

GreenGlass for Preservation Selection

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Abstract

Changes in patterns of collection use have led to new collection management strategies in academic libraries, including shifting focus from widely held materials to special and distinctive collections. Similarly, changes in strategies are needed in order to focus preservation efforts on such materials.¹ In addition, the use of data to identify preservation candidates becomes more important as print materials are increasingly housed in collection storage facilities. GreenGlass,² an interactive application for print collection analysis and management, can be used to identify a group of materials based on research value and prioritize among them for preservation action. Findings from a study to evaluate the use of GreenGlass for preservation selection are reported, and related professional development is described.

Background

The General Collections Conservation Unit (GCC) in the Indiana University Bloomington Libraries, which is responsible for the care of the research book collections, conducted a study in 2019 to explore the use of GreenGlass to identify print collections for preservation. A condition survey was used to facilitate the collection and analysis of data, and to provide a basis for further prioritization based on condition, subsequent to initial selection via GreenGlass.

Two elements of the Preservation Department's 2018 strategic plan formed the basis for this study. First, a central focus of the plan was the alignment of preservation activities with the library's goal of expanding support for and use of the collections that distinguish IU from its peers. Second, an opinion survey conducted as part of the strategic planning process revealed that collection managers were interested in proactive methods for selecting collections for preservation.

The study focused on scarcely held early monographs in the research collection. In 2006 the library transferred monographic imprints up to 1820 from open stacks to remote storage, making this a good target group to study using data for selection. The transfer, along with a change in access level to in-library use only, indicated a level of importance for these materials, as the library's Auxiliary Library Facility (ALF) provides optimal conditions for

preservation through low temperature, controlled relative humidity, filtration of pollutants from the air, security, and protection from fire, light exposure, and handling. At the time of transfer some items were placed in protective enclosures, but no conservation treatments or needs assessments were performed.

Selecting this part of the collection for the study also helped evaluate the library's capacity to address the conservation treatment needs of early printed books. The condition survey provided a way to learn more about early bookbinding methods through close examination, as well as to identify areas for further training.



Johannes Goedaert.³ *Metamorphoses Naturelles; Ou, Histoire Des Insectes Observée Tres-Exactement Suivant Leur Nature & Leurs Proprietez ...* Amsterdam, 1700. Godaert was a Dutch naturalist whose work was the earliest to depict the life stages of insects. This French translation was among the items in the survey sample.

Understanding how a book is constructed informs treatment decision-making aimed at preserving a book's original characteristics and functionality. To complement the learning aspect of the survey, a three-day workshop on historic book structures was held on site in the Preservation Lab during which staff studied and made models of the early book structures represented in the survey.



Binding models, showing methods of sewing from the 16th through 19th centuries.

Survey Method Data Source and Criteria for Inclusion

The population for the survey was selected from GreenGlass data purchased in 2017 of monographic works in the IU Bloomington Libraries, excluding the Lilly Library. First, records with five or fewer U.S. holdings of the same edition were selected, yielding close to 500,000 items. Limiting further by the ALF “Restrict” (in-library use) location reduced the number of items to about 10,000. Then a limit by publication date through 1820 further reduced the set to 5,594 records. Evaluation of records either lacking publication dates or with a placeholder date of 1800 brought the number of records to 5,505. Records were downloaded from GreenGlass in spreadsheet form.

Random Sampling

A random sample was selected as follows:

- Survey Monkey⁴ sample size generator: 5,505 items, 95% confidence, 5% tolerance = 360.
- “Corrections” to sample size based on assumptions about the population:⁵ est. 25% poor condition, need repair:
 - $.25 \times .75 = .1875$
 - $.1875 \times 4 = .75$
 - $360 \times .75 = 270$

Random numbers were generated using <http://www.randomizer.org>⁶ and matched with the record numbers in the data file to select the sample records.

Survey Database Design

A Microsoft Access database was created and populated by importing the 270 records. The data from GreenGlass included bibliographic and item data, holding libraries in WorldCat (world, U.S. Indiana, BTAA, and other groupings), whether in HathiTrust, usage data, and links to records in the library catalog (IUCAT), WorldCat, and HathiTrust. Fields were added about the book's construction, materials, condition, prior repairs, housing, and bibliographic data accuracy (primarily publication dates). Another field allowed the surveyor to mark items not available at the time of the survey. By excluding items not available at the time of the survey and those found on examination to be out of date scope, the sample was reduced to 261 items. The survey was pre-tested, discussions helped ensure surveyors' interpretations of the questions were in synch, and adjustments were made to address problems of consistency and clarity.

Key Findings

Findings from the survey, highlighted below, provide examples of the possibilities for prioritizing materials for preservation action using data from GreenGlass and condition information, either separately or in combination.

Overall condition

This question gauged the severity of damage and length of treatment time, providing an overall view of the condition of the library's early imprints. Fifty-one percent were found to be in good or fair/stable condition, 49% needed treatment. The first table below shows overall condition and treatment time, and the second provides examples of typical damage and number of items in each category.



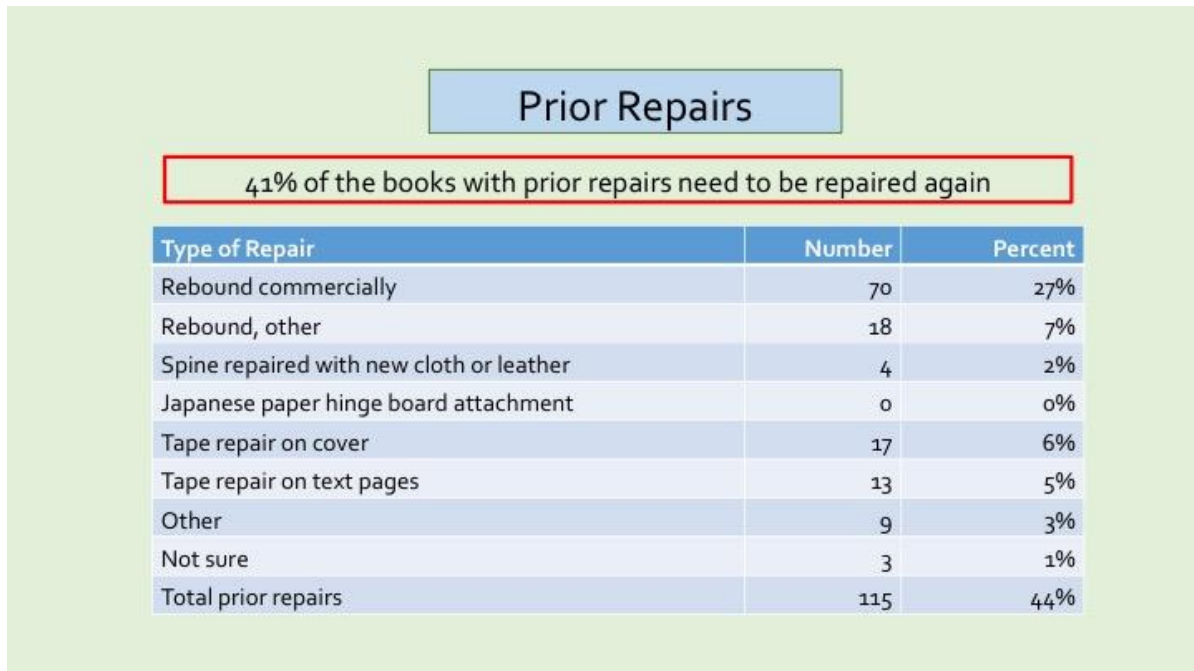
Overall condition	Number	Percent	Types of damage
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Good	81	31%	No repair needed
Fair/stable	53	20%	Foxing, abrasions, insect damage, but nothing to make the item unstable or unusable
Repair up to 1 hour	48	18%	Damaged joints or hinges, deteriorated leather, inactive mold to remove, torn fold-out
Repair up to 2 hours	53	20%	Joint or spine damage; detached boards, missing or torn pages
Repair over 2 hours	26	10%	Tight commercial binding obscuring text, detached boards, damaged or detached spine cover, prior tape repairs, signatures need guarding and re-sewing
Repair over 6 hours	0	0%	
Total repair needs	127	49%	

Additional survey questions collected specific information on damage and original book structure and materials, which could be used to prioritize based on severity of damage or batching similar treatments for efficiency.

Prior Repairs

Almost half of the books in the sample (115, 44%) had been repaired previously. The table below indicates the types of repairs observed. Note some books had more than one kind of repair.



Almost half of the books with prior repairs need repair again (47, 41%), reflecting expedient methods in use prior to the establishment of the Preservation Department in the mid-1980s. Pressure-sensitive adhesive tape is responsible for most of the failed repairs and damage. A large number (70, 27%) were rebound commercially. Although many are stable, most were over-sewn, which eliminates the original structure by cutting off the signature folds and often restricts the book's opening. Some were very tightly bound, such that text in the inner margins is obscured, and would require lengthy repairs in order to be read or copied.

Enclosures

During the transfer project, many items were placed in Tyvek envelopes, which protect from exposure to light and abrasion, but do not provide adequate structural support for damaged or fragile books. Because Tyvek is opaque, the fragility of the item inside is not apparent, risking damage during shelving, handling, and transport. Fifty-nine percent (154) had adequate enclosures, 30% (78) had inappropriate enclosures, and 11% (28) had no enclosure.

Digital Surrogates

Ninety-one items in the sample (35%) are accessible in HathiTrust. Of the 127 books that need repair, 41 (32%) are accessible in HathiTrust. The majority of the books that are both damaged and in HathiTrust were digitized from the Indiana University Bloomington Libraries' own copies (63%, 26 out of 41).

Accuracy of Bibliographic Records

There were 8 mismatches (3%) between the publication year in the record and in the book, either facsimiles, reproductions from microfilm, or later reprints. A small amount of other incorrect data, such as misspelled words in titles, was observed though not quantified. Eight items in the sample had a value of zero U.S. holdings, indicating that IUL's holdings are not attached to the cited OCLC record.

Discussion

GreenGlass for Preservation Selection

Preservation selection and treatment decisions rely, in varying proportions, on three factors: research value, condition, and use. GreenGlass facilitates identifying a target *group* of materials based on research value (e.g., subject, age, language) as well as bringing together in one place much of the information often needed for decision-making (digital surrogates, duplicates, number of holding libraries). As such, GreenGlass can be used to identify a group of collection items and prioritize among them for preservation action based on collection management specialists' priorities and management strategies.

A condition assessment is not of necessity when using GreenGlass for selection, but can be useful for determining the skills, materials, and time needed to work through the treatment of a targeted collection, as well as to further prioritize based on condition. Surveys based on samples can provide such general information for planning purposes; item-level surveys can, in addition, provide the basis for working through a collection in a systematic way. Whether

or not to use a condition survey, as well as the choice of an appropriate survey method, depend on the nature of the collection, its size, and the goals of a particular project.

Although the age of the GreenGlass data did not pose problems of currency in this study, it could for other collection areas and as the data ages. The cost to purchase a GreenGlass data set may be prohibitive if a library does not have other uses for it. There are other ways to create a data set of records meeting specified criteria, such as the back-end access to IUCAT via the Indiana University Information Environment (IUIE)⁷ or with BlueCloud Analytics,⁸ but these do not bring together the information from WorldCat and HathiTrust often needed for decision-making. The advantage with GreenGlass is that it avoids multiple searches for every item. Some libraries have their own federated search tools, and these would add some efficiency to preservation selection using alternatives to GreenGlass.

Capacity to Care for Early Printed Materials

The survey made it possible for GCC staff to expand their knowledge and skills to pre-19th century book structures. This is a continuation of GCC's evolution to support the changing needs of users and the library's strategies in response to those changing needs. Since 2013, skills appropriate for 19th-century books have been added to GCC's repertoire, including less invasive and more reversible treatments for acidic paper and deteriorating leather, and techniques for undoing the damaging tape repairs that were common prior to the 1980s and are now failing.

The survey also helped to identify where new skills may be needed. Many of the books in the survey are made from the same materials and have similar binding structures to those with which GCC staff are familiar. Two types of bindings encountered less often include books with tight-back spines (1/3 of the sample) and laced-case vellum bindings (3% of the sample).



Example of a tight back binding, in which the spine covering leather is glued directly to the spine of the text. Johann Christoph Gottsched Fontenelle. *Auserlesene Schriften: Nämlich Von Mehr Als Einer Welt, Gespräche Der Todten, Und Die Historie Der Heydnischen Orakel*. Leipzig, 1751.



Laced case binding. Model at left, original at right, Lieuwe van Aitzema. *Verhael Van De Nederlandsche Vreede Handeling*. 2d ed. Amsterdam, 1653.

Vellum has different properties and vulnerabilities from leather. In many cases, fortunately, books of this type and age are quite sturdy. In addition, their age and rarity often dictate conservative, minimal stabilization measures. The historic book structures workshop in September enhanced the survey's learning experience for staff. After the workshop, staff looked again at the surveyed materials to reinforce what they learned and to see the books with new eyes. Additional professional development activities recently have focused on treatment techniques for early leather bindings.

Conclusion

Changes in patterns of collection use have led to new print collection management strategies in academic libraries. In this environment, preservation efforts can support library goals with collection-level approaches such as the use of data and analysis tools to identify priority collections. In the Indiana University Bloomington Libraries, this work is part of an evolution in practices in General Collections Conservation to respond to these changes by developing new tools and workflows, and expand treatment skills.

References

1. Teper, Jennifer Hain. 2014. "Selection for Preservation." *Library Resources & Technical Services* 58 (4): 220–32. doi:10.5860/lrts.58n4.220.
2. OCLC. GreenGlass. Accessed April 17, 2020: <https://www.oclc.org/en/greenglass.html>.
3. Wikipedia. Jan Goedart (Johannes Godaert). Accessed April 17, 2020. https://en.wikipedia.org/wiki/Jan_Goedart

4. Survey Monkey. Sample Size Calculator. Accessed April 17, 2020: <https://www.surveymonkey.com/mp/sample-size-calculator/>
5. Drott, M. Carl, "Random Sampling: A Tool for Library Research," *College & Research Libraries*, 30, no. 3 (1969): 119-125. Accessed April 17, 2020. <https://crl.acrl.org/index.php/crl/article/view/12113>.
6. Research Randomizer. Accessed April 17, 2020: <https://www.randomizer.org/>.
7. Indiana University Information Technology Services. Indiana University Information Environment. Accessed April 17, 2020: <https://iuie.sitehost.iu.edu/prod/IuieWelcome.html>.
8. SirsiDynix. BlueCloud Analytics. Accessed April 17, 2020: <https://marcomtest1.sirsi-dynix.com/bluecloud-analytics/>