

Book Traces @ UVA

Project Overview

Book Traces @ UVA is a large-scale project to find and record historical readers' interventions in the circulating collections of the University of Virginia Library, focusing on volumes published before 1923. Based on the ongoing Book Traces initiative (<http://booktraces.org>), this project aimed to develop a protocol for the discovery and cataloguing of uniquely-modified volumes in the stacks, while also gathering data regarding the nature and distribution of such modifications. Many titles in our nineteenth-century circulating collections were acquired by donation from private owners and have unique evidentiary or artifactual value due to characteristics including marginalia, inscriptions, artwork, and inserted objects such as photographs and correspondence. Although the books themselves have always been discoverable in the catalog, the unique artifactual features of the books have previously been undocumented and therefore undiscoverable, hidden in plain sight in our stacks. We have created a protocol for surveying large swaths of the collection and identifying the interventions we find using a controlled vocabulary. We are adding enhanced metadata to the catalog for books with unique interventions and we are eager to share the adaptable protocol we have developed.

The Book Traces @ UVA Protocol

Describing interventions

Book Traces @ UVA had two major goals. The first was to identify pre-1923 books in the circulating collections at the University of Virginia Library with unique markings, modifications, or insertions left behind by the books' previous owners. We refer to these traces of past ownership collectively as "interventions." The second major goal was to develop a protocol for discovering and describing books with unique interventions that could be deployed at other libraries, either as a stand-alone surveying project or as part of an existing workflow.

In our project plan, we committed to using a standardized vocabulary to describe the interventions we found: specifically, terms from the Provenance Evidence Thesaurus (PET) developed by the Rare Books and Manuscripts Section of the ACRL. Because the PET is rooted in the rare book library practice of description for "physical features rather than by intellectual content," the PET is ideal for describing physical interventions in a consistent, machine-actionable, and shareable way.¹ We chose a subset of terms from the PET to represent the types of interventions found in our circulating collection, but we found that some of the terms were too broad to characterize different types of interventions we were interested in distinguishing from each other. For example, the PET offers the term "Insertions," but we wanted to distinguish loose insertions (which qualified books for special preservation treatment) from ones that were attached to the book, and we wanted a special category for botanical insertions. While we distinguished these categories for project purposes, they can be collapsed back into the standardized

¹ Bibliographic Standards Committee of the Rare Books and Manuscripts Section. "Provenance Evidence: A Thesaurus for Use in Rare Book and Special Collections Cataloguing." *Association of College and Research Libraries*, <http://rbms.info/vocabularies/introductions/ProvenanceIntro.htm>.

term “Insertions” for cataloging. We also added terms for previous library markings, which we wanted to investigate for the project, but without intending to catalog them; we do not plan on translating these terms into PET terms.

The following chart shows the vocabulary we developed and the PET terms into which our project-specific terms can be collapsed:

Project term	PET term
Inscription - owner's or indeterminate	Inscriptions
Gift inscription	Presentation inscriptions
Author's inscription	Authors' inscriptions
Inscription - covered by bookplate	Inscriptions
Insertion - loose non-botanical	Insertions
Insertion - tipped	Insertions
Insertion - fully pasted	Insertions
Insertion - botanical	Insertions
Insertion - extra-illustration	Extra-illustrated copies
Marginalia - verbal	Marginalia
Marginalia - nonverbal	Marginalia
Annotations - verbal	Annotations
Annotations - nonverbal	Annotations
Annotations - juvenile	Annotations
Doodles / artwork	Annotations
Doodles / artwork - juvenile	Annotations
Previous library label / bookplate	-
Previous library stamp or embossing	-
Underscoring	Underscoring

The Provenance Evidence Thesaurus provides a standardized list of terms for describing provenance evidence, but does not supply a definition for every term. Thus, in order to distinguish between the closely related terms “Inscriptions,” “Marginalia,” and “Annotations,” we developed our own definitions after consulting library and bibliographic reference works. Project assistants were trained to describe written markings in books according to the following definitions:

- **Annotations:** The broadest category of markings in books. Can include markings anywhere in or on the book; we use it largely for endpaper markings. Can include diagrams, checkmarks, and other nonverbal markings. Use this term for markings such as endpaper math, handwriting practice, and other markings that do not appear to relate to the text.² However, exclude sellers’

² Although there may be a large overlap in the general usage of “marginalia” and “annotations,” for the purpose of the Book Traces @ UVA project, we distinguished the two primarily by whether they related to the printed text or not. We categorized markings that did not appear to relate to the text as “annotations” largely on the basis of Suarez and Woudheysen’s assertion that “[a]nnotations in

marks, previous library marks, and other markings that clearly were not made by an individual who owned or read the book.

- **Inscriptions:** The (presumed) owner's name, written into the book by the owner, along with any accompanying data such as dates and place names. Use "Gift inscription" where the context suggests that the owner's name was written in by the person who gave them the book. The term "Gift inscription" includes things such as commemorative notes that go along with the names of the donor and recipient.
- **Marginalia:** Markings, usually in the margins or within the text area, that appear to relate to the text somehow (e.g. commenting on the text or marking passages of interest). May be verbal or nonverbal. This term may include markings on the endpapers and other non-text pages that clearly comment on the text of the book.

Setting thresholds

In the process of designing the Book Traces @ UVA protocol, we examined dozens of sample books from the collection to determine what types of interventions we wanted to describe. Should we describe every little mark or modification, no matter how tiny? Should we capture modern students' markings as well as interventions made by the books' original nineteenth-century owners? Should we attempt to rate interventions on a scale of interestingness? Would we record bookbinders' and booksellers' labels, or unusual publishers' bindings?

We decided that our guiding rationale was to look primarily for interventions made by the books' private owners prior to the books' acquisition by the UVA Library, and to set the same chronological cutoff for interventions as for the books' publication dates: 1923. Interventions that could be positively ruled out of that category—for example, markings in ballpoint pen, which did not come into common use until the 1940s—would not be noted, but we would err on the side of including interventions of uncertain date that could have been made by a book's prior owner.

Some interventions, we decided, were so common and gave so little evidence of their makers' use of the books that we felt they should fall below the threshold of notability for the project if they were the only intervention found in a book. For example, underscoring is very common in library books, difficult to date, and usually tells us very little about the underscore maker's intentions unless it is explained in verbal marginalia. So, we decided that if the only intervention found in a book was underscoring, we would not describe it; however, if underscoring was found in combination with other interventions such as verbal marginalia, we would apply the term "Underscoring." Similarly, we observed that it was very common for pre-1923 UVA Library books to have a name inscribed on the flyleaf or title page, and we decided that a name alone would not qualify for description. We would only apply the term

books are not always text-related; people have used free space in books to write occasional jottings, accounts, library lists, poems, and other kinds of content, and they have sometimes included pictures as well as words." Michael F. Suarez, S.J., and H. R. Woudheysen, *The Oxford Companion to the Book* (Oxford: Oxford University Press), 2010.

“Inscriptions” if an inscription included the owner’s name, a date, and a place name (or if an inscription lacking one or two of these elements was found in combination with other, notable interventions). The combination of name, place, and date would make it much more likely that we could positively identify the historical owner of the book and place the book in the appropriate context of the owner’s life history.

Shelf surveys: method

We designed a two-step process for our graduate student project assistants to survey the books in our circulating collections. The first step was a screening in which the project assistants checked the shelf for a list of books published before 1923, captured certain data for every book on the list, and decided whether to select books for description. In the second step, the project assistants looked again at the books they selected for description and chose descriptive terms from the project’s controlled vocabulary. The descriptive terms were selected in a Google form and tied to each book’s item ID (normally represented as a barcode on the book).

Because it was essential to tie our descriptive data to a stable, definitive item ID for each book, we sent books to have their catalog records updated whenever they lacked current item IDs or when the barcodes on the books did not match the item IDs listed in the catalog. We also, after recording descriptive data, forwarded some books to the preservation department for stabilizing treatment or to Special Collections if we thought reclassification from the circulating collections might be appropriate. In particular, by forwarding all books with certain names on the bookplates, we assisted the Special Collections staff in reassembling certain significant donors’ collections that had been dispersed into the general collections. Spreadsheets were used to track the movement of books from our office to these other departments of the Library.

Shelf surveys: selecting the population

From the outset, our project plan specified that we would survey all pre-1923 monographs in the circulating collections of Alderman Library, the main research library for humanities and social sciences subjects at the University of Virginia. We decided to start, however, by surveying only a sample of books from each Library of Congress classification. Our project statistician, Mary Jacqueline (Jackie) Morrogh, designed a sampling scheme that broke down the complete shelf list by Library of Congress subclassification (call numbers starting with AC, call numbers starting with AE, and so forth) and randomly selected enough books from each subclassification to produce a statistical sample with a 95% confidence level and 5% margin of error.

This sampling scheme allowed us to accomplish two important things within the first few months of surveying: first, before we started on a complete survey, it gave us a chance to track our project assistants’ progress and observe how many books per hour they could survey, which in turn allowed us to make projections of their future pace of work. Secondly, by doing a sample survey we were able to determine with a high degree of confidence the rate of interventions within each Library of Congress subclassification. This allowed us to present some early findings from the project while the work was ongoing. It also would have allowed us to concentrate on the areas of highest intervention if our metrics

of the project assistants' efficiency had indicated that they would not be able to finish the entire collection in the time budgeted.

As it happened, after observing the project assistants' efficiency for a few months, we projected that we would be able to complete the full shelf survey of pre-1923 monographs in Alderman Library—and then some. We knew we would have enough money for student wages left in the budget to survey several other libraries within the UVA Library system, so we divided our efforts between several collections, doing full surveys of some and sample surveys of others in order to diversify the population of our study while using student work hours efficiently. The table below shows the collections in which we surveyed pre-1923 circulating monographs, the number of volumes surveyed, and whether the survey of each collection was a complete survey or a statistical sample.

Collection	Complete survey or sample	Number of volumes surveyed
Alderman Library	Complete	92,209
Ivy Stacks	Sample	6,190
Ivy Annex	Complete	2,367
Clemons Library	Complete	508
Brown Science and Engineering Library	Complete	4,333
Music Library	Sample	1,432
Morris Law Library	Sample	8,664
Total		115,703

Challenges and Benefits from Developing the Book Traces @ UVA Protocol

The sheer scale of the project proved to be one of the most significant challenges of executing Book Traces @ UVA. Even though we immediately ruled out roughly 80% of the books surveyed and left them on the shelf, and marked many other books as “not on shelf,” we still ended up with thousands of books passing through the Book Traces @ UVA office, the circulation department's recall system, the libraries' re-shelving workflows, the off-site Ivy Stacks retrieval and return workflows, and the preservation and cataloging work rooms. The impact was more easily absorbed in some areas, such as in the student-staffed re-shelving teams, than in others, such as in cataloging.

There are benefits of working at this scale, though. First of all, we met the project's goal of analyzing rates of intervention in different subject areas across a large collection. Secondly, however, there were other ways in which the collection benefited from our dragnet approach to the pre-1923 monographs. We easily added a piggyback project of recording the names on the bookplates of all the volumes we handled, collecting provenance information that can potentially be added to the catalog and identifying hundreds of volumes for transfer to Special Collections on the basis of their provenance.

We also seized the opportunity to improve the catalog metadata and physical condition of many low-circulation books that might not otherwise have risen to our attention; we hypothesize that, with their unique interventions having been cataloged by Book Traces @ UVA, these books may see an increase in use.

Cataloging

The main role of cataloging in Book Traces @ UVA is to enhance existing catalog records with new metadata describing the interventions found in books. To date Book Traces data has been added to nearly 2700 records, and work has begun on an additional 4000 items. The updates chiefly comprise local notes and controlled genre headings. Detailed local notes were provided for insertions in particular to direct users to the correct copy, as multiple copies existed for a large number of individual titles, and not all copies contained insertions identified through the project.

In the course of the project, we have discovered numerous items with metadata problems such as cataloging errors or analytic records that needed to be consolidated. Of the completed titles, close to 1400 were identified for further cataloging review due to problematic metadata. Initially, items discovered by the surveying team to have metadata problems were forwarded for cataloging review regardless of whether they were also having interventions described; within a month it was clear that the volume of corrections identified across the collection would exceed resources assigned to the project, and all parties agreed that only materials selected for description should be forwarded for corrections. The project surfaced problematic records that had long been in the catalog and could not be corrected in a programmatic fashion due to the effort required to find idiosyncratic errors in a large catalog. When identified as part of a subset of the overall catalog, the opportunity opened for staff to make programmatic changes to this subset.

Although we have had a small number of books digitized in the course of our work, the project was not conceived primarily or even secondarily as a digitization project, so we have not opted to include digitized images of the books or their interventions in the catalog records. Metadata considerations also informed the decision to omit digitized images of books, especially in cases where digitization constitutes only part of a given title and is not a representation of the full text. Because a bibliographic record pertains to a whole work, we would need to create separate metadata record(s) to describe the digital surrogate(s) because a title-level record would not accurately describe selectively digitized parts. We understand and share interest in pairing enhanced description with digitized versions of works with interventions and have proposed a new project phase that would involve systematically digitizing a selection of our finds; as of the writing of this report, we await a decision from the prospective funder.

Preservation

When we started the Book Traces project, the initial workflow routed every book that needed preservation to Preservation Services for treatment, regardless of whether or not the team found any interventions in the book. Preservation staff quickly became overwhelmed. We have large numbers of fragile books in the circulating stacks, but we focus our resources on books that have circulated or need stabilization simply to safely sit on the shelf. After about five weeks of Book Traces @ UVA surveying activity, it became clear that we could not sustain the rapid increase in volume of preservation work, so

we narrowed the scope of items sent for treatment to those that met our threshold for enhanced cataloging, on the rationale that the enhanced metadata would make these items more discoverable and therefore more likely to be used than the books not selected for additional metadata enhancement. We also reviewed all books being transferred to Special Collections and boxed the vast majority of them per our standard policy for transfer to Special Collections.

Even with the narrowed scope, the Book Traces project still added 200 books to the 650 average books we typically receive each month for the first 18 months of the project. That is an increase in volume of about 30%. In order to sustain the enhanced stress on the unit, we redirected student staff time and added about 20 hours a week of non-student staffing support.

We triaged the treatment options for the Book Traces volumes based on a number of factors. First, there was the sheer volume of items coming in all at once—the department was literally overrun with book trucks from the project. More importantly, however, these books contained unique interventions: their artifactual significance meant that sending the books to the bindery (our most common treatment for circulating collections) was not really an option. Therefore, we needed a streamlined set of options for these materials that would move them quickly through the unit, while maintaining artifactual evidence. Eventually we settled on five choices:

- Do nothing (maybe fix call number)
- Box
- Box, with minimal repairs
- Transfer to more secure storage
- Extreme measures

The majority of volumes were placed in a box. Occasionally, we did some minor repairs, such as tipping in a loose title page or mending a damaged illustration. For a few items, we took extreme measures to put the book back together, retaining as much of the original as we could. We had initially assumed that we would outsource all of the items needing housing and we had a budget line for that. Many of the boxes did get outsourced, but the variety of housing needs were so great that we ended up doing much of the work in house, which required that we spend more resources on supplies than initially expected during the project.

We gave special consideration for treatment to certain genres. For example, the children's literature section tended to have more illustrations and decorated covers, and were very well worn. The user community for this genre is a bit different from the rest of the Library: in addition to the scholarly research that these books get, they often are used by children. Therefore, it was worthwhile to spend a little more time in this section to ensure more functional, sturdier repairs with as many of the original components as possible.

We spent some time considering what to do with loose insertions. We determined early on to leave them *in situ* rather than remove them and put them in acid-free envelopes because we decided that the context was potentially as important as the content. We were greatly concerned, however, that once the presence of insertions was made discoverable in the library catalog, the items would be accidentally

or deliberately moved from the context in which we found them. We decided, therefore, to transfer them to medium-rare status. This moves them off-site, into our secure, environmentally controlled facility with Special Collections Reading Room access only. We have described the insertions and identified the page on which the insertions are located in the catalog record. We have also written the page numbers on the outside of the boxes indicating where the insertions are found. This will help reading room staff check to make sure that the insertions remain in their original place.

While the large volume of preservation work stemming from Book Traces @ UVA presented the department with a significant challenge, we also learned a great deal from the project that will be useful in the development of future plans and policies. The initial surge of items sent to preservation gave us a good sense of the preservation needs of the pre-1923 materials in general. As we plan to renovate the building that houses our social sciences and humanities collections (and we therefore have to move 2.5 million items out of the building), we have a much better sense of the stabilization challenges that are contained in the stacks and can plan for additional resources accordingly. The survey also revealed portions of the collection at risk for theft, such as the Children's Literature section, where 18% of the pre-1923 books were missing from the shelves and others had been stripped of their beautiful illustration plates. Such discoveries can be an excellent conversation starter for considering a higher level of security for these volumes. More broadly, the Book Traces @ UVA project has stimulated some excellent conversations about the need to balance functionality of the books with retention of artifactually important evidence within the circulating collections.

Cost model

The two largest expenses for Book Traces @ UVA were the salary and benefits for the full-time project manager, who designed the protocol, then planned and oversaw the surveying work, and the wages and benefits for our student workers, who executed the surveys.

The project manager also spent time on activities such as outreach, conference presentations, grant reporting, and research. If a similar project were executed at another institution at a large scale but without these activities, full time project management might not be required, but we would recommend dedicating at least the equivalent of one half FTE to the project, due to the extensive needs for coordination with other library departments (cooperative personnel in circulation, stacks management, preservation, cataloging, and special collections were all essential to the success of Book Traces @ UVA) as well as student worker supervision.

The Book Traces @ UVA screening and description protocol has been designed, however, so that it can be integrated into an existing workflow or carried out on a relatively small scale, and in these cases a dedicated manager may not be needed. Any workflow that involves routinely handling books can have a Book Traces step added if workers are trained to recognize interventions of interest. We would suggest that workers take a moment to inspect each book: we found that checking the endpapers, flyleaves, and title page, then flipping through the text block was sufficient to catch most interventions. When interventions are found, the book can be entered into a Google form; the collected data can later be analyzed or added to the catalog. Here is a link to a sample form based on the one used for Book Traces @ UVA: <https://goo.gl/1KmrMT> As described above, we chose to collect granular data on the nature of

the interventions we found, but a simplified version of the form could be made using only PET terms (e.g. Inscriptions, Annotations, Marginalia, Insertions). This would eliminate the need to collapse the descriptions into PET terms before using them to enhance catalog metadata. Similarly, the Book Traces @ UVA protocol can be scaled down by using statistical sampling methods to explore segments of a collection with a relatively small commitment of staff time. We have also found that students and other community volunteers enjoy the “treasure hunt” atmosphere of one-day Book Traces events, often loading up library book trucks with their finds, and a Google form like the one linked above is an easy way for a trained staff member to screen the proffered “treasures” and capture data at the end of an event.

In the case of a more methodical survey based on shelf lists and carried out by library staff, the costs for the surveying work depend on the number of books to be surveyed (where each item on a shelf list represents one “book,” whether or not it actually corresponds to a single physical book that is examined by the team) and the efficiency of the workers conducting the surveys. The efficiency of Book Traces @ UVA project assistants varied widely between employees, ranging from a low of 21 books per hour to a high of 67 books per hour. Overall, the project assistants completed the surveying work at an average pace of about 41 books per hour. (This figure does not include time spent on non-surveying activities such as writing blog posts; only the time spent on surveying activities—primarily searching for books, screening them for interventions, describing the interventions, and routing pulled books back to a central sorting area for reshelving—is factored into the equation.) We would therefore suggest that anyone replicating the Book Traces @ UVA protocol in another collection use 40 books per hour as an estimated rate of efficiency, or 30 books per hour for a more conservative estimate. The estimated cost of the surveying work would then depend on the size of the target population of books (or the size of a statistical sample selected from the population). Some sample estimates are shown below, with alternatives at the \$15 hourly wage paid by Book Traces @ UVA and a lower \$12 hourly wage (shaded gray). These estimates do not include fringe benefits or equipment. It should be noted that we have observed a less-efficient “learning curve” for project assistants in the first three to four weeks of surveying work, and projects with a smaller target population of books will take a larger proportional hit to their overall efficiency due to the time needed for training and practice.

Estimated efficiency, books/hour	Estimated efficiency, books/hour (conservative)	Target population, number of books	Hourly wage	Estimated cost	Estimated cost (conservative)
40	30	1,000	\$15	\$375	\$500
40	30	1,000	\$12	\$300	\$400
40	30	10,000	\$15	\$3,750	\$5,000
40	30	10,000	\$12	\$3,000	\$4,000
40	30	100,000	\$15	\$37,500	\$50,000
40	30	100,000	\$12	\$30,000	\$40,000

Although salaries, wages, and benefits made up by far the largest portion of our direct project expenses, we also spent money on equipment, including book trucks, laptop computers, and book cradles. Indirect expenses were also incurred due to the additional work generated by the project for staff in cataloging, preservation, circulation, and stacks management.

Book Traces @ UVA Project Outcomes

Shelf survey results

Before we discuss the results of our shelf survey, it is important to explain two details about how we calculated our statistics.

First: in theory, the “hit rate” in a given section of the library should be simple to calculate: the number of books with at least one notable intervention divided by the total number of books in the section. In practice, the calculation is a bit more complicated. When we surveyed UVA Library books for interventions, we worked from shelf lists drawn from the library catalog. Many of the books on the shelf lists were not on the shelf when we looked and could not be found or recalled from checkout during the project period. In a few cases, books on the shelf list turned out to be phantoms, representing cataloging errors rather than actual holdings of the library. Should we calculate the “hit rate” as the number of books we found with interventions divided by the total number of books on the shelf list? Or should we omit from the equation all of the books we could not find, dividing the number of books we found with interventions by the number of books we were actually able to inspect? Seeing reasons for each approach, our project statistician ran both calculations, but in reporting her results, we will emphasize the “hit rate found,” the proportion of books with interventions out of the books we were actually able to inspect.

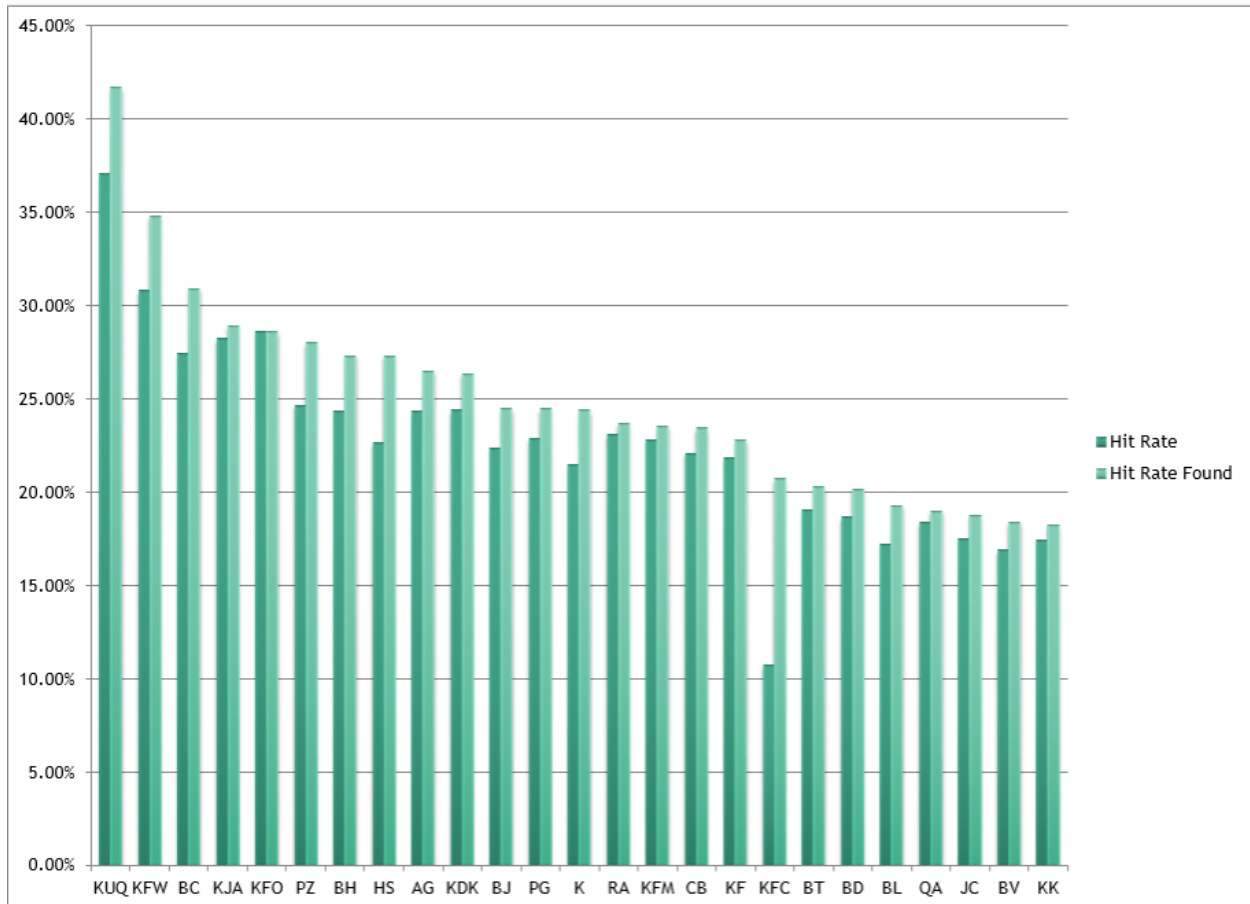
Second: we analyzed our statistical findings by Library of Congress subject classes and subclasses.³ The sizes of the subclass populations could range from a single book to over 14,000 books. We were concerned that the hit rate findings in the smallest subclasses might skew our data; for instance, if there were only two books in a subclass and we found interventions in one of them, then the hit rate of 50% would be a drastic outlier relative to most of the other subclasses, but we would not feel confident saying that books in this subclass attracted an unusually high amount of interaction by readers. In analyzing our final statistics, therefore, we have excluded subclasses populated by fewer than 20 books.

Looking at all subject classes of books across all of the UVA libraries that we surveyed, we found a range of hit rates within classes from as low as 0% to over 40%. In our initial sampling of Alderman Library, where the collections lie predominantly in the humanities and social sciences, we found an average hit rate of about 12.5%. We wondered whether the humanistic content of the books in Alderman might invite more reader interaction than books in other subject areas such as the physical sciences. As it turns out, however, after expanding our survey to other collections including the Brown Science and Engineering Library and the Morris Law Library, we still maintained a final hit rate on found books of

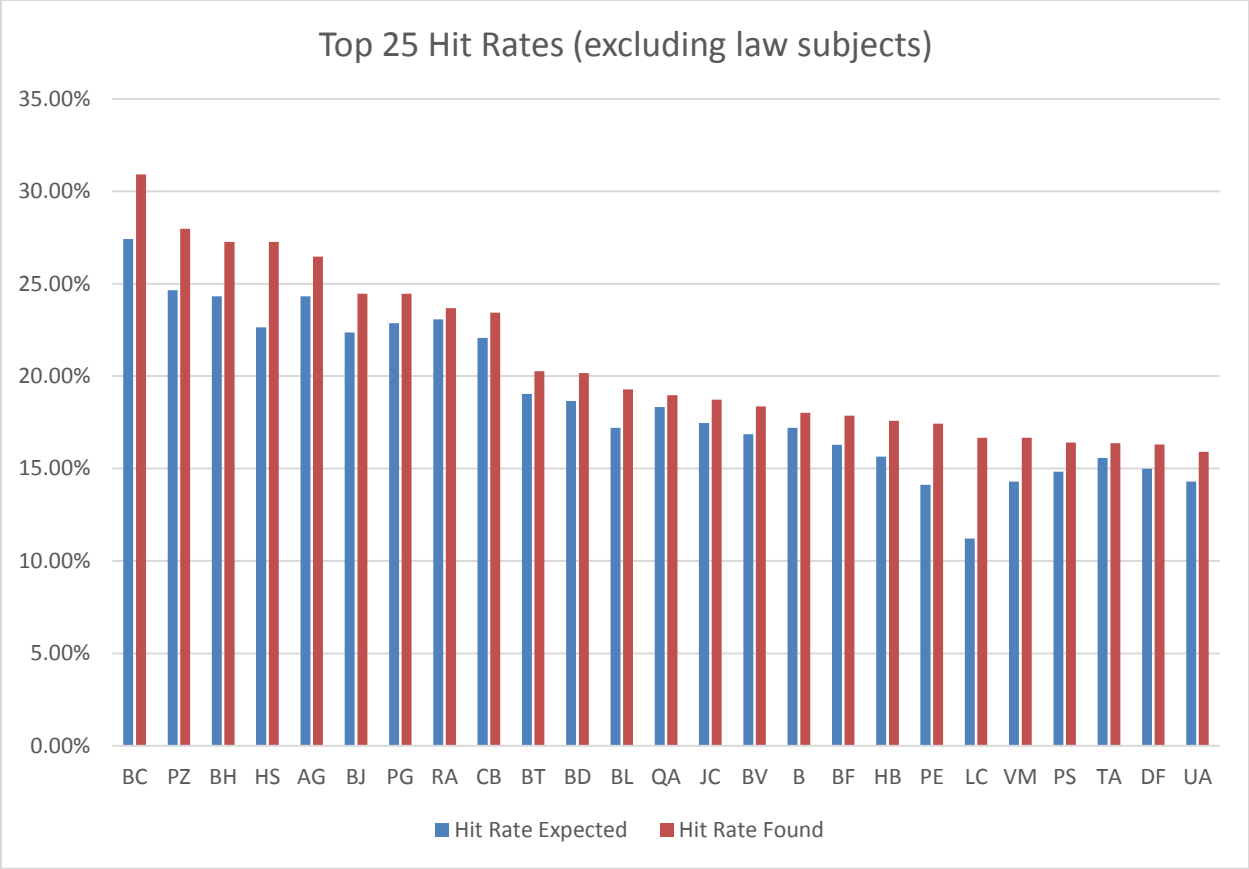
³ A minority of books in the Law Library collections were classified at the time of our survey by the obsolete Hicks system, so we have analyzed those books by Hicks class. The Hicks books in the Law Library collections are undergoing a long-term process of reclassification to the Library of Congress system.

12.52%. On the whole, we feel confident saying that roughly one out of every eight books in the pre-1923 circulating collections at the University of Virginia has interventions meeting our threshold for description.

When we look at the subclasses with the top 25 hit rates (see chart below), the most striking trend is that nine of them are in law subjects (Library of Congress subclasses starting with the letter K). This may be because the lawyers who donated their books to UVA had previously made heavy use of them as instruments in their law practices, adding marginalia and insertions to customize their tools and aid their work. It should also be noted, though, that law books are assigned Library of Congress subclasses with a much higher degree of granularity than most other subjects: our survey covered 89 different K (law) subclasses, as compared with 19 different P (language and literature) subclasses and just one subclass each in E and F (both representing history of the Americas). Thus, it is to be expected that the K subclasses might be overrepresented in any range of the hit rate results.

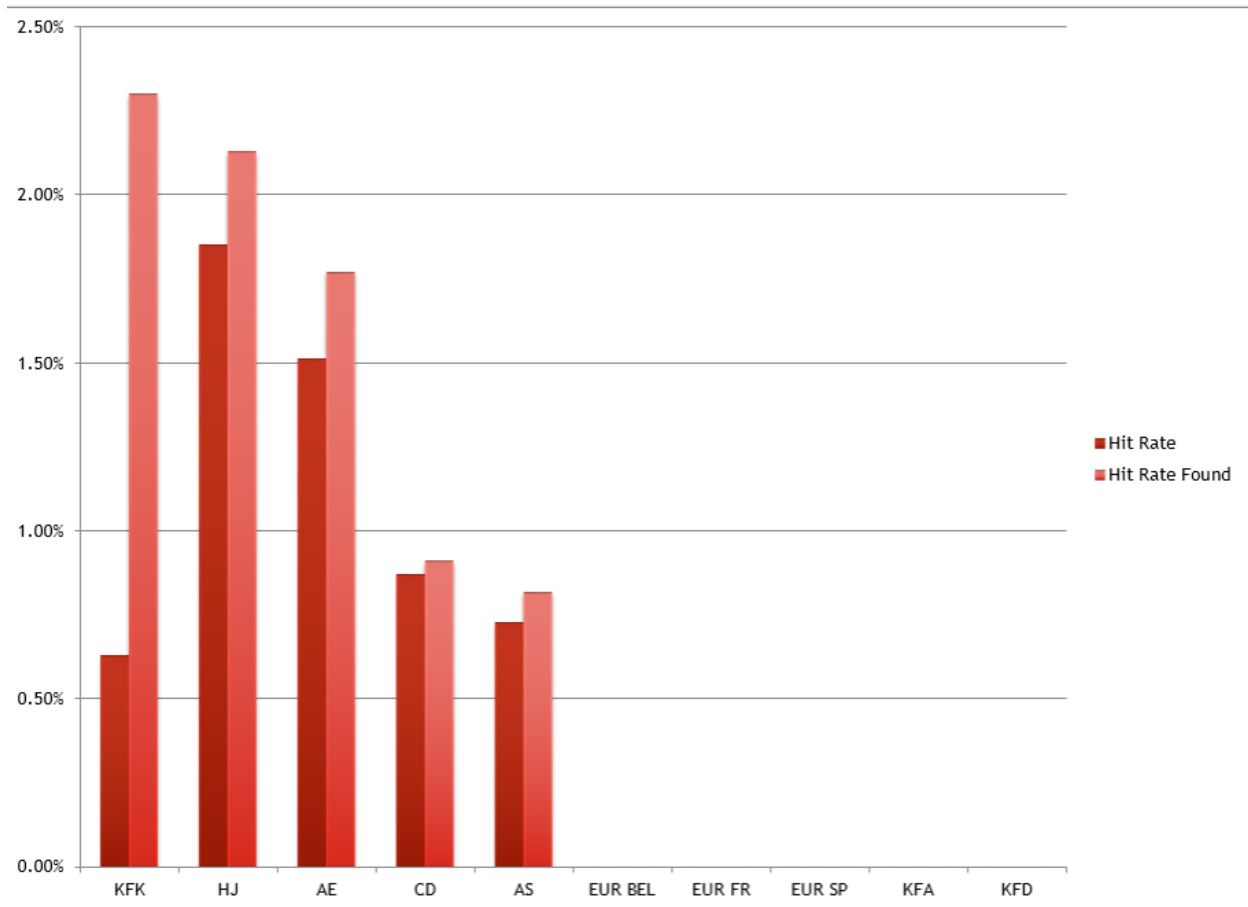


If we exclude law subjects from the top 25 hit rates, we get the following results:



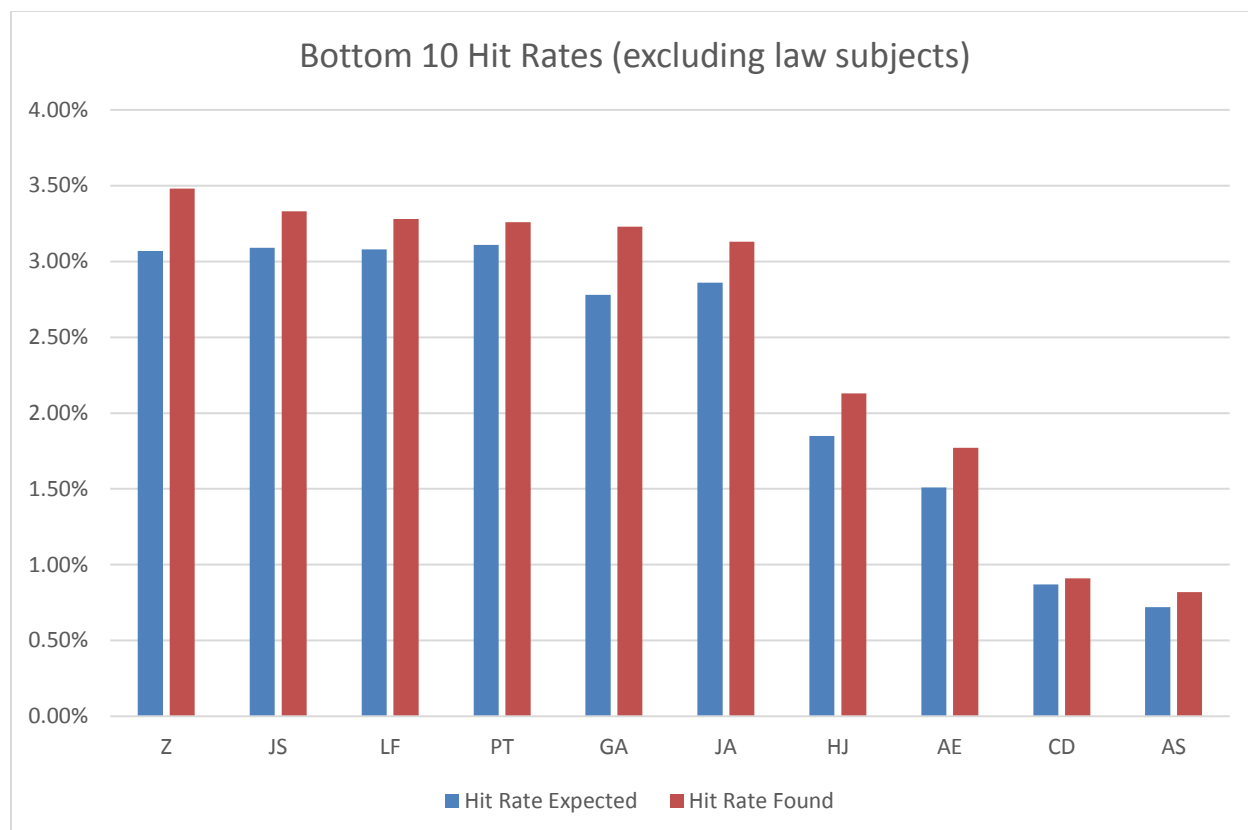
In the chart above, the Library of Congress B subclasses (philosophy, psychology, and religion subjects) are heavily represented, perhaps owing to the fact that many of our books in this area came from the collections of Albert Lefevre and George Frederick Holmes, two former UVA professors who marked up their books prolifically. The P subclasses (languages and literature) are also well represented. While acknowledging the possible influence of the Lefevre and Holmes books on these statistics, we also hypothesize that the humanistic nature of books of literature, philosophy, and religion might especially invite intellectual interest and affective interaction from readers.

It is also interesting to see which subject areas attract little intervention. The chart below shows the bottom ten hit rates across all subclasses:



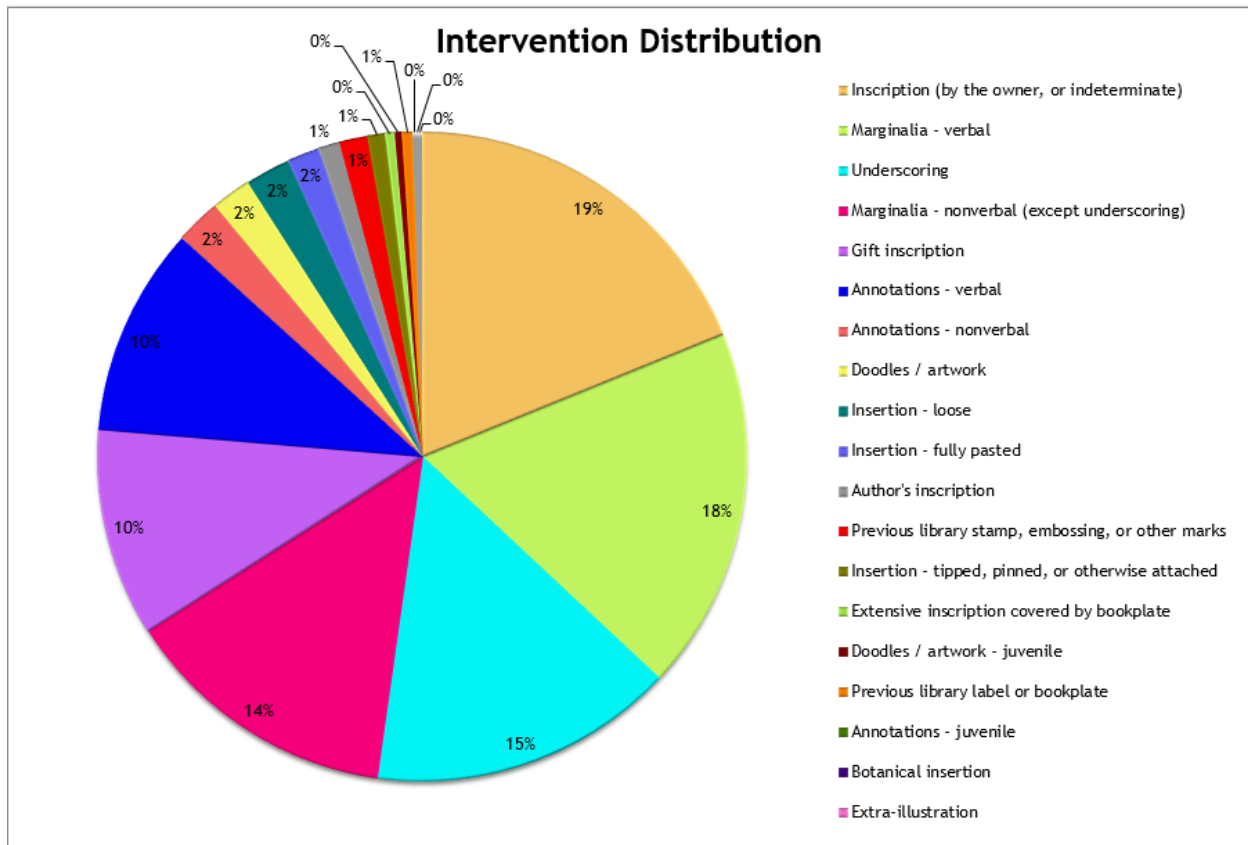
Once again, the law subjects are overrepresented, making up six of the bottom ten hit rates, including all five subclasses where we found no interventions at all.⁴ If we exclude the law subjects, we get the following results:

⁴ EUR BEL, EUR FR, and EUR SP are all law subclasses from the Hicks classification system.



The subjects represented in the chart above, near the bottom of all subject area hit rates, include reference works (the AE and AS subclasses), bibliography (Z), local government (JS), and public finance (HJ), all fairly dry subjects as compared with philosophy, religion, or literature.

When we combine data across the subject classes and break down all the interventions we have found by type, we can see that some types are much more common than others. The largest category, inscriptions (by the owner, or indeterminate, as opposed to gift inscriptions), accounts for 19% of the interventions we described. Verbal marginalia comes close behind, at 18% of all interventions. The next largest categories are underscoring (15%), nonverbal marginalia (14%), gift inscriptions (10%), and verbal annotations (10%). With these categories making up, in combination, 86% of all the interventions that we described, there is a precipitous dropoff in frequency to the less-common interventions. Loose (non-botanical) insertions, botanical insertions, fully pasted insertions, tipped and pinned insertions, authors' inscriptions, and doodles and artwork each made up 2% or less of the total number of interventions found. See the chart below for a detailed breakdown.



Retention commitment

Each volume selected for description by the Book Traces @ UVA project has some unique feature—be it a gift inscription, a scholar’s marginalia, a child’s doodle, or a pressed flower between the pages—that endows it with evidentiary value as an artifact touched, used, and modified by human hands. In order to protect this body of evidence and offer researchers the opportunity to discover and analyze it, we are making a commitment to retain these UVA Library volumes for a minimum period of 25 years.

Bonus benefits of the shelf survey

We designed the Book Traces @ UVA shelf survey primarily to gather data on the reader interventions found in the circulating collections at UVA. There have, however, been some additional benefits to the surveying work.

One of the biggest payoffs has been the collection of bookplate names from the books that we surveyed. Several notable collections of books were donated to the UVA Library and dispersed into the circulating collections decades ago; because we had no records of the specific books given by different donors, it was unfeasible to reconstruct these collections. However, the Book Traces surveying work has had the beneficial side effect of allowing us to re-unite personal libraries donated by notable figures such as Edwin Anderson Alderman, the University’s first president, and Frederick W. M. Holliday, a nineteenth-century governor of Virginia.

Another positive outcome has been the development of our surveying methods. Knowing that our student workers would need to work very efficiently in order to get through tens of thousands of volumes, we designed a process to collect accurate data using standardized terms while working quickly in various areas of the library that may or may not have reliable wifi reception. We believe our methods can be adapted to other large-scale surveying efforts in libraries. In fact, a modified version of the Book Traces @ UVA protocol has already been used by Miriam Nelson at the Ohio University Libraries to identify materials of local significance.

Student engagement

Book Traces @ UVA was designed from the outset to engage graduate and undergraduate students with book history and the history of the UVA Library collections. A large portion of the project's budget was dedicated to student wages and fringe benefits, enabling us to pay a substantial student wage (\$15/hour, higher than standard Library student wages) and competitively recruit a diverse team of well-qualified doctoral, master's, and law students as project assistants. These graduate students conducted our surveying work in the stacks of Alderman and other UVA libraries. For some, the Book Traces initiative was closely related to their research and professional interests; for others, like an engineering student with personal blog chronicling her love of old books, it was a welcome opportunity to delve into materials they would not otherwise spend time with during their graduate school career.

Perhaps our most notable example of student engagement was with our project statistician, Mary Jacqueline (Jackie) Morrogh. Jackie joined the project as a fourth year undergraduate, applying her expertise as a dual major in English and statistics to design our statistical sampling scheme. As the data from different subject areas of the library came in for analysis, Jackie had to contend with its messy, "real world" nature, a task that spurred conversations with her statistics advisor and no doubt provided great preparation for future work in the field. After working on Book Traces @ UVA for a year, Jackie was inspired to enroll in UVA's BA/MA program, staying on for an extra year to write a thesis in the English department while continuing her work on Book Traces @ UVA statistical analyses. In fact, Jackie's thesis was based on her experiences with Book Traces, and one chapter was about the interventions found in books by a certain author.

Another notable case of the project's impact was Kaye Marie Ferguson. She came to us as a recent UVA graduate with an interest in librarianship and started out helping with general office tasks on a volunteer basis. Project manager Kristin Jensen noticed Kaye Marie's superb attention to detail and recommended her to Preservation Services Director Kara McClurken, who hired her to help with the rehousing needs of the Book Traces books. Kara ended up serving as an unofficial mentor to Kaye Marie, who applied to graduate school in Library Science and used the skills gained from working on the project to find employment in the Preservation Department at UNC-Chapel Hill.

Other instances of student engagement include blog posts written for the project's website by two students in the English department, Maggie Whalen and Jamie Rathjen; a talk on Book Traces given by Andrew Stauffer and sponsored by the Student Library Council; and a class field trip to the library for brief talks on the project by project staff and a hands-on hunt for interventions in the stacks.

Book Traces beyond UVA

In addition to our work on the UVA collections, the Book Traces initiative (<http://booktraces.org>) has begun to expand its scope by reaching out to other libraries. In February of 2016, Book Traces @ UVA hosted an invitational meeting involving representatives from Columbia, Michigan, MIT, Miami, Wisconsin-Madison and ReCAP. Each library provided a small set of sample data on intervention rates in their pre-1923 materials, and we had a valuable discussion regarding next steps for the scalability of the Book Traces effort to a national level. Our primary goal for the invitational was to get input on workflows and data protocols, trying to imagine what it would take to build a coalition of libraries to share tactics, strategies, and data.

Along these same lines, a number of Book Traces site visits have been organized during the CLIR grant period. We have conducted one-day library stack searches, involving librarians, faculty, and students, at the University of Miami, the University of Victoria, the University of Nevada-Las Vegas, the University of South Carolina, Millsaps College, and the College of the Holy Cross. Although each of these institutions and their collections varied in size, emphases, and history, we found encouragingly large numbers of interventions in pre-1923 volumes at all of them, along with a lot of fascinating individual examples uploaded to the BookTraces.org site. Such events have demonstrated a widespread interest in the Book Traces idea across academic libraries. In further confirmation of this, a faculty member at Arizona State University (Devoney Looser) is working with her librarians on a Book Traces @ ASU project, adapting our protocols to their collections and purposes, and a librarian at the University of South Carolina (Jeanne Britton) has received an internal grant to pursue Book Traces searches and cataloging within their special collections.

In the fall of 2017, the UVA Library and the Book Traces project (funded by NINES.org) will host another invitational event at Virginia, involving approximately 20 librarians and humanities faculty members. The goals of this event will be to examine materials found during the CLIR grant, to discuss future goals for discovery and cataloging, and to map out possible strategies for scaling the project to the national level.

We would also like to make a formal recommendation to the Rare Book and Manuscript Section for the inclusion of two new terms in the Provenance Evidence Thesaurus: one to describe insertions of a botanical nature such as tree leaves and flowers, and another to describe artwork such as doodles and fore edge painting. We believe these categories are distinctive and common enough to warrant identification as types of provenance evidence, but we will need time to develop the details of our recommendations, including the exact label for each category and the literary warrant for each proposal.

Conclusions

We have been delighted with the amount of data collected by Book Traces @ UVA and we consider the project a strong success. Most importantly, our survey and analysis have strengthened our conviction that multiple copies of a pre-copyright book cannot be deemed redundant based on catalog information alone. We have also confirmed our hypothesis that with sampling methods, it is possible to identify areas of a library collection in which to concentrate efforts to examine books for unique interventions. This is an important conclusion that could allow the Book Traces @ UVA protocol to be deployed in a cost-effective manner in smaller-scaled surveys. As the larger Book Traces initiative has demonstrated,

many examples of marked books exist in the circulating collections of academic libraries, and we may now be in a position to predict which libraries are richest in such owner-modified, pre-1923 volumes.

We remain concerned about the future of uniquely modified pre-1923 books in circulating collections, especially in the face of moves towards shared print repositories and catalog-guided “deduplication.” Our deep dive into the UVA collection has impressed on us how common it is for books acquired by donation to be tied by their former readers’ markings to local and institutional history; the uniqueness of any institution’s holdings will be most valuable to that institution and its community. Moreover, another lesson we have taken from Book Traces @ UVA is the difficulty of conducting a large-scale survey on books once they have been shifted to off-site storage. We were only able to pull a sample of a little over 6,000 books from the nearly 90,000 pre-1923 volumes stored at our off-site facility, known as the Ivy Stacks, and even that relatively small sample took a full calendar year to complete while putting a heavy strain on the staff responsible for retrieving and returning books in the closed, high density stacks. We think it is important to survey books for readers’ interventions before they are relocated to off-site storage, if possible; indeed, during the course of the project we made a point of moving quickly to survey several hundred volumes that were slated for imminent shifting into less-accessible storage.

Common books of the long nineteenth century—the era when industrial processes enabled an explosion of the print market and democratization of book ownership and reading—offer a rich evidentiary base for work in the history of reading, but this evidence has lain largely hidden in library collections. Heather Jackson, in her book-length study *Marginalia*, comments that the hardest part of studying the history of marginalia as a common reading practice is finding representative examples in any kind of systematic way: “Ordinary libraries seldom have the will or the resources to catalogue marginalia; special collections contain special books. [. . .] If books are listed [in a catalogue] as containing [manuscript] notes it is likely to be because the books were purchased for the sake of the notes, in which case they are almost by definition not typical or representative.”⁵ Robert McLean, in a blog post titled “How can we be sure old books were ever read?”, identifies the same problem. “Perhaps the most insightful evidence for historic reading can be found when a reader has written something in a book confirming it has been read,” he observes, but “[a] major barrier to researchers investigating material evidence of historic reading more systematically is the difficulty of finding it.”⁶

Moreover, although historians of reading have confronted these problems directly, other researchers stand to benefit from the kind of intervention data uncovered by Book Traces @ UVA, too. We have come to realize that our circulating library books from donated collections can be viewed as extensions of the University archive. The original owners’ names, represented on bookplates or by autograph inscriptions, often allow books to be connected with the owners’ family papers and other records in the archives, thus reassembling two forms of documentation that had previously been sundered. We have

⁵ Jackson, H. J., *Marginalia: Readers Writing in Books* (New Haven: Yale University Press, 2001): 10-11.

⁶ Robert MacLean, “How can we be sure old books were ever read?”, blog post, University of Glasgow Library, published April 14, 2016; accessed June 28, 2016.

<https://universityofglasgowlibrary.wordpress.com/2016/04/14/how-can-we-be-sure-old-books-were-ever-read/>

found that the archival materials often illuminate the markings found in the books, helping us to understand their context and import; we believe that marked-up books should, reciprocally, be of interest to anyone investigating the former owners' papers. There is no reason to believe that this connection between donated books and donated papers is limited to the UVA holdings. Wider adoption of the Book Traces @ UVA protocol has the potential to open up for research a new stratum not only of book history but also of local, institutional, and family history.

For more information

You can learn more about the Book Traces @ UVA project at <https://booktraces.library.virginia.edu/>. There you will find information about the project, blog posts about interesting discoveries, information on how to get involved in future efforts and one day soon, information on how to access the data gathered from the project.

Credits

The following individuals contributed directly to the success of the Book Traces @ UVA project:

Principal investigators

- Kara McClurken
- Andrew Stauffer

Additional members of the steering committee

- Ivey Glendon
- Jennifer Roper
- Christine Ruotolo
- David Whitesell

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- Kristin Jensen

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- Rachel Newman
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- Julia Schrank
- Emily Temple

Project statistician

- M. Jacqueline Morrogh

Intern

- Araba Dennis

Volunteers

- Kaye Marie Ferguson
- Charles Friedman
- Judy Herbst
- Allison Holm
- Jamie Rathjen

Research assistant (English department)

- Maggie Whalen

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