

# Intertextual Networks: A Research Report

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## Introduction

This research report reflects on an initiative by the Women Writers Project titled “Intertextual Networks,” funded by a Collaborative Research grant from the National Endowment for the Humanities (2016–2020). The focus of this work was twofold: both to develop a version of the WWP’s full-text collection of early women’s writing in which intertextual “gestures” are formally represented as data, and also to produce a body of scholarship that explores the complex and multifarious phenomenon of intertextuality with a specific focus on women’s writing. As we noted in the initial grant proposal, there are a number of research questions which this initiative has been well positioned to explore. First, we were eager to consider the history of reading in the context of the history of women’s writing, expanding knowledge about the books women read to develop a better understanding of how women’s reading manifested in their writing and about how women writers understood their own readers. 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? 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? Second, we wanted to explore questions about readership and the expectations women held of their readers and their literacies. 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? What kinds of cultural power may be at stake in the work of citation and quotation? And finally, we tackled a set of questions arising in the concerns of text encoding and humanities data representation, looking at how text encoding can represent the extremely complex connections between texts, working with formal categories without flattening out useful levels of nuance. 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?

The Intertextual Networks project began in October 2016 and the bulk of the work was completed by September 2020, but the creation of an exploratory interface for research with the intertextual data has continued for another year and the full integration of the data into Women Writers Online is an ongoing project. The major elements of the project (which are described in fuller detail below) included:

- Developing research and encoding protocols, documentation, training materials, and tools to support the creation of the intertextual bibliography and the expansion of the encoding in the WWP texts.
- Identifying all of the quotations, references, citations, and other “intertextual gestures” within the texts of the WWP collection, and creating a comprehensive bibliography that is linked to the corresponding references points in the WWP texts.
- Researching and developing the collaborative research exhibits that were published as part of Women Writers in Context.
- Exploring more specialized forms of data modeling that might reveal intertextual nuances not captured in our broader encoding.
- Designing and developing the various interface tools through which the intertextual data can be explored and visualized.
- Developing methods for making the intertextual data itself available (e.g. through APIs and downloadable data sets) to researchers for further experimentation and tool-building.

This work was in itself very substantial, but it is important to emphasize at the outset that it would not have been possible without the prior foundational work that established the WWP’s textbase, its encoding protocols and documentation, its publication apparatus and tool set, and its working culture. By the time the Intertextual Networks initiative started in 2016, the WWP had already accomplished nearly 30 years of applied research which made it possible to structure a new effort like this one effectively. The existing full-text transcriptions that constitute the WWP textbase already capture details of text structure, appearance, and reference within which it is meaningful to add further layers representing features such as intertextual reference. While earlier phases of the WWP’s development focused on articulating these basic representational requirements, the project is now able to expand into more specialized areas.

## Scholarly Context

This project sought to provide a collection-level basis for exploring a number of 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 the WWP, 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” (Phillips 2009, 609). 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 “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” (Winterer 2008, 105–107). The texts in WWO show how women on both sides of the Atlantic negotiated that precarious balance, as they quoted from, cited, and named

classical works. The significance of classical works for women writers is indicated by the breadth of their references in WWO: as of spring 2023, there were 800 references to classical works in WWO texts; these references appear in 110 out of the 450 texts in WWO; and classical works are the sixth most referenced form of writing in WWO (after sacred texts, poetry, history, theology, and drama).

From another angle, Kate Rumbold's (2006) 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. And, as Ingrid Horrocks (2008) 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)? 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" (Roberts 2008, 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). The 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 (Ferguson 2008, 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). 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" (Uman 2012, 12). The Women Writers Project has long worked to expand the canon of early texts; Intertextual Networks enabled us to build on that work to show how women produced and resisted, subverted and sought entry to, the canons of their times.

# Technical Issues and Findings

## Background and Context

A key strand of the work for Intertextual Networks was the systematic augmentation of the encoded data in the Women Writers Online collection. With this in mind, some brief explanation of that encoding will be useful. The WWP's data is represented using the [Text Encoding Initiative](#) (TEI) markup language, which is an international community standard for modeling humanities research materials in digital form. TEI is expressed with XML (the Extensible Markup Language), which provides a mechanism for identifying and describing content objects, using elements and attributes. In text encoding, elements both name and mark the boundaries of textual features, while attributes provide some further information about elements. The TEI Guidelines offer a detailed vocabulary and grammar for modeling texts, specifying the names of hundreds of elements used to describe a wide range of textual features, and constraining where elements are allowed to appear, and what they are allowed or required to contain.

For instance, here is how a stage direction might be encoded in TEI:

```
<stage type="delivery">Aside to <persName>Mr. Scribbler</persName>.</stage>
```

The <stage> element indicates that "Aside to Mr. Scribbler." is a stage direction. The @type attribute further specifies that the type of stage direction at stake is "delivery", meaning that it describes the delivery of a line. We also have the <persName> element, indicating that "Mr. Scribbler" is the name of a person.<sup>1</sup> While the TEI functions as an international standard, each TEI project will adopt its own approach to modeling texts, depending on the priorities of the project and the specific text(s) being encoded. WWO encoding models a broad range of informational facets: document structures, named entities, rhetorical and linguistic devices, the appearance and physical conditions of the source texts, and many others. This detailed encoding was essential to the Intertextual Networks project, as we retrieved and created entries for the tens of thousands of intertextual features already modeled in the WWO encoding.

## Markup Expansions

Through this project, the WWP team has attempted to identify the sources for many different forms of intertextuality present in Women Writers Online. This work was possible only because of the foundations we had laid down in the encoding. Our initial markup allowed us to tag many relevant phenomena in the moment of encoding, so that these could then be retrieved and reviewed systematically. In most cases, we had not included pointers to reference systems or made any attempts during the first phase of encoding to identify specific texts and authors.<sup>2</sup> However, because we had tagged these different forms

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<sup>1</sup> For more on TEI encoding, see the WWP's [resources for teaching and learning text encoding](#).

<sup>2</sup> One exception is that we had an earlier project on creating and linking references to persons within a subset of the WWO collection. See the project's [white paper](#) for more information.

of intertextuality, we were able to programmatically locate, review, and update these to include pointers to entries in the bibliography that we developed. The encoding features that we acted upon include:

- titles (encoded in <title> elements)
- bibliographic citations (in <bibl>)
- quotations (in <quote>)
- indirect but specific references to titles<sup>3</sup> (encoded in <rs> with @type of "title")
- citations of works that have standardized reference systems (typically the Bible, encoded with the WWP's customized <regMe> element, itself nested in a <bibl>)
- references to authors within bibliographic citations (in <author>).

Additional intertextual information is also carried by the contexts in which these elements appear: for example, in advertisements, in authorial annotations, in epigraphs, in verse or prose, in authorial dedications or within the bodies of novels, and so on. The original markup also provided detailed metadata about each WWO text, including authorship, publication date and location, genre, and other features.

To this existing information, we added markup whose primary function is to point to the entries for the various texts at stake in our bibliography. Because we wanted to support potential reuse of the data, we used existing TEI attributes already available on the elements. To <title> and <rs> elements, we added @ref; and, to <quote> and <bibl> elements (including <bibl> elements that contained <regMe>s), we added @source, in all cases pointing to the relevant entries in our bibliography.<sup>4</sup> To <persName>s in <author> or with other contextual markup to indicate authorship, we added @ref. We also gave each element an @xml:id with a unique identifier so that we could point to it from other resources.

Here is the encoding for a sample <title>:

```
<title ref="b:IT00659" xml:id="t003">Midsummer-night's Dream</title>
```

And here is the encoding for a sample quotation:

```
<quote source="b:IT07317" xml:id="q061">They are all up—the innumerable stars!</quote>
```

As described below, we implemented many of these additions programmatically, identifying repeated instances at scale and automatically inserting the relevant pointers within the encoded texts. While we reviewed all of the forms of intertextuality described above, we weren't always able to identify their sources: for cases where we had titles or bibliographic details that we were unable to match to a specific historical text, we created basic entries in the bibliography containing whatever information we could glean from within the WWO references (and marked these coming only from internal sources). We marked all quotations that we were unable to identify as being "unfindable." We plan to return to these

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<sup>3</sup> We use this encoding in cases where a specific text or texts are referred to with language that is standing in for but not any version of their proper titles —for example, "Milton's Great Epic" as a reference to *Paradise Lost*.

<sup>4</sup> To simplify the encoding and reduce typos, we used a prefix declaration "b:" in the place of a file path to the XML bibliography.

in the future, as additional texts are digitized and the resources for finding obscure and partially-described or even incorrectly-described texts continue to grow.

We also expanded our encoding of intertextual features to encompass a wider and more nuanced set of phenomena. During this project, we added several values for @type on <quote>, including "adaptation" for deliberate changes to the original language, "parody" for parodies, and "remix" for deliberate re-ordering of the source text (for example, cases where authors change the orders of lines in quoted poetry). As these definitions might suggest, we reserved this encoding for instances where it was clear that the author was choosing to make changes to the language of quoted materials, rather than the slight and unintentional misquotations or abbreviations that are common in texts from this period.

We performed some exploratory encoding that was aimed at marking an even more nuanced set of intertextual gestures, such as allusions, references, and distillations of quoted source material. We tested the implementation of this encoding across a set of WWO texts that we had identified as being densely intertextual—our experiments indicated that consistent application of this more detailed markup required very substantial knowledge of the texts at stake. These types of gestures were often not self-evident and required both extensive research and domain-specific expertise. While we determined that the broad application of experimental encoding across WWO texts was out of scope for this project, we were invested in doing a fuller exploration of what that encoding might look like. To that end, we convened a workshop in the fall of 2019 and invited participants to speculate about what forms of intertextuality might be visible in early women's texts, particularly forms that might challenge and expand our sense of the boundaries of intertextual reference. This event yielded a rich set of possibilities. Participants explored the challenges of encoding references to fictional or fictionalized characters and places (e.g. Clarissa, or the Pompey of Katherine Philips' play, or the London of Sherlock Holmes), references to entire literary schools or movements (e.g. the Lake Poets) or families (the Brontës), and metonymic references (e.g., an author's name being used to indicate a specific text—"I was reading Homer yesterday"). They also considered approaches to encoding that might be able to indicate many layers of intertextuality, as authors adapt and reference materials from other writers through parody, emulation, echo, and other subtler forms of appropriation. The group developed an inventory of potential encoding strategies for future consideration, including attributes such as @basedOn (which might work transitively to establish chains of reference and genealogies of adaptation and appropriation) and forms of personographic reference that would establish intermediary targets (such as family groups or literary schools) that could then point onward to specific individuals. The goal throughout was to thicken the bandwidth of information being captured about each intertextual gesture: both its source, its target, and its rhetorical vector.

Based on these tests, we decided to adjust our pilot of this more detailed markup to draw on our collaboration with the editors of the *Almancks* of Mary Moody Emerson, a collection of manuscript texts written by this influential transcendentalist scholar between 1804 and 1858.<sup>5</sup> The editors, Sandra

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<sup>5</sup> While most of the WWO collection is print, we are piloting the encoding and publication of manuscript texts through a partnership with the editors of Emerson's *Almancks*.

Petrulionis and Noelle Baker, had already performed extensive research into the sources and contexts for Emerson's *Almanacks* and had recorded the outcomes of that research in editorial annotations.

After review of the Emerson texts already encoded in WWO, we decided to add a new element <itg> (intertextual gesture) with a constrained list of values on the @type attribute to distinguish these forms of intertextuality from those already encoded in TEI elements like <quote> and <title>.<sup>6</sup> Working with Baker and Petrulionis, we identified the following as values for @type on <itg>:

- **allusion**: An implied or indirect, but deliberate, reference to another text
- **dialogic\_reference**: Dialogue or direct address to authors or source material, or commentary on both in the form of debate, argument, or pondering/musing; or placement of authors in dialogue with each other
- **distillation**: A synthesis of materials from a text or set of texts; may include direct quotation
- **intertextual\_echo**: A reproduction of ideas from another text or set of texts; a key distinction here is that the reproduction is not clear or specific enough to be identified as another form of intertextual gesture
- **paraphrase**: A summary or representation of the meaning and content of material from another text that may or may not include some direct quotation of the original language
- **reading\_reference**: A mention of having read or otherwise engaged with another text
- **reference**: A mention, typically brief, of material from another text
- **repurposing**: A representation of material from another text that deliberately changes the meaning of the original

We also added a specialized set of values for @type on <quote> to reflect the specific contexts in which Emerson adapted quoted materials:

- **misquotation**: A quotation that diverges from the original material in ways which may or may not be deliberate, while still including some language from the original text
- **repurposing**: A representation of material from another text that deliberately changes the meaning of the original
- **remix**: A quotation in which the language has been deliberately re-ordered.

We also added @cert where necessary to indicate the lower levels of certainty for these less clear-cut forms of intertextuality. In the less common cases where Emerson quotes or names a text directly, we used <quote> and <title>, with @source, @ref, and @cert as relevant. We partnered with Baker and Petrulionis to develop a system for translating their annotations into this encoding and applied that system across the full set of *Almanacks*; to make this enriched information visible for experimentation and exploration, we developed an [interactive visualization](#) that allows users to explore the different types of gestures and the genres of the referenced texts. We have now established routines for adding the enhanced intertextual encoding to all Emerson texts and so this information will continue to expand as we publish further materials from the *Almanacks*.

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<sup>6</sup> This decision reflects the very distinctive phenomena that are being modeled with this encoding—however, this customized encoding can be transformed into <seg> with @ana for reuse by other projects.

## Work Processes and Tools

The central philosophy we adopted in our encoding enhancements was to start with the most frequently referenced works and move to increasingly more challenging texts. Beginning with the references that would be easiest to track down allowed us to develop our bibliography as efficiently as possible, and then apply the lessons we learned from that process to our work on the increasingly obscure references. Other key aspects of our approach have been: combining human and programmatic interventions, using the lightest possible tools for each task, and continually testing our encoding decisions against our corpus.

In the first phase, we used XQuery to extract those <title> elements that appeared multiple times or inside of <bibl> elements, along with any contextual information that we could identify programmatically (typically the other contents of any <bibl>s in which the <title>s appeared). We propagated these textual contents into a Google Sheet, to support the intensively collaborative work in that phase and to make the addition of bibliographic information as efficient as possible. We also performed some basic regularizations to aggregate instances with multiple attestations, for example, if the same title appears with a long or a short s character (such as in *Epiftles on Women* and *Epistles on Women*). By preserving the XPath and regularizations that we used, we were able to fill in the bibliographic details while maintaining a records of how the extracted titles appeared in the WWO texts, which allowed us to automatic the propagation of the identified texts back into the instances in which they were named in WWO. In this phase, we determined the key pieces of information to be identified for the basic bibliographic entries: original and display titles, genre, author(s), author gender(s), publication date, publisher, and publication location—along with both internal and public-facing notes as needed. We also begin identifying and developing entry templates for other, more complex, forms of bibliographic entries, such as translations, periodicals, revised editions, miscellanies, fictional works, proverbs and sayings, works inscribed on physical objects, visual art, and so on.

To accommodate the wider range of fields necessary for these more complex entries, we created an XML bibliography; these two forms of data-tracking complemented each other, because the spreadsheet made it possible to have a team of encoders collaborating seamlessly on a set of 1500 records while the XML bibliography was there for the smaller number of cases where more complex information structures were necessary.

This phase allowed us to thoroughly test our work processes and our handling of bibliographic complexities—we were also able to develop detailed documentation and template entries from our work on these initial entries. After we created entries for all of the <title>s either in <bibl> or with multiple attestations, we held the first of several review phases, in which we checked for duplicates and inconsistencies. We adopted a multipronged approach to deduplication: we used alphabetization as a first-pass method, beginning with our input phase in which our alphabetized extracted titles made it clear that, for example, “Collections of the Massachusetts Historical Society” and “Collections of the Historical Society” should be checked as potential duplicates. Of course, variant titles aren’t always alphabetically proximate; for instance, if one author refers to the *New and General Biographical*



*Dictionary* as the “General Biographical Dictionary” and another calls it the “Biographical Dictionary,” the fact that these are duplicates is less immediately clear in a bibliography with thousands of items. To help identify this kind of potential duplicate, we reviewed the display titles created by our encoders (which were much more consistent) and we surveyed repeated bi- and trigrams in the titles for likely duplicates. In addition to duplicates, we also reviewed author names, publishers, and publication locations to ensure that these were standardized consistently. At this point, we then created a canonical bibliography with all of the texts for whom we had records—in all subsequent data creation, encoders first checked this bibliography to ensure that we did not yet have a record.

In the second phase of our work, we turned our attention to those instances in which the specific contexts of individual intertextual gestures were more essential: <title>s that appeared only once, and <quote>s. To accommodate the different needs for this phase, we moved from the Google Sheets to a web-based platform designed to combine programmatic and human interventions. Because we had a clear sense of how we would enter information for various kinds of texts, and we knew which pieces of contextual information would be most useful for encoders, we were able to construct an interface able to handle most forms of entries, with the very complex cases still being entered in the XML bibliography. The interface presented encoders with textual data extracted from WWO (for example, a quotation and the epigraph in which it appeared or a title and the surrounding text), along with a set of entry fields for adding our standardized bibliographic information, as well as both an XML view of the extracted text and an XPath pointing to the specific instance in WWO.

We also used the web interface to manage workflow, such as assigning entries to specific encoders and flagging individual items for discussion. We then migrated all of the data from the web interface into the XML bibliography. Following this phase, we performed another review for duplicates and inconsistencies; we also refined our XPaths for locating individual textual instances that remained to be tagged. At this point, we had created entries for the majority of the texts referenced in WWO, and we had carefully proofed the bibliography. We also added unique identifiers for the authors in the bibliography at this point—from previous work, the WWP had biographic entries for thousands of persons, and so we were able to cross-check the person names in our bibliography against those in our database of persons and apply the appropriate identifiers in many cases. For those persons who did not yet have entries, we automatically assigned identifiers and created basic biographical entries based on the information in the bibliography (e.g., when they would have flourished, and what texts they had authored).

In parallel with the phase above, we extracted all of the contents of the <regMe> element for citations that can be regularized according to a standardized system (as discussed above, these are primarily biblical citations) and propagated these to a Google Sheet, handling them in similar fashion to the first phase of bibliographic development. We adopted a similar approach to handling names of authors within the WWO texts; we were able to extract and identify many of these in a single pass, relying on contextual encoding that suggested named persons were likely to be authors (primarily the <author> element, but also <epigraph> and co-occurrence with <title>s in <note>s). To help locate other potential references to authors, we extracted the contents of all <persName>s in WWO (regardless of their contexts) and cross-checked these against the <persName>s in the bibliography; we also searched across the WWO collection for common spelling variations on all authors whose names appeared at least twice

in the bibliography. Thus, we were able to substantially (if not completely) expand our tagging of individual authors in the WWO collection.

At the end of these phases, we used XQuery to propagate the unique identifiers for referenced texts back into WWO. Because we had preserved information about how the references originally appeared in the markup, we were then able to programmatically add attributes to <quote>s, <title>s, and <bibl>s as described above, marking each with a pointer to the unique identifier for the text identified as being quoted, named, or cited. In the final phases of the work, we used XPath to retrieve the remaining cases that had not yet been identified (for example, <bibl>s that did not contain <title>s). As we continue adding new texts to the WWO collection, we work directly in the XML bibliography and the WWO files, retrieving the intertextual gestures with a set of XPaths, determining which text or texts is being referenced, adding a bibliography entries as needed, and adding the pointers to the referenced text(s) directly in the WWO texts. This more direct approach to the markup augmentations aligns well with our ongoing work, now that there are thousands of texts in the bibliography and new additions are much rarer.

## Public Interfaces

The Intertextual Networks data sets express a complex network of human creators and consumers and the publications through which their relationships are enacted. Under this grant, we developed some initial public interfaces for exploring the data, and have mapped out additional places in the WWP ecology where this data will become publicly visible over time. In addition, because the data is being expressed through a public API, we encourage scholars and projects to create additional tools and views that build upon this work. The broad goals and design considerations that shaped this work were as follows:

- The intertextuality data itself should be available to the public, both as a downloadable data set and via APIs that support querying and which return data in a form that aligns with the ways in which scholars are likely to use it.
- The WWP should consume the data via its own APIs: thereby ensuring that those APIs are well tested and also have clear working demonstrations of their capacities.
- The environments for exploring the data should foreground its networked nature and should enable readers to traverse connections between WWO authors, WWO texts, external authors and their texts, and informational facets like gender, genre, and types of reference. We drew here on our previous work on Cultures of Reception, in which the reader can navigate flexibly from any given starting point (for instance, a particular work in WWO) to reviews of that work, to reviews of other works in the same periodical, to other reviews with a similar evaluative position (positive, negative, etc.), and so forth. This exploratory open-endedness ensures that readers experience the scope of the data from varied perspectives and never come to an informational dead end. Putting this another way, the reader experiences the data as a network that can be infinitely traversed, like a web of city streets, rather than like a set of divergent paths or an information hierarchy.

- The interfaces for exploring Intertextual Networks data should connect the reader back to other parts of the WWP ecology, but without requiring a license to Women Writers Online to make sense of what is discovered.

The technologies used to build these interfaces are those that the WWP has relied on for the other WWP publications, with a focus on open-source XML technologies including XML databases and tools that transform and consume XML data. This tool set has served us well in several ways. It accords with our emphasis on free, open-source tools and open standards, and enables us to incrementally alter and improve specific components in a modular fashion, rather than having systems that are very tightly integrated.

It also facilitates support for equitable internet access. By starting from semantically rich TEI XML, our tools can easily interpret and transform textual data into semantic, accessible HTML. The Intertextual Networks site also performs most processing on the server-side, which reduces the amount of data that browsers must request or process on a reader's behalf, and so lowers barriers to access on mobile devices and in low-bandwidth environments.

For the Intertextual Networks interfaces built thus far, we are using:

- the programming language XQuery, which is used to manage and compile data, and to respond to API requests;
- the programming language XSLT, which is used to transform TEI documents, both into clean, publication-ready TEI and into HTML;
- the XML database [eXist](#), which stores the TEI documents created by our encoders and hosts the Intertextual Networks website/API; and
- the visualization library [D3.js](#), which is used to generate visualizations of some data.

We mostly grappled with the size and density of the intertextual data. Moving into the interface-building phase, we now had a growing number of intertextual gestures, a large bibliography, and many ways of filtering or subsetting all this data. Even with eXist's robust indexing capabilities, a request for the first 50 quotes out of 10,913 (the total is 12,136 as of this writing), sorted by source WWO document, could take over 2 minutes to return a response. Optimizing the XQuery code and tuning the eXist indexes helped speed up page load times, but we've found that the most effective and necessary solution was to generate pre-compiled caches of response data. These caches themselves are indexed and used as a starting point for a customized API response. As of this writing, the request for quotes above loads in about 2 seconds. Though there is still room for improvement, keeping page load times below 10 seconds is currently acceptable.

The major interfaces we have built or are planning for this data provide very different kinds of access and express the concept of “intertextuality” within several different kinds of reading scenarios. As a result, they not only explore the potential of the data itself from a variety of perspectives, but also shed a varied light on what “intertextuality” means as a textual rhetoric, across the period covered. We describe each one in detail below.

## Women Writers: Intertextual Networks

<https://www.wwp.northeastern.edu/intertextual-networks>

Launched in May 2022, Women Writers: Intertextual Networks (WWIN) is a web-based exploratory environment dedicated to the intertextuality data developed under this grant. Like Women Writers in Review (<https://www.wwp.northeastern.edu/review>), it provides an interface for exploring a data set that is complex and densely interlinked: the Intertextual Networks bibliography, and the record of “intertextual gestures” within Women Writers Online that reference those sources. It is guided by several design and functionality goals:

- Enable readers to get an overall understanding of the scope of the Intertextual Networks bibliography including its overall size, the genres it includes, the date range covered, the gender of authors referenced, and the distribution of publication locations.
- Enable readers to get a similarly broad understanding of the scope of the intertextual gestures within WWO, including the type of gesture, the texts where the gestures originate and the texts being cited, and the genres of both.
- Enable readers to navigate within the data set using the natural associations and interconnections available. For instance, by clicking on a publication location, the reader should be able to see all of the texts published from that place; by clicking on the title of a work in the bibliography, the reader should be able to discover all intertextual gestures that refer to it, other works by the same author or in the same genre, and so forth.
- Enable readers to see patterns in the data: for instance, by choosing a single WWO author to see what types of sources she refers to, or what kinds of intertextual gestures she uses (quotation, reference, parody, etc.).
- Enable readers to study particular WWO authors, WWO texts, or cited works in detail, by examining the specific intertextual connections they are implicated in.
- Enable readers to navigate back to WWO where relevant (e.g. to read the full text of a work).

WWIN offers four starting points for readers: the Intertextual Networks bibliography, the index of intertextual gestures, the list of WWO authors, and the list of topics and genres we developed to categorize the bibliography entries. Each of these provides a different starting point for exploration, but leads the reader into the same densely interlinked mesh of data. For instance, starting from the Topics and Genres index, the reader can both see the full range of genres represented in the bibliography and their comparative frequency, and can examine any genre of interest to see what bibliography items it includes. From the Authors index, the reader can see a list of WWO authors, and a summary of the intertextual gestures they employed through their works in WWO. From the Intertextual Gestures index, the reader can see a full list of all the intertextual gestures in WWO, with the ability to filter by gesture type, referenced work, referenced work’s genre, source text, source text’s genre, and WWO author. From the Bibliography index, the reader can explore the full bibliography of referenced works and see the number of intertextual gestures which reference each entry. The reader can further filter those entries by various bibliographic facets: contributor, gender of contributor, genre, publication location, and whether or not the work is published in WWO.

## **Intertextual References in the Almanacks of Mary Moody Emerson: Visualization for Close and Distant Reading**

<https://www.wwp.northeastern.edu/lab/emerson-networks/index.html>

This tool was the first one developed to visualize the Intertextual Networks data, focusing specifically on a single, very long text. The *Almanacks of Mary Moody Emerson* are a manuscript document comprising over 1000 pages and representing a hybrid commonplace book and spiritual diary maintained by the author over a period of 50 years. The text's editors, Noelle Baker and Sandra Petrulionis, have been collaborating with the WWP to publish this text in Women Writers Online. It serves as an important project within our collaborative team for Intertextual Networks, both because of its extraordinary performance of intertextuality and also because that aspect of the text is central to Baker and Petrulionis's approach to editing. They have developed a detailed inventory of different kinds of intertextual gestures through which Mary Moody Emerson works with her readings, and that rich vocabulary informs this complex visualization. The visualization gives the reader several different views. On the left, there is a broad view of the genres of texts being referenced and their distribution over time (showing for instance a predominance of religious reading in the earliest parts of the Almanacks, and shift in the balance towards philosophical works in the latest parts). In the middle pane, an alluvial flow diagram shows how different broad genres of texts (religious writings, philosophy, literature, etc.) are referenced in different ways in Mary Moody Emerson's work: for instance, showing that her predominant mode of engagement with religious writings was "reference" (i.e. a citation without actually quoting the work in question) whereas with philosophical writings she is far more apt to quote, "distill", paraphrase, or include a "dialogic" reference in which she engages more deeply with the referenced material. These two panes are closely coupled: the use of color helps the reader trace the different genres and connect the chronological narrative on the left with the rhetorical narrative in the center. On the right, the reader gets a closer view of the specific gestures in a particular area. The visualization is necessarily a work in progress: since the Almanacks are being published incrementally in Women Writers Online, intertextual data from these texts is being gradually made available to populate this visualization. As a result, the conclusions we can currently draw from it are provisional and in some cases misleading—for instance, the gap in the 1830s and 40s does not indicate that Emerson did not read or record her reading practices, but rather that those folders have not yet been completed. However, what it does show is the kinds of insights that can be gleaned from a visualization of this kind, which makes so many different dimensions of the intertextual data visible and traversable.

### **Women Writers Online**

<https://www.wwp.northeastern.edu/WWO/>; requires a login)

The intertextual data developed for this grant will also be integrated into the existing interface for Women Writers Online, with two major goals. The first and simplest is to annotate individual intertextual gestures (such as quotations, title references, parodic references, etc.) so that interested readers can learn more about the referenced texts. This is particularly important since many of these gestures

reference obscure works, or reference familiar works in a manner that is obscure to the modern reader. The second goal (which will remain a work in progress for some time) is to use the intertextual data to enable readers to explore Women Writers Online as a collection. For instance, a reader who encounters a reference to Roger Williams' *A Key into the Language of America* might wonder whether any other texts in the WWO collection also mention this work, or a reader might want to find all of the authors working in a particular period who quote the same set of sources.

## Women Writers in Context

([https://www.wwp.northeastern.edu/context/index.html#topics/intertextual\\_networks](https://www.wwp.northeastern.edu/context/index.html#topics/intertextual_networks))

The collaborative research essays developed as part of the Intertextual Networks grant were published in Women Writers in Context, an open-access collection of critical and contextual essays that provide thematic and historical explorations of Women Writers Project texts. Within WWiC, all essays on intertextuality can be retrieved using the topical keyword navigation, and additional essays will be added over time.

## Data

In addition to the interfaces described above, the Intertextual Networks data sets are all being released publicly in two modes: both as downloadable data sets and (eventually) via an API. The downloadable data sets include:

- the complete bibliography of intertextual sources (represented as a single TEI file);
- a data set of the specific intertextual gestures extracted from WWP (represented as a set of individual TEI files, one for each WWO text, with all content except the intertextual gestures excluded);
- representations in XML and JSON of the full indexes of gestures, authors, and texts.

In addition, users can download individual files or data sets representing the data in the found set or individual record they are actually viewing, based on the filters or search terms they may have applied. This data includes information about the request that the user has made (filters/facets applied, what page they're on, number of records, etc., and the individual records that were requested), as well as all fields from the WWP data record (including fields that are excluded from display for reasons of concision/legibility) and shows all possible facets that characterize the results. At the time of this report, the API for Women Writers: Intertextual Networks is not yet public, but we expect to release it in 2024. We invite members of the public to experiment with these data sets and share their results with us. Experimental visualizations can be hosted on the public-facing WWP Lab, and we also invite blog posts and exhibits describing both the experimentation process and any findings.

## Collaborative Research Findings

Concurrently with the development of the data and interface tools described above, the project's collaborative team also undertook an investigation of intertextuality through a set of research projects and exhibits that explored the many different formations through which intertextuality manifests in early

women’s writing, and their social and cultural significance. These projects shared an interest in bringing to light the subtle, pervasive, and indirect forms of intertextuality that formal markup systems are ill-equipped to represent; they also sought to put critical pressure on commonsensical concepts of intertextuality and to look more closely at their cultural modes of operation.

One of these projects extended an existing collaboration with RECIRC, a research project focused on the circulation of women’s writing between 1550 and 1700. RECIRC, which concluded its active research in 2020, looks at women’s writing that was either written or read in Britain, Ireland, and Anglophone countries, with a focused on “reception”: construed broadly to include evidence of reading (e.g. in diaries or letters), annotations in books by women, citations and quotations, performances, obituaries or funeral sermons concerning women authors, visual representations of women authors, and a wide range of other kinds of evidence. The project attends to the genres and formats of reception sources, the types of reception, and the types of circulation, and provides a formal categorization that aids in analysis. The data consists of records documenting the primary entities being studied—people, receptions, works, and reception sources—all gathered in a relational database. In a sense, RECIRC’s focus was a mirror image of Intertextual Networks in that RECIRC examined how women’s texts were read and received, whereas Intertextual Networks looks at how women writers use and cite what they read. RECIRC took into consideration a wider range of documents and forms of evidence (including auction catalogues, works in translation, manuscript materials containing evidence of reading of women’s writing, and correspondence networks) in a somewhat briefer timespan than the WWP.

The practical outcomes of this collaboration were experimental and small-scale. The two projects exchanged data sets with the initial idea of creating links between the two projects (for instance, from individual WWP texts to the related receptions recorded in RECIRC). The overlap between the two data sets turned out to be less significant than we had anticipated (due to different project emphases and time scales), so formal linkages were not useful. But the examination of the two data sets in conjunction brought to light a number of insights, which we shared via a conference panel that also included the Collective Biographies of Women project.

We noted the complex relationships between the concepts of “intertextuality” and “reception,” where reception is focused on a clear causal relationship manifested through awareness, deliberate response, and evidence of direct knowledge—whereas intertextuality (as the WWP exhibits demonstrate) is in many cases more about sharing a cultural space. We also noted important commonalities between the projects’ data models. Both WWP and RECIRC focus on relationships between people and texts, and model those relationships in similar ways: as a kind of “triple” where two entities are connected by an act of reference (even though neither project used a formal triple structure such as RDF). The structures are something like this:

**RECIRC:** reception instance (inside a reception source) → reception → target author or text

**WWP:** author/source text → intertextual gesture → target text

Both projects paid close attention to the rhetoric of “reception” or “reference”, with detailed systems for characterizing those gestures (detailed documentation is available at each project site; see [RECIRC](#) and [WWP](#)). Both projects were also attentive to the genres of writing and the formats of circulation, while

also both noting the challenges in distinguishing those two classes of information. This collaboration was an opportunity for the WWP to develop a detailed list of genres (both for the WWP texts and for the referenced texts; the process is documented in a [blog post](#)), and RECIRC likewise developed a detailed list of types of “reception sources.” These classifications did not align strongly at all, but both combine the concepts of “topic,” “genre,” and “format.” The gender of the human agents was also of great significance: authors of “source” texts, authors of referenced texts, and what RECIRC terms “receivers” (i.e. people who read or otherwise responded to a text).

For both RECIRC and the WWP, thinking about textual reference also required consideration of the levels of reference that are in play in both intertextuality and reception: that is, the question of whether the reference is to a specific material document (such as a physical book that could be owned or annotated by an individual person), to a specifically identifiable edition, to a specific “work” in the broader sense, or to an author’s overall body of work. These gradations of specificity reflect the rhetoric of reference—whether the intertextual gesture is broadly intended to show familiarity with an author’s existence, or whether it is intended to document a specific passage—but also offer potential clues concerning the level of familiarity a writer may have had with the referenced text. In the RECIRC data, these levels of reference are captured in the detailed information about types of reception source, some of which are necessarily at the level of material documents (for instance, annotations, commonplace books, account books, diaries, and letters) and some of which make explicit reference to an identifiable edition (for instance, the first print edition of a manuscript work). Similarly, some of the types of reception operate at the level of the material object or physical performance—such as handwritten annotations, or reading aloud—while others operate for instance at the level of the individual print edition.

The WWP formalized these levels using the entities from the Functional Requirements for Bibliographic Records ([FRBR](#)):

- work: A distinct intellectual or artistic creation
- expression: The intellectual or artistic realization of a work
- manifestation: The physical embodiment of an expression of a work
- item: A single exemplar of a manifestation

In the example below from the WWP’s XML bibliography, the “work” is represented by the bibliographic record as a whole; within that record, the “monographic” information about specific title and authorship is associated with the FRBR “expression”, and the data about a specific imprint (date and place of publication) is associated with the FRBR “manifestation”:

```
<biblStruct xml:id="TR00858" corresp="#frbr.work" ana="#poetry">
  <monogr corresp="#frbr.expression">
    <author>
      <persName gender="female" ref="p:aseward.lkq">Seward, Anna</persName>
    </author>
    <title type="display">Elegy on Captain Cook</title>
    <title type="wwo">Elegy on Captain Cook</title>
```



```
<title type="full">Elegy on Captain Cook. To which is added, an Ode to the sun. By Miss  
Seward</title>  
<imprint corresp="#frbr.manifestation">  
  <date when="1780">1780</date>  
  <pubPlace>  
    <placeName>London, England</placeName>  
  </pubPlace>  
</imprint>  
</monogr>  
</biblStruct>
```

Our bibliographic records did not include any materials at the FRBR “item” level, but we have the ability to accommodate those if we do encounter any in the future. Overall, the work with RECIRC was valuable as a challenging experiment in establishing formal interconnections between data sets, and also as an opportunity to put shared critical pressure on formal models for literary concepts like reception and intertextuality.

The other collaborative research projects that arose from this material were framed as exhibits published in *Women Writers in Context*, which explored several notable thematics. One was the importance of locale and spatiality when considering intertextuality. Samuel Diener’s exhibit (“[“To the Most Distant Parts’: Writing the World in the WWO Corpus”](#)”) tackled this topic directly by examining how spatial references in women’s texts constitute important evidence about “networks of information in which these women were embedded, the sources they employ—like news or travel narratives—and the uses they make of their material.” His process for the research involved compiling a data set consisting of the place name references for each text (encoded as <placeName>), which enabled him to track the overall frequency of each place name and the texts in which it appeared. (Front matter and back matter were excluded, to eliminate things like title pages and subscriber lists, which would have been interesting but would have spoken to a very different set of geographic interconnections.) Based on this information, his analysis explored how different genres use place names—for instance, works of history, 19th-century novels, and natural science are likely to be richer in place references—and he also examined the overall range of geographic reference, and the authors whose works contributed those references. His concluding case study of Eliza Haywood’s *The Female Spectator* uses place references to position Haywood (and the readers of her periodical) within a geographical imaginary centered predominantly on London but also engaged intertextually in limited but significant ways with travel narratives that generate place references representing British colonial reach.

The theme of location also figures significantly in several exhibits that deal with language and with national literary traditions. Beatrice Righetti’s “[“But women read and wrote’: A comparison between the Italian and the English sides of the querelle des femmes”](#)” compares the emergence of the *querelle des femmes* genre in England and Italy, exploring the possibility of intertextual echoes of Italian sources in English *querelle* texts by Rachel Speght, Esther Sowernam, and Constantia Munda, and also looking for evidence that writers in both the English and Italian traditions exhibited the kinds of “literary awareness” that would signal intertextual connections and borrowings from earlier works in their own language

traditions. Along similar lines, Arnaud Zimmern's "[Staging the Learned Lady: Dialogue and Interruption in Margaret Cavendish and Jean Baptiste Molière](#)" explores how we might identify possible intertextual connections between two notable playwrights separated by language and locale, focusing on the figure of the "learned lady" and on Cavendish's adaptation of that character, directly or indirectly, from Molière. Megan Herrold's exhibit ("[The 'Seeds' of Intertextuality in Seventeenth-Century Women's Writing: Craft, Philosophy, and Politics](#)") considers Lucy Hutchinson's translation of Lucretius' *De Rerum Natura* and more broadly how translation and other forms of intertextual appropriation carry (and in the process alter) key concepts and terms across languages.

Another significant theme in our collaborative research was commonplacing, a form of writing whose fundamentally intertextual nature is highlighted by both Elizabeth Ann MacKay ("[Rhetorical Intertextualities of M. R.'s The Mothers Counsell, or Live Within Compasse, 1630](#)") and Noelle Baker, Sarah Connell, and Sandra Petrulionis ("[Mary Moody Emerson as Reader and Reviewer](#)"); the latter draws on an extended research collaboration that extends beyond the Intertextual Networks project but has direct bearing on its topical focus. Both of these projects situate the author within contemporary commonplacing practice: M. R. drawing on the moral allusiveness of commonplacing (as a way of accumulating moral instruction from authoritative sources) in her provision of maternal advice, and Emerson recording the extraordinary range of reference of a voracious reader at the turn of the 18th/19th centuries, steeped in the theological, historical, and philosophical writing of her time. What each piece also brings to light is how each author absorbed, synthesized, and repurposed their references into a significant spiritual narrative: commonplacing functioning not simply as a process of accumulation or recording, but as the starting point and model for the construction of selfhood.

One recurring question concerned issues of agency and intention, and specifically how intertextuality might be "read" through textual signals that do not arise from specific allusions or citations. Amanda Henrichs's research used computer-assisted analysis to explore a range of different kinds of intertextual reference at different levels of perceptibility (by humans and by computer analysis), looking at the literary works of Mary Sidney, Sir Philip Sidney, Mary Sidney Herbert, and Robert Sidney and at what Henrichs calls an "intertextual gap" where, in the absence of explicit intertextual connections, we may be able to infer subtler points of interaction. As she puts it,

In a family that is demonstrably intertextual, and with an author that is especially so but with one surprising gap, can computers find additional moments of intertextuality? How does a shift in method change our understanding of historical intertext?

Megan Herrold's exhibit similarly examined forms of intertextuality that are transacted at the level of "discourse" through shared patterns of language. Her exploration of the use of the word "seed" in early modern women's writing looks at associations between words and the ways these associations form a kind of connective tissue between early modern texts in specific genres: for instance, the association of the word "seed" with medicinal plants; with reproduction, and with concepts of husbandry, housewifery, and thrift; and thence to imaginative thrift and generativeness and thereby to metaphysics, cycles of rebirth, and questions of materialist philosophy. She argues that attending to these connections helps to make visible "the centrality of women to broad, intertextual conversations about the nature of reality and the status of women in society." Another form of this kind of indirect or diffuse intertextuality is explored in Elizabeth MacKay's exhibit which reads *The Mother's Counsell* and the intertextual dynamics

of mother's books and commonplacing culture, identifying their similar rhetorical features, vocabularies, and literary qualities and arguing that this advice book has important (implicit) intertextual connections with genres of memoir, instructional manuals, and conduct literature.

In addition to the research exhibits—which focused for the most part on reading intertextuality through specific texts and authors—this project laid the groundwork for insights into the broad patterns of intertextual reference in the WWP collection, and readers are invited to explore those through the Women Writers: Intertextual Networks interface itself, which will reflect a steadily expanding body of data as the WWP continues to transcribe new texts and add their references to the data set. The WWP's [blog](#) also includes a series of postings that offer additional context concerning the development of the data and the interface.

## Next Steps

Going forward, we will continue to develop the Women Writers: Intertextual Networks interface by improving both its infrastructure and its functionality. The WWP team has been reconfiguring the ways that the site processes data to make it faster and more robust. As a next phase of development, we plan to add a search function to the site to make it easier for users to discover how different texts and authors were referenced within the WWO collection. We will also continue enhancing the filters that make it possible to navigate the complex textual and authorial networks in the interface. We will add several new filters, and will also enable users to see additional “top” results from within each filter, since initial feedback on the site has shown this to be a powerful analytical mechanism.

The WWP team will also continue adding resources to both Women Writers Online and Women Writers in Context. We add 12 to 15 new texts to WWO each year, and our routine publication processes now include a phase in which the intertextual gestures within each text are marked and the bibliography updated. Thus, the picture that the WWIN interface can provide about how early women writers engaged with intertextuality will become more detailed and broader in scope with each new publication to WWO. We will also continue publishing new exhibits on intertextuality through the open-access Women Writers in Context platform. We are now collaborating with scholars to add exhibits on topics that range from biblical citation practices in the works of Lucy Hutchinson to the remixing of poetic sources in the *Ladies' Diary* mathematics periodical. We anticipate that the Intertextual Networks series within WWiC will be ongoing, and we look forward to providing a platform for current scholarly discussions and pedagogical orientations in this domain.

Related to pedagogy, we will also be working to make the WWIN interface easier for both teachers and students to use. WWP staff led a workshop and discussion on classroom applications of WWIN as part of the 2022 “Attending to Early Modern Women” symposium; during this event we were able to share the interface with a diverse group of instructors and we received valuable feedback. Drawing on those insights, we will develop sample classroom activities and other pedagogical materials that teachers can adapt. We will also be recruiting syllabi, assignments, and activities through our [teaching partners program](#); in this program, teachers share their classroom materials alongside reflections that discuss pedagogical design, possibilities for adaptation to other learning contexts, and student feedback.

Visualizations are another important method for making the Intertextual Networks data accessible for research and discovery. We will continue publishing new visualizations and platforms for exploration to provide new entry points into the data. For example, the WWP team is currently collaborating with two student groups in an “Information Presentation and Visualization” course to create prototype visualizations that will show chronological patterns in how various authors and genres were referenced across the more than three centuries represented in WWO. We will also support ongoing research by publishing both our TEI data and the XQuery libraries we have developed for querying and extracting intertextual gestures from the WWO texts and bibliography. Making the data more accessible will not only support research but can also lead to further resources, such as exhibits or data visualizations. We are excited about the possibilities that the Intertextual Networks project will open up, and we look forward to future collaborations on the many ways that early women writers engaged with intertextuality.

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## Appendix: Sample Bibliography Entries

### Sample single-authored monograph

This entry shows the basic information that we attempted to collect for all the texts in the bibliography:

- Display title
- Original title
- Author name
- Author gender
- Publication date
- Publication location
- Publisher
- Text topics/genres

Note that <biblStruct> maps to the “work” level in the Functional Requirements for Bibliographic Records; <monogr> maps to the “expression” level; and <imprint> maps to the “manifestation” level. The value on @ref for <persName> points to the entry for Centlivre in our database of persons. We used <name> for all publishers because we did not want to enforce distinctions between individuals and publishing companies.

```
<biblStruct xml:id="IT07364" corresp="#frbr.work" ana="#drama #comedy #satire">
  <monogr corresp="#frbr.expression">
    <author>
      <persName gender="female" ref="p:scentlivr.mtp">Centlivre, Susanna (Freeman)</persName>
    </author>
    <title type="display">A Bold Stroke for a Wife</title>
    <title type="full">A Bold Stroke for a Wife: A Comedy; As it is Acted at the Theatre in Little
Lincoln's-Inn-Fields.</title>
    <imprint corresp="#frbr.manifestation">
      <pubPlace>
        <placeName>London, England</placeName>
      </pubPlace>
      <publisher>
        <name>W. Mears, J. Browne, and F. Clay</name>
      </publisher>
      <date when="1718"/>
    </imprint>
  </monogr>
</biblStruct>
```

### Sample entry with two distinct printings

Note that each <imprint> has its own @xml:id, so these can be pointed to individually.

```

<biblStruct xml:id="IT00198" corresp="#frbr.work" ana="#theology">
  <monogr corresp="#frbr.expression">
    <author>
      <persName gender="male" ref="p:thartley.xso">Hartley, Thomas</persName>
    </author>
    <title type="display">A Discourse on Mistakes Concerning Religion, Enthusiasm,
      Experiences, &amp;c.</title>
    <title type="full">A Discourse on Mistakes Concerning Religion, Enthusiasm, Experiences,
      &amp;c.</title>
    <imprint xml:id="IT00198.1" corresp="#frbr.manifestation">
      <pubPlace>
        <placeName>London, England</placeName>
      </pubPlace>
      <date when="1759"/>
    </imprint>
    <imprint xml:id="IT00198.2" corresp="#frbr.manifestation">
      <publisher>
        <name>Christopher Sower</name>
      </publisher>
      <pubPlace>
        <placeName>Germantown, Pennsylvania</placeName>
      </pubPlace>
      <date when="1759"/>
    </imprint>
  </monogr>
</biblStruct>

```

## Sample entry for analytic-level texts

We used <analytic> for individual poems, essays, letters, articles or other texts published within larger collections. For example, here is an entry for several individual poems from within *Poems by Mr. Grey*. Each <analytic> has its own @xml:id, so each can be pointed to individually.

```

<biblStruct xml:id="IT07606" corresp="#frbr.work" ana="#poetry">
  <analytic xml:id="IT07606.1" ana="#poetry">
    <title type="display">The Progress of Poesy</title>
    <title type="full">The Progress of Poesy; A Pindaric Ode</title>
    <author>
      <persName gender="male" ref="p:tgray.kxi">Gray, Thomas</persName>
    </author>
  </analytic>
  <analytic xml:id="IT07606.2" ana="#poetry">
    <title type="display">Ode on the Pleasure Arising from Vicissitude</title>
    <title type="full">Ode on the Pleasure Arising from Vicissitude</title>
    <author>
      <persName gender="male" ref="p:tgray.kxi">Gray, Thomas</persName>
    </author>
  </analytic>

```

```

<analytic xml:id="IT07606.3" ana="#poetry">
  <title type="display">Sonnet on the Death of Mr. Richard West</title>
  <title type="full">Sonnet on the Death of Mr. Richard West</title>
  <author>
    <persName gender="male" ref="p:tgray.kxi">Gray, Thomas</persName>
  </author>
</analytic>
<analytic xml:id="IT07606.4" ana="#poetry">
  <title type="display">Epitaph on Sir William Williams</title>
  <title type="full">Epitaph on Sir William Williams</title>
  <author>
    <persName gender="male" ref="p:tgray.kxi">Gray, Thomas</persName>
  </author>
</analytic>
<analytic xml:id="IT07606.5" ana="#poetry">
  <title type="display">Elegy</title>
  <title type="full">Elegy</title>
  <author>
    <persName gender="male" ref="p:tgray.kxi">Gray, Thomas</persName>
  </author>
</analytic>
<analytic xml:id="IT07606.6" ana="#poetry">
  <title type="display">Hymn to Adversity</title>
  <title type="full">Hymn to Adversity</title>
  <author>
    <persName gender="male" ref="p:tgray.kxi">Gray, Thomas</persName>
  </author>
</analytic>
<analytic xml:id="IT07606.7" ana="#poetry">
  <title type="display">The Bard; A Pindaric Ode</title>
  <title type="full">The Bard; A Pindaric Ode</title>
  <author>
    <persName gender="male" ref="p:tgray.kxi">Gray, Thomas</persName>
  </author>
</analytic>
<monogr corresp="#frbr.expression">
  <title type="display">Poems by Mr. Gray</title>
  <title type="full">Poems by Mr. Gray</title>
  <author><persName gender="male" ref="p:tgray.kxi">Gray, Thomas</persName></author>
  <imprint corresp="#frbr.manifestation">
    <pubPlace>
      <placeName>Glasgow, Scotland</placeName>
    </pubPlace>
    <date when="1768">1768</date>
  </imprint>
</monogr>
</biblStruct>

```

## Sample entry for language inscribed on a physical object

Note the use of <bibl>, rather than <biblStruct>, the @type of “inscription”, and the addition of a local publication place to provide more specific information about where the text was inscribed (in this case, on a coffin). As with many inscriptions, this sample includes a public-facing note providing essential context that points to the relevant sections in the text(s) where this inscription is referenced.

```
<bibl xml:id="IT07682" type="inscription">
  <author><persName gender="unknown">[unknown]</persName></author>
  <pubPlace><placeName type="local">coffin</placeName>
  <placeName>New Hampshire</placeName></pubPlace>
  <title type="display">Liberty</title>
  <note target="t:adams.newengland#q090 t:adams.newengland#q091" type="public" subtype="general">This
is an inscription on a coffin used in a burial procession for the metaphorical death of Liberty. According to the
account in Hannah Adam's
  <title>History of New England</title>, the inscription was later changed to "Liberty revived".</note>
</bibl>
```

## Sample flagged entry—imagined or hypothetical text

We used flags both to track the phases in which entries were added and to convey additional details about the entries. For example, the “imagined” tag marks works as hypothetical, imagined, or otherwise existent only within the reality of the sources in which they are named. Note that we also convey the fictional status of the work through the topic/genre on @ana.

```
<biblStruct xml:id="IT01374" corresp="#frbr.work" ana="#fictional">
  <monogr corresp="#frbr.expression">
    <title type="display">The Moralist</title>
    <title type="full">The Moralist</title>
    <imprint corresp="#frbr.manifestation">
      <catRef target="#debug.needs-disambiguation"/>
      <catRef target="#tag.imagined"/>
      <date/>
    </imprint>
  </monogr>
  <note type="public" subtype="general">This refers to a fictional work compiled by a character in Susanna
Rowson's <title ref="#TR00602">The Inquisitor</title>.</note>
</biblStruct>
```

## Sample flagged entry—works for which no imprints are possible or appropriate

We used the “unimprintable” flag for ancient texts, works of visual art, and other contexts in which information on an imprint will never be appropriate. For example, here is a sample entry for a sculpture:

```
<biblStruct xml:id="IT07718" corresp="#frbr.work" ana="#visual-art">
  <monogr corresp="#frbr.expression">
    <author>
```



```
<persName gender="unknown">[unknown]</persName>
</author>
<title type="display">Venus de' Medici</title>
<title type="full">Venus de' Medici</title>
<imprint corresp="#frbr.manifestation">
  <catRef target="#tag.unimprintable"/>
</imprint>
</monogr>
<note type="public" subtype="general">Venus de' Medici is a marble sculpture of the Greek goddess
Aphrodite. While its origins are unknown, its style dates back to the Greek Hellenistic tradition in the first century
BCE.</note>
</biblStruct>
```

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