

NATIONAL ENDOWMENT FOR THE HUMANITIES



SAMPLE APPLICATION NARRATIVE

Reference Materials Grant Institution: University of Nebraska

Significance

The *Walt Whitman Archive* is a long-term project dedicated to the creation of a vast electronic scholarly resource focused on the work of one of America's greatest and most influential writers. Ed Folsom of the University of Iowa and Kenneth M. Price of the University of Nebraska-Lincoln intend eventually to include in one online site the full range of work by and about Walt Whitman.

Since 1990, over eighty-five books and well over a thousand articles have been published about Whitman, his work, and his relationship to American history, American culture, and cultures around the world. This remarkable outpouring of scholarly work is matched by a popular admiration of Whitman: few of America's great writers continue to generate as much interest in the wider culture as the poet of *Leaves of Grass*. He continues to speak powerfully to Americans in many ways. In recent years his words have been inscribed in public areas with increasing frequency: on the balustrade overlooking the main terminal of the Reagan National Airport in Washington, D.C., in the Archives-Navy Memorial Metro Station (where his words reach across a sea-wave sculpture to the words of Fernando Pessoa, a Portuguese poet and admirer of Whitman), on the balustrade at Battery Park in New York, at the entry of the Monona Terrace Convention Center in Madison, Wisconsin (built according to Frank Lloyd Wright's specifications, including the inscription from his favorite American poet). He was a central voice in Ken Burns's magisterial *Civil War* series for PBS and again for Rick Burns's PBS series on New York. He has been a key figure in at least twenty films in the past two decades and is

continually invoked, portrayed, and celebrated in political speeches, television programs, musical compositions (from classical to pop), and paintings. Schools, bridges, summer camps, corporate centers, political think tanks, and shopping malls are named after him. Whitman's inclusive vision of democracy, his celebration of the breadth and diversity of the American nation, resonates in a nation still seeking to fulfill its democratic promise. He is a foundational figure in American culture.

One of the most remarkable aspects of the voluminous critical writing about Whitman is that it spans the range of critical and theoretical approaches and methodologies: there are New Historical studies of Whitman, feminist studies, gay studies, deconstructions, close readings, comparative examinations, textual studies, and biographical approaches. Whitman is one of the very few American authors who has remained a vital figure throughout the sometimes bewildering changes in critical fashions. He is perhaps the only American writer to have successfully made the transition from "canonical" writer to "marginal" writer: as literary critics came more and more to celebrate the marginal elements of the culture, Whitman re-emerged as a writer from the working class, as well as a writer with radical and unconventional attitudes toward sexuality. In some fascinating ways, he has been reinvented as a writer who has more in common with the edgier and challenging marginal authors in America than with the more centrist mainstream writers. The "poet of democracy" has remained a democratic writer, but one with more radical ideas than previously detected. Such reinventions of Whitman have been a characteristic of the response to him ever since he himself created a fluid identity in his poetry and in photographic portraits of himself, shifting from a Broadway dandy to a journeyman laborer, from a tough-talking journalist to a gentle nurse, from a young "rough" to an aged prophet. Since his death, his readers continue to find aspects of his work that often contradict each other (as he warned they would), but that open the way for reading him as a socialist, a capitalist, a nationalist, an internationalist, a racialist, a multicultural sage. He has proved to be (as he said he was) "large" and to "contain multitudes."

Whitman's growing significance is not limited to the United States. He has, in fact, had greater impact on world literature than any other American writer. As parts of *Leaves of Grass* have been translated into every major language over the last century, Whitman has begun to take on new cultural identities as other nations absorb him into their own literary traditions. Hundreds of poets—Spanish-speaking poets from Central and South America, the Caribbean, and Spain; German-speaking poets; French poets; Russian poets; Chinese poets; Japanese poets—have been influenced in key ways by their reading of Whitman, who has carried his democratic messages and his democratic challenges into their cultures. Whitman carries out his own diaspora—becoming again and again an immigrant in foreign literary traditions—and thus continues to have a dramatic impact on poetic development and democratic philosophy around the world.

Interest in Whitman, then, has never been more intense or more varied. And yet all of this work is based on an incomplete textual record. Even fundamental facts about Whitman's work, such as a record of the drafts and notes that led to his great poem "Song of Myself," are still inaccessible. The materials that the *Whitman Archive* is bringing together will allow for and in some cases necessitate a re-examination of what have been considered safe assumptions about his work. Whitman, again, has become the focal point of wide-ranging cultural work dealing with the history of sexuality, the theorizing of democracy, the development of a radically new kind of socially conscious poetry, a testing of the boundaries between prose and poetry, and an attempt to spawn an international poetics (where poets from various cultures engage in energetic dialogue across national, cultural, and linguistic boundaries), and all of these areas of critical exploration will be significantly influenced by the synthesizing, searchable virtual archive that this project is producing.

The *Walt Whitman Archive* is revising, adding to, updating, and supplementing the monumental New York University Press edition of *The Collected Writings of Walt Whitman* by gathering from numerous archives the many materials that were not included in it. *The Collected Writings* was a forty-year-long editorial endeavor that set out to

compile in one place all of Whitman's writings, including his various volumes of poetry and prose, along with his correspondence, notebooks, daybooks, manuscripts, journalism, and uncollected poetry and fiction. Like so many monumental print editions of major writers' works, however, *The Collected Writings* fell far short of its goals, and as its volumes appeared over the decades, previously undiscovered materials continued to surface, rendering the printed volumes anachronistic almost by the time they appeared.

The *Collected Writings* now consists of twenty-two volumes (six volumes of correspondence, six volumes of notebooks and unpublished prose manuscripts, three volumes of daybooks and notebooks, two volumes of published prose, one volume of early poetry and fiction, three volumes of the variorum of printed poems, and one volume of a reader's edition of the poetry), but four decades of energetic work by a team of eight scholars, supported by an editorial board of an additional six scholars, has left many of the original goals unrealized. Some of the original intentions of the project were altered along the way. Whitman's journalism, which appeared from 1834 right through to the year of his death in 1892, was originally intended to be a key part of the *Collected Writings*, but, because of delays in preparing the manuscript, these projected six volumes were abandoned and only last year did the first volume appear, issued by another publisher; it is doubtful that any more volumes will be published. The original five volumes of correspondence appeared over an eight-year period and have since been extended with an appendix, supplement, and second, third, and fourth supplements (the last three published outside the *Collected Writings*); letters continue to be discovered, however, and the books thus have suffered the fate of all such printed collections—doomed to be incomplete and, with each new supplement or appendix, more difficult to use, as materials become scattered out of sequence and as indices become outdated. The last volumes of the New York University Press edition were published in 1984, and the project has now come to a halt, woefully incomplete. With one exception, all members of the editorial board are now deceased. Meanwhile, important new manuscript materials continue to surface regularly, with over one hundred previously unknown manuscripts appearing just in the past year.

The most glaring shortcoming in *The Collected Writings* volumes is the omission of Whitman's manuscript notes and drafts for his poetry. Whitman left behind an extraordinary number of manuscripts, which allow us to track the evolution and development of his major lifelong work, *Leaves of Grass*. Scattered in fragments in over seventy archives, these early drafts of his poetry provide the materials for tracking the origins of some of America's most innovative and important poetry. Because the poetic drafts are often surrounded by Whitman's notes about events and people he was encountering, the manuscripts also allow us to track the cultural, historical, and biographical bases of the work. We received a three-year NEH Collaborative Research Grant (2000-2003) to develop the necessary infrastructure for this work. We have developed strategies and style sheets for the difficult XML-encoding of transcriptions of Whitman's poetry manuscripts. We have procured high-quality scans of Whitman's manuscripts from numerous libraries. Now we must travel to numerous other archives to do digital photography ourselves, since many libraries do not have the resources to do the scans themselves, since many of the manuscripts are extremely fragile and cannot withstand the handling necessary for scanning, and since the decisions about just which manuscripts are significant and relevant for the various parts of the project are often difficult critical judgments, requiring the on-site presence of a researcher intimately familiar with Whitman's work. The project is moving from the initial "research" stage—identifying, organizing, describing manuscripts—to the stage of electronic archiving: we are now working with the Institute for Advanced Technology in the Humanities at the University of Virginia (IATH) to develop a fully accessible and searchable website that will serve scholars, students, and the general public as a comprehensive virtual collection of Whitman materials.

The *Archive* thus sets out to create an invaluable information and research tool that combines databases, textbases, and bibliographies to allow for the kind of research in Whitman's work and his times that have not been possible before. When Whitman died, his manuscripts were divided between his three appointed literary executors; when they

died, their families auctioned off most of this material, and it was scattered among institutional and private collections, mostly in the United States, but also abroad. As indicated, over seventy libraries now own Whitman manuscripts. Library holdings range from the vast collection in the Manuscript Division at the Library of Congress which contains, in the Feinberg-Whitman collection, over 30,000 items, to repositories that possess single manuscript fragments. (There are approximately 70,000 Whitman items in all repositories.) No scholar has ever been able to examine everything, and the digital archive is well on its way to providing the first opportunity for researchers to access Whitman's entire known corpus.

In addition to work with archives at institutions, the directors have been working with a very generous private collector, Dr. Kendall Reed of Des Moines, Iowa, who has, over the past decade, purchased many of the most important Whitman manuscripts that have been made available. Dr. Reed has agreed to allow the directors to make digital images of all the documents he owns for inclusion on the *Archive*. The directors plan to work with other private collectors as well. They have been negotiating with libraries across the country to get high-quality digital images of manuscripts and original print editions (including magazine publications) with the goal of creating a virtual archive, a single collection that contains everything Whitman wrote and that links all of the material so that students, teachers, and scholars can trace the development of particular poems, essays, and books, from first manuscript jottings through all the various printings. This kind of synthesis previously has not been possible because of the remarkably broad dispersal of Whitman materials. The *Archive*, then, will finally allow for a complete re-examination of Whitman's writing practices and of the connections between his various works.

It is a remarkable fact of textual scholarship that as we fast approach the 150th anniversary of the appearance in 1855 of Whitman's *Leaves of Grass*, we still know almost nothing with certainty about its genesis. Long after published versions have appeared of Whitman's juvenilia, of his late daybooks with listings of his supper guests

and gas bills, his postcards and much of his marginalia, his poetry manuscripts remain uncollected and unedited, and few of them are readily accessible. When the Variorum edition of *Leaves of Grass* was announced in 1955, the poetry manuscripts were promised as a central feature, but when the *Textual Variorum* actually appeared in 1980, it contained only the published versions of each poem (in fact, only the published *book* versions—the periodical variations have yet to be gathered and edited). There was speculation that a companion set of volumes dealing with the manuscripts would soon follow, but twenty years later nothing has appeared, and Whitman’s poetry manuscripts remain largely a mystery, a mystery the *Whitman Archive* sets out to solve. Our project is demonstrating, for the first time, just how extensive and illuminating Whitman’s manifold revisions were. We have located approximately 4,300 poetry manuscripts. His poetry manuscripts and periodical publications reveal, among other surprising things, a Walt Whitman who devoted extraordinary time and care to the creation of a poetry that *appeared* to be quick and spontaneous; his manuscripts expose an artist whose casual, loafing persona was in fact the result of intensive and obsessive artistic labor. Scholars and students will finally be able to explore the full evolution of Whitman’s poetic work, and this previously unavailable evolutionary record will revolutionize Whitman scholarship.

It is difficult to indicate briefly the value of making accessible Whitman’s poetry manuscripts and a unified finding guide to those manuscripts. Our *Archive* is in the process of enabling users to reintegrate the dispersed Whitman manuscripts. That is, they will be able to survey distributed collections in various repositories through a single finding guide and will be able to place side by side, virtually, manuscripts separated by great distances. In Appendix 1, we have provided a more detailed explanation of how study of his manuscripts can help us address one of the central mysteries in American literary scholarship, the emergence of the first edition of *Leaves of Grass*. Appendix 1 also addresses the controversies that have developed over Whitman’s manuscript sequence of love poems, “Live Oak, with Moss,” the poems that eventually evolved into the famous “cluster” called “Calamus.” As a final example in this appendix, we trace the

characteristically complicated development of Whitman's poem "A Noiseless Patient Spider," which was transformed from a prose jotting into a poetry draft before undergoing additional surprising changes through several periodical and book printings.

Exciting developments in electronic textual editing now offer us the chance to build upon the strengths of the monumental *Collected Writings* project, to correct its deficiencies, to remedy its oversights, and to produce a cohesive, comprehensive, searchable, and accessible *Archive*, one that will also—by virtue of being electronic—always be open to revision and supplementation. One healthy aspect of electronic scholarship, of course, is that criticism of projects like the *Archive* becomes therapeutic rather than purely judgmental: if a review of a book edition points out errors in transcription or errors of omission, there is nothing to do but cringe; if a reviewer of an electronic edition points out problems, however, that reviewer in fact becomes a collaborator. Omissions can be filled in; disputed dates can be resolved or at least acknowledged; ambiguities in transcriptions can be noted. We are building an electronic infrastructure that can make available the best of what scholars know now while making provision for future revisions and additions. We intend our work to be passed on, reused, and augmented by future scholars. We see the *Whitman Archive* as a monumental *process* rather than as a scholarly monument. The number of its collaborators should grow over the years as its ambitions continue to grow.

Our ultimate goal is to create a collection of Whitman's writings dynamic enough that it will encourage users to become the "athletic readers" Whitman always called for—readers who would not passively accept what others told them, but who would instead challenge and continually recreate the text, utilizing all the resources available to them. Our electronic archive is dedicated to the presentation of authoritatively edited transcriptions—encoded so as to allow complex interlinking and multiple display options—and of high-quality manuscript facsimiles, so that readers can check every transcription against the original and can examine idiosyncrasies of the manuscripts as material objects. An archive like this thus requires an extraordinary number of digital

images. The result will be a virtual archive that will allow in-depth scholarship on Whitman's work to take place in a way never before possible: manuscripts from widely scattered collections will now be easily available in excellent facsimiles that will allow for close examination, for creative juxtapositions with manuscripts from other collections, and for direct comparison to printed versions of the manuscript material. The "athletic readership" we seek to create will of course not be limited to scholars. Access to the *Archive* on the World Wide Web will assure that the vast and varied international interest in Whitman will be facilitated and enhanced—in fact, will be democratized as all readers of Whitman will for the first time have full access to the entire range of his work.

History

In 1995, Folsom and Price undertook a series of projects to help bring Whitman scholarship into the digital age. Our goal, as noted above, has been to build upon the strengths of the *Collected Writings* edition, most volumes of which were supported by grants from the National Endowment for the Humanities. The amount of Whitman's work is so huge that no two scholars could hope to edit it effectively in a lifetime—fourteen scholars spent the better parts of their careers editing the materials that now make up the *Collected Writings*. But we believed that developments in electronic scholarship had made it possible to significantly enhance and supplement the *Collected Writings* by editing the materials that were not included (and adding the materials that have come to light since the *Collected Writings* volumes were issued) and by digitizing and encoding the *Collected Writings* so that these disparate volumes—which often arrange material in confusing and contradictory ways—could function seamlessly and so that Whitman's materials could be presented effectively in any number of new configurations: by genre, by date, by keyword, by subject. The electronic environment could also allow us to make available not just printed transcriptions of Whitman's manuscripts, letters, and books, but to deliver actual facsimile images of the original documents.

In 1996, Folsom and Price joined with Primary Source Media (PSM), an innovative publisher of electronic scholarship and a subsidiary of the Thomson Corporation Publishing International, to produce a CD-ROM, part of PSM's *Major Authors on CD-ROM* series. PSM obtained permission rights from the New York University Press, and the entire 22-volume *Collected Writings* was re-keyed as electronic text and made fully searchable. As editors, we added a complete collection of fully annotated photographs of Whitman, a collection of all the reviews of Whitman's work that appeared during his lifetime, and a large selection of Whitman's manuscripts (as images but without transcriptions), culled from the Library of Congress and the New York Public Library collections. All manuscript images were accompanied by identifying annotations and were linked to the finished poems and prose pieces. We also added facsimiles of all the books of poetry—including all six editions of *Leaves of Grass*—so that users could examine the typeface, page layout, and general appearance of each poem and each book as Whitman's work evolved over the nearly forty years between his first edition of *Leaves* and his last.

Until this CD-ROM was issued, the only way such comparative examinations could be accomplished was through travel to one of the handful of library special collections that houses copies of all the Whitman editions. And the electronic versions have, of course, the further advantage of being fully searchable (since we included electronic text of each edition as well as the facsimile images) and of being easily compared, since it is possible to open several windows on the monitor, each containing a different edition of the poem under examination. The CD-ROM also produced, for the first time, a comprehensive index covering all the volumes in the *Collected Writings*, and the index was constructed so that users can simply click on the page number and be electronically transported to the relevant document. One reviewer commented that the CD-ROM brought “an entire library”—one filled with rare books—onto the user's desk and made the library instantly accessible. The CD-ROM was named one of *Choice's* “Outstanding Academic Books” for 1998.

While developing the CD-ROM, Price and Folsom also developed a website, open and freely available on the World Wide Web, that makes available a large selection of out-of-copyright Whitman material, including facsimiles and e-text of all the editions of *Leaves of Grass* published during Whitman's lifetime, all the photographs of him, all the contemporary reviews, and selected manuscripts, along with teaching ideas. PSM generously furnished e-text for Whitman's various books, and the Electronic Text Center at Virginia helped in preparing these e-texts in XML format.

During the first year of the website's operation, Price and Folsom affiliated with the University of Virginia's Institute for Advanced Technology in the Humanities (IATH), which ever since has offered valuable technical advice and provided server space. The website of the Whitman Archive is located at Virginia and is available at *whitmanarchive.org*.

In 2000, the directors collocated the standard Whitman current bibliography, compiled by Folsom in each issue of the *Walt Whitman Quarterly Review*, and added it to the website as an annual annotated bibliography of work about Whitman. This past year, Price and Folsom have developed a database for this bibliography that will make it searchable across years. The website now offers the only such compilation available for scholarship on Whitman during the past twenty years.

At about the same time Price and Folsom made several other important additions to the *Archive*. We added to the site Whitman's manuscript poetry sequence called "Live Oak, with Moss," which was the basis of his famous cluster of poems called "Calamus," one of the most discussed groups of Whitman poems over the past twenty years. Our site offers the only place scholars can view both images of the original manuscripts and searchable e-text transcriptions. Folsom and Price wrote a substantial hypertext biography of Whitman, now available on the site, with links to detailed descriptions of Whitman's associates, his key poems, and his central ideas.

Not content with the quality of images on the PSM CD-ROM (black-and-white images made from microfilms of manuscripts and books) Folsom and Price undertook to make, for display on the *Archive* website, high-quality color scans of all of Whitman's books published in his lifetime, all periodical publications of his poems, and all of his poetry manuscripts. We have worked with special collections librarians from the University of Iowa, the College of William and Mary, and the University of Virginia to gain access to rare first editions of Whitman's work so that high-quality scans could be made of every page of every edition. This part of the project is nearly complete.

Meanwhile, to develop the pedagogical possibilities of the website, Price teamed with Martha Nell Smith of the University of Maryland, a co-director of the *Dickinson Electronic Archives*, to develop a four-year project, *The Classroom Electric* (supported by the Department of Education's Fund for the Improvement of Post-Secondary Education), that investigated ways the *Whitman Archive* and the *Dickinson Electronic Archives* could be effectively used in the college classroom. Ten professors from around the country (including Price and Folsom) developed teaching websites linked to and drawing on the *Whitman Archive* and the *Dickinson Electronic Archives*; this project ended in the summer of 2001, and the final product is at classroomelectric.org.

In 2000, Folsom and Price received a three-year NEH Collaborative Research Award to undertake the difficult job of identifying, describing, categorizing, transcribing, and encoding Whitman's poetry manuscripts. This grant has allowed us to carry out a major redesign of the website and to reconceive the site as a dynamic XML-based project instead of an HTML-based site, as much of it was in its previous incarnation. The newly designed site became publicly accessible early this year and is being added to regularly. The NEH Collaborative Research Award also allowed us to hire a project manager at Virginia's IATH, which has facilitated interaction and cooperation with Virginia's Electronic Text Center, has allowed for coordination of efforts to develop the complex Document Type Definition (DTD) for Whitman manuscripts, and has provided regular consultation with IATH technical staff. The directors and *Archive* staff meet at IATH

each summer for several days to assess the previous year's work and plan for the coming year.

Price and Folsom have received substantial support from the University of Nebraska-Lincoln, and from the University of Iowa for research assistance, travel, and research time that have enhanced the NEH Research Award. When the NEH Collaborative Research Award ends in May, 2003, the *Archive* will be poised to begin the arduous work of presenting the poetry manuscripts that will have been gathered over the term of the grant, as the project shifts its focus to making this massive virtual archive accessible and searchable. Once accomplished, these invaluable fragile and widely dispersed documents will be available in high-quality scans to students, teachers, and researchers around the world, so that it should become unnecessary for most researchers to handle the actual manuscripts.

Methodology and Standards

In order to make a large amount of material available to users quickly, the Whitman project first developed a prototype HTML project (1995-2000). However, since 2000 we have worked exclusively at a more sophisticated and demanding level, adding new content to the *Archive* only in the form of structured data. Issues of preservation and of searchability mandate that the entire *Archive* must now be XML encoded. Many archivists refer to XML as the “acid-free paper of the digital age” because it is platform-independent and non-proprietary. XML encoding will also allow for specific searches of Whitman's writings—including important features of poetic structure—that are impossible with HTML documents. Virginia's IATH currently serves as one of the four sponsoring hosts of the Text Encoding Initiative (TEI), a particular implementation of XML and the de facto international standard for sophisticated electronic scholarly editions. With guidance from IATH, we have successfully developed a Whitman project DTD, establishing the grammar of our encoding. The Whitman DTD extends TEI

guidelines to deal with complex issues raised by manuscripts as material objects and intellectual constructs. Our Whitman project encoding guidelines are posted to the web for use by our geographically dispersed project staff. These guidelines are currently password protected but eventually will be made freely available for the benefit of other projects. A manuscript tracking database, specifically tailored to our project, enables us to manage the flow of work as we assign manuscripts and track their progress through the stages of transcription, encoding, multiple proofings, and ultimate posting on the web in the form of both digital images of the manuscripts and searchable electronic text.

The directors will focus effort on the poetry manuscripts, since the challenges in tagging the various traits of these complex documents will lead to coding solutions that can be employed later for Whitman's other writings. As indicated, our long-term goal is to encode and to provide digital images of all the documents in Whitman's vast oeuvre, including letters, notebooks, poetry manuscripts, daybooks, and prose writings. These documents will be made available in facsimile as permissions are received so that users of the transcriptions will at any time be able to gain access to a clear image of the document on which the transcription is based. Given that no one claims copyright on the content of Whitman's manuscripts, we are free to publish transcriptions. Reproduction of digital images does require permission from the repositories, and all of the major holders—University of Virginia, New York Public Library, University of Texas at Austin, Duke University, and the Library of Congress—have granted us the needed permissions. We have had similar good fortune with the smaller institutions.

Our practice is to procure from various repositories 24-bit color scans of the original manuscripts done at 600 dpi and saved as TIFF files. Scanner hardware, software, and settings are all recorded. When scanning documents is not possible, we rely on digital photography supervised by archivists at the participating institutions or done by ourselves, and lighting conditions and camera settings are recorded. Ultimately, we derive a smaller, faster-loading, high-quality JPEG image from the archival-quality TIFF. Each digital image is examined by project staff as it is being cleaned and cropped for

distribution on the Web. We benefit from the experience IATH has had with the *Blake Archive* and the *Rossetti Archive*, two projects with extensive imaging components.

We are making innovative use of Encoded Archival Description (EAD), an internationally recognized and widely used document type definition for archival finding aids that facilitates sophisticated search and retrieval of manuscripts. We have received finding aids already encoded by some repositories. Other institutions have provided us with paper or HTML finding aids. With their permission, we are converting these guides using the EAD tag set and eXtensible Markup Language. Using EAD provides us a means of bibliographical control of documents while also offering our users one entry way to the manuscript material (the EAD route to the manuscripts will be via a listing of repositories; another entry way will be via the search engine). Our efforts to integrate the disparate Whitman collections into a single, detailed, item-level finding aid is unprecedented, and we will provide a model for future projects that wish to organize data in a similar fashion. Although Whitman's manuscripts are widely scattered across more than seventy repositories, it is also true, fortunately, that by far the greatest number of his manuscripts, approximately eighty percent, can be found at a handful of collections at Duke University, University of Virginia, New York Public Library, University of Texas at Austin, and the Library of Congress. All of these major libraries are cooperating with our EAD work. In advancing this aspect of our work, we have also benefited from a small grant from the Gladys Krieble Delmas Foundation.

On the technical side, the *Whitman Archive* will provide an opportunity to experiment with methods for virtually reintegrating dispersed collections of Whitman manuscript materials using the standard for archival description, EAD; on the social and intellectual side, the project offers an unusual opportunity to experiment with a deeper engagement between scholars and archivists, in which scholars might enrich the item-level descriptions of archival materials. Finally, because it is driven by ongoing scholarly interest and embedded in a larger scholarly enterprise, this project will do more than

produce a prototype: it will maintain the resource it creates, and will continue to develop that resource beyond the period of the grant requested here.

Through a coordinated effort among a large number of libraries and institutions, our project will increase national understanding of how best to utilize and integrate EAD records made (and perhaps maintained) at disparate institutions by different authors. The project will help to define local practices with regard to specificity and consistency in item descriptions. Our work can serve as a model for future collaborations among libraries as they seek to develop and integrate EAD records of other materials. At the same time, we can provide a model illustrating the mutual benefits of scholar-archivist engagement.

Whitman frequently left his manuscripts untitled, and when he did title them, he often used a title different from that employed in any of the six distinct editions of Leaves of Grass. It is thus difficult to correctly identify and categorize Whitman's manuscripts, a difficulty compounded by the fact that Whitman's drafts of ideas for his poems, his first treatment of key images, and his initial explorations of rhythmic utterances sometimes began as prose jottings that were gradually transformed into verse. For example, in the case of his great elegy for Lincoln, "When Lilacs Last in the Dooryard Bloom'd," Whitman jotted down bare lists of words that provided a kind of chromosomal code for the fully realized poem. In such cases, scholarly specialists can help identify manuscripts that are in fact the working papers contributing to poems.

Our project builds upon work done previously by the American Heritage Virtual Archive and the Research Libraries Group (RLG), an organization that collects and provides access to library records on an international scale. One goal of the American Heritage Virtual Archive (funded Nov. 1996-June 1998 by the National Endowment for the Humanities) was to integrate "collections that have been dispersed among two or more institutions (such as the Mark Twain collections at Virginia and Berkeley)" and to experiment "with cooperatively creating a single finding aid, in which separate

components are used to describe each of the separate collections held at separate repositories” (<http://sunsite.berkeley.edu/amher/proj.html>). However, perhaps because of its broad scope—American heritage materials of all sorts—the goal of creating a single, integrated finding aid was not reached. We think this remains an important research objective, and we believe that a project driven by scholars with a focused interest in a more limited subject area (Whitman, rather than all of American Heritage) and which taps the experience of some of the earlier project’s participants (University of Virginia Special Collections, Duke University, and Daniel Pitti) can actually attain it.

To achieve the goal of the widest possible access to Whitman manuscripts, this project will work with RLG and the many repositories with Whitman holdings to ensure that MARC AMC summary descriptions and detailed EAD finding aids exist for all collections and are contributed to Archival Resources. Our item-level descriptions, born out of scholar-archivist collaborations, demonstrate the uses of EAD for deep scholarly research. While MARC records can be used to describe individual items, they are not ideal for providing a context for manuscripts, either within an institution’s collections or within the entire dispersed corpus of Whitman materials. By testing the use of EAD as a means of both providing context and heightened description, we will develop a model for use by other scholarly editing projects and for archives.

With our earlier grant from the NEH Collaborative Research program, we have completed a great deal of the fundamental work in the research phase of the poetry manuscripts project. To summarize, we have

- developed a DTD for tagging poetry manuscripts
- established project standards for digital images
- set up delivery mechanisms involving both hardware and software
- developed expertise in coding and delivery on the Web
- identified repositories and procured digital images for the vast majority of Whitman’s poetry manuscripts (approximately 80% of the total)

- developed an innovative response to problems of bibliographic control and delivery of manuscript material through the use of EAD, eXtensible Markup Language, and XSLT style sheets
- delivered a growing number of sample completed documents currently available at <http://www.whitmanarchive.org/manuscripts/>

For further information on methods and standards, please see the Technical Summary in Appendix 2.

Plan of Work

With the necessary set-up work now accomplished, a Preservation and Access grant will enable us to move seamlessly from the research to the delivery phase of the poetry manuscripts project. Where the print volumes of the New York University Press *Collected Writings of Walt Whitman* brought the reader print transcriptions of Whitman's often chaotic and ambiguous manuscripts, the *Whitman Archive* will allow readers, if they choose, to exercise their own editorial decision-making powers. They can consult (and, using the magnifying capabilities of the software, greatly enlarge) the manuscript facsimiles in order to verify or to question our transcriptions. Ultimately, the *Whitman Archive* will destabilize the "authority" of what have been taken to be "authoritative" editions by giving users the opportunity to do transcriptions of their own, even while recognizing and appreciating the massive work of the original editors. Transcriptions will become aids to reading the manuscripts instead of replacements *of* the manuscripts.

The next phase will allow these beginnings to be carried to completion, so that by the end users will have

- crisp color images of manuscripts
- reliable and deep transcriptions

- online union access through EAD and XML to holdings, complete with links to images and transcriptions
- more complete access to Whitman's poetry workshop than has ever before been possible

Folsom will take a leading part on this project, coordinating work at the University of Iowa Obermann Center for Advanced Studies, which continues to provide space and secretarial support. He will work full-time on the manuscripts for two months during each of the summers of the grant; Price, working in conjunction with the Electronic Text Center at the University of Nebraska-Lincoln, will also devote two months each summer to the project. Folsom and Price will devote 20% of their time fall and spring semesters, working with graduate students at Iowa and Nebraska to complete the transcription and encoding of the poetry manuscript materials and begin linking them to the printed versions of the texts already included on the electronic archive. Folsom and Price will also meet in July 2003, July 2004, and July 2005 at the Institute for Advanced Technology in the Humanities with John Unsworth and Daniel Pitti and other staff specialists to discuss technical issues, refine long-range planning, and to determine the protocols for the most effective use of the search engine, Tamino. Unsworth has already trained our project manager for onsite work at IATH. Pitti, the principal architect of the EAD standard, will spearhead the effort to coordinate EAD implementation across collections in a way that ensures the interoperability of records produced by different institutions and participants. He has already committed a substantial amount of time and advice about EAD to Price and Katherine Walter, Chair of Special Collections and Preservation Department at the University of Nebraska Libraries, who are heading up the effort to build a comprehensive online finding aid to Whitman collections using EAD. Pitti meanwhile has also been of great help in demonstrating how disparate finding aids can be displayed through a single user interface.

From May 2003 to November 2003, Folsom, Price, and their staff will work methodically with the collection of images that they have gathered and listed via EAD. We will

process images, transcribe, annotate, and do the XML-encoding that will enable linking and searching. We will start with Library of Congress documents—the largest Whitman collection. The processing of this collection will be well underway when the grant begins. Price, working with various graduate students, has photographed every poetry manuscript held in this largest of all Whitman collections. Still, the magnitude of this collection means that we have a considerable amount of transcription, encoding, and annotation left to do. We have nonetheless made remarkable progress, and nearly all of our completed sample documents are from the Library of Congress. Meanwhile we will continue our work with EAD by encoding or procuring from the repositories themselves EAD records for the remaining large collections.

From December 2003 to May 2004, we will work on the University of Virginia manuscripts. Folsom and Price will continue to supervise graduate students in the transcribing of poetry manuscripts and will continue to build links between the manuscript images and the XML files of the poems. We will fine-tune the display of manuscripts, and we will coordinate and reconcile different implementations of EAD.

From June 2004 to November 2004, we will work on the manuscripts held at the Harry Ransom Center at the University of Texas. We will test the use of the search engine, and we will trouble-shoot any remaining problems with our EAD files.

From December 2004 to the end of April 2005, we will work on the manuscripts held at the Beinecke Library of Yale University. In addition, Folsom and Price will spend a week in Iowa City at the University of Iowa's Obermann Center for Advanced Studies, working on an overall explanation and guide for use of the manuscript and periodical versions of the poetry, developing an effective set of instructions that will allow users to access the materials effectively and efficiently. We will continue to supervise graduate students in the transcribing and linking of poetry manuscripts. We will also further refine the use of the search engine.

From May 2005 until November 2005, we will concentrate on the processing and presentation of manuscripts held in the Trent Collection at Duke University. Based on the meeting held at the Obermann Center, we will also further fine-tune the guide to the use of the manuscript and periodical versions of the poetry.

From November 2005 until April 2006, we will conclude our work by focusing on those libraries with very small Whitman collections.

While work on the highly complex poetry manuscripts moves forward, other parts of the Whitman project will also advance without external grant support. Matt Cohen of Duke University is undertaking to make Horace Traubel's *With Walt Whitman in Camden*—an invaluable nine-volume record of Whitman's late conversations—available online and in searchable electronic form. Susan Belasco of the University of Nebraska-Lincoln is gathering, digitizing, transcribing, and encoding for the first time a comprehensive collection of the printings of Whitman's poetry in periodicals. Meanwhile the annual bibliography of scholarship is constantly being updated by Folsom.

Staffing

The co-directors of this project are Ed Folsom, F. Wendell Miller Distinguished Professor of English at the University of Iowa, and Kenneth M. Price, Hillebrand Professor of Nineteenth-Century American Literature at the University of Nebraska-Lincoln. Folsom is the editor of the *Walt Whitman Quarterly Review*, the international scholarly journal of record for Whitman studies. He is the author of *Walt Whitman's Native Representations* (Cambridge UP, 1994) and the editor or co-editor of three books about Whitman. As director of the NEH-sponsored "Walt Whitman: The Centennial Project," he organized the 1992 "Whitman Centennial Conference" at The University of Iowa and the 1992 symposium on "Whitman in Translation." He recently directed a conference held in Beijing, China, "Whitman 2000: American Poetry in a Global Context." A volume of selected papers from that conference is forthcoming. Price is the author of *Whitman and*

Tradition (Yale UP, 1990) and the editor or co-editor of two books on Whitman. Price also served as co-director of the FIPSE-sponsored project *The Classroom Electric: Dickinson, Whitman, and American Culture*. Folsom's and Price's essays on Whitman and their reviews of Whitman scholarship have appeared in numerous journals and books.

The co-directors have shared responsibilities for the project and expect to continue to work as collaborators on the *Whitman Archive* for years to come. They worked together on the conceptualization of the CD-ROM, the planning of materials to be included, the identification and annotation of manuscripts, the writing of guides and introductory materials, and the development and testing of the final product. Folsom oversees the Iowa center of the *Archive*, where he generates and updates the ongoing bibliography of Whitman-related materials, with the assistance of a research assistant. Both Folsom and Price have received support from internal grants at their respective institutions. The directors have each contributed major scholarly works to the website, including Price's edition of all the contemporary reviews of Whitman's work and Folsom's annotated edition of all known photographs of Whitman. Before Price moved to Nebraska, he was at the College of William & Mary in Virginia, and he and Charles Green, the first project manager of the *Whitman Archive* met frequently with the director and staff of Virginia's IATH. Folsom has traveled to the University of Virginia six times to take part in extended meetings with IATH staff.

Folsom and Price regularly consult members of their Advisory Board, composed of prominent Whitman scholars, leaders in the field of electronic scholarship in the humanities, and scholars involved in other electronic literary archives. The board includes Roger Asselineau, professor emeritus at the University of Paris-Sorbonne and the only surviving member of the original Editorial Board of the *Collected Writings of Walt Whitman*; Julia Flanders, Director of the Women Writers Project and Associate Director of the Scholarly Technology Group at Brown University; Walter Grünzweig, professor at the University of Dortmund and author of books on Whitman's international

reception; Jerome McGann, the John Stewart Bryan University Professor at the University of Virginia and director of the Electronic Research Archive of the *Complete Works of Dante Gabriel Rossetti*; Joel Myerson, Carolina Distinguished Professor at the University of South Carolina and one of the preeminent American textual scholars; David Reynolds, Distinguished Professor at the Graduate School of the City University of New York and author of influential books on Whitman and American literature; Susan J. Rosowski, Adele Hall Professor of English at the University of Nebraska-Lincoln, and General Editor of the *Willa Cather Scholarly Edition* and of its electronic component, the *Willa Cather Archive*; and John Unsworth, Professor of English and Director of the University of Virginia's IATH.

A growing team of people work on the *Whitman Archive*. Project directors Folsom and Price each benefit from strong institutional support, with Iowa providing a graduate assistant specifically for the *Whitman Archive* to Folsom, and with Nebraska providing two assistants to Price. In addition, the University of Nebraska-Lincoln libraries have taken on the Whitman project as a demonstration case in digital scholarship. The Whitman project and the UNL libraries have forged an extraordinary and mutually beneficial partnership. Currently, four librarians (Katherine Walter, Mary Ellen Ducey, Jean Dickinson, and Brian Pytlik-Zillig) and one project assistant (Melissa Sinner) are devoting a considerable amount of their time to solving various problems associated with the task of building an online Whitman archive. They work on transcription of manuscripts, development of EAD records and the coordination of disparate EAD records from various institutions, design and navigation issues, and XSLT stylesheet development for the display of XML documents. The project also benefits from a TEI specialist, Brett Barney, who works sixteen hours per week for Price. We enjoy further assistance from a Technical Editor, Charles Green, who has been involved with the project since its inception in 1995 (Green is now head of Information Technology at St. Louis University).

As mentioned previously, we receive expert advice from IATH directors John Unsworth and Daniel Pitti. An NEH Preservation and Access grant will also allow us to retain a graduate student project manager on-site at IATH.

Dissemination

The final product of this project will be a major Web research tool, offered free to anyone who wants to make use of it. Folsom and Price are dedicated to the open accessibility of materials on the site, in part because Whitman himself was such an advocate of democratic accessibility to knowledge and experience. Of all of America's writers, Whitman deserves a vast and widely accessible site. As the site grows, parts may have to be limited to subscribers, depending on copyright restrictions and permission fees. Response to the site to this point indicates that a wide range of users—from high-school students to prominent scholars—visit the *Whitman Archive* regularly. The site has received significant publicity, including articles in the *Washington Post* and *The Chronicle of Higher Education*. Currently the site is accessed an average of 2,500 to 3,000 times per day.

Appendix 1: Samples of Materials

Reviewers of this proposal are invited to examine our work-in-progress on Whitman's manuscripts at <http://www.whitmanarchive.org/manuscripts/>.

With the assistance of Daniel Pitti of IATH, we have also developed a prototype demonstration of how disparate finding aids can be displayed through a single user interface. Additional experimentation and development will lead to refinements, including the ability to search across and within all finding aids. See <http://jefferson.village.virginia.edu:8090/saxon/findaids/documents/allwhitman.new.html>

One of the great mysteries in American literary scholarship is the genesis of the first (1855) edition of *Leaves of Grass*. Since virtually all of Whitman's manuscripts of the volume's twelve poems and prose preface have disappeared, critics and biographers have usually presented *Leaves* as an artistic immaculate conception, apparently emerging from nowhere. We are left with very few traces of Whitman's creation of the book that redefined American literature. There are several passages in a couple of the poet's notebooks and some very rare holograph proto-versions of some passages of poetry. But the printer's copy of Whitman's manuscript has never been found, and biographers and critics have assumed that Whitman--a printer himself who tended to value his poetry only when it was set in type--simply tossed the manuscript onto the floor of the printer's shop when the compositors were done with it. Whitman told Horace Traubel in 1888, "You have asked me questions about the manuscript of the first edition. It was burned. Rome [Andrew Rome, the printer] kept it several years, but one day, by accident, it got away from us entirely--was used to kindle the fire or to feed the rag man." In a recent article in *Resources for American Literary Study*, Michael Feehan notes that "we know that [Whitman] participated in setting type for the first, 1855, *Leaves*, though we cannot be sure of the extent of his contribution. Unfortunately, we lack the manuscript, so we do not know whether Whitman designed the book while he was writing it or later on, after consultation with his publishers."

Thanks to a remarkable manuscript preserved in the University of Texas Humanities Research Center (HRC), however, we now can offer some substantive answers to such questions. Biographers and critics have always assumed that Whitman was actively involved in the design and even the typesetting of the 1855 *Leaves*, but the HRC manuscript provides the first actual evidence of Whitman's structuring of the book. From this manuscript, we can gain insight into the extent of Whitman's involvement in the design and production of his volume, and we can finally confirm some previously unsubstantiated claims about the first edition--including Whitman's recollection that his prose preface to the first *Leaves* was added at the last minute ("It was written hastily

while the first edition was being printed in 1855" [*Correspondence 2*: 100]). The HRC manuscript--worn and soiled, after obviously spending some time on the Rome brothers' printing shop floor—consists of, on one side, a heavily revised section of a proto-version of the poem that would eventually become "Song of Myself" (see Figure 1). Key images of the eventual poem here appear in surprising juxtapositions. On the other side are Whitman's scribbled notes for the arrangement, size, and decoration of the 1855 *Leaves* (see Figure 2). Whitman often wrote notes and drafts on the backs of various documents, including the backs of abandoned drafts of poems. During the years this manuscript has been housed in the HRC, scholars have understandably been far more interested in the side containing the draft of the poem and have ignored the cryptic and seemingly disjointed notes on the verso. But those notes cast light on the mystery of Whitman's plans for the first edition of *Leaves of Grass*.

The 1855 *Leaves* consisted of twelve poems, all untitled. On the HRC manuscript, Whitman lists the twelve poems, but in order to list them he has to use working titles. The manuscript thus gives us our first indication that Whitman referred to his poems by name, even though he would withhold the titles in print. He gives most of the twelve poems first-line titles, a practice he would frequently employ during the rest of his career. In the manuscript, the poems appear in an order significantly different from the arrangement he finally settled on: "I celebrate myself" ("Song of Myself") came first (as it would in the printed edition), followed by "A young man came to me" (the poem that would develop into "Song of the Answerer"), "A child went forth" ("There Was a Child Went Forth"), "sauntering the pavement" ("Faces"), "great are the myths" ("Great Are the Myths"), "I wander all night" ("The Sleepers"), "Come closer to me" ("A Song for Occupations"), "Who learns my lesson complete" ("Who Learns My Lesson Complete"), "Clear the way there Jonathan" ("A Boston Ballad"), "Resurgemus" ("Europe: The 72d and 73d Years of These States"), "To think through the retrospections" ("To Think of Time"), and "Blacks" ("I Sing the Body Electric").

Whitman's use of these shorthand names allowed him to work out an arrangement of poems. Only one of the twelve poems had previously been published, and Whitman continued to call it by the same title under which it had originally appeared in the *New York Tribune*--"Resurgemus." Perhaps the most interesting working title is "Blacks" (the word is smudged almost beyond recognition on the manuscript), which underscores how race and the slave auction are at the heart of the poem that would become "I Sing the Body Electric." At the time he wrote these notes, "Blacks" was to be the concluding piece, a position that would have intensified the importance of slavery in the book. In two cases, Whitman groups pairs of poems: "A young man came to me" is bracketed with "A child went forth," and "Who learns my lesson complete" is bracketed with and joined by an ampersand to "Clear the way there Jonathan." These subgroups suggest that Whitman had a hitherto unrecognized organizational plan for the book, a plan he would soon abandon in favor of what became the final arrangement.

Anticipating his notes in the 1860 "Blue Book" copy of *Leaves*, where he compares the number of words in his book with those in the Bible, the *Iliad*, the *Aeneid*, the *Inferno*, *Paradise Lost*, and other classics, Whitman here counts the number of letters that appear on average in "one of my closely written MS pages" (he figures 1,600) and compares it to the number of "letters in a page of Shakespeare's poems" (1,120). He makes the comparison of his manuscript pages to Shakespeare's printed pages so that he can estimate how long the printed *Leaves* will be. Whitman's arithmetic covers the page as he calculates that his book will contain 116 pages. Either his estimates were grossly inaccurate, or, more likely, he had not yet decided on the large page size, since the first edition ended up with only 95 pages, including his ten-page prose preface (which he clearly had not yet written, since it is not mentioned in these notes). He lets us know his *Leaves* manuscript has "about 127 pages" (this is the first we've known the size of the phantom manuscript). And in one corner of the page of notes he registers that he "left with Andrew [Rome] 5 pages MS," so we know that these notes were written relatively close to the publication of *Leaves*, since at least some of the book was already being set in type. Since so much changed between the making of these notes and the completion of

the book (including the addition of the preface and the reordering of the poems), this manuscript reveals that Whitman was actively making substantive last-minute changes--reorganizing, adding, and deleting, even while Andrew Rome was typesetting the poetry.

One of the revelations of the HRC manuscript is that Whitman divided "I celebrate myself" into five parts. Critics over the past century have argued endlessly about the partitive structure of "Song of Myself," and countless schemes have been proposed. Whitman added to the confusion by the changes he made from one edition to the next: in the first edition of *Leaves*, he did not section the poem except by inserting frequent spaces between groups of lines, thus creating very irregular stanzas. By 1860, he numbered each of those stanzas, almost like biblical verses, and ended up with 372. In 1867, he added 52 section numbers and retained the stanza numbers; in 1881, he dropped the stanza numbers but kept the 52 sections. Critics have always suspected a partitive structure deeper than that indicated by Whitman's numbering schemes. Edwin Haviland Miller has recently summarized the various "searches for structure," beginning with William Sloane Kennedy's 1896 suggestion of a three-part structure; most of the suggestions range from four to nine parts, with five the most popular number of divisions. The manuscript reveals that Whitman originally divided the poem in five parts, a fact that is perhaps enough to restore one's faith in criticism.

Whitman projected that "I celebrate myself" would run 62 pages, and he indicated the number of pages in each of the five sections. Since the poem in print actually occupied only 43 pages, we need to do some math of our own to locate the approximate places where Whitman conceived of the major breaks in the poem. His notations suggest that he saw the first movement of the poem occupying what became the first fifteen sections of the 1881 "Song of Myself"; his second major division included the eventual sections 16-27; the third part ran from sections 28-34; the fourth from 35 to somewhere in section 42, and the final from section 42 (perhaps beginning with the line "This is the city. . . . and I am one of the citizens") through 52. That turns out to be very close to Carl F. Strauch's early (1938) suggestion that the main parts of the poem break into sections 1-18, 19-25,

26-38, 39-41, and 42-52. While Whitman's notes certainly don't determine the "correct" division, the HRC manuscript does give us our first indication that he conceived of the poem partitively and furnishes scholars with the beginnings of an author-sanctioned reading of the poem in five sections.

The HRC manuscript also indicates that Whitman originally planned to include an illustration in the book, the figure of "A large ship under her full power of steady forward motion." This note suggests that the decorations that the poet finally employed in the 1860 *Leaves*—a finger with a butterfly, a cloud-encircled globe, and an ocean with a rising or setting sun—were the realization of a longstanding desire to offer such visual accompaniments to his text. We don't know why he abandoned the ship ornament in the first edition—perhaps for financial reasons, or perhaps because the ship-motif had yet to surface in his poems the way it would after the Civil War, when poems like "O Captain! My Captain!" ("The ship has weather'd every rack") and "Passage to India" ("Sail forth—steer for the deep waters only, / . . . And we will risk the ship, ourselves and all") were predicated on the emblematic significance of a ship under full power.

The verso of the HRC manuscript of an early version of a section of the poem he would eventually entitle "Song of Myself" turns out, then, to be one of the most valuable and instructive of all surviving Whitman manuscripts. It is Whitman's early work sheet, the only record we have of the poet's plans for the first edition of *Leaves of Grass*. And the passage of "Song of Myself" on the other side of the manuscript opens up a particularly tricky set of textual challenges: it appears that Whitman wrote his instructions to the printer on the back of an abandoned draft of "Song of Myself," since it contains some images and lines that eventually appear in the 1855 *Leaves*, along with some lines that do not appear. Furthermore, the lines that do later appear are arranged in a pattern remarkably different from their eventual use in the published version. Combined with several other manuscript sheets in the HRC and elsewhere, we can begin to piece together a kind of ur-version of "Song of Myself"—what appears to have been a full version of the poem that was radically different from the version Whitman printed in 1855. These

manuscripts suggest that "Song of Myself" did not emerge full-blown from Whitman's early notebook jottings but rather went through at least one complete early draft. It will be crucial, then, in editing these manuscripts to carefully link each line and image to its appearance in the printed versions of the poem and to note all lines and images that were ultimately discarded before the published 1855 version. On this HRC manuscript, for example, line 5 read (before Whitman's revisions), "And I dare not say the bay mare is less than I because she reads no newspaper." In the manuscript, this line is crossed out by Whitman, but in his published version of "Song," the line reappears as "And the look of the bay mare shames the silliness out of me." In the manuscript, Whitman alters that line to read "And I guess the chippy bird [crossed out: mocking bird] sings as well as I, although she never learned the gamut." This line emerges in the 1855 published "Song" as "And the mockingbird in the swamp never studied the gamut, yet trills pretty well to me." In the 1855 "Song," this line appears just before the "bay mare" line, the one heavily revised line of the manuscript thus emerging as two contiguous lines in the published version.

The final visible line on the manuscript—"And to me the cow crunching with depressed head surpasses every statue"—appears in the 1855 "Song" as "And the cow crunching with depressed head surpasses any statue," but this line appears in the published version over 350 lines after the others. Meanwhile, the penultimate line in the manuscript—"They fill the worm-fence, and lie on the heaped stones, and are hooked to the elder and the poke-weed"—is transformed in the 1855 "Song" into one of Whitman's most familiar lines—"And mossy scabs of the wormfence, and heaped stones, and elder and mullen and pokeweed"—a line that appears in the published version nearly 200 lines earlier than the two contiguous lines. Other lines of this manuscript reappear in various forms in three other places in the published "Song" and one line appears in a different version in Whitman's prose preface to the 1855 *Leaves*.

This manuscript and its companion pieces in the HRC and in the Library of Congress raise key questions about the compositional history of what is arguably America's best-

known poem. There appears to be a proto-"Song of Myself" containing many of the same or similar lines and images that are in the final version, but arranged in radically different order, with lines from stanzas in the ur-version dispersed out over the entirety of the published version. Only a hypertext variorum, which will allow users to click from any one line of the manuscripts to the related lines in the published versions of "Song," will be able to indicate the complexity of Whitman's drafting techniques and rewriting of the poem he eventually named "Song of Myself."

Another example will illustrate the complexity of the poetry drafts that led to Whitman's "clusters" of poems in *Leaves of Grass*. In the late 1850s, Walt Whitman composed a sequence of twelve sonnet-like love poems. He took care with this powerful sequence, inscribing fair copy versions of the poems into a notebook. (These manuscripts are far less messy than his typical poetry drafts.) Whitman never published the sequence as such. Instead, he tore the individual leaves out of the notebook, revised some of the poems, and altered their order when he published the much longer forty-five-poem "Calamus" cluster in the 1860 edition of *Leaves of Grass* (see Figure 3). These changes made a once fairly clear narrative far less clear. Whitman may have concluded that the poems, frank in their treatment of male-male love, were too risky, revealing, or compromising.

Despite the daring and originality of Whitman's achievement, critics have been slow to appreciate it. Whitman himself didn't help much: he said next to nothing about the sequence in later years, and if a love affair lay behind the sequence (as is commonly thought), he commented on it only obliquely. In fact, the existence of the sequence was utterly unknown to scholars until 1953 when Fredson Bowers discovered it while working with the Valentine manuscripts now at the University of Virginia. For various reasons, including the reluctance of scholars at that time to discuss same-sex love, Bowers's discovery was left largely ignored and its implications unexplored.

We can't know with certainty about Whitman's romantic life in the late 1850s, though some evidence points to a strong attachment and troubled relationship with Fred

Vaughan, a horse-car driver and a frequenter of Pfaff's beer hall, where Whitman and other young men formed friendships and intense bonds of affection and love. Cultural historians rightly note, however, that it is a tricky matter to draw inferences from nineteenth-century discourses of intimacy. The coded expressions and indirections of love talk are not easy to decipher, and expressions of fervent attachment may or may not imply the same level of sexual intimacy as such an expression would imply in our own time.

As Steven Olsen-Smith and Hershel Parker point out in "'Live Oak, with Moss' and 'Calamus': Textual Inhibitions in Whitman Criticism," the tendency in Whitman criticism has been to speak inexactly about clusters and even individual poems. Critics frequently refer to, say, "Out of the Cradle Endlessly Rocking" or "Calamus" without specifying which edition is meant and sometimes with the implication that the remark holds for all versions of a poem or cluster. Given Whitman's current status as icon of gay America, and given the imprecision with which critics have typically referred to Whitman texts, an explosive mix was brewing.

In 1992, Alan Helms published "Live with Oak Moss," in *The Continuing Presence of Walt Whitman*, edited by Robert K. Martin. Helms articulated his editorial policy as follows: "I give the 'Live Oak' poems in their first published form--that is, as they appeared in the third *Leaves of Grass* in 1860 in the form Whitman approved for publication. I've simply removed them from "Calamus" and restored them to Whitman's original order" (187). Helms's editing of the sequence received blistering criticism in 1996 from Hershel Parker in his essay (also included on our site) "The Real 'Live Oak, with Moss': Straight Talk about Whitman's 'Gay Manifesto.'" Parker points out that Helms had put forward a combination different from anything Whitman had ever compiled (the revised 1860 versions of the "Live Oak" poems in the original sequence's order). Parker notes that "there is nothing merely 'academic' about the distinction between a correct text and an incorrect text of this Whitman sequence" (159). Parker insists that Helms has misinterpreted Whitman by reading a spurious text and that he himself rather

than Helms offers the "genuine" or the "real" "Live Oak, with Moss." Parker gets the better of the textual editing argument, though his language is unnecessarily harsh. Parker offers a careful transcription of Whitman's text, a closer approximation to what the poet originally inscribed in "Live Oak," though Parker, curiously, invokes a language of authenticity that is typically reserved only for tangible objects (such as the physical manuscripts themselves now housed in the University of Virginia Special Collections). On our site, one can view digital reproductions of Whitman's individual manuscript leaves. And while these are even closer approximations to Whitman's original manuscripts than Parker's "real" or "genuine" "Live Oak," they are not, of course, identical with those material objects.

One can see why see why the stakes are high: as Helms points out, it is possible to argue that "Live Oak" as opposed to the fuzzier "Calamus" is the "only sustained treatment of homosexual love in all of [Whitman's] poetry." How those documents are edited, taught, and interpreted are matters of considerable academic and social importance.

A final example will indicate the complexity of poetry drafts—in prose and verse—and of periodical variants. Again, the current Variorum edition of *Leaves* does not contain either manuscript or periodical variants of the poems, and the *Whitman Archive* will be the first place the full histories of Whitman's poetic composition will be available. Let us consider one of Whitman's best-known short poems, "A Noiseless Patient Spider," which first appeared in Whitman's *Passage to India* book experiment and then was incorporated into *Leaves of Grass* in the 1881 edition. The poem, surprisingly, has its origins, as do many of Whitman's poems, in his prose jottings in a notebook. In this case, the originating passage dates to a notebook kept during the late 1850s and early 1860s:

First I wish you to realize well that our boasted knowledge, precious and manifold as it is, sinks into niches and corners, before the infinite knowledge of the unknown. Of the real world of materials, what, after all, are these specks we call knowledge? —Of the spiritual world I announce to you this—much gibberish will always be offered and for a season obeyed—all lands, all times—the soul will yet

feel--but to make a statement eludes us—By curious indirections only can there be any statement of the spiritual world—and they will all be foolish—Have you noticed the [worm] on a twig reaching out in the immense vacancy time and again, trying point after point? Not more helplessly does the tongue or the pen of man, essay out in the spiritual spheres, to state them. In the nature of things nothing less than the special world itself can know itself— (*Notebooks and Unpublished Prose Manuscripts*, 2051).

Here we see Whitman working with a philosophical idea, about how the "spiritual world" can be accessed from the material world, how the vast regions of the unknown can be indicated by language, "the tongue or the pen of man." To ground the philosophical investigation, Whitman hits upon a tentative image—he puts in brackets the word "worm" and imagines a silkworm putting forth filaments.

The image would stay with Whitman over the years and would emerge again during the Civil War, when the ideas he is ruminating about suddenly manifest themselves in a draft of a poem, written on a page in one of his Civil War notebooks, amidst his prose jottings of his visits to wounded soldiers (see Figure 4). Here, the "[worm]" has become a spider, an analogue of the soul, "throwing out filament after filament," but the poem now shifts surprisingly into a set of images and ideas much more related to his "Calamus" poems about "manly love," and the vastness that the spider/soul is exploring are not the spiritual world or the unknown so much as "the fathomless oceans of love." The poem ends on a moving cry for "latent souls of love— / You pent and unknown oceans of love!" This draft, then, is an early version of "A Noiseless Patient Spider," but it is also closely related to his poems exploring sexuality and desire, poems like "From Pent-up Aching Rivers" and "I Am He That Aches with Love." In the draft, we can see the poet reaching, throwing out lines and filaments into the unknown as he seeks to attach his quest to language: "as the the," he writes in one tantalizingly incomplete line, abandoning the object, leaving language hanging on the promontory, incomplete. Finally, in 1868, Whitman publishes the poem as an untitled part of a cluster called "Whispers of Heavenly Death" in *Broadway Magazine* (see Figure 5). Here the poem is close to what it

would be in its final form in *Leaves of Grass*, but still with some key differences in punctuation. In the periodical version, the casting out of the spider/soul is still broken, tentative, restricted again and again by commas—"I mark'd, where, on a little promontory, it stood, isolated." In the final version, Whitman's "exploration"—literally, his "crying out," as the etymology of the word suggests—becomes dominant, erasing the pauses, the separations, as the poem enacts the casting out of long seamless filament/lines: "I mark'd where on a little promontory it stood isolated, ..." (see Figure 6). Once again, the changes--many and often subtle--that move us from the ur-poem to the familiar final version are invisible in the current Variorum in the *Collected Writings*. The *Whitman Archive* will for the first time allow students and scholars to track such illuminating shifts and revisions and fracturings in Whitman's poems as they move from originating ideas, often in prose notebooks, to drafts of poems that lead often to several different published poems, to periodical publications that often are close to the final version but that contain some key differences. The manuscripts and periodical versions of all of Whitman's poems are steps along a compositional evolution—crucial steps for this poet who based his poetics on evolution, on the faith of an ongoing process of life, democracy, and poetry that an electronic edition will for the first time let us explore in its entirety.

Appendix 2: Technical Summary

Servers

The electronic files containing the texts (both TEI representations and EAD descriptions), images, and supporting apparatus for the Walt Whitman Archive are disseminated through an Apache HTTPD server, with separate daemons, as appropriate for supporting applications. The Apache HTTPD server operates on a Sun 420R Enterprise Server (jefferson.village.virginia.edu) and Solaris 8 operating system. The Sun Server is located at the University of Virginia, and is jointly administered by the Institute for Advanced Technology in the Humanities (IATH) and the University's Information Technology & Communication (ITC), with ITC providing 24x7x365 support.

Extensible Markup Language (XML) and Related Standards

Data and Metadata

Extensible Markup Language will be used to represent a wide variety of textual materials: machine-readable transcriptions of manuscript and published items (Text Encoding Initiative (P4): <http://www.tei-c.org/>); description and intellectual access to archive and manuscript materials (Encoded Archival Description (EAD, version 2.0 (pending): <http://www.loc.gov/ead/>); description, control (or administration) and structural information of pictorial, graphic, and text images (Metadata Encoding and Transmission Standard (METS: <http://www.loc.gov/standards/mets/>).

XML will also be used, as appropriate, for context and help pages associated with the *Walt Whitman Archive*, as well as publication of databases.

METS

METS is an emerging standard for describing and controlling digital objects, and is intended to support long-term preservation and access. METS is currently jointly maintained by the Library of Congress and the Digital Library Federation. METS is designed to be used with other metadata schemas, in particular schemas for descriptive data such as EAD and Metadata Object Descriptive Schema (MODS: <http://www.loc.gov/standards/mods/>), and schemas for administrative data, techniques and conditions of creation and storage, intellectual property rights, provenance of digital files (source, generational derivation, and migration/transformation information). To the extent possible, the *Walt Whitman Archive* will monitor and adhere to emerging archive and library standards and best practices with respect to descriptive, administrative, and structural data.

TEI

The TEI is maintained by the Text Encoding Initiative Consortium, jointly administered by University of Virginia, Brown University, Oxford University, and the University of Bergen. In consultation with XML and TEI experts at IATH, the *Walt Whitman Archive* has developed a TEI-derived DTD. The modifications to TEI conform to the guidelines provided in Chapter 29, "Modifying and Customizing the TEI DTD" in the *Text Encoding Initiative Guidelines for Electronic Text Encoding and Interchange* (Oxford: TEI Consortium, 2002). The *Walt Whitman Archive* DTD and documentation of the modifications of the TEI will be available on the *Walt Whitman Archive* site.

EAD

EAD is jointly maintained by the Library of Congress and the Society of American Archivists. Version 1.0 was released in 1998, and release of version 2.0 is anticipated in the fall of 2002. The *Walt Whitman Archive* follows the guidelines provided in the *EAD*

Tag Library (Chicago: Society of American Archivists and Library of Congress, 1998), and the *EAD Application Guidelines* (Chicago: Society of American Archivists and Library of Congress, 1999). The *Walt Whitman Archive* also collaborates with repositories holding Whitman manuscripts in the creation and modification of EAD finding aids, and, to the extent feasible, works to reconcile differences in practice and adheres to emerging national consensus on best practice.

Creation, Maintenance, and Publishing Software

Indexing of EAD finding aids, TEI texts, and the descriptive data in METS instances will be provided by Tamino (Software AG), XML indexing software. Tamino is installed on the Sun 420R Enterprise Server, and employs a dedicated Apache HTTPD daemon. Software AG is committed to support of XML and related XML technologies such as XPATH and XQUERY for standard declarations of searching, and Extensible Stylesheet Language-Transformations (XSLT) for conversion of XML to HTML for viewing. In addition, a combination of commercial and open source software will be used in creation, maintenance, parsing, and entity management (NoteTab, XMetal, Epic Editor, XML Validator, and so on). The project will monitor and employ the emerging XML Catalog standard under development by The Organization for the Advancement of Structured Information Standards

(OASIS: <http://www.oasis-open.org/committees/entity/spec-2001-08-06.html>).

PHP, a scripting language used to extract information from a database for dynamically generating web pages, is also being used for three major sections of the Archive: the *Walt Whitman Encyclopedia* entries, the Whitman Image Gallery, and the Bibliography of Scholarship. PHP allows us to keep content files separate from design files, greatly reducing the chance for error during revisions. PHP also enables customized display of

information within a database (MySQL); for example, bibliographic entries can be sorted by author, year, title, or annotation.

Imaging (Text, Graphic, and Pictorial Material)

We are currently considering a number of options for the scalable presentation of images of manuscript pages. Our final decision will be based on which of these options will produce the most appropriate behavior for Whitman materials while imposing the fewest restrictions on the user. These can be divided into two categories: server-side and client-side approaches.

- Server-side. Both of the pieces of software listed below utilize wavelet compression to gradually feed the user increasing resolution of parts of an image (rather than loading the entire image at once).
 1. Mr. Sid, proprietary software already owned by the University of Virginia library.
 2. EyeSpy Image Viewer, proprietary software from AXS Technologies; John Unsworth has negotiated a one-year free trial of this software.

- Client-side. Both of the options below were developed at IATH and require some additional software on the user's browser (Java or Flash).
 1. Flash Widget, developed by Chris Jessee. This Flash-based sequential image-viewer allows the user to zoom in and pan around images. Because Flash is installed in 98% of browsers, it may be a better option than an application which relies on Java.
 2. ImageSizer, currently used by both the Blake and Rossetti Archives. A sophisticated image manipulation tool whose principal function is to allow users to view images in their actual physical dimensions. It also allows users to enlarge or reduce the image within its on-screen display area. This tool relies on a Java applet.

Our policy in general is to follow the best practices recommended in Anne R. Kenney and Oya Y. Rieger's *Moving Theory into Practice: Digital Imaging for Libraries and Archives* (Research Libraries Group, 2000).

Other

Networked Communication

The *Walt Whitman Archive* currently maintains a closed listserv to facilitate communication among the collaborating archivists, librarians, scholars, and technologists (whit-proj). This listserv resides on lists.village.virginia.edu and is maintained by IATH. All traffic on whit-proj is automatically archived using shareware software known as Hypermail (version 2.0). The list itself is run by widely-used Majordomo software (version 1.94). IATH is committed to the long term preservation of the listserv archive as a partial though important record of the building of the *Walt Whitman Archive*.

Access Tracking

Access to the Apache HTTPD server on jefferson.village.virginia.edu is tracked using Wusage 8.0. This software provides daily records in both graphical and statistical form that allow the *Walt Whitman Archive* collaborators to observe frequency with which texts and images are requested by users, and their domain name (allowing us to compare, for example, access from educational sites with access from commercial sites).

Backup and Record Keeping

All of the Archive's data is safeguarded by means of daily incremental backups on magnetic tape to an off-site location. The University of Virginia Information Technology and Communication (ITC) is responsible for backups and data integrity.

The Archive's project office maintains hard copies of all print records, as well as hard copies of the DTD derived from TEI.

The University of Nebraska-Lincoln Libraries has recently received funding to purchase a large Sun Microsystems "Sun Fire V880" server and peripherals (licenses, installation software, associated media kits, cord kit, and interface). The server operates at 750 megahertz, has 8 gigabytes of memory, and 6 disk drives with 36.4 gigabytes of storage space each. This equipment was purchased to host and preserve large digital collections and web sites, and to mirror digital archives or web sites developed at other research institutions on a reciprocal basis. By the end of summer 2002, the *Whitman Archive* site at the University of Virginia will be backed-up both off-grounds in Charlottesville, Virginia, and at a mirror site maintained by the University of Nebraska-Lincoln.