

Asking the Right Questions: The Role of the Conservator in Digital Projects

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Abstract

Jan Paris, conservator at the library of the University of North Carolina (Chapel Hill) explains how she decides whether vulnerable material from the special collections may be digitized and under what conditions. She considers not only the condition of the objects, but also the purpose of the digitization process: education, preservation, creating a facsimile edition or as part of a large-scale preservation project. These can be summarized as the impact of preservation considerations such as the reduction in handling, the reduction in the need for interventive conservation and the impact of access considerations such as enabling value-added research, on-demand digitization and producing aids to teaching.

Key Words: conservator; digitization; decision making; value; special collections; conservation; preservation

At the threshold between artifacts and their digital incarnations, those of us who work in memory institutions make decisions in a landscape of mutable values, fluctuating economic considerations, and changing research agendas. The resulting uncertainty leaves us in a liminal space — a space we need to see not as a boundary between ‘here’ and ‘there’, but as a position of possibility. In the expanding digital universe, we have an opportunity to clarify the roles we wish to play. As a conservator of special collections in a research library, I’ve looked closely at the decision-making process by which materials are evaluated for conservation treatment. My particular interests center on making explicit the unstated assumptions and judgments we form as we assign value to classes of materials, to individual artifacts, even to parts of artifacts. Selection for digital projects and selection for conservation have much in common, and the impact of unexamined decisions may have reverberations into the future for both.

In a research environment, digital projects are carried out in the service of many agendas, and in the course of any digital conversion project, there are innumerable decisions to be made. Some are straightforward and practical, but the more complex choices force us to confront where and how we assign value. Increasing demand for digital resources and long-distance access is impelling us toward a more reflective decision-making process. We need to problematize the way we look at artifacts and develop new patterns of communication and collaboration among curatorial, preservation, and technical staff — and increasingly with scholars themselves.

Digital conversion projects in a special collections context start with the working assumption that little or no damage to materials is acceptable and that all materials will be retained. This perspective doesn’t make our decisions differ fundamentally from those we make in any conversion project, although a few options may be eliminated. One of the most obvious is that guillotining the spine of a book is no longer an option. That said, however, I can imagine a book with such severe mold damage that the artifact itself is compromised, and that might, therefore, be guillotined for ease of scanning as a preservation measure. And, in that case, if the paper of every leaf were just too soft to handle and we were to have a master scan for preservation and a hard copy for the researcher, I could even imagine that the original might be discarded. All this is to say that, as a practical and down-to-earth conservator, I’m not ready to rule out any choice entirely, if I’m satisfied that the decision-making practice has been truly reflective.

Knowing which questions to ask is one of the most important aspects of planning. The initial questions we ask in a project are fairly general and establish the context for all that follows. *What, why, which, how, who, when*. We start with the *what* and *why* — defining the universe of materials and the purpose of the project. Next we move on to more detailed questions. ‘Which materials will we select (from among the *what*)?’ From there we move to *how*. In a world of finite resources, we can’t ever forget to ask, ‘How much will it cost?’ and ‘How will we pay for it?’ The answers to those questions depend in part on the answers to other *hows*. ‘How can we do this technically?’ — be it in terms of workflow, handling and protection of originals, image capture, indexing, or cataloging. And conceptually, ‘How can we be sure to serve a researcher who seeks meaning beyond textual content?’ — for example, the historian who looks at slight variations in ink color to date marginal notations. And of course, there is *who* — ‘Who needs to be at the table to make decisions about all of these questions?’ Different stages require input from different participants — the project creators; preservation, technical and metadata staff; and of course the conservator. As a conservator, I ask another, more specific, question: ‘When does the conservator need to be involved?’ This may be the only question I pose for which I already know the answer. She needs to be involved right from the start, as soon as the project is conceived, and participate all the way through production.

The specific questions we ask at various stages of a digital project will differ depending on the purpose of the project. ‘Is it primarily an access project that requires safe handling and decisions about equipment selection, but with little or no other preservation component?’ — for example, a project to digitize the hand-colored engravings in a single copy of a 16th-century text. ‘Are we considering digitization in place of extensive conservation treatment for a particular item?’ — for example, a scrapbook that’s vulnerable to further loss if handled. ‘Are we thinking of providing a facsimile from a digital surrogate to restrict access to a single highly light-sensitive leaf in a frequently consulted plantation book?’ ‘Are we creating a value-added digital collection with multiple formats and materials borrowed from different institutions?’ ‘What are the priorities for image capture and is color fidelity an issue for the users of this material?’

It is almost a preservation mantra that all digital projects have a potential preservation benefit from reduced handling of originals. But once we’ve acknowledged that, there still remains a plethora of potential variables about

which we need to be clear from the start, while always maintaining an awareness of how the project fits into an institution's overall priorities. Arriving at the right questions can be complex, even for a small project, so I start with a simple classification system to guide my decision-making process and to ensure that all of the relevant factors are considered. My schema is divided into three categories: *Purpose*, *Goals for Image Capture*, and *Scale*.

My first broad category — *Purpose* — is divided into two main streams: *primarily access* or *primarily preservation*. This distinguishes between whether the surrogates are meant, very generally speaking, to 'represent' or to 'replace' (at least in terms of use) the originals. These two streams can be further modified by a range of selection criteria that are more specific. Projects defined as *primarily access* may include focused collections of source material defined by subject or format, or they may bring together materials of various kinds in a value-added comprehensive research collection that is highly indexed and supported by scholarly commentary. An additional factor critical to my understanding of a project's purpose is a clear understanding of whether the originals represent a selection from among like materials (for example, a representative portion of a collection of Civil War maps) or whether the aim is comprehensive representation of all materials within a defined sphere, such as the Walt Whitman archive.¹ Other *primarily access* projects might address immediate teaching needs or on-demand digitization requests from individuals or institutions.

Projects whose purpose is *primarily preservation* could include the creation of digital surrogates to reduce handling for highly fragile materials, especially those that are requested frequently, or items that are difficult to serve. Digital surrogates can also provide access when the extensive conservation treatment required to facilitate safe handling is not an option, and they may also be used to produce facsimiles for use in exhibitions or other situations where originals would be at risk.

My second category relates to *Goals for Image Capture*. This category has to do with whether a project will include only images, only text, text with some images for illustration, or images of the entire source original with accompanying text transcription for legibility or searchability. Based on the nature of the originals and the anticipated research use of the digital objects, I also bear in mind the need for color fidelity.

Third, I consider the impact of *Scale*. Scale makes a difference, of course, and what may be the right choices for a few selected items can differ radically from what may be appropriate for a large-scale project.

Once the purpose of the project is clear, planning can proceed. Digital projects have been compared to analog reformatting projects, like microfilming, in terms of risks for originals as materials move through a workflow. But when thinking about the decision-making process from the conservator's perspective, I find it more useful to compare digital project planning to planning an exhibit. Fundamentally, the access goals of both are quite similar. Staff members in all types and sizes of cultural institutions are usually familiar with the process, which includes balancing multiple levels of risk, such as security, display techniques, lighting, temperature, and relative humidity. They are also familiar with the fact that multiple constituencies have a role to play in this process. My role as a conservator is similar in both situations, bringing my knowledge and skills to the mission of providing access with as little as possible harm to originals.

Myriad decisions must be made at every stage of the planning process for digital conversion, whether we're talking about a single complex item or a large-scale project. If the conservation review and the calculation of cost and time required for remedial conservation is overlooked, compromises are often made that may not be in the best interest of the originals. In a project using historic and/or fragile sources, this can result in damage and increase the potential for additional costs for conservation intervention or related production delays. For this reason, it's useful if conservators also participate in writing and evaluating vendor contracts so that preservation concerns are factored in from the outset and defined in such a manner that originals are not endangered for the sake of meeting production goals.

Working with a project's creators during the process of selection and review, conservators can assess the stresses of both transport and image capture on original materials. Books, photographic materials, and unbound paper artifacts all have different vulnerabilities. A 16th-century book that doesn't open well, a collection of glass plate negatives, and a group of political posters on extremely thin paper will all require different approaches to handling and capture. The sizes of originals, and of course, condition, are also limiting factors.

Whether evaluating individual items or whole collections for digitization, conservators consider the physical and chemical stability of materials as they are being prepared, moved, stored, or scanned. One of the issues we consider for all artifacts is the scanning light source, the heat it generates, and the potential for related RH changes that could affect materials during image capture. The duration of the scans and number of exposures are also factored in. Beyond light, the questions we ask often vary by format. If there are books that can't open to 180 degrees without damage, is there a face-up scanning option available and is there an adequate cradle? If not, can we fabricate something? The availability — or unavailability — of cradles has been one of the most vexing issues for digital projects with bound materials, especially those involving historical materials where difficulties of book opening and the potential for damage are common.

The conservator also determines if there's a need for pre- or post-scanning conservation, and if so, how much. Does an original need in-depth treatment such as removing pressure-sensitive tape that obscures informational content before it can be scanned? Or will it need treatment after scanning? Is an item so fragile that a conservator is needed to do the actual handling during scanning? Can a whole collection move safely from its storage location to the digital lab for scanning and back again, or does it need rehousing first? Conservators' ability to make decisions as we ask these questions requires understanding the full range of options, awareness of what equipment is available in the local digital operation, and if something is not available, knowing if a contractor can provide it or if it can be obtained in some other manner.

I start from the premise that it's my job to facilitate the process of digitization and to do so in a way that captures both the visual and intellectual attributes of a given artifact. In doing this, however, I need to keep in mind that my intention to do as much as possible to make scanning feasible may sometimes have cost implications. At times, making an assessment about a particular artifact calls for me to think directly about research potential and value. The questions I ask are about *who* (in terms of both demographics and disciplines) would use this digital surrogate. And just as important, I would ask *who* has, does, or would use the original. I also ask *how* that original would likely be used, because after all, it's the original that may be changed in some manner. If that artifact were to be compromised in some way, would its research value be affected? If the answer were yes, I'd again ask *how*.

The vulnerabilities of individual artifacts are diverse. Consider a book — it may not open well; its binding may be in parts or otherwise extremely fragile; its pages may be brittle or may be tipped together in some parts of the volume, hiding text and images or refusing to lie flat; tape scattered throughout the text may be turning the paper dark brown and obscuring information; the volume may be too tall or too thick to be supported in a scanning set-up. The list goes on. Any one of these factors would demand further consideration before I could give scanning a green light. The possible solutions are also diverse. A book could, of course, be eliminated from a project. For some problems disbinding would remove the obstacles to capture. For others, constructing a special support or transcribing the text without images might be the answer. And pre-scanning conservation may facilitate safe scanning of many materials.

Through discussion, conservator and project creators can weigh the pros and cons of altering an original vs. changing the intellectual content of a project. Disbinding is often one of the procedures at the top of the list as a solution for digitization of problematic volumes. The following examples use the question of disbinding to illustrate a decision-making process that considers the research value of *both* the digital project and the original. It's important to remember that disbinding a book does not always refer to guillotining the spine. In a special collections context, a volume may be taken apart carefully so that it may be put back together, albeit no longer in an entirely 'original' structure, and always at an additional cost.

These examples show a comparative decision-making process for three 19th-century volumes: two published slave narratives and a diary. To disbind, or not to disbind? That is the first question in all three cases, but from there the decision-making process for each diverges.

Example 1. The first book is a fairly rare slave narrative held in the special collections. Still in its original binding, it has brittle paper with a few leaves already breaking at the inner margin. It's very likely that more pages would break as a result of scanning, despite careful handling and no matter what equipment is used. If the digital project for which it's proposed represents a selection from a collection of slave narratives, we *could* decide not to digitize this particular text. However, this might not really be the best decision. Asking a few more questions would help us decide. Does the fragility of this volume mean that it shouldn't be digitized? Is our primary responsibility to preserve this artifact

by protecting it from handling? Do we house it in a box to wait for a researcher who will probably break the same pages that would be broken by any capture, including simply turning the pages while preparing a transcription? Or does this volume's brittleness and fragility mean that, more than ever, it *should* be digitized because if our copy is like this, other copies are likely to be in similar condition? On the other hand, if this were a text of which only three copies are known to survive, the questions and the answers might be different.

Now let's assume this same volume is selected for a digital project that seeks to include all known North American slave narratives.² Since our volume must be included in the digital project, it becomes my job to figure out how to make this happen. Let's add a couple more layers. The volume has a publisher's decorated cloth binding that adds to its perceived value as an artifact. But at the same time, let's remember that the vast majority of items in our collections are used for their informational rather than artifactual value. Still, let's imagine a researcher who *is* interested in this book as an artifact, perhaps doing a comparative study of the marketing of slave narratives in the U.S. and England. Is it really the binding *structure* that carries meaning? Or is it the cover design and perhaps the material qualities that interest our researcher? Can we capture book structure digitally? And even if we could, is the structure of this 19th-century mass-produced volume unique or item-specific enough to convey meaning in any way?

After asking and answering all these questions, we decided to disbind this volume for digitization, and because of its rarity, to reconstruct it post-scanning — even if some of the leaves incurred a bit more damage in the process.

Example 2. The second slave narrative had been transferred from the general collections to the special collections and is in an oversewn commercial rebinding. Although oversewing is potentially the most damaging structure for brittle books, this particular volume is currently stable. The margins are very small, and the digital projects staff asks if we can disbind it for scanning on a flatbed scanner, which is the primary in-house scanning option at this time. Let's consider a list of pros and cons that frame the decision. The following points argue *against* disbinding the volume. At least forty copies of the book exist, including two copies in North Carolina that we might be able to borrow for scanning. The possibility of face-up photographic capture by a vendor, although an extra cost and not without risk, has not yet been explored. Disbinding an oversewn volume can be very time-consuming and

once it is disbound, the entire inner margin is full of holes. Because of this extra damage and its brittle pages, post-scanning conservation treatment and a new structure would require a considerable share of very limited conservation resources. And simply boxing the loose leaves would result in a significantly different reading experience of this text for an on-site researcher.

Conversely, the following points argue in *favor* of disbinding. The volume is already in a commercial binding, which has pretty much divested it of its material culture interest. Because of its brittleness and its current sewing structure, there is a possibility that the book would be damaged even by the amount of physical manipulation required for face-up photography. Funds for photography by a vendor haven't been identified and there's no guarantee that they will be found. Availability on the Web, however, would increase access for a broader cross section of publics both in the U.S. and internationally, and most significant, this text is important to the comprehensiveness of the North American Slave Narratives project.³

In this scenario, the decision emerges from balancing costs for digital capture and costs for conservation, in the context of institutional priorities. Extremely limited conservation resources and the potential for even greater loss of value for the artifact led us to consider pursuing the photographic option or borrowing another copy. We chose to explore the first. The volume could withstand relatively prolonged exposure to hot lights, so the photographer and I worked together to come up with a way to support and photograph the volume safely. Small margins notwithstanding, we were able to obtain perfectly adequate scans for this project, without disbinding.

Example 3. The third volume is a leather-bound diary written during the last few years of the 19th century by the first female student at the University of North Carolina. This small, well-used volume — every surface filled with a young woman's activities and thoughts — was repaired at some time in the past by someone who clearly valued it. Its significance lies not only in the textual content, but also in its iconic value to the University. It's been selected for inclusion in a project highlighting writings by students at the University. The ink is faded and the paper is very thin, quite discolored, and somewhat brittle around the edges, probably from poor storage conditions at some point in its long life. To complicate matters, the book doesn't open very well, and will only stay open if held or restrained. Its relatively small size makes this kind of handling awkward, increasing the potential for damage.

All of this rules out the use of a flatbed scanner. In our digital lab, the remaining options are a Phase One digital camera back on a 4x5 studio camera or an intermediate-format digital camera on a copy stand. Scans done using the Phase One are often in the range of 20–25 minutes long. During extended exposure time, the available studio lights become very hot, and there is a heightened risk of heat gain and dimensional change within the book. The same studio lights would be used with the smaller camera. Although the duration of the scan is much shorter, the length of time the volume would be exposed to elevated temperatures is still rather long because of both the number of leaves and the inevitable increase in time resulting from the awkwardness of supporting the book. We asked ourselves about potential gains and losses if this object of clear importance to the University were to be damaged by excessive manipulation and possibly suffer further deterioration, even *if* someone across the globe could have immediate access to it on the Web. In the context of *this* project of selected writings, we might decide to exclude this item.

This decision would reflect a judgment about the value of the *artifact*. The risk to the manuscript is clear. But what if this project centered on the first fifty years of female students at UNC with the goal of creating a comprehensive collection of all of these women's diaries and letters known to exist? Some of the questions might then be different. But would the answers be the same?

What options do we really have? This is a book that doesn't open well; its leaves are thin with brittle edges, so we can't invert it on a flatbed scanner. Even for face-up capture, we know that the heat generated by the studio lights would not be good for this volume. Although showing signs of age and wear, in its current state, the book is quite stable. But for a digitization project — should we disbind it? If we did, we could digitize the covers and the individual leaves. But what about the 'aura'⁴ of the original artifact? Would we ever be able to convey that? Could we capture the way you feel the presence of the author and the importance the diary had to her, the way it sits in your hands, the leather smooth from being held. If we decide to disbind this book, do we leave it disbound and simply box it with the original binding fragments after scanning? Or does it get full conservation treatment? *Could* we even treat it in a way that maintains the amateur repair that is integral to its value as an artifact? If so, at what cost?

So, where does the value lie? With the artifact? With the project? Or can we somehow accommodate both? What if we decide to make images only of the exterior of the diary and provide the text only in transcription? Would this solution be acceptable if the rest of the project has full color images of individual leaves from the other diaries? As part of a digital collection, does any of the value reside in the consistency of presentation? And these are only some of the questions to be asked.

In all of these examples, each question assesses value; subjectivity and contingency frame each decision. What matters most to me, in all of this work, is to promote a user-centered decision-making process and to encourage open, collaborative dialogue about *why* we're doing what we're doing and for whom we're doing it.

Virtually all cultural institutions with research collections have mission statements that include both preservation *and* access, but often our discussions focus on preservation as *opposed* to access; on artifact as *opposed* to digital object. These polarities don't begin to reflect the complexity of cultural institutions in the 21st century. As contemporary scholars work more frequently with images as well as text, as they collaborate across institutional and national borders, and as Digital Humanities grows as a discipline, the research need for digitizing originals will only increase. Our commitment to value both the artifact and its digital incarnation must grow apace. And it must become second nature to ask ourselves what we are preserving — and for whom.

Notes

¹ The Walt Whitman Archive. Editors Ed Folsom and Kenneth M. Price, <http://www.whitmanarchive.org> (accessed 8.20.2008).

² North American Slave Narratives. Documenting the American South. University Library, The University of North Carolina at Chapel Hill, <http://docsouth.unc.edu/neh/> (accessed 8.20.2008).

³ Ibid.

⁴ Benjamin, Walter. 'The Work of Art in the Age of Mechanical Reproduction.' In *Illuminations*, edited by Hannah Arendt, p. 223 ff. New York : Harcourt, Brace & World, 1968.