

# Intertextual Networks: Reading and Citation in Women's Writing 1450-1850

## Substance and Context

### Overview of the Project

In a provocative response to Ed Folsom's "Database as Genre: The Epic Transformation of Archives," Peter Stallybrass directs our attention to the ways in which digital archives foreground the deeply intertextual nature of language. Working with digital collections, Stallybrass argues, "renews our sense of language as a 'tissue of quotations'" and reminds us that what he calls "the regime of originality" is a temporally bounded ideology of authorship with a history and its own particular set of writing and citing practices.<sup>1</sup> The metaphor of "database"<sup>2</sup> suggests for Stallybrass a set of pre-Romantic writing practices characterized by extraction, commonplacing, annotation, and quotation; he proposes this metaphor as a way of getting critical perspective on modern ideas of "proprietary authorship" (1583).

The Women Writers Project (WWP) at Northeastern University seeks funding for a collaborative research project aimed at exploring and theorizing the representation of intertextuality, with a focus on the citation and quotation practices of the female authors represented in the WWP's digital collection, Women Writers Online (WVO). This collection covers 400 years of English-language writing by women, spanning the watershed that Stallybrass describes and representing a very wide range of genres and authorial positions. The texts in WVO cover another significant watershed for literary studies, in which the number of women able to read and publish their writing increased dramatically, and so this project also has the potential to foster research into the history of women as readers and users of texts.<sup>3</sup> At stake here are not only issues of originality and indebtedness, which are crucial and recurring themes throughout the collection, but also issues of how writers make use of what they read:

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<sup>1</sup> Peter Stallybrass, "Against Thinking." *PMLA* 122.5 (October 2007): 1580-7.

<sup>2</sup> The term "database" is used by Folsom and his respondents as a way of describing the flat and interconnected structures of digital archives, as distinct from the narrative arrangements characteristic of genres like the novel.

<sup>3</sup> Heidi Brayman Hackel and Catherine E. Kelly calculate that in "England in 1500, as much as 99 percent of women may have been illiterate, and girls of all social backgrounds were the objects of purposeful efforts to restrict their access to full literacy. Three centuries later, in 1800, nearly half of English and Anglo-American women demonstrated alphabetic literacy and the female reader had emerged as a cultural ideal and market force" (1-2). "Introduction." *Reading Women: Literacy, Authorship, and Culture in the Atlantic World, 1500-1800*. Ed. Heidi Brayman Hackel and Catherine E. Kelly. Philadelphia: University of Pennsylvania Press, 2008. 1-10.

how allusive practices enact gestures of cultural authority, expertise, appropriation, and homage. This project will work towards a much clearer and more textured picture of the rhetoric of intertextuality: what female authors read, what they felt it important to quote, paraphrase, or cite, and what other subtler mechanisms of allusion or unintentional echo were at work that connect their writing to that of other authors.

For this project, the WWP will assemble a collaborative research team that includes faculty, graduate students, and members of the WWP staff, representing a diverse set of perspectives and expertise on the research questions we are pursuing. We have recruited an initial set of collaborators whose work has helped to frame this proposal (see below for details); if this grant proposal is funded, we will recruit up to ten additional members. The team also includes a small group of senior advisors who will bring expert perspectives and represent connections to major research projects of significance to this work.

Our research will encompass three main activities. First, each member of the collaborative group will pursue a focused research project that contributes some facet to our understanding of intertextuality. These projects will engage directly with materials from WWO and their outcomes will be expressed as public exhibits published in *Women Writers in Context*, the WWP's open-access publication series. These research projects and essays will provide an important initial set of explorations into the rhetoric and cultural significance of intertextuality in the WWO collection. Each piece will offer its own view of a specific intertextual ecology, focused through a particular topic and set of texts, and will serve both as a reading and as a kind of prototype: a demonstration of how different analytical practices can reveal new aspects of textual conversations. As part of *Women Writers in Context*, these prototypes will suggest pathways for further research and scholarship, providing points of entry for the WWO collection that license a wide variety of engagement strategies.

Second, all members of the collaborative team will contribute to a sustained discussion of the modalities of intertextuality, as revealed through the individual research projects and through reading and research conducted by the WWP staff. This discussion will inform both the individual research projects and the enhancements to WWO described below; we hope it will also draw other voices into the conversation. The outcomes of this discussion will first be framed as a series of blog posts at the WWP site and then synthesized as a final report on intertextuality and its representation in mid-scale digital research collections.

Finally, the WWP will extend its encoding of intertextual phenomena to produce an explicit representation of quotations, citations, and other intertextual references in the WWO collection. These interconnections will be captured explicitly in the markup of the individual texts (described in more detail in the Methods section below), so that for every quotation, citation, or allusion the underlying data will also include information about the text or author being referenced. Anchoring these references will be a comprehensive bibliography of referenced works, including manuscripts, lost items, and items which can only partially be identified. The work of representing intertextual references in digital form will be deeply informed by both the individual research projects and by the broader discussion within the research team. Many of the references we seek to represent operate straightforwardly through overt mechanisms of quotation and citation, and these are well understood and already captured to some degree in our existing transcriptions. From this project, however, we seek to gather the subtler forms of intertextual engagement that emerge from verbal echoes, stylistic or topic similarities, imitation, parody, and other transformative ways of responding to what one has read. The work of the collaborative team, guided by our project advisors, will map out concrete examples which can then be used as models for a deeper encoding of selected texts from the WWO collection, making the entire collection more closely interconnected.

This work will have several important outcomes. The research projects and the resulting exhibits will make a significant contribution to the study of intertextuality and of women's reading practices. These exhibits will serve as an initial cluster within Women Writers in Context that we can continue to expand after the completion of this project, as scholars take advantage of the enhancements to WWO resulting from this grant. The encoding enhancements are also in themselves an important outcome. Exposure of the intertextual data as part of the WWO interface, together with our existing information on reception history (arising from our just-completed Cultures of Reception project), will profoundly alter the reader's experience of the texts in WWO, embedding them in an intricate textual conversation and enabling readers to follow linkages between texts. The connections in question not only are those experienced by the author—the explicit set of references backward to things she has read—but also include influences that may be imperceptible or transitive (for instance, verbal echoes of works she does not remember reading, or more indirect references such as the use of Alexander Pope as a way of referencing the *Iliad*). And further, the intertextual exchanges relevant to individual texts also point forward to the future authors who may have cited them, or whose work has

commonalities based on shared citation patterns. For users of WWO, the reading practices made possible by these enhancements draw inspiration from so-called “distant reading” methods, in the sense that they enable readers to explore collection-level patterns and to take advantage of the diachronic and generic range of the collection. But those patterns emerge out of and return us to a very detailed analysis of individual texts, in which information about quotation and allusion is embedded in the generic and rhetorical texture of the works themselves: an allusion to Sappho means something quite different depending on whether it appears in a dedication, an epigraph, a passage of fictional dialogue, or a dramatic comedy. The collaborative project here is designed to expose and explore this texture as fully as possible.

Finally, the bibliographic data we create for this project will be published on an open-access basis through the WWP Lab, including a comprehensive public bibliography of sources cited and quoted by WWO texts, and a publicly accessible data set representing the source, target, and reference type for each intertextual reference. This data will be made visible for exploration through a set of visualization tools at the WWP Lab, and will also be made available via an API and as a downloadable data set that can be used by third-party researchers to study networks of intertextuality or to enhance other data sets.

The source materials for this research effort fall into two categories. The first is the texts of WWO itself, which include a broad cross-section of women’s writing from the early modern period through the first half of the 19th century.<sup>4</sup> These texts have been transcribed and encoded using the TEI Guidelines,<sup>5</sup> with explicit representation of crucial textual elements including the major structural components of verse, prose, and drama; quotations; bibliographic references; names of people and places; notes and annotations; textual revisions and corrigenda; and details of the physical books. These materials thus serve as research sources both in their content and also in the meta-information captured in the markup, which enables us to study textual rhetorics in ways that go beyond simple language analysis. The second body of source materials is the set of texts which are the targets of intertextual reference, to be represented for our purposes as a bibliography linked to the transcriptions of the primary source materials in WWO. A first, rough version of that bibliography can be created automatically by extracting all

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<sup>4</sup> A full list of texts currently in the collection can be found at <http://www.wwp.northeastern.edu/wwo/texts/textlist.author.html>.

<sup>5</sup> The Text Encoding Initiative Guidelines (<http://www.tei-c.org>) are a language for representing the structure and content of humanities research materials in digital form; they are widely used for digital scholarly editing and are considered to be an accepted standard for work in this domain.

explicit citations from the encoding of the WWO texts: explicit citations are those that include a title or an author (or, as in many cases, both).

Both of these bodies of source material will be significantly enhanced during the course of the grant, so that by the end of the project they will constitute an important research resource not only for the research team but also for readers of WWO and the broader scholarly community.

These enhancements will include the following activities:

- Starting with automatically extracted bibliographical data, develop a full bibliography of works quoted, cited, referenced, or paraphrased in WWO texts, with as much bibliographic data as is feasible to manage. Except where only one edition of a source was published, it will often not be possible to determine the specific edition being referenced, so our data will typically capture the author, title, and either the date of the sole edition or the latest possible date of publication (i.e. the date of publication for the text in which the reference appears).
- Expand our markup of titles in WWO texts to link them with bibliographic entries.
- Expand our markup of quotations (and, where possible, paraphrases) in WWO to link them explicitly with their sources (flagging any misattributions in the texts) and, based on the input of our advisory group, characterize them according to type. For example, we have already begun marking certain <quote> elements as “paraphrase” or “parody”; we plan to expand our encoding here, informed by current research into early citation and intertextuality. This extended markup will permit readers and researchers to study how frequently and extensively specific texts are quoted, the breadth of quotation for authors or groups of authors, how precisely different authors quote (perhaps indicating quotation from memory or from second-hand reporting), and similar analyses.

### **Major Research Questions**

The key research questions we seek to address arise out of the research literature on intertextuality and also from the informational potential of the WWO collection. This project will work to address questions about the history of reading in the context of the history of women’s writing, building on the increasing knowledge we have about the books women read to develop a more concrete, and nuanced, understanding of how women’s reading manifested in their writing and about how women writers understood their own readers. We are now in a position to ask: how do female authors frame and contextualize their gestures of acknowledgement of other texts? How do these gestures help us understand the cultural status

of different kinds of textual sources? Because the authors in WWO cite a wide range of texts, our research can examine broader trends in citation practices during formative periods for print culture and the transatlantic literary sphere, and can consider the centrality of women's writing to literate culture overall. In addition to tracking how frequently, and by whom, various texts are cited, we can examine patterns in the ways that different texts and authors are referenced: which kinds of texts are more likely to be quoted without attribution? When are writers paraphrased and when are they parodied? How can the texts in WWO build a fuller picture of the *uses* of texts across the temporal and geographic range of the collection?

This project also explores research questions related to how women writers established a place for their own work within—or in opposition to—established canons and systems of authority. For example, in a text like Anne Francis's translation of the Song of Solomon, footnotes and citations simultaneously acknowledge the authority of her sources and constitute a position of expertise for Francis in relation to those sources. We can thus ask: how does citation and intertextual reference function to situate the author within or in relation to systems of cultural authority? How do women establish a position of *expertise* through citation practices? Can we arrive at a subtler understanding of rhetorical gestures of deference and acknowledgement?

We are likewise invested in exploring how women used intertextual references to establish relationships with their readers—both male and female—and how these references might shed light on the expectations women held of their readers. In examining the expectations of legibility women authors make, we can ask: are these writers addressing themselves to readers who are expected to have read the same sources and hence can be counted upon to recognize even glancing allusions and verbal echoes? Are they citing and quoting sources they expect will be unfamiliar, and if so what is the cultural valence of such references? Is there a pedagogical motive, or a desire to set themselves apart from readers, or a desire to establish a boundary between readers who occupy the same cultural space and those who do not?

And, finally, the project will attempt to answer research questions that are relevant to the concerns of text encoding and other scholarly projects invested in representing the nuances of textual interchanges digitally. How can text encoding represent the extremely complex ways in which early writers engaged with other texts, working with formal categories without flattening out useful levels of nuance? What best practices can enable projects to ensure consistency in their representation of these complex phenomena—and what pragmatic concerns might govern

the decisions projects make about the level of detail it is possible to represent? What major categories of intertextual practices would be made evident by developing standards for encoding the quotations, allusions, and other kinds of textual reference in WWO? How can this information be displayed and visualized for the use of modern readers and researchers?

### **Related Work and Bibliography**

The impact of this enhancement to the WWP data will be important for the study of individual authors and their writing practices, permitting readers to gain a much clearer picture of what texts an author has read (or read about) and how these figure in the overall rhetorical texture of her work. Taking advantage of the WWP's other structural markup, we can enable readers to visualize where in a given text quotations appear (even focusing on quotations from a specific source or type of source): for instance, in dedications, in epigraphs, in specific genres. Taking just one example evident in the current markup, Ovid is frequently referenced by the writers in WWO, but less often directly cited or quoted; there are 16 cases where Ovid's name appears in a bibliographic citation or alongside a quotation, out of 121 total references to Ovid by name. By contrast, Shakespeare is named a total of 130 times, 42 of which are inside bibliographic citations or next to quotations. This is a suggestive difference, and one that the proposed encoding enhancements would elucidate considerably by specifying the texts that are cited or quoted and offering additional information on the types of quotations and references that appear in WWO, including paraphrase, parodies, translations, and so on.

This project is positioned to shed new light into the many ways women writers made use of other texts. For instance, our preliminary research has revealed that a substantial percentage of references to texts by title (about 1,900 out of 5,300 total <title> elements) occur outside of notes, bibliographic citations, advertisements, or textual apparatus such as tables of contents or section heads. The titles that are named, rather than cited, offer an intriguing snapshot of how women invoked other texts—some include advice to mothers on the books they should allow their children to read, some are included in discussions of literary aspirations or the state of the literary market, some are mentioned as works that writers read or wished to acquire, and some form part of deeply personal statements of how various texts influenced women's personal development.<sup>6</sup> Expanding our encoding of titles would enable us to construct a rich

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<sup>6</sup> As Heidi Brayman Hackel and Catherine E. Kelly explain, "women looked to texts of all kinds not only to craft subjectivity but also to display it before others" (75). "Practices and Accomplishments." *Reading Women: Literacy,*

bibliographic portrait of the texts that women referenced and elucidate the considerable range of intertextual gestures available to women writers.

In addition to titles, enhanced encoding of quotations can reveal where and how women quoted. The quotations in WWO are often densely layered and quite complex—for example, Lady Eleanor Davies inserts the full text of other short documents into some of her political pamphlets; the 1706 Ladies Diary constructs short poems, called “Enigmas” out of lines from two or three other poetic works; and Elizabeth Craven’s 1789 *A Journey through the Crimea to Constantinople* inserts a poem that she wrote based on, and sometimes “literally translated” from a pamphlet, with citations to the pamphlet herself, so that her reader may not suppose she has “invented” the “strange things” it says (43).<sup>7</sup> When we have compiled more detailed and systematic information on the titles and quotations used in WWO—where they are, what relationships they have to other titles and quotes, what kinds of quotations they are, and so on—we will be able to provide researchers with the ability to discover patterns in the uses of texts over time, to search for particular kinds of usages (for example, which titles or authors are referenced in stage directions or in verse? which appear in epigraphs? which authors are more likely to be paraphrased than quoted directly?), and to develop models of text encoding that can support further inquiry into intertextuality and citation during this crucial period.

This project also has the potential to elucidate a number of further, more complex questions that are of concern to recent scholarship. What kinds of cultural work are done by invoking sources from the remote past, and what specific presence do these citations have in the text? How are they introduced and contextualized? Christopher Phillips situates the question of quotation in connection to issues of eloquence, rhetoric, style, and classical allusion that are very suggestive for our project, observing that “the classically based politics of eloquence in the eighteenth century were already being eroded by the time of the Revolution by women, African American, Native American, and less-educated white men such as Patrick Henry and Thomas Paine who participated in public discourse without reference to Cicero, Aristotle” (609).<sup>8</sup> The relationship between quotation and ideas of eloquence also has bearing on issues of education and the self-conscious class positioning of both male and female authors. For example, examining the

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*Authorship, and Culture in the Atlantic World, 1500-1800*. Ed. Heidi Brayman Hackel and Catherine E. Kelly. Philadelphia: University of Pennsylvania Press, 2008. 75–77.

<sup>7</sup> Elizabeth Craven. *A Journey through the Crimea to Constantinople*. London: G. G. J. and J. Robinson, 1798.

<sup>8</sup> Christopher Phillips, “Epic, Anti-Eloquence, and Abolitionism: Thomas Branagan’s *Avenia* and The Penitential Tyrant.” *Early American Literature* 44.3 (2009): 605-637.



“growing number of elite women” who had entered the “sphere of classical learning long cherished by men” by the mid-eighteenth century, Caroline Winterer shows how women as readers of the classical were required to achieve a “precarious balance between feminine frivolity and petticoat pedantry” (105–107).<sup>9</sup> The texts in WWO can show how women on both sides of the Atlantic negotiated that precarious balance.

From another angle, Kate Rumbold’s exploration of Shakespeare’s quoted presence in 18th-century literature suggests the significance of patterns of quotation that function within and across texts to characterize particular authors, characters, or cultural and political positions.<sup>10</sup> And, as Ingrid Horrocks suggests, there are issues of genre to be explored as well: what are the thematic and generic implications of quotation itself, particularly when quotations seem to represent the irruption of alternative or competing discursive modes within particular literary forms (such as the novel)?<sup>11</sup> What are the aesthetics of quotation and allusion, and how do larger patterns of quotation across texts contribute to shifts in formal properties of literary texts and position their social and political effects?

The various forms of writing represented by the texts in WWO—categorized broadly as verse, drama, fiction, and nonfiction, or more precisely as letters, meditations, prayers, confessions, narratives, petitions, and many others—can bring a productive focus to questions about women’s reading and writing, in large part because, as Sasha Roberts asserts, “genre is as vital—as mediating—as the more familiar litany of categories of critical analysis in the history of literature and women’s reading: gender, class, race, religion, politics, history, region” (50). Roberts’s own examination of women’s engagements with Shakespeare shows how women’s consumption of drama “intensified” in the mid-seventeenth century, leading to a corresponding shift in the printing of plays; as Roberts shows, this account of women’s reading is particular to Shakespeare, leading her to argue that the “impact and specificities of genre should inflect the methods and claims that we may propose for the history of women’s reading” (50).<sup>12</sup> The

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<sup>9</sup> Caroline Winterer, “The Female World of Classical Reading in Eighteenth-Century America.” *Reading Women: Literacy, Authorship, and Culture in the Atlantic World, 1500-1800*. Ed. Heidi Brayman Hackel and Catherine E. Kelly. Philadelphia: University of Pennsylvania Press, 2008. 105–123.

<sup>10</sup> Kate Rumbold, “‘Alas, poor Yorick’: Quoting Shakespeare in the Mid-Eighteenth-Century Novel.” *Borrowers and Lenders: The Journal of Shakespeare and Appropriation* 2.2 (2006).

<sup>11</sup> See, for instance, Ingrid Horrocks, “‘Her Ideas Arranged Themselves’: Re-Membering Poetry in Radcliffe.” *Studies in Romanticism* 47.4 (2008).

<sup>12</sup> Sasha Roberts, “Engendering the Female Reader: Women’s Recreational Reading of Shakespeare in Early Modern England.” *Reading Women: Literacy, Authorship, and Culture in the Atlantic World, 1500-1800*. Ed. Heidi Brayman Hackel and Catherine E. Kelly. Philadelphia: University of Pennsylvania Press, 2008. 36–54.

encoding in WWO is able to foster just such an examination of generic specificities in the texts that women read, wrote, and referenced.

Finally, as WWO contains a number of translated texts, the collection is able to provide insight into a practice that points “so interestingly to complexities in acts of reading that cross linguistic and cultural boundaries,” as Margaret Ferguson has observed (202). Exploring this complexity, Ferguson examines the “richly paradoxical” effects achieved by Aphra Behn’s translations, through which Behn participated in a relationship both with the “source text but also with the new readers she hopes to gain through the work of translation” (214).<sup>13</sup> WWO collects twenty translations and translators’ prefaces, including two of Behn’s. The collection also includes close to five hundred quotations in languages other than English, many accompanied by the authors’ own translations (and writers’ decisions about whether to provide translations for non-English quotations can also offer significant information on writers’ expectations for their readers). These translations represent one method by which women spoke up in a literary culture dominated by men; as Deborah Uman argues, “female writers used translation as an entry” into the literary world, and so the “work of women translators expands our notion of canonicity” (12).<sup>14</sup> The Women Writers Project has long worked to expand the canon of early texts; the project proposed here would enable us to build on what we have accomplished to show how women produced and resisted, subverted and sought entry to, the canons of their times.

This project will also build on and contribute to ongoing research into digital representations of women’s intertextual networks and the circulation of women’s writing. For example, the Orlando Project, which is building a literary history of women’s writing in the British Isles, has used an <intertextuality> element, which tracks descriptions of and references to adaptations, acknowledged and unacknowledged allusions, continuations, answers, imitations, quotations and misquotations, satires, and prequels in the project’s entries on women writers.<sup>15</sup> The RECIRC project (The Reception and Circulation of Early Modern Women’s Writing, 1550-1700) is also tracking intertextualities in women’s writing, working to build a “large-scale

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<sup>13</sup> Margaret Ferguson, “‘With All Due Reverence and Respect to the Word of God’: Aphra Behn as Skeptical Reader of the Bible and Critical Translator of Fontenelle.” *Reading Women: Literacy, Authorship, and Culture in the Atlantic World, 1500-1800*. Ed. Heidi Brayman Hackel and Catherine E. Kelly. Philadelphia: University of Pennsylvania Press, 2008. 199–216.

<sup>14</sup> Deborah Uman, *Women as Translators in Early Modern England*. Newark: University of Delaware Press, 2012.

<sup>15</sup> For more on this research and encoding, see Susan Brown, Isobel Grundy, Patricia Clements, Renée Elio, Sharon Balazs and Rebecca Cameron. “Intertextual Encoding in the Writing of Women’s Literary History.” *Computers and the Humanities*. 38.2 (2004): 191–206.

understanding of how women's writing circulated in the early modern English-speaking world" by capturing the contexts in which female authors and their works were received, written about, and cited. Researchers at RECIRC have begun cataloguing the contents of manuscript miscellanies in order to expose patterns in how works by women were copied and compiled. The project is also developing a taxonomy of reception, marking the genres of recirculation—such as adaptation, translation, and imitation. The WWP has already begun coordinating with researchers at both Orlando and RECIRC to discuss the ways that our research into intertextuality can productively connect with the work these projects are doing. The research we propose would thus connect with a range of fields, contributing to studies in women's writing, reception and reading history, quotation and intertextuality, scholarly text encoding, and digital textualities.

## History of the Project and its Productivity

The WWP was founded in 1988 by a group of scholars concerned to increase the visibility and accessibility of early modern women's writing, and is now in its 27<sup>th</sup> year, making it one of the oldest active digital humanities projects. Its mission—to digitize and publish pre-Victorian women's writing and to explore new modes of digital scholarship—is open-ended and the project has no projected date of completion. Its main publication, *Women Writers Online* (<http://www.wwp.northeastern.edu>), was first published in 1999 and has during its 16 years of publication become a mainstay of research and pedagogy on women's writing in English, with more than 250 institutional subscribers representing a broad community of researchers and teachers.<sup>16</sup> Accompanying and contextualizing WWO is the more recently launched *Women Writers in Context*, a free, open-access series of exhibits and critical essays which offer insights into the texts, themes, and cultural context of WWO.<sup>17</sup> These publications are further supported by a growing body of formal data about the persons, places, organizations, and events named. The WWP has also published extensively on the theory and practice of scholarly markup,

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<sup>16</sup> Although WWO charges subscribers for access, our policies are also designed to ensure that licensing fees do not constitute a barrier to entry. Our prices are prorated based on institutional size (the lowest tier is \$120/year; the individual student price is \$25/year), and we offer discounted or free accounts in cases of financial need (including institutions in the developing world). We also make the source data freely available for research upon request. All license fees go to support the continued development of the WWO collection, and to the outreach work of the WWP which includes advice and consultation to new projects, an internship program, extensive public documentation and training materials, and free resources such as *Women Writers in Context*.

<sup>17</sup> See <http://www.wwp.neu.edu/context>. *Women Writers in Context* is republishing in enhanced, open-access form the materials originally published in *Renaissance Women Online*, and is adding newly submitted and commissioned essays and exhibits.

including white papers, research articles, internal documentation, self-guided tutorials, and a comprehensive Guide to Scholarly Text Encoding.<sup>18</sup> The project has also contributed panels and sessions on textual scholarship, women's writing, pedagogy, and digital scholarly editing at major humanities conferences including MLA, RSA, NASSR, Attending to Women, and GEMCS, as well as a number of individual conferences on specialized topics. The WWP has also served as a mentor—both formally and informally—to a very large number of digital humanities projects and digital editions, through our workshops, consulting, and support for community initiatives such as the Text Encoding Initiative (TEI), the TEI Archiving, Publishing and Access Service (TAPAS), and the Digital Humanities Summer Institute.

Our research on intertextuality builds on two previous grant-funded projects which focused on representing and analyzing the interplay of intertextual and contextual reference in the WWO collection. The first of these was an NEH Digital Humanities Start-Up grant in which we created a biographical database (or “personography”) of people mentioned in a sub-collection of WWO representing approximately 30 texts. This personography captured key biographical information including birth and death, marriage, cultural and geographical frames of reference, and other data; it also explored the challenges of representing personal names in a literary collection.<sup>19</sup> The second project, completed in December 2015, is a much larger NEH-funded project titled “Cultures of Reception” in which we are encoding large numbers of periodical reviews together with contemporary letters, literary histories, and anthologies with the goal of illuminating the reception and readership of women's writing in the late 18th and early 19th centuries. The resulting data will position WWP texts and authors within an intertextual network arising from readers' and reviewers' associations: in other words, from the textual culture within which these works circulated and were consumed.

The research for which we now seek funding would complement and extend this work in important ways: by taking advantage of the flexibility of Women Writers in Context as a publication venue, and by linking the substance of these collaborative research projects so closely to the enhancement of WWO, which will enable the entire WWO readership to follow and extend the work we undertake here. This project and the others on which it builds

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<sup>18</sup> A full list of WWP publications is included in the Appendix, and is also available at <http://www.wwp.northeastern.edu/research/publications/>.

<sup>19</sup> The final white paper for this project is available at [http://www.wwp.northeastern.edu/research/publications/reports/neh\\_2008/WWP\\_Names\\_White\\_Paper.pdf](http://www.wwp.northeastern.edu/research/publications/reports/neh_2008/WWP_Names_White_Paper.pdf).

represent a long-term developmental direction for the WWP, enhancing our data in ways that will directly support new forms of scholarly inquiry while also involving the WWP scholarly community in the process through contributed data and expertise. The work funded by this project will establish a set of workflows and tools that will become part of the WWP's standard text capture protocols, so that as the WWO collection continues to grow, the associated citation data grows with it. The WWP Lab<sup>20</sup> represents a public focal point for this work: a place where WWP materials are exposed for open access and where experimental tools and data are visible as a provocation to exploration. The data exposed via the Lab will be dynamically updated to reflect a current view of the WWP textbase. In addition, over the next five years we will be working to expand the scope of the Lab and to incorporate its most successful interface experiments (including those developed by third parties using the API) into WWO proper.

## Collaborators

The collaborative team for this project brings together expertise in the substance of women's writing and intertextuality, and expertise in representing scholarly research and textual perspectives in digital form. The latter domain is grounded in the expertise of the WWP staff. In recruiting the external collaborators for this project, we sought to fulfill two complementary goals. We wanted to assemble a group of scholars whose work on intertextuality would be original, significant, and relevant to the larger research space of WWO. Additionally, we wanted to include scholars whose approaches to intertextuality and women's reading and allusive practices could illuminate and enrich our markup process as we wrote intertextual connections into the structure of WWO's underlying data. Since that data will underpin substantial further research in this area—extending well beyond the immediate scope of this grant—we wanted to ensure that diverse perspectives would be brought to bear on it.

To advise the group and shape the overall direction of the project, we have assembled a small group of senior advisors who represent ties to important related projects and research on intertextuality, while also providing expertise across the temporal and topical range of the project. Letters of support for this group are included in the appendix. The group includes:

**Susan Brown** is Professor of English at the University of Guelph and director of Project Orlando, a comprehensive literary-critical encyclopedia of women's writing that includes

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<sup>20</sup> See <http://www.wwp.neu.edu/wwo/lab/>.

detailed information about mutual influences among texts and authors. Project Orlando is now exploring ways to build connections with other resources for the study of women's writing— notably the EU-funded Reading Experience Database, which is now available in a linked open data format—with particular emphasis on reception and intertextuality.

**Marie-Louise Coolahan** is a Personal Professor at the National University of Ireland, Galway, and Director of RECIRC (The Reception and Circulation of Early Modern Women's Writing, 1550-1700), a new EU-funded initiative studying the recirculation and reception of early modern women's writing. RECIRC examines the contexts in which female authors are discussed, cited, and compiled, with special focus on manuscript miscellanies, thus providing an important complementary perspective to our work for this project.

**Heidi Brayman Hackel** is an Associate Professor of English at the University of California, Riverside. Professor Hackel is an authority on the study of women's reading and intertextuality; she is the author of *Reading Material in Early Modern England: Print, Gender, and Literacy* (2005), and co-editor of *Reading Women: Literacy, Authorship, and Culture in the Atlantic World, 1500–1800*, both of which are major contributions to framing the issues we explore in this project.

The collaborative team includes the following members of the WWP staff (with additional technical support by members of the Digital Scholarship Group as detailed in the budget):

**Julia Flanders** is the Project Director and will be responsible for the general oversight of the project. She holds a PhD in English and has long-standing expertise in digital scholarly communication and text encoding.

**Sarah Connell** is the WWP Project Manager and will be responsible for the overall organization of the research effort, the integration of collaborative research and encoding activities, and the publication of research outcomes. She holds a PhD in English, with a specialization in the development of medieval and early modern historical genres and national identities, and has extensive expertise in scholarly text encoding, digital publication, and project coordination.

**Ashley Clark** is the WWP's XML Developer; she will be responsible for integrating the intertextuality data into the WWP Lab and WWO interfaces, and for developing the API to expose WWP data through the WWP Lab. She has extensive expertise in XML publication systems and in methods of working with and analyzing XML data.

**Syd Bauman** is the WWP's Senior Programmer / Analyst and will be responsible for the implementation of schema changes, development of tools to assist in the automation of data

capture processes, and (with Ashley Clark) development of new interface features for WWO and the WWP Lab. He has a BA in Political Science and served as North American Editor of the TEI Guidelines from 2001-2007. He has nearly unrivalled expertise in TEI schema design and customization as well as TEI encoding.

External collaborators for this research team were selected through an application process involving a detailed research proposal identifying specific WWO texts that would provide the research focus, and describing an exhibit, data exploration, or research essay that would be the outcome of the project. From the applications received we selected the following five projects, which complement one another in chronological distribution and method. If this project is funded, we will issue a second call for proposals to extend the research group by up to an additional ten scholars, for a total of fifteen projects supported.

**Kristen Abbott Bennett , Department of English, Stonehill College**

**“Elizabeth I in History and Fiction”**

Calling attention to the intertextual resonances of a writer whose influence is difficult to overstate, this project examines the invocations of Elizabeth I’s historical and fictional personae throughout the WWO corpus. The project will network transcontinental representations of Elizabeth by several WWO authors, including Margaret Cavendish, Mary Deverell, Elizabeth Haywood, Bathsua Makin, Judith Murray, and Ester Sowernam. Beyond inviting examination of how Elizabeth’s ideas and conduct were received by early modern women, these intra-WWO connections provide an opportunity to interpret this historical moment from multiple perspectives. The project will include an exhibit in Women Writers in Context comprising seven linked web pages, including an overview of Elizabeth’s place in history and six pages organized around the themes of her dual gender, virtues, “cult of love,” renowned learning, relationship with Mary, Queen of Scots, and refusal to marry. Each theme will be analyzed in the contexts of current scholarship and intra-WWO textual networks. This intertextual project will not only engage a broad audience with Elizabeth I’s contributions to history and literature, but also underscore the relationships among the texts in the WWO corpus and invite users to learn about transcontinental exchanges among early modern women writers.

**Nicole Keller Day, Department of English, Northeastern University**

**“Mathematical Mash-Ups: Poetry and Intertextuality in *The Ladies’ Diary*”**

Some cases of early women's intertextuality are highly complex and reliant on readers' recognition of specialized literary forms and genres. For example, editor John Tipper's 1706 *Ladies' Diary* featured forms of poetry familiar to the almanac's growing audience. Early issues contained mathematical questions and answers, which appeared in verse, as well as "Enigmas," a type of poetic riddle. The 1706 issue is unique, poetically speaking, in the way quatrains are incorporated into the text's calendar pages. Beneath each month's detailed listing of eclipses, daily sunrise and sunset times, holidays, term dates, and biblical readings, Tipper included single stanzas, which were neither entirely original compositions nor consistently drawn from a single author's work. This project's preliminary assessment of the 1706 issue shows that Tipper drew heavily from John Dryden, incorporating lines from the *Georgics*, "The Flower and the Leaf," "Palamon and Arcite," and the "Twenty-Ninth Ode of the First Book of Horace," into these quatrains. He also pulled from Poor Robin's *Almanack*, as well as the works of Josuah Sylvester, William Browne, Joshua Poole, and Thomas Gray. This project will investigate the following questions: What can a study of intertextuality and *The Ladies' Diary* reveal about generic connections between *The Ladies' Diary* and other almanacs? Can the mathematical almanac be read as contributing to the rise of the nineteenth-century literary annual? What can this genealogy of the genre and intertextual practices reveal about bibliographic practices of editors? Did these editors expect their audience to be familiar with these intertextual gestures? What difference does it make, in interpreting the content of the almanac, if editors' intertextual references were meant to be accidental or obligatory?

**Heather Ladd, Department of English, University of Lethbridge**

**"Female Platonics in Pix's *The Innocent Mistress* and Centlivre's *The Platonic Lady*"**

This project's inquiry into women's reframing—and subversive reinterpretation—of a dramatic figure from the theatrical canon centers on two plays in the WWO collection: Mary Pix's *The Innocent Mistress* (1697) and Susanna Centlivre's *The Platonic Lady* (1707), both of which refer to the same type character, the "platonic lady." Understudied and undertheorized by scholars of Restoration and eighteenth-century theatre, the platonic lady is distinguished by her fervent adherence to an idealized form of love popularized and subsequently satirized in English culture. This project traces an intertextual thread of influence and interpretation, positing that *The Innocent Mistress* is the predecessor and intertext of Susanna Centlivre's *The Platonic Lady*. Pix's play itself likely drew on William Davenant's generically mixed tragicomedy *The Platonic Couple* (1636), which features the first reference in the English language to "platonic love."



Davenant's play, like his masque *The Temple of Love* (1635), satirically treats Platonic love as a fashionable affectation. Both Pix and Centlivre transvalue this concept, offering a much more sympathetic representation of their female philosopher-lovers. The abstract discourse of these characters is not empty and ornamental posturing; rather, platonic love is positioned by Pix and Centlivre as a potentially subversive, protofeminist stance.

**Carme Font Paz, Department of English, Universitat Autònoma de Barcelona, Spain**

**"Cloud Intertextuality and Invisible Poetics: The Intersections of Manuscript and Print in Women's Poetry from the 1730s-1760s"**

Exploring intertextual influences beyond the realm of print, this project concerns the ways in which women poets from the 1730s–1760s borrowed subject matter and tropes from other contemporary poets whose intellectual production circulated in manuscript or not at all. It will concentrate on Elizabeth Rowe, Mary Chandler and Ann Yerbury. This latter case is an extreme example of a poetic corpus which was invisible and existed "in a cloud," but which nevertheless informed other poets while being informed by them. This cloud intertextuality is an (invisible) seal of female poetics. Themes such as death, ethical concerns, family separations, and the flight of the soul were recurrent themes, evident even in unpublished poetry. This project will ask how female published poets created intertextualities off print. These intertextualities happened primarily in writers' choice of topic, in their melancholic undertones, in the choice of pen names and specific phrases on death and mourning. Intertextuality was for many of these poems, whether printed or circulated, a form of establishing an assertive authorial self. This project will compare and collate fragments of manuscript poetry with published sources, and will tag similarities directly on the digitization of the manuscripts.

**Lindsay Ann Reid, Discipline of English, National University of Ireland, Galway**

**"Flora, Florilegia, and Isabella Whitney's 'Phylosophicall Flowers'"**

Linking the intertextual and the material, this project calls attention to the literary borrowings and connections with both botany and cookery evident in the most understudied part of Isabella Whitney's corpus: the "Phylosophicall Flowers" found in *A Sweet Nosegay* of 1573. As Whitney explains to her readers in the prefatory materials of this auto-miscellany, these 110 short poems versify moral *sententiae* culled from Hugh Plat's 1572 *Floures of Philosophie*. Attuned, like so many of her Tudor contemporaries, to the etymological resonances of *florilegia* and *anthologia*, Whitney puns extensively on the ways in which these poesies or "Flowers"

derived from the prose of Plat/“Plot” have been selectively reworked into her own “Nosegay.” The digital exhibit for this project both calls explicit attention to the pervasive botanical metaphors informing the design of this sequence and illuminates a nexus of concerns surrounding gender, adaptation, and authority. It is thus part scholarly contextualization and part interactive aesthetic experience: it will visually draw from Tudor illustrated herbals to literalize and animate the metaphors of gardening, grafting, and cultivation that structure *A Sweet Nosegay*, and it will use sound to explore the complex interplay of male and female authorial voices in Whitney’s appropriation of Plat’s work. The landing page of this proposed exhibit will provide users with a scholarly overview of the “Hundred and Ten Phylosophicall Flowers.” From this page, users will be able to access an annotated bibliography and the text of *A Sweet Nosegay*, as well as three interlinked sub-exhibits: 1) Whitney’s Garden Plot (exploring the intertextual relationships posited between the “Phylosophicall Flowers” and Plat’s *Floures of Philosophie* in the prefatory materials to *A Sweet Nosegay*); 2) Whitney’s Slips (featuring interactive clickable woodcut flowers and sound recordings of Plat’s *sententiae* and Whitney’s corresponding poems in male and female voices); and 3) Whitney’s Kitchen (focusing on the relationships between early modern recipe books and the four-line poem “A soveraigne receypt” that concludes Whitney’s “Phylosophicall Flowers” sequence).

## Methods

### Representing Digital Intertextuality: TEI and XML

The interpretive goals of this project rest on the ability to represent the incredibly diverse and subtle range of intertextual gestures that are part of a scholarly digital text collection, and to interpret and analyze that information through a variety of research tools. At the heart of the enterprise lies the detailed digital representation of text itself, and for this the WWP follows well established practice in the digital humanities in using the Text Encoding Initiative (TEI) Guidelines, an XML language for representing the structure and content of humanities research materials. The WWP has long-standing expertise in using the TEI for detailed markup of textual sources, and for this project we will extend our existing markup and create further data resources that provide context of several kinds: a bibliography representing all of the sources that are cited, quoted, paraphrased, or otherwise referenced in the WWP collection, and a “personography” containing biographical records for individual persons named in the texts (or arising from bibliography entries). For each of these components we constrain and document

our encoding practice using a TEI schema customization.<sup>21</sup> We have already made some specific customizations, such as providing additional constraint to our encoding of personography records to enforce greater data consistency. Other customizations will arise from the specification process in the first six months of the project; for instance, we will add constraints that enable us to characterize bibliographic items to reflect their cultural sphere (for instance, classical, scriptural, and popular sources), their level of bibliographic precision, their genre, and other characteristics that are germane to the analysis.

There are also a number of conceptual challenges in the design of this markup that we will address as part of the data capture and modeling process. These include the following:

**Handling of paraphrases and allusions:** Paraphrase and allusion can be treated as special types of quotation in which the boundary between source material and the surrounding text is fuzzy (and probably unmarked) and where the relation between the usage and its source is inexact. We can use the TEI @type attribute to characterize quotes as “direct”, “paraphrase”, “allusion” (and other terms as needed), and for “direct” quotations we can further use the @subtype attribute to indicate whether the quotation is exact or not. We will mark the boundaries of unmarked paraphrase and allusion as accurately as we can determine, with the explicit understanding that the boundaries of paraphrases and allusions are less determinate than those of direct quotations.

**Representing works at the appropriate level of generality:** The Functional Requirements for Bibliographic Records (FRBR) provides definitions for different levels of bibliographic entities. The most abstract of these is the “work” (defined as a “distinct intellectual or artistic creation”) followed by “expression,” “manifestation,” and “item.”<sup>22</sup> In some cases, authors may cite or refer to a text in only a very general way (for instance, “Homer doth report in his Illiads...”) that does not invoke any specific expression of that text, let alone a particular edition, while in other cases we may be certain of the specific edition being quoted, or even in rare cases a specific copy of the text in question. In later periods as footnoting practices become more common (especially

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<sup>21</sup> Despite the connotations of this term, the TEI customization mechanism is the formal way to express any TEI schema, whatever the degree of difference between that schema and the unmodified TEI. A typical customization will express the specific TEI modules that are included in the schema (representing the elements that will actually be used by the project building the customization), any elements that are to be omitted or altered, and any new elements that the project chooses to define for its own use. The customization is expressed as a TEI ODD file (a source file from which a TEI schema can be generated) and serves to document the customization so that it can be further altered, shared, and understood by other projects.

<sup>22</sup> For a detailed account of the Functional Requirements for Bibliographic Records, see <http://www.ifla.org/en/publications/functional-requirements-for-bibliographic-records>.

in genres such as historical writing where the author is deliberately producing an apparatus of scholarly authority), the bibliographic data provided in the text tends to be more precise. Our bibliographic data, as well as our representation of citations in the text, needs to accommodate these different levels; for each work quoted or cited we will need a “work-level” entry and for many of these works we will also need one or more entries representing the “expression” of that work in a specific language. (In cases where the author refers to a work that exists in translation such referencing as Virgil’s *Eclogues* without quoting it directly, we will have no certain way of knowing whether she read it in Latin or English, and in these cases the citation would necessarily be to the work rather than the expression.) For some works we will also need a manifestation-level representation that includes specific publication information; in cases where only one manifestation exists (e.g. books published in a single edition) we can say with reasonable certainty that a given quotation is from a specific manifestation.

**Requotations and plurality of sources:** In some cases, authors may quote from an intermediary source that is itself quoting some other more remote sources (either knowingly or unknowingly). Where such layering is present, we need to be able to represent both the intermediate transmitters and the ultimate source, if we can identify them. Similarly, we need to be able to accommodate cases where there exists a plurality of possible sources (or transmitters) for a given quotation.

**Establishing connections between WWP data and authority records:** The WWP’s personography already supports the association of historical persons with Library of Congress name authority records, permitting us to retrieve associated records in our data set with a publicly established identity and to disambiguate between individuals with the same name. We also have mechanisms in place for dealing with cases of unknown persons (e.g. unidentified annotators of WWP texts) but we will need to expand these systems to handle cases of texts with no attributable authors (such as proverbial sayings).

### Tasks and Work Processes

The WWP’s encoding currently includes markup of all quotations that are explicitly indicated in the source text through quotation marks, italics, citation, or other mechanisms. Where a full or partial bibliographic citation is present (author, title, other information) this is also represented in the markup. In the 375 texts currently published in WWO, there are approximately 11,000 <quote> elements (some of these represent parts of larger quotations, but the number is not

large enough to significantly alter the scope of the task). Of these, approximately 45% are accompanied by a preceding or following citation or source indication. The following screenshot shows an example of the most explicit form of this markup, in which the association between quote and citation is unambiguous, the identification of the source is fairly complete, and the source itself is readily recognizable (at least at the “work” level):

```
<epigraph rend="slant(italic)pre(#rule)post(#rule)">
  <quote>
    <lg type="poem" subtype="indeterminate">
      <lg type="indeterminate">
        <l>-- Revenge at firft, tho' fweet,</l>
        <l>-- Bitter, e're long, back on it felf recoils.</l>
      </lg>
    </lg>
  </quote>
  <bibl rend="align(right)slant(upright)">
    <author>
      <persName rend="case(smaller)slant(upright)" ref="personography.xml#jmilton.kta">Milton's</persName>
    </author>
    <title>Paradife Loft</title>.
  </bibl>
</epigraph>
```

Using TEI attributes (@source with <quote> and @ref with <title>), we can make explicit in the markup what is already evident in the text above—that both the title mentioned and the quote itself are referring to John Milton’s *Paradise Lost*, thereby fostering advanced large-scale analyses and clarifying instances when the sources of quotes and referents of titles are much less clear.

As the example above suggests, the texts in WWO engage with other texts by referencing titles and authors as well as through quotation. Titles are most explicitly identified in the current markup; there are around 5,300 <title> elements in the published texts in WWO, approximately half of which appear in conjunction with quotations. Titles in WWO appear in particularly high concentrations in bibliographic entries, notes, and advertisements, and so are often accompanied by information that will assist in the identification of the texts being referenced. Some authors have already be identified during previous WWP research; we will continue adding personographic references as we encounter additional authors through researching titles and quotations, we can automatically add references for commonly-referenced authors and those that are published in WWO, and we will be able to add references for the other authors who are simply named for texts on which we perform “deep dive” encoding.

The sheer number of quotations and titles to be identified is very substantial, but there are several factors that will make the task manageable. First, in WWO texts from the fifteenth and sixteenth centuries, the vast preponderance of quoted or referenced material is from the Bible,

and even in later texts the Bible is a very significant source. This dramatically reduces the complexity of the work since Biblical citations are often in a fairly standard format, lending themselves to semi-automated detection and encoding. Second, our preliminary scoping suggest that unattributed quotations are typically from very familiar sources (since the assumption is that citation is unnecessary).

Encoding of quotations can also be made more manageable by establishing priorities for completion. We will begin with the approximately 5,000 quotations that are accompanied by some source information (such as author or title attribution); this will enable us to perfect our workflow and make substantial progress on developing the bibliography. We can then focus on encoding the quotations that are in texts from the time period covered under our Cultures of Reception project, building on and expanding our current research in this area. When encoding of the 2,800 additional quotes from the Cultures of Reception period is completed, the next priority will be nonfiction, representing approximately 2,700 additional quotes; the final set of quotations to be encoded will be those remaining in fictional works. This approach will ensure that we can learn from previous experiences in our encoding processes and that we first complete encoding those texts that will be most generative for continued research into intertextuality and the reception of women's texts.

One important design challenge is to balance both breadth and depth in encoding and research. In the encoding described above, we are capturing a broad and comparatively shallow slice of information across the entire WWO collection. But we also want to provide a more detailed and exploratory "deep dive" encoding of a smaller set of texts. We will canvas the 125 texts that fall within the period of the Cultures of Reception project in their entirety, marking up the range of intertextual features present in these texts in ways that that extend beyond <quote> and <title> elements, including parody, verbal echoes, imitation, topical allusions, and any other formations we encounter in the test set. This approach will substantially expand our understanding of the kinds of intertextual moves early women made, and will provide an opportunity to explore the feasibility of applying this encoding at larger scale.

## **Tools and Systems**

The WWO collection and its related publications are built on a set of open-source XML tools that are well adapted to flexible long-term use and sustainability. Both WWO and Women Writers in Context use XML databases for their search, data manipulation, and presentation

logic; WWiC and the WWP Lab use eXist, and WWO uses the Extensible Text Framework (XTF). Both systems are highly adaptable and support the integration of features such as those described in this proposal. The dynamic visualizations being developed for the WWP Lab will use a combination of open-source visualization tools, including D3 (Data Driven Documents), which supports the creation of highly manipulable visualizations from a single data source. The TEI/XML data for all of these publications is captured using the Oxygen XML editor and is managed using the Subversion version control system, which permits the coordination of a complex workflow involving a geographically distributed team. The WWP uses a customized TEI schema that includes features reflecting additional constraints and special problems relating to the representation of early printed books; WWP data can be automatically converted to conformant TEI. In addition to standard XML validation (available in the Oxygen editor), the WWP has a number of quality assurance systems that include Schematron checks (which provide for additional consistency checking and flagging of irregularities), at least two cycles of hand data checking and proofreading by our graduate encoders, and a final review by the WWP staff. The resulting data exhibits an extraordinarily high degree of accuracy and consistency, compared with the typical results of large-scale digitization processes.

## Work Plan

### October 2016–March 2017

- Begin blog posts, hire/train GAs, recruit further collaborators (Connell, Flanders)
- Develop documentation and workflow for encoding (Connell, Flanders)
- Begin initial creation of bibliography and preliminary title encoding: develop schema with handling of abstraction levels; extract titles from existing encoding; fill out bibliographic records with research as necessary; encode title references with links to bibliography (GRAs)
- Develop functional specification for WWP Lab and WWO interface enhancements (Flanders, Bauman, Clark, Connell)
- Set up framework and stylesheets for WWiC exhibits of WWO texts (Clark, Bauman)

### April 2017–September 2017

- Finish bibliography / title encoding; refine schema (GRAs, Bauman, Connell)
- Begin identification and encoding of quotations (GRAs)
- Begin development work on WWO interface (Clark, Bauman)
- Set up a prototype exhibit and test with collaborators (Connell, Clark)
- Continue blog posts (collaborators, Connell)

### **October 2017–March 2018**

- Continue identification and encoding of quotations; review encoding processes and decisions to identify areas of significance for future research (GRAs)
- Communicate results of initial encoding passes to collaborators (Connell, Flanders)
- Begin development work on WWP Lab, keeping up-to-date with encoding changes (Clark)
- Text setup for collaborators doing specialty encoding on WWO texts (Connell, Bauman)
- Continue collaborator blog posts (Connell, collaborators)

### **April 2018–September 2018**

- Complete identification and encoding of quotations (GRAs)
- Write schema/ documentation for “deep dive” encoding, perform test encoding (Connell)
- Exhibit drafts due July 2018; feedback to collaborators by end of August (Flanders, Connell)
- Discuss data/encoding with exhibit authors, begin data preparation for exhibits (Connell)
- Continue collaborator blog posts (Connell, collaborators)
- Continue development work on WWP Lab and WWO interface integration (Clark, Bauman)
- Develop specification and stylesheets for specialized exhibit display (Clark, Bauman)

### **October 2018–March 2019**

- Begin “deep dive” encoding of selected texts from 1780-1830 (GRAs, Connell)
- Continue data preparation for exhibits; begin editing/encoding of exhibits (Connell, GRAs)
- Continue work on WWP Lab and WWO interface integration; user testing (Clark, Bauman)
- Continue collaborator blog posts (Connell, collaborators)
- Begin publishing data: expose the bibliography and add links in WWO (Clark, Bauman)
- Begin drafting final report and summary of the project (Connell, Flanders)

### **April 2019–September 2019**

- Final blog posts, reflections on process and outcomes (Connell, Flanders, collaborators)
- Complete “deep dive” encoding (GRAs, Connell)
- Complete editing and encoding of exhibits, and publish exhibits (Connell, Clark)
- Complete and publish WWP lab visualizations; finalize WWO interface features (Clark)
- Complete and publish final report (Flanders, Connell)

## **Final Product and Dissemination**

There are several main final products arising from this project, which will each be disseminated in appropriate ways. Research essays and exhibits on intertextuality, written by the collaborative team, will be published in *Women Writers in Context*, an open-access series of critical and contextual articles published by the WWP. Research blog posts detailing the research process, written by the collaborative team and WWP staff, will be published on the



WWP site. Data enhancements to the WWP textbase, including explicit identification of sources for all titles and quotations as well as more detailed intertextual information for selected texts, will be visible as part of WWO. Visualizations for exploring the intertextuality data will be made publicly visible via the WWP Lab. Public data sets including the full bibliography, the personography of authors, and metadata records representing the intertextual references in each WWO text will be published via the WWP Lab API and will be available for public download. A final reflective summation of the project will be published on the WWP site.

The dissemination of the materials developed for this project will take several forms, each of which offers a distinct mode of engagement. The exhibits represent the collaborative scholarship produced through this project in a way that is familiar through its analogy to the traditional scholarly essay, but with enhancements that take advantage of the close linkages between Women Writers in Context and the WWO collection. The blog posts represent a works-in-progress narrative that will enable our collaborative team to receive feedback from a wider community, and will also help readers understand the data representation processes that underlie this research. The final report will provide a retrospective analysis of this work for a digital humanities audience interested in understanding the work and data preparation processes and their close relation to the work of the collaborative team.

The WWP Lab represents a dynamic environment in which readers can explore and test the insights offered by the research essays in a wider textual space. We envision the Lab as a zone for experimentation by the WWP and its readers, using visualization tools and other “distant reading” forms of interaction with the WWP collection. The Lab also provides a portal through which this data can be exposed to other tools: the application programming interface or API enables other projects and individuals to produce their own ways of visualizing or interacting with this data. Once the API is in operation, we plan to organize regular calls for trial implementations using the API, probably with a small award attached for the most successful exploitations of the Lab data, which we hope will open up opportunities for experimentation in ways that we cannot foresee.

All materials developed for this project will be maintained and published at the WWP site indefinitely, and all data (including the enhanced encoding of WWO) will be freely available for researchers. In the event that the WWP ceases operation all data will be deposited in the Northeastern University Digital Repository Service and made publicly available.