arrange and rearrange Melville's prints by various categories and link them to MEL texts. Negotiations with the Berkshire Athenaeum (which has already digitized the lion's share of Melville's print collection) are underway and will continue in the proposed grant period. Already, arrangements with the Osborne family collection at Southwestern University (TX) and the William Reese Collection of the Melville Society Archive at NBWM have borne fruit, and MEL's server now holds close to seventy images from the Osborne and Reese collections. With future funding, MEL will develop metadata with Berkshire Athenaeum that will facilitate further image uploads and the navigation of this remarkable collection. For a display of art objects referenced in *Moby-Dick* and of our current collection of Melville's prints, visit <http://mel.hofstra.edu/gallery.html>.

The Travel Group: *Moby-Dick* and Locast. Melville's travels played a significant role in the development of his global consciousness and are an intimate part of his writing. Melville provides detailed descriptions of the South Pacific, New York, Liverpool, London, Paris, Jerusalem, Naples, and Rome, which he visited during lengthy stays, and he also wrote of places that he had read about but never visited. One goal for MEL is to map all of Melville's travel itineraries—in the U.S., South Pacific, Europe, and Holy Land—in order to link sites to his writings and demonstrate his remarkable geographic imagination. MEL's Travel Group, co-edited by Kelley and Brian Yothers, has completed an Excel sheet linking geographical references (real and imagined) in *Moby-Dick* to geo-coordinates and page/line references in the Longman Critical Edition of *Moby-Dick*. These will be incorporated in a mapping tool for visualizing Melville's travels and writing, which, in turn, will be linked to MEL's *Versions of Moby-Dick* edition. The group's research now serves as a model for geographic annotation and global reference for all other Melville works.

At the same time, Kelley has drawn upon Locast—a mapping tool developed by MIT's Mobile Experience Lab—to visualize the range of global reference in *Moby-Dick*. In Spring 2014, Bryant will focus the research segment of his Fulbright Fellowship at the University of Rome (Sapienza) on using Locast to trace the daily itinerary of Melville's two-month visit to Rome in 1857 as recorded in his journal. In the proposed grant period, MEL will explore adapting Locast for this and other travel visualizations. For the Travel Group's Excel sheet and Kelley's prototype for a *Moby-Dick* Locast site,

visit the “Geographical Imagination” link on MEL’s home page, or go to http://mel.hofstra.edu/mel_geographical_imagination.html.

The History Group: *Battle-Pieces* and Timeline Technology. We chose *Battle-Pieces* as one of our model works because poetry presents distinct challenges in coding and formatting for any digital scholarly edition. At the same time, despite his reputation in prose fiction, Melville devoted most of his life to writing a remarkable range of poetry from the epic *Clarel* and the dramatic monologues of *John Marr* to the lyrical *Timoleon*. The modernistic poems found in *Battle-Pieces* (1866), his first poetic publication, are also remarkable for their varied and unique meters and rhyme schemes. Interest in the content of Melville’s poetry has grown worldwide as his poems continue to be translated, and a recent Melville and Whitman conference in Washington, DC—the Melville Society’s ninth international gathering—drew over 200 participants. However, Melville’s metrics and poetics remain undervalued. *Battle-Pieces* is a natural model for metrical analysis, and Bryant has worked with MEL Associates Robert Madison and Peter Riley to explore the TEI-XML coding for poetry. At the same time, MEL’s History Group, headed by co-editors Gerard McGowan and Timothy Marr, has gathered images, determined time and geographical coordinates, and composed contextual annotations related to the *Battle-Pieces* poems and their corresponding Civil War battles. As part of its *Versions of Battle-Pieces* edition, MEL will use MIT’s timeline program Simile to visualize Melville’s poetic and historical imagination. To view our timeline display prototype, visit the “*Versions of Battle-Pieces*” link on the MEL home page, or go to <http://mel.hofstra.edu/timeline/>.

Biography: Revising Augusta. In researching Melville Biography, Bryant, who is writing a full-scale biography of Melville, transcribed in the winter of 2012 the high school compositions of Melville’s sister Augusta Melville. These manuscripts, held in the New York Public Library, also include corrections and heavy revisions by Herman and Augusta’s older brother Gansevoort Melville. Gansevoort’s suggested revisions also appear on the working draft manuscript of three chapters of *Typee*. In effect, the three siblings constituted a literary coterie in their adolescence. Bryant has also transcribed Gansevoort’s revisions of Augusta and, with the collation web service Juxta Commons administered by NINES, he has collated Gansevoort’s revisions with Augusta’s original. When the NYPL creates digital images of these biographical documents (due in 2014), MEL will be able to upload them to TextLab for closer manuscript analysis, direct TEI transcription, and collation. For an introduction to the sibling collaboration and the Juxta Commons collation of the two versions of Augusta’s essay, visit the two links in MEL’s Biography room at <http://mel.hofstra.edu/biography.html>.

Metadata and MEL's Administrative Site. In order to upload, search, and link texts and images, we need to categorize each digital object using a consistent, transmedial metadata framework and a tool for applying metadata. Given the wide-ranging nature of MEL, our metadata needs are complex. In the spring semester of 2012, Bryant met with then Hofstra library Dean Daniel Rubey, Associate Dean Howard Graves, and other staff members along with Brian Ferris and Kevin Pechin to discuss text and image metadata. In a subsequent meeting on metadata, we also consulted with John Walsh of Information and Computing at Indiana University and IU librarian Michelle Dalmau. Walsh delivered one of three keynote speeches at MELCamp4—held on March 25-27, 2013 at Texas A&M University—and met with our three MEL research groups about their particular metadata needs. He agreed to design a framework for MEL's metadata, an essential step toward building MEL's Administrative Site at Hofstra.

In June 2013, the MEL groups' co-editors delivered lists of content categories specific to their projects for Walsh's perusal over the summer, and in a conference call held that month at MIT, Walsh also learned more about Annotation Studio and the metadata needs regarding TextLab and Annotation Studio. In the fall, Walsh met with Bryant, Ferris, and Pechin to discuss his progress. In the meantime, Pechin and Hofstra IT specialist Chris Santillo began programming the shell for MEL's Administrative Site, which when completed in the coming year will allow users to upload text, image, metadata, and annotation, provide editors a platform for editorial review, and enable them to place materials for display on the MEL website. Testing and perfecting of the Administrative Site will continue into the proposed grant period. Walsh's metadata planning site can be visited at <https://digitalculturelab.atlassian.net/wiki/display/MM/MEL+Metadata>.

Interface and Web Design. In 2010, Hofstra's Executive Director of Design and Production Francis Rizzo and Kevin Pechin built the first version of our MEL interface to announce the project, explain its features, record agendas and minutes of our MELCamps, and display sample materials. Throughout 2012-13, Bryant consulted with Pechin to update that site, and to develop uniform designs and navigational patterns for MEL's three model editions, the Gallery for displaying images of Melville's print collection, and the projected Administrative Site. Pechin also integrated TextLab and its Juxta features to the MEL website interface and makes periodic updates.

Sustainability: Affiliations, MELCamps, and Hofstra's Digital Research Center. A crucial, early affiliation has been with Houghton Library of Harvard University, which holds most of the relevant Melville manuscripts. Houghton's agreement to supply MEL with digital images of Melville documents, at no cost, was first realized with the delivery in 2011 of the *Billy Budd* manuscript (over 800 images). In 2014, we expect to see Melville's travel journals and *Weeds and Wildings*, Melville's last projected but unpublished volume of poetry. (See Appendix F, "Letters of Support: Morris.") In pursuit of its goal to

re-assemble Melville's art print collection digitally, MEL has established affiliations with the already mentioned art print holders: the Berkshire Athenaeum, the Osborne family collection, and the Melville Society Archive. On 13-15 October 2011 our affiliation with MIT's HyperStudio was inaugurated at MELCamp3, hosted by the Comparative Media Studies program at MIT, where one affiliation led to another. At this MIT gathering, Laura Mandell, director of the Initiative for Digital Humanities, Media, and Culture (IDHMC) at Texas A&M, offered to host MELCamp4 at her University. The three-day, IDHMC-sponsored event on 25-27 March 2013 included TextLab and Annotation Studio workshops, a first for MELCampers, which heightened participant understanding of coding and deepened commitment to the project.

MEL is located on a dedicated server at Hofstra University, and it has enjoyed strong support from Hofstra's administration and IT staff. Since 2010, Bryant has been working to deepen Hofstra's commitment to MEL and digital research. He began by issuing a general call to the faculty enlisting support to create a Digital Research Center (DRC) at Hofstra, and he met with like-minded colleagues at two planning meetings in 2011 and 2012. In 2011, and with the full support of Provost Herman Berliner, Vice President for IT Robert Juckiewicz, and HCLAS Dean Bernard Firestone, he submitted a proposal to Hofstra President Stuart Rabinowitz, asking for start-up funds to create the DRC, which would consist of a Forum (for periodic mini-conferences on digital scholarship) and a Digital Lab for developing digital solutions for research problems proposed by fifteen Hofstra faculty. (See Appendix F, "Letters of Support: Juckiewicz and Firestone.") In spring of 2013 the president and provost funded our first DRC Forum, organized through Hofstra's Cultural Center. The two-day program on 24-25 October 2013 featured three keynoters, two faculty project panels, and two workshops (TextLab and Annotation Studio). And during the conference, Bryant was able to announce that Hofstra University has, in fact, committed \$85,000 as start-up support for its new Digital Research Center (both Lab and Forum). Bryant has been appointed director of DRC; the Hofstra funding also supports Bryant's course release.

The importance of this development cannot be overestimated. Not only does the University's DRC start-up funding underscore its commitment to MEL, but it will also generate a new synergy at Hofstra University conducive to the mutual development and sustainability of other faculty-initiated digital humanities projects. Since MEL will serve as the flagship of Hofstra's DRC, its development of TextLab, Annotation Studio, and other tools will provide guidance for other faculty projects, and those other projects will adapt additional tools useful to MEL. At the same time, a new community focusing on digital scholarship will attract additional funding for the kind of technical support needed to sustain digital research projects, including MEL, as they mature. With Hofstra's Digital Research Center in place, MEL will have a much stronger infrastructure upon which to grow and thrive.

STAFF

Project Director and General Editor **John Bryant** (Hofstra) has published several books and articles on Melville, most recently *Melville Unfolding: Sexuality, Politics, and the Versions of Typee* (Michigan), “Rewriting *Moby-Dick*: Politics, Textual Identity, and the Revision Narrative” (*PMLA*), and “Versions of the Melville Meme” (*Cambridge Companion to Melville*). He is editor of the electronic edition *Herman Melville’s Typee* (UVa-Rotunda; awarded MLA’s Committee on Scholarly Editions seal in 2009) and, with Haskell Springer (Kansas), the Longman Critical Edition of *Moby-Dick*. Until his retirement from the position in 2013, he was editor of the Melville Society (1990-2013) and in 1998 created the CELJ award-winning *Leviathan: A Journal of Melville Studies*. Bryant has also served on MLA’s Committee on Scholarly Editions (2004-08), and now serves on the Executive Council of NINES, where he was also Americanist co-editor with Kenneth Price (2004-2007). Associate Editor **Wyn Kelley** (MIT), editor of the Blackwell *Companion to Melville*, authored *Melville’s City: Literary and Urban Form* (Cambridge) and *Herman Melville: An Introduction and Reading in a Participatory Culture: Remixing Moby-Dick in the English Classroom* (Teachers’ College Press), a curriculum on *Moby-Dick* and new media literacies. She was Associate Editor of *Leviathan* from 1998 to 2010. (See Appendix G, “Vitae: Bryant and Kelley.”) MEL’s metadata consultants are accomplished digital humanists: **John Walsh** (Information and Computing at Indiana University) has created digital research archives on Swinburne, Newton, Petrarch, and comic books; and **Michelle Dalmau** (Indiana University Library) explores complex metadata structures and the pedagogic uses of digital resources.

Bryant will devote his regular research time throughout the academic year to the project and will receive the equivalent of 1.1 salaried semesters for compensation during each year of the project. Kelley, Walsh, and Dalmau will receive annual consultant stipends. Together, Bryant and Kelley supervise the work of the MEL research groups in text and image acquisition and perform all editorial work including transcription, mark-up, and annotation; they also organize and run each MELCamp. Bryant also supervises technical development, coordinates with affiliates, and writes grant proposals.

As part of his regular duties, Hofstra’s Vice President of Information Technology Robert Juckiewicz oversees MEL’s administration and technical hiring. His Assistant Vice President Linda Hantzschel coordinates scheduling and time management. MEL’s Technical Director and TextLab developer Brian Ferris consults on all technological developments and on MEL’s interface, with a time commitment of 6% of his regular load.

The project’s editorial and content development work is divided among four MEL research groups: Editions, Art, History, and Travel. Scholars in these groups donate research time throughout the grant period to work with Bryant and Kelley directly and to supervise work related to the transcribing and mark-up of *Moby-Dick*, *Battle-Pieces*, and *Billy Budd*, the location and acquisition of images related to the art, travel, and historical references in those three featured works, the further contextual annotation of them, the assembling and cataloguing of Melville’s art print collection, the testing of TextLab, and the

transcription of the *Billy Budd* manuscript. These scholars are listed below by group. For staffing updates, visit the “About Us” page on the MEL website: http://mel.hofstra.edu/about_us.html.

Editions: With Bryant, Marta Werner (D’Youville) is the Editions group co-editor. She is also editor of the online edition of Dickinson’s late fragments, titled *Radical Scatters* (Nebraska) and the *Emily Dickinson Archive* (Amherst and Harvard). Wesley Raabe (Kent State) specializes in textual editing and digital humanities and is working on an electronic edition of *Uncle Tom’s Cabin*. Les Harrison (Virginia Commonwealth), author of *The Temple and the Forum* (Alabama), co-edits the UTC edition. John Wenke (Salisbury State) is the author of *Melville’s Muse* (Kent State). Also contributing are director of *Melville’s Marginalia Online* Steven Olsen-Smith (Boise State), Christopher Ohge (UC-Berkeley; Mark Twain Project), Joseph Meyer (Arkansas), and two Hofstra graduate students Kristin Mattern and Steven Sill.

Art: Editor Dennis Berthold (Texas A&M) is author of *American Risorgimento: Herman Melville and the Cultural Politics of Italy* (Ohio State) and has written the chapter on Melville in the annual *American Literary Scholarship* (ALS). Christopher Sten (George Washington), also an ALS contributor and author of *The Weaver-god, He Weaves*, edited *The Savage Eye: Melville and the Visual Arts*. Robert K. Wallace (Northern Kentucky) has authored *Frank Stella’s Moby-Dick, Douglass and Melville*, and numerous articles on Melville and the arts.

History: Co-editor Timothy Marr (American Studies, UNC-Chapel Hill) is author of *The Cultural Roots of American Islamism*, and co-editor Gerard McGowan (West Point) is Executive Secretary of the Melville Society and is currently working on Melville’s career-long meditation on war and violence. Robert D. Madison (Arkansas) is the Associate General Editor of the Northwestern-Newberry *Writings of Herman Melville* and Textual Editor / Board Member for *The Writings of James Fenimore Cooper*. Robert Sandberg (Charter College of Education, Cal State), the web editor for the Melville Society, teaches information technology and develops online courses using open source PHP and MySQL based software, including Wordpress, Joomla, WebCT, Blackboard, and Moodle.

Travel: With Kelley, Brian Yothers (UTexas, El Paso) co-edits the Travel group; he is author of *Melville’s Mirrors* and is the Associate Editor of *Leviathan*. Mary K. Bercaw Edwards (UConn), author of *Cannibal Old Me* (Kent State) and Extracts Editor for *Leviathan*, specializes in Melville’s time at sea, especially aboard whaling ships, and his use of written and oral sources. Dawn Coleman (Tennessee) is author of *Preaching and the Rise of the American Novel* (Ohio State) and Book Review Editor for *Leviathan*.

SCOPE AND EDITORIAL METHOD

Our progress in creating MEL is recorded above. Going forward, the scope and methods of the project remain the same but with enhanced focus and directionality. In particular, since MELCamp3 at MIT and

MELCamp4 at Texas A&M, MEL’s technological agenda has grown to include Annotation Studio along side TextLab, and our MEL groups have grown more populous and acquired a clearer sense of the workings of art, history, and travel data collection, metadata, and coding. Our efforts to organize MEL’s metadata have taken an important step forward with contributions from Walsh and Dalmau. Our specific goals for MEL development during the proposed grant period 2014-2017 are explained in the following sections and in our work plan and work chart (at the end of this narrative).

Editions Technology

Our three focal editions—*Versions of Moby-Dick*, *Versions of Battle-Pieces*, and *Versions of Billy Budd*—have begun to emerge in palpable form, thanks to MEL’s development of TextLab. Visitors to the MEL Editions page can now access both British and American versions of *Moby-Dick* side-by-side, and editors can compose revision narratives to build the editorial annotations of that novel. (Visit the “*Versions of Moby-Dick*” link on the MEL home page and select “*Moby-Dick* in print.”)

Users can also access the first three chapters of MEL’s *Versions of Billy Budd* edition, generated on the fly from coding created in TextLab. When they click on a manuscript thumbnail to the left of the edition’s Reading Text, they are taken to a side-by-side viewing of a zoomable image of that leaf and its Diplomatic Transcription. They can then click on highlighted revision sites to inspect the edition’s Revision Sequence/Narratives in pop-up displays. TextLab’s Juxta feature allows users to compare different versions of a work and compose multiple revision narratives for any individual variant. (Visit the *Versions of Billy Budd* link on the MEL home page then select “Billy Budd Reading Text and Manuscript” or “Billy Budd in Print”; see also Appendix B, “TextLab Screen Shots and TEI Coding.”)

While TextLab’s two display features—transcribed manuscript and collated print versions—are fully functional, they are not yet displayed on a single Graphic User Interface (GUI). In our plan for further development, we will create an integrated GUI allowing users to navigate from the *Billy Budd* Reading Text into both manuscript and collated manuscript and print displays, each displaying its respective Revision Sequence/Narratives.

Under the hood of our TextLab implementation are a MySQL database, TEI-XML (P5) transcriptions, metadata, style sheets, and displayable HTML. This database acts as a bridge between the two modes of primary and secondary editing. On the “internal” side of the database, we use (1) Java to construct TEI transcriptions, and (2) a custom graphical tool to enhance the TEI with rectangle coordinates indicating regions of interest (revision sites) on the manuscript image. Added to TextLab is a version of the Juxta web service whose annotation feature emulates TextLab’s revision sequence and narrative functions. Technical details for this feature are available at http://juxtacommons.org/tech_info. As noted above, the video of TextLab’s primary editing, secondary editing, and collation functions can be viewed at <http://mel.hofstra.edu/textlab.html>.

Tertiary Editing. Our goals for further technological development for our scholarly editions projects include adding “tertiary editing” to TextLab. Already, TextLab (with its primary and secondary editorial functions) generates and displays base versions of works in manuscript and print. Tertiary editing will permit editors to select a TextLab generated base version (or any version) as copy text and emend it to create a critical edition of that work including a standard Textual Apparatus with lists of variants. In addition, tertiary editing will allow editors to link the text to contextual annotations developed with other tools like Melville ReMix (our version of Annotation Studio). Beginning in Fall, 2013, Bryant, Ferris, and Pechin consulted with Nick Laiacona of Performant Software Solutions (see Appendix G, *Vitae: Laiacona*) to develop a statement of work for adding tertiary editing features to TextLab during the proposed grant period. (See Appendix D, “Tertiary Editing.”) Also a priority in further TextLab development is to create ways to make TextLab outputs (revision sequence/narratives) exportable to Melville ReMix. Finally, we have built TextLab with open source code, and by the end of the grant period, we plan to make TextLab’s code available for use in other digital editing projects.

“How Billy Grew” Storyboards. An ongoing editorial development is Bryant’s storyboarding of his visualization project—tentatively titled “How Billy Grew”—which will situate the “micro-revision” visible in TextLab within a simulation of the stages of composition, or “macro-revision,” in Melville’s writing of *Billy Budd*, as described above. The proposed visualization would animate the various macro-stages of composition, allowing users to stop the animation, burrow into a manuscript leaf, and consult TextLab revision sequence/narratives to witness specific animated micro-revisions. In modeling this ambitious project, Bryant has focused on a set of revisions in which Melville transformed his original notions of beauty and strength in the Handsome Sailor type from racially white to black. (For a sample of the storyboards, visit the *Versions of Billy Budd* link on the MEL home page.)

Content Technology

Our *Versions of Battle-Pieces* edition is not yet fully realized, but, as noted above, MEL’s Timeline—which is based on Simile and displays selected poems, Civil War images, and contextual annotation—is growing. Similarly, our program to build our Gallery by annotating Art references in *Moby-Dick* and collecting Melville’s art prints continues. Developing and populating these two features is part of our proposed Work Plan discussed below. In addition, Bryant and Kelley will work with HyperStudio’s Kurt Fendt and Jamie Folsom during the grant period to create MEL’s version of Annotation Studio—Melville ReMix—for annotating and linking sources and MEL texts. Bryant and Kelley will also negotiate with MIT’s Mobile Experience Lab to add more functionality to Kelley’s Locast map of geographical reference in *Moby-Dick* mentioned above.

Content Acquisitions: MEL’s Seven Rooms

When fully realized, MEL will be the primary digital site for Melville research. We have conceived of the website's home page as a set of "rooms" in the library that will contain links to various types of texts and images or workspaces. Our working conception for the MEL interface can be explored through the main menu links on our MEL home page at <http://mel.hofstra.edu/>. Throughout the proposed grant period, we will continue our research to populate the critical archive's seven rooms. As stated in previous proposals, we project the completion of MEL's interface, infrastructure, and textual core (including digital editions of all Melville works) to take fifteen years. (See Appendix E, "Scheduled Scanning.")

The project's textual core and MEL's *Versions of Moby-Dick* and *Versions of Billy Budd* editions can be accessed in the **Editions** room. In the **Manuscripts** room, you will find samples of the *Billy Budd* manuscript and a link to the TextLab video, also available through the What is TextLab? link on the home page. Fundamental to Melville research is the study of his sources, reading practices, personal library, and marginalia, as represented in MEL's **Sources** room. Our annotation workspace Melville ReMix will be located here. At present, MEL also provides a link in this room to *Melville's Marginalia Online* (MMO). Edited by MEL Associates Steven Olsen-Smith and Peter Norberg and recently adapted to TEI-compliant standards, this site is an online version of Olsen-Smith's continuous updating of *Melville's Reading* by Merton M. Sealts, a catalog of the books owned by Melville. MMO is also a repository of Olsen-Smith and Norberg's collaborative work (with Dennis Marnon) on Melville's marginal annotations. At MELCamp4, Bryant, Laiacona, Walsh, and Hofstra's IT specialist met with Olsen-Smith to discuss the creation of an MMO web service that would permit MEL users access to exportable MMO materials along with texts of other Melville sources for use in the projected workspace, Melville ReMix. We will continue during the grant period to assist with the web service.

A central room in the MEL critical archive is its **Gallery**. In various scholarly articles MEL Associate Robert K. Wallace has catalogued Melville's Art prints, presently dispersed in three or more public and private collections. The Berkshire Athenaeum (BA) has already digitized its Melville Print Collection and created a finding aid. Our goal for MEL's Gallery is to provide a space where users can view a digitized version of Melville's print collection and make links from these to MEL's textual core and editions. Bryant, Wallace, and MEL Art co-editor Dennis Berthold have already made preliminary contacts with BA staff and look forward in the proposed grant period to acquiring images of the BA materials and supplying metadata for them to be shared by MEL and BA. The Gallery will also include images of art works alluded to in Melville works as well as photographs of Melville and his family members (located mostly in the Houghton and New York Public Libraries). As noted above, the MEL Art Group has already begun work on identifying and assembling art images related to *Moby-Dick*. In the proposed grant period, we will continue to integrate BA and other images into MEL's Gallery and develop metadata for all manuscript, print text, and art images.

MEL's **Adaptation** room will contain digital representations of a range of materials adapted from Melville works, which appeared almost as soon as he began his publishing career. In its first year of publication, Melville's first book *Typee* (1846) was digested and illustrated for children in the journal *Robert Merry's Museum*. In the twentieth century, modern illustrations of Melville texts—including Mead Schaeffer's *Typee*, Rockwell Kent's *Moby-Dick*, and Maurice Sendak's *Pierre*—abound. *Moby-Dick* and other texts, such as “Bartleby,” “Benito Cereno,” and *Billy Budd* have been adapted for stage, radio, opera, and film. In “Textual Identity and Adaptive Revision: Editing Adaptation as a Fluid Text,” Bryant has elaborated the theoretical foundation for conceiving of sources, originating text, and adaptations as versions of a fluid text. For a PDF of the article, visit the Adaptation room. A more practical concern in digital scholarship is how to code adaptations in order to link them to discrete texts and images, a problem we hope to resolve during the grant period in further discussions with MIT's HyperStudio, with special focus on its video tool titled *Berliner sehen*.

The principal feature of MEL's **Biography** room will be a Melville Timeline enabling users to link biographical events to texts. Hofstra IT web designer Kevin Pechin will consult on this idea drawing upon the already developed prototype (based on MIT's Simile) in our *Battle-Pieces* Civil War Timeline feature. Visit <http://mel.hofstra.edu/timeline/>. In addition, Bryant's “Revising Augusta” feature, created with the external web service Juxta Commons and discussed above, appears here.

Finally, MEL's **Criticism** room will provide a workspace for primary bibliography and secondary research. It will include a finding aid to major Melville collections (to parallel the catalogue of Melville's prints) and, building on the work of MEL Associate G. Thomas Tanselle, a descriptive bibliography of Melville's works, linked to the proposed scholarly edition. Also to be included will be secondary bibliography, linked where applicable to a collection of Melville reviews and selected modern criticism. We will also include links to digitized versions of Melville reference tools such as Bryant's *Melville Dissertations* and MEL Associate Mary K. Bercaw Edwards's *Melville's Sources*.

Editions Development

As indicated above, we selected *Moby-Dick*, *Battle-Pieces*, and *Billy Budd* to be MEL's first featured works because of the different editorial and technical challenges they pose for the digital editing of revision and of the versions of Melville's prose and poetry, in manuscript, magazine, and book formats. In terms of content, these works also represent Melville's major statements about democracy and authority before, during, and after the Civil War. Together, these editions will serve as models for future editions of Melville's remaining works, and for any writer's work existing in multiple versions. For technical reasons, the *Moby-Dick* and *Billy Budd* editions have grown at a swifter pace than the *Battle-Pieces* edition. In the proposed grant, we focus more fully on building the *Battle-Pieces* edition and completing all three by the end of the grant period.

Images for all pages of the principal versions of all three works have been acquired in the form of 24-bit color scans taken from the originals at 600 dpi and delivered as TIFF files, with accompanying JPEGs, for archiving in Hofstra's dedicated MEL server. In addition, MEL also has the text of the 2006 Longman Critical Edition of *Moby-Dick*. All first edition versions have been transcribed in TEI-XML, double-keyed, and machine proofed. As mentioned above, displays of two print versions of *Moby-Dick* and of three chapters of the manuscript and four print versions of *Billy Budd* are now viewable in MEL's Editions room. The following indicates our goals for the three editions during the proposed grant period.

Versions of *Moby-Dick*. We plan to add certain historical and modern versions of *Moby-Dick* and one related document. In August, 1850, as he was composing *Moby-Dick*, Melville also wrote his review essay, "Hawthorne and His Mosses," which appeared in the *Literary World*; a copy-edited manuscript version is located at NYPL. We will digitize and transcribe both the manuscript and print versions. In the month before the novel's American publication, *Harper's Magazine* published an excerpt, titled "The Town-Ho's Story," which appeared with important differences as chapter 54 in the novel. In 1892, Melville's literary executor Arthur Stedman supervised a posthumous edition of *Moby-Dick*. More modern scholarly editions, including the Northwestern-Newberry (1988) and the Norton (1967, 2001) editions contain significant differences. These, too, will be digitized and transcribed.

Versions of *Billy Budd*. MEL's Editions group will continue the transcribing of *Billy Budd* begun in 2012, with the aim of completing the remaining two-thirds of the text during the first two proposed grant years. We will add to the present collection of four twentieth-century print versions, Milton Stern's 1975 version, which we will also digitize and transcribe. Bryant will continue to develop storyboards for "How Billy Grew."

Versions of *Battle-Pieces*. Melville composed most of the 70 or so war poems in *Battle-Pieces* (1866) soon after Appomattox. Five of them appeared with meaningful differences in *Harper's Magazine* in advance of book publication. An inveterate reviser, Melville also tinkered with his poems after publication, as is evident in his own revised copy of *Battle-Pieces* (located at Houghton Library). Critics savaged *Battle-Pieces*, condemning Melville for his conciliatory postwar vision and seemingly irregular style. The irregularity was, in fact, the result of a refusal to write the same poem twice, in terms of tone, voice, rhyme, and meter. In addition to continuing its contextual annotation of *Battle-Pieces*, MEL will adapt TEI-XML prosodic coding to our transcription, thus facilitating metrical analyses of Melville's poetry. We will also acquire and transcribe the Harper's poems and relevant pages from Melville's annotated copy. We plan to launch *Versions of Battle-Pieces* by the end of the proposed grant period.

Projected MEL Text Acquisitions. By the end of our present grant period, in fall 2014, Harvard's Houghton Library is scheduled to deliver digital images of Melville's journals and his last, unpublished volume of poems, titled *Weeds and Wildings*. In the proposed grant period, we anticipate receiving from Houghton images of Melville's unpublished work in progress known to scholars as the

Burgundy Club Sketches, including important poems on aesthetics (“At the Hostelry”) and Italian politics (“Naples in the Time of Bomba”), as well as documents related to his two volumes of poetry, *John Marr and Other Sailors* and *Timoleon, Etc.* We also plan to acquire images of the three principal versions of *Typee* (1846), the 1892 Stedman edition, and *Redburn* (1849) as well as images of the print and manuscript documents representing Melville’s tales published in *Harper’s* and *Putnam’s Magazines* and the collection of Putnam’s short stories (including “Bartleby” and “Benito Cereno”), titled *Piazza Tales* (1856), which include variants and revisions by Melville.

FINAL PRODUCTS AND DISSEMINATION

MEL’s interface, database, and TextLab are currently under construction and are located in a dedicated server at Hofstra University. Our goal is to make the MEL website, its scholarly editions, and workspaces available to all users. We are also designing TextLab and Melville ReMix as open-source tools for adaptation by other editorial projects.

Editorial Standards. MEL’s editorial project follows best-practice protocols of transcription, collation, annotation, and proofing in guidelines established by the Association of Documentary Editing (ADE), as outlined in Mary-Jo Kline’s *A Guide to Documentary Editing*, 3rd ed. (2008), and by the Modern Language Association (MLA), as outlined in *Guidelines for Scholarly Editions*, http://www.mla.org/cse_guidelines. Trained students (at Hofstra and elsewhere) under the supervision of MEL associates will proof keyboarded texts against digital images of print texts. Bryant and other MEL research associates will proof manuscript transcriptions against images and original documents. As noted above, we follow practices for editing revision as outlined in Bryant’s *The Fluid Text* and *Melville Unfolding* and implemented in his 2009 electronic edition, *Herman Melville’s Typee: A Fluid-Text Edition*, which is the second digital edition to be awarded MLA’s Committee on Scholarly Editions seal.

Because they will be based on open-source technology and standards, MEL’s three featured scholarly editions will be made available, without charge, to students, instructors, scholars, and general readers through all browsers. MEL’s seven rooms are expandable so that other materials for scholarly, critical, and pedagogical projects will be added, and MEL will be interoperable with other sites such as the *Walt Whitman Archive*, the *Emily Dickinson Archives*, and NINES’s ever-expanding research index so that Melville texts and materials can be integrated with the digitized works of other writers, ancient and modern. By the end of the proposed grant period, we expect to make our open-source code for the fully functioning TextLab tool available for adoption by other editorial projects that address a writer’s revisions. MEL subscribes to GNU General Public License (GPL), which passes on freedom of use to developers and requires acknowledgment of modifications. For details, see <http://www.gnu.org/copyleft/gpl.html>.

Coding, Schema, Metadata, and NINES. If our grant is awarded, MEL's Groups will continue to train in TEI-XML coding. Bryant and Kelley have already attended beginning and advanced TEI workshops, at various institutions (Miami University of Ohio, Maryland, and Brown). We gave workshops on TEI, TextLab, Annotation Studio, and NeatLine at our 2013 MELCamp4 and also funded MEL Research Associate Christopher Ohge's attendance at the "Introduction to XSLT" workshop at the Digital Humanities Summer Institute (University of Victoria, BC) in June, 2013, and Associate Director Wyn Kelley will attend a workshop on GIS at DHSI in June 2014. In our proposal, we have budgeted funds for further training at future DH Summer Institutes and consultation on contextual annotation at our next MELCamp scheduled for 2015. For samples of TextLab coding, see Appendices B and C.

Bryant, MEL Associates John Walsh and Michelle Dalmau, and Hofstra IT specialists Ferris and Pechin will continue in the proposed grant period to develop MEL's metadata, using a mixture of formats to accommodate TextLab outputs (revision sequences and narratives) and texts and images processed by our three MEL Groups. For art work, we will be relying on Visual Resources Association (VRA Core; <http://www.loc.gov/standards/vracore/schemas.html>) and, most probably, DublinCore (<http://dublincore.org/metadata-basics/>), the XML-compliant protocols established by the Metadata Encoding and Transmission Standard (METS; <http://www.loc.gov/standards/mets/>) and Encoded Archival Description (EAD, version 2002; <http://www.loc.gov/ead/>). To affiliate with NINES, Bryant will confer with Walsh and Andrew Stauffer at NINES for applying XML-encoded Resource Description Format metadata (RDF; <http://www.nines.org/join/rdf.html>), which categorizes genres and types of digital objects thus enhancing MEL's interoperability.

CONCLUSION

Now in its fourth year, MEL remains embryonic: images have arrived, texts are being transcribed; TextLab can both generate and display MEL's nascent editions; *Versions of Moby-Dick* and *Versions of Billy Budd* are in the offing. Our two most recent MELCamps (2011 and 2013) have proven highly effective in bringing Melville scholars and digital scholars together to plan, build, learn coding, and edit. The recent creation of Hofstra's Digital Research Center augments the University's already strong commitment to MEL. The DRC will provide MEL with a support system that will sustain MEL and facilitate our integration into the world of Digital Humanities. But equally important is that in attracting younger scholars, we are establishing a community that will perpetuate itself beyond the launching of MEL's projected editions. In this community of scholars is our most heartening potential for intellectual growth and digital sustainability.

By supporting MEL, NEH has stimulated new and unanticipated liaisons at Hofstra among faculty and staff in English and other liberal arts departments, Computer Science, Faculty Computing, Information Technology, Library, and Museum. It has enabled Bryant and Kelley to forge links between

Hofstra's IT sector and MIT's HyperStudio and with Houghton Library, the Melville Society Archive, Berkshire Athenaeum, and the New York Public Library. Word of MEL has spread internationally at conferences in Barcelona, Galway, Paris, Copenhagen, Rome, and Washington DC. These local, national, and international developments attest to the viability of MEL and the growing interest in revision, adaptation, and digital fluid-text editing.

MEL's vision of using digital technology to reconceive the totality of Melville's writing so that it includes revisions and versions and its commitment to creating innovative editorial tools and scholarly workspaces that will enhance (not merely replicate) Melville studies and pedagogy cannot be realized overnight. But the project has gained recognition and momentum: its three proposed scholarly editions will set the stage for further editing and scholarly research; its development of scholarly tools will facilitate research, generate scholarship, and inspire new ways of teaching. A renewal of our grant would help ensure our progress in making MEL the sustainable critical archive it is designed to be.

WORK PLAN

With development of the database for *Versions of Moby-Dick* and *Versions of Billy Budd* well underway, our main three-year focus will be on building *Versions of Battle-Pieces*. At the same time, we will continue editing *Billy Budd* by transcribing the manuscript and creating revision sequences and narratives for both manuscript and print texts, and we will augment *Versions of Moby-Dick* by digitizing and coding related documents in TEI-XML. See Chart 1, below, for the detailed, half-yearly scheduling of our proposed three-year grant period.

At the end of **Year One**, we expect completion of MEL's Administrative Site by Hofstra's IT staff; we will also contract with Performant Software to add tertiary editing to TextLab. During this time, we will continue development of Annotation Studio as a prototype for Melville ReMix. The MEL groups will continue assembling data for their projects. Year One will culminate with MELCamp5, hosted by Hofstra University's Digital Research Center and Cultural Center, where MEL Associates will be trained in MEL's Administrative Site, TextLab, TEI coding, and Annotation Studio.

In **Year Two**, MEL Associates will upload images and annotations for *Moby-Dick* and *Battle-Pieces*. We also expect to complete the full transcription of the *Billy Budd* manuscript by 2016. We will develop a plan for releasing TextLab to the public. By the end of the year we expect to have a prototype of Melville ReMix for testing and will work on adapting Locast to the MEL environment. We will also acquire digital images of Melville's magazine pieces, *Piazza Tales*, and *Redburn*, and we expect to have these texts transcribed in TEI-XML.

In **Year Three** we will release a public version of TextLab and take Melville ReMix into its Beta version. With the primary transcription of *Billy Budd* completed, we will turn to the secondary editing of revision sequences and narratives, and we will develop plans for making such TextLab outputs exportable

to Melville ReMix. Having worked on storyboards for “How Billy Grew,” we will turn in this year to developing a proof-of-concept for this visualization and its integration of TextLab data. In terms of content development, we expect to complete our annotation and metrical coding of *Battle-Pieces* and launch the *Versions of Battle-Pieces* edition.

If full funding is granted, we expect that by the end of the grant period’s third year, we will have launched all three of our model editions. Our next step will be to acquire the images for the three principal versions of *Typee*—Melville’s first and editorially most complex literary work—and prepare TEI transcriptions of those print versions for Juxta collation.

Chart 1. Melville Electronic Library: Work Plan (2014-2017)

	Technical Activities	Editorial Activities
Year 1 2014-15 Nov 2014 Apr 2015	Administrative Site: <ul style="list-style-type: none"> • Test functionality • Upload Art data to <i>Moby-Dick</i> TextLab: <ul style="list-style-type: none"> • Develop Tertiary Editing • Develop integrated GUI Melville ReMix: <ul style="list-style-type: none"> • Adapt Annotation Studio How Billy Grew Storyboarding	Annotation: <ul style="list-style-type: none"> • Context Coding: <i>Versions of Battle-Pieces</i> (1st third) • Update Versions of Moby-Dick Transcription: <ul style="list-style-type: none"> • Versions of Billy Budd (2nd third) Develop Database: <ul style="list-style-type: none"> • Gallery: Annotate art in <i>Moby-Dick</i> • Biography: Assemble Timeline data • Assemble <i>Battle-Pieces</i> Timeline data Acquire Text images: <ul style="list-style-type: none"> • Town-Ho’s Story (<i>Harper’s</i>) • Hawthorne’s Mosses (<i>Literary World</i>) • Melville’s copy of <i>Battle-Pieces</i>
Year 1 2014-15 May 2015 Oct 2015	Administrative Site: <ul style="list-style-type: none"> • Upload Art data to <i>Moby-Dick</i> • Upload images for <i>Battle-Pieces</i> TextLab: <ul style="list-style-type: none"> • Develop Tertiary Editing Melville ReMix: <ul style="list-style-type: none"> • Adapt Annotation Studio How Billy Grew Storyboarding MELCamp 2015: <ul style="list-style-type: none"> • Keynote speakers • Panels • Admin Site, TEI, TextLab, Annotation Workshops 	Annotation: <ul style="list-style-type: none"> • Context Coding: <i>Versions of Battle-Pieces</i> (1st third) • Update Versions of Moby-Dick Transcription: <ul style="list-style-type: none"> • Versions of Billy Budd (2nd third) Develop Rooms: <ul style="list-style-type: none"> • Gallery: Annotate art in <i>Moby-Dick</i> • Biography: Assemble Timeline data • Assemble <i>Battle-Pieces</i> Timeline data TEI-XML Transcription: <ul style="list-style-type: none"> • Town-Ho’s Story (<i>Harper’s</i>) • Hawthorne’s Mosses (<i>Literary World</i>) • Melville’s copy of <i>Battle-Pieces</i>
Year 2 2015-16 Nov 2015	Administrative Site: <ul style="list-style-type: none"> • Upload Travel images for <i>Moby-Dick</i> • Upload images for <i>Battle-Pieces</i> TextLab: <ul style="list-style-type: none"> • Develop plan for Releasing 	Annotation: <ul style="list-style-type: none"> • Context Coding: <i>Versions of Battle-Pieces</i> (2nd third) • Update Versions of Moby-Dick Transcription: <ul style="list-style-type: none"> • Versions of Billy Budd (last third)

<p>Apr 2016</p>	<p>TextLab as open source code Melville ReMix Testing Develop Timeline Technology Mapping Melville: <ul style="list-style-type: none"> Develop plan for adapting Locast to MEL How Billy Grew Storyboarding</p>	<p>Develop Rooms: <ul style="list-style-type: none"> Gallery: Annotate Travel in <i>Moby-Dick</i> Biography: Add to Melville Timeline History: update <i>Battle-Pieces</i> Timeline Acquire Text images: <ul style="list-style-type: none"> Piazza Tales (Putnam's) Stories (Putnam's and Harper's) Redburn </p>
<p>Year 2 2015-16</p> <p>May 2016</p> <p>Oct 2016</p>	<p>Administrative Site: <ul style="list-style-type: none"> Upload Travel images for <i>Moby-Dick</i> Upload images for <i>Battle-Pieces</i> TextLab: <ul style="list-style-type: none"> Develop plan for Releasing TextLab as open source code Melville ReMix Testing Develop Timeline Technology Mapping Melville: <ul style="list-style-type: none"> Develop plan for adapting Locast to MEL How Billy Grew Storyboarding</p>	<p>Annotation: <ul style="list-style-type: none"> Context Coding: <i>Versions of Battle-Pieces</i> (2nd third) Update Versions of Moby-Dick Transcription: <ul style="list-style-type: none"> Versions of Billy Budd (last third) Develop Rooms: <ul style="list-style-type: none"> Gallery: Annotate Travel in <i>Moby-Dick</i> Biography: Add to Melville Timeline History: update <i>Battle-Pieces</i> Timeline TEI-XML Transcriptions: <ul style="list-style-type: none"> Piazza Tales (Putnam's) Stories (Putnam's and Harper's) Redburn </p>
<p>Year 3 2016-17</p> <p>Nov 2016</p> <p>Apr 2017</p>	<p>Administrative Site: <ul style="list-style-type: none"> Upload Contextual annotations for <i>Moby-Dick</i> Upload images for <i>Battle-Pieces</i> Release TextLab to Public Adapt TextLab for Melville ReMix How Billy Grew: Proof of Concept</p>	<p>Annotation: <ul style="list-style-type: none"> Context Coding: <i>Versions of Battle-Pieces</i> (last third) Update Versions of Moby-Dick Transcription: <ul style="list-style-type: none"> <i>Versions of Billy Budd</i> (Secondary editing) Develop Rooms: <ul style="list-style-type: none"> Gallery: Annotate Travel in <i>Moby-Dick</i> Biography: Add to Melville Timeline History: update <i>Battle-Pieces</i> Timeline Acquire Text images: <ul style="list-style-type: none"> <i>Typee</i> (manuscript + 3 first eds + 1892) Moby-Dick (1892) </p>
<p>Year 3 2016-17</p> <p>May 2017</p> <p>Oct 2017</p>	<p>Administrative Site: <ul style="list-style-type: none"> Upload Contextual annotations for <i>Moby-Dick</i> Upload images for <i>Battle-Pieces</i> Release TextLab to Public Adapt TextLab for Melville ReMix How Billy Grew: Proof of Concept</p>	<p>Annotation: <ul style="list-style-type: none"> Context Coding: <i>Versions of Battle-Pieces</i> (last third) Update Versions of Moby-Dick Transcription: <ul style="list-style-type: none"> <i>Versions of Billy Budd</i> (Secondary editing) Develop Rooms: <ul style="list-style-type: none"> Gallery: Annotate Travel in <i>Moby-Dick</i> Biography: Add to Melville Timeline History: update <i>Battle-Pieces</i> Timeline TEI-XML Transcriptions: <ul style="list-style-type: none"> <i>Typee</i> (3 first eds + 1892) Moby-Dick (1892) </p>