

Historians' Experiences Using Digitized Archival Photographs as Evidence

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ABSTRACT

Widespread digitization of cultural heritage materials and access to digital tools have altered the scholarly research landscape. For historian scholars who use archival sources to construct arguments, such changes in research environments have undoubtedly influenced the ways in which they work. Using an embedded case study approach, this research seeks to understand how scholarly information practices are changing by exploring the experiences of historians using digitized archival photographs as sources of evidence. How and why are historians deciding to use (or not to use) these sources in their scholarly activities? The findings of this research illustrate what makes experiences meaningful and significant for historians working with archival photographs in digital research environments.

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KEY WORDS

Primary sources, Archival literacy, College and university archives, Local history collections, Photographs

The networked research environment presents both opportunities and challenges for historian scholars working critically with primary source materials. Indeed, recent research has confirmed that technological advancements have significantly influenced scholarly practices.¹ On the one hand, widespread digitization has given scholars unprecedented access to new kinds of sources. Previously “hidden” collections are now available for research, suggesting that scholars may ask new kinds of historical questions and answer historical questions in new kinds of ways.² On the other hand, the very act of doing research and assessing sources critically in the digital scholarly ecosystem requires different competencies at multiple levels and at various points in the research process. Interactions with digital historical representations are mediated by how well scholars navigate sociotechnical factors, including ease of interface, digitization quality, collection orientation, and/or domain-specific heuristics.³ While methods for interpreting and analyzing visual data are increasing in both frequency of use and rigor, empirical studies of how scholars use visual materials in digital environments remain scarce in library and information science (LIS) research.

This research study attempts to address noted gaps in the literature by exploring the experiences of historians using digitized archival photographs as evidence. The goal was to provide an in-depth, empirically grounded understanding of a complex interaction space made up of, but not limited to digital surrogates of archival objects, user perceptions and attitudes, environmental constraints, and historical training and orientation. My methodological approach enabled me to explore historians’ changing information practices in digital environments and to extend attention beyond the material constraints of scholarly resource discovery and access channels. Broadening emphasis to historians’ information experiences helped to reveal potential mediating factors in their use of information.

“About or Is?” Describing Archival Photographs

Institutions in the United States have long recognized the importance of acquiring and collecting photographic materials as documentation. One of the earliest and most widespread uses of photographs in an institutional context was the capture and recording of war activities. Writing in *The American Archivist* in 1958, Joe Thomas told the story of an 1860 U.S. expedition to Japan that used daguerreotypes to document governmental activities. He noted that the expedition was the first time that “an agency of the United States Government in connection with the transaction of public business had consciously created photographic records that were appropriate for preservation as evidence of its operations or as the embodiment of valuable information.”⁴ The U.S. National

Archives began collecting photographs from federal agencies shortly after its inception in 1934 and even housed a separate division called Photographic Archives.⁵

Despite the long history of collecting and cataloging photographs, the development of archival descriptive standards specific to visual materials has been notably slow.⁶ Allen C. Benson pointed to the “general reluctance to recognize the unique and complex nature of archival photographs, collections, and image-constructed knowledge.”⁷ Joan M. Schwartz argued that by “embracing a textual model of recorded information and by adopting a bibliographic model of image classification, archives continue to fixate on the factual content rather than the functional origins of visual images.”⁸ Jane Greenberg agreed that current descriptive standards place constraints on access to visual materials. She suggested that metadata schema design should support functions across domains (such as discovery of images, regardless of disciplinary background) rather than focusing on designs to meet the needs of only one domain.⁹ According to Tim Schlack’s historical analysis, changing cultural conceptions about the value of archival photographs played a role in making access and preservation use cases more compelling for institutions.¹⁰

In terms of specific guidance, the literature suggests that archivists aim to develop visual literacy skills to improve description efforts. Though writing primarily about photograph appraisal, William H. Leary advised that archivists processing visual materials should be both “students of history” and “student[s] of the history of photography.”¹¹ Elisabeth Kaplan and Jeffrey Mifflin advocated for archivists to familiarize themselves with visual communication methods and borrow aesthetic approaches from photography, film, and video to formalize literacies.¹² In *Photographs: Archival Care and Management*, Helena Zinkham provided an in-depth discussion regarding how archivists might describe photographs. She instructed archivists to study both photographs and negatives carefully, noting any written information on the materials themselves or on their containers. Potential reference sources such as pictorial histories, histories of photography, and photography dictionaries, directories, and databases can help identify relevant details.¹³

The burden for archivists lies in adequately describing the archival photograph within changing temporalities for archival spaces that exist in perpetuity. As Schlack wrote, “Working with photographs then is a process of substantiating the most valid narrative that a photograph collection can evoke and transcribing it into the academic discourse of our time.”¹⁴ Given the relationship between archival description and access, the archival profession would benefit from user studies that explore aspects of interactions with visual materials. What do users need from the presentation and display of archival photographs in digital environments? What factors matter to them as they evaluate sources?

Understanding the dynamics at play in the space of interactions is an important part of ensuring that descriptive models are an adequate fit for enabling access to visual materials.

How Does Library and Information Science Study Image Use?

Visual information (and visual methodologies) is an underexplored phenomenon in library and information science (LIS), though recent work indicates this may be changing.¹⁵ According to Joan E. Beaudoin, developing a comprehensive understanding of scholarly image use is challenging for LIS simply because “aspects surrounding use are markedly different than those of textual materials.”¹⁶ Images are polysemic by nature: meaning depends on the viewer, and the same image may have multiple interpretations at the same time.¹⁷

Overwhelmingly, visual information behavior studies are quantitative in nature and tend to focus on visual search.¹⁸ A popular method used in studies is query analysis, which attempts to understand visual information needs by analyzing the kinds of search queries submitted to different corpuses. For example, Linda H. Armitage and Peter G. B. Enser collected, analyzed, and classified approximately 1,800 queries to anticipate user information needs for image-related materials at seven libraries.¹⁹ While acknowledging the value in creating image classification schemas, they nevertheless pointed to the difficulties in classifying queries with vague geographic locations (e.g., “London scenes”) or singular topics that may include many types of representational formats (e.g., paintings, photographs). Karen Collins also looked at user-submitted queries in two photographic archives to assess how well information systems were meeting the needs of users searching for visual materials.²⁰ Despite the perceived importance of provenance as an archival access point, all of the patrons in her study sought images individually rather than in the context of a collection. Noting this discrepancy, Collins concluded: “While maintaining the context in which images were created or used is necessary to preserve their evidential value, it is clear that few patrons are presently using images as primary source documents. A study of how patrons use images, and the implications for archives, would be interesting and useful.”²¹ Using the Library of Congress’s *American Memory Collection* as their corpus, Youngok Choi and Edie M. Rasmussen analyzed the relationship between user-submitted search queries and participants’ statements of information needs.²² One interesting finding in this study is that, given a set of images with accompanying metadata, study participants ranked “date,” “title,” and “subject descriptors” as the most relevant attributes—a noted difference from textual retrieval environments.²³

Visual information behavior studies also employ task-based scenarios to understand the context in which users submit queries for visual materials. For

example, Raya Fidel analyzed and classified a hundred queries submitted to a stock photography agency, noting semantic differences between user queries motivated by informational purposes (e.g., an icon for a handicapped entrance) versus images serving as representations (e.g., a colorful picture).²⁴ These conceptual differences in query construction suggested to Fidel that the nature of the retrieval task might influence search behavior. Lori McCay-Peets and Elaine Toms also focused on task-based work contexts, interviewing thirty journalists and historians to understand motivations in using images.²⁵ Building on Fidel's work, McCay-Peets and Toms were interested in classifying whether participants used images as "illustration" or "information." They suggested that visual information use studies should distinguish between what motivates *image acquisition* (physically acquiring the item) and *image use* (purposefully using the item). Marjo Markkula and Eero Sormunen also examined the practices of journalists working in a digital photo newspaper archives in Finland, identifying the different types of criteria used to determine relevancy.²⁶ However, they concluded that user queries from image searches revealed very little about user behavior; instead, they noted that observation sessions from the newsroom provided a more illuminating understanding of context for image needs and uses.²⁷

A small number of studies have employed qualitative approaches in their explorations of digital image collection use. Noting a gap in the literature on attempts to understand visual meaning-making practices in archival settings, Paul Conway and Ricardo Punzalan explored how expert users interacted with digitized photographs.²⁸ They developed a model called "Fields of Vision," identifying three different modes of inquiry (storytelling, discovering, and landscaping) to help contextualize motivations for participants' use of digitized photographs. In another qualitative study, Kathleen Fear examined how users working with digital image collections perceived various Dublin Core metadata elements.²⁹ Although the stated purpose of the study was to examine search behavior, Fear's research offers contextual, nuanced descriptions of how users interact with digital image collections. In an effort aimed at understanding image use across disciplines, Joan E. Beaudoin investigated four professional groups (archaeologists, architects, art historians, and artists) to note similarities and differences in practices.³⁰ The most common motivating factor shared across all four groups was "knowledge development."

Conceptualizing Information Use as Experience

Quantitative methods can be beneficial for understanding aspects of image use including useful baseline information about resource use. Yet such approaches can over-emphasize information access points—or how scholars locate particular objects using a specific information channel for object

retrieval.³¹ Treating access and delivery mechanisms as proxies for use obscures important aspects of the information experience. As Laura Sheble and Barbara Wildemuth pointed out, transaction logs “cannot tell us anything about the users’ cognitive or affective responses during the system interaction.”³² Citation analysis also presents an incomplete picture of use, as citation practices for digitized archival materials are continuously evolving. Databases like the Web of Science also do not currently provide interfaces that permit citation searches by material type, making citation analysis for visual materials like photographs particularly difficult.

User needs can also shift in the course of a single interaction. Quantitative approaches that count access to a resource do not capture dimensions that may in fact deter use. In a study of visual information seeking among video users, Dan Albertson noted, “Visual information can influence outcomes in an interactive process and presents variations in the types of needs, tasks, considerations, and decisions of users, as compared to information seeking in other contexts.”³³ In other words, ecological, emergent factors can mediate experiences significantly in ways that may not accurately reflect actual outcomes of use. If we only study cases where *resource access* signifies successful use, what can we learn about the characteristics that make environments usable and useful for scholars? The studies reviewed in the literature provide very little insight into critical dimensions related to scholarly use (or nonuse) of materials.

Investigating *how* scholars interact with visual materials can be helpful for revealing the emergent qualities and attributes that make that experience meaningful for participants. Ronald McIntyre and David Woodruff Smith explained:

Photographs, symbols, and words in themselves and apart from the meanings and interpretations given them by persons or other creatures possessing mentality, are only so many marks on paper. Their intentionality—their “representing,” or being “of” or “about” things other than themselves—is therefore not a character they have intrinsically, insofar as they are merely the physical objects that they are, but is derivative from their relation to intentional mental states.³⁴

Following this argument, visual representations *become* information through the relationships and meanings we inscribe onto them. Analyzing our experiences of things, then, can help us understand the contexts in which these things *become* meaningful.³⁵ In this research study, exploring *how and why* scholars used digitized archival photographs helped to reveal the factors and qualities that mattered to them. Underlying these experiences are important insights about how knowledge practices are changing in digital research environments.

Methodology

In the spring and summer of 2015, I conducted semi-structured, in-depth interviews with fifteen self-identified historians. I used three avenues to recruit potential research participants: (1) professional mailing lists, online forums and Twitter;³⁶ (2) individuals at five local institutions;³⁷ and (3) individuals recommended to me through colleagues and other recruited participants.³⁸ All recruitment invitations specified that to qualify for inclusion in this study, participants must have previous experience using digitized archival photographs in scholarly activities. Scholarly pursuits could include teaching, publications, presentations, or research projects. I posted initial recruitment invitations online or emailed them to potential participants, depending on the targeting strategy.³⁹ Recruitment strategies happened simultaneously, though the third strategy (snowball sampling) continued throughout data collection and analysis.

Interview sessions took place with recruited participants at settings of their choice, provided they were equipped with Internet access. Recruited participants came from a variety of academic departments, including history, English, African American Studies, American studies, classical studies, and musicology. Prior to interviews, each participant selected and submitted at least two examples of digitized archival photographs they had used in scholarly activities such

Table 1. Study Participants by Title and Primary Area of Research

PARTICIPANTS	TITLE	PRIMARY AREA OF RESEARCH
P1	Doctoral student	20th-century African American history
P2	Postdoctoral fellow	19th-century American alternative green culture
P3	Public historian	Technology and the Gilded Age
P4	Assistant professor	Historical preservation and U.S., 1900–1945
P5	Faculty instructor	Urban history
P6	Doctoral student	African Americans and labor history
P7	Assistant professor	19th-century American visual and material culture
P8	Professor emeritus	Urban neighborhoods
P9	Doctoral student	Science and technology studies
P10	Adjunct professor	20th-century intellectual history
P11	Doctoral student	History of musical opera; gender studies
P12	Master's student	Early 20th-century gender studies
P13	Professor emeritus	Aboriginal studies
P14	Professor	International migration
P15	Doctoral student	19th-century environmental history in the South

as research and teaching. Material types included conference presentations, class presentations, course syllabi, dissertation chapters, and journal articles.

The goal of this research was to understand and characterize historians' practices using digitized photographs as evidence in scholarly activities. In my methodological approach, I adopted a phenomenological stance to enable a focus on understanding "how persons construct meaning" by examining their particular experiences with certain phenomena.⁴⁰ The use of multiple types of data including examples of historians' specific uses helped to facilitate a complete picture of my phenomenon of interest (i.e., historians' experiences using digitized photographs as evidence).

I used Skype to conduct the majority of my interviews. I recorded each interview digitally and then transcribed them verbatim. On average, most sessions ran 1.5 hours. In the first part of the interview, I asked participants to provide demographic information and to answer questions about their image use practices.⁴¹ In the second part of the interview, I instructed participants to open a Web browser to the online location of their submitted photographs (see Figure 1).

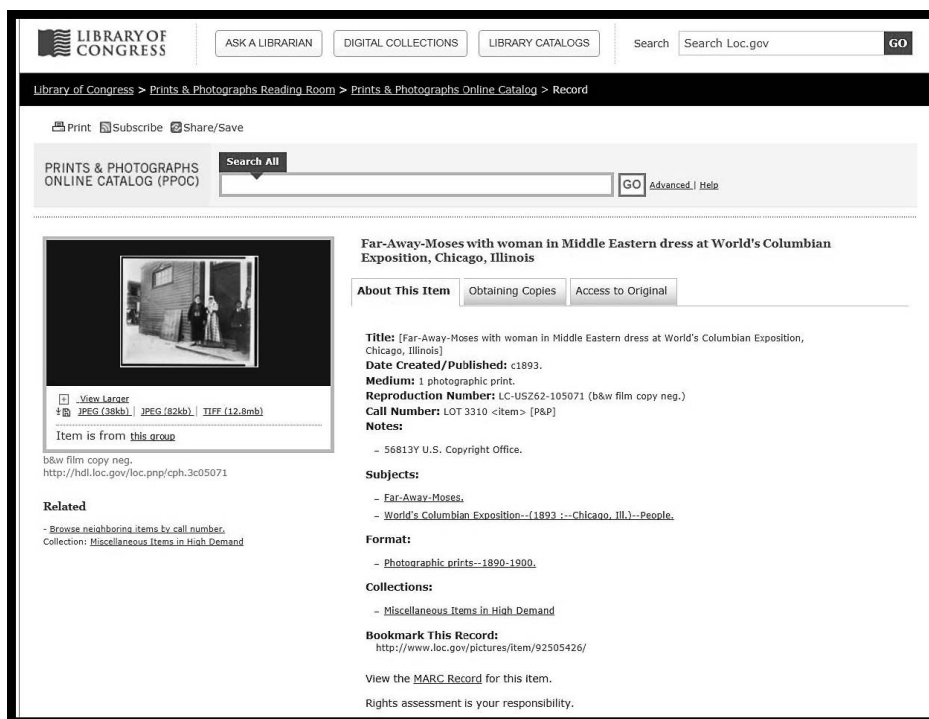


FIGURE 1. This is a screen shot of a webpage containing a photograph used by one of my participants. The image is *Far-Away-Moses with woman in Middle Eastern dress at World's Columbian Exposition, Chicago, Illinois*, c. 1893, Library of Congress, <http://www.loc.gov/pictures/item/92505426/>.

In my interviews, I drew on techniques from photo elicitation interviewing (PEI)⁴² and concurrent verbal probing⁴³ to ask participants about how they evaluated, selected, and used materials in scholarly activities. The PEI portion of the protocol contained fifteen interview questions with several embedded probes.⁴⁴ I used open coding and a hybrid approach to thematic analysis⁴⁵ to surface salient aspects of participant experiences. To strengthen and verify the analysis, I employed multiple types of triangulation. The goal was to assemble all participant materials and begin to formulate and approach the collection as the building of each case. During both data collection and analysis, I took memos as a strategy to “trace the thinking of the researcher and help guide a final conceptualization that answers research questions (or related ones) and offers a theory as an explanation for the answers.”⁴⁶

Findings

Overall, this research identified sixteen broad themes related to historians' experiences using digitized archival photographs. The findings shed light on both the practical concerns and the intellectual challenges that surfaced for historians working with visual materials in digital research environments. Each case demonstrated the extent to which material conditions in interactions (rather than just tools used to discover or access resources) influenced visual information use. Table 2 is a typology of themes that characterize historians' use, alongside examples of descriptive quotations from interview transcripts.

The results of this study suggest that distinct practices remain critical to historians' image selection and use. Broad visual browsing of collections is an integral part of the research process, with participants initially approaching a body of images to cycle through and then locate potentially relevant material. P7, a historian of nineteenth-century American visual and material culture explained, “I wouldn't do keyword searches, because I know that keyword searches are going to limit what I find. And if I'm looking for everything, you know what I mean, if I don't know what I'm going to find yet, then I don't want to limit what I see.” Participants also used photographs to orient their research in two distinct ways. First, they used online image access initially to determine whether to make an in-person visit to a repository. Second, they downloaded interesting images “to get the lay of the land” at an early stage of research for later use as they may not “realize right away which images were going to stick out.” Participants were motivated to begin research projects after just being “fascinated with the images” and proceeding to see “what story would develop out of it.”

The affective power of photographs also motivated image selection and use.⁴⁷ Two participants described how their use of photographs “would foster

Table 2. Sixteen Themes of Experience

THEMES OF EXPERIENCE	#PARTICIPANTS	INTERVIEW EXCERPT
1. Browsing	15	"I wouldn't do keyword searches, because I know that keyword searches are going to limit what I find. And if I'm looking for everything, you know what I mean, if I don't know what I'm going to find yet, then I don't want to limit what I see."
2. Starting with images	6	"And I was not interested in using the images as supplementary evidence to a written record, but actually as the foremost piece of evidence, that would then be corroborated by written record. So, I would often find images that documented sort-of unseen moments in American history, that were not in the historical record, and then use that as a starting point to investigate what had happened in that historical moment."
3. Orienting	6	"I'm researching an area of musicology that is relatively untouched—so I didn't know who any of these people were. I mean, I really had to get the lay of the land. I did not know, initially, who was going to be important and who wasn't, in my research. And that went on for a very long time, even when I thought I was doing more specialized research."
4. Amassing personal collections	5	"If I see an image that I think I might want to download it, I almost always just download it and save it to my Google drive, or whatever I am using. I keep a master document for images. . . . I'd have a link to this image and a link to the page, so I could have all the information to cite it."
5. New entry points for access	10	"I did a lot of Google image searches. And spent a lot of time sort of honing how I did that and to come up with a lot of images like the one I sent you."
6. Affect-related	9	"But I'd always try to find good touristy photos to show some good 60s and 70s touristy photos or whatever, just to make it livelier."
7. Historical reference	10	"A lot of times we need to look at these historic photos to actually know what it actually looked like and not just our idea of what it looked like."
8. Filling in absences	4	"And it was images of that that really drew me into the fact that there was a whole, much more extraordinary history linked to the power of images, that hadn't been told before."
9. Materiality	6	"I don't want to say that the digital was not helpful, or that it misled me or anything. It actually led me to the physical image. But I'm thankful I got to hold the hard copy in my hand."
10. Obtaining digital surrogate	7	"So if I were to, for example, use this image in an article that I were going to send out, getting permission to use this image is incredibly simple because it's owned by the Library of Congress. If it's another kind of private institution or something, then there's a lot more agreements that have to be made, and rights questions that you have to ask, but being that it's from the Library of Congress and it's owned by the U.S. government, they make it available for use, basically for free. So that's certainly useful."
11. Trustworthiness	9	"You know, obviously an image that's on some random website that's come off of Google image, I would be more careful with using. But if it's a university website, you know, university library, New York Public Library, something like that . . . I trust the repository."

Table 2. Continued

THEMES OF EXPERIENCE	#PARTICIPANTS	INTERVIEW EXCERPT
12. Provenance	7	"It's important to know where it's from and when it was created and what the archive knows about it, which certainly guides me, and it's important to know where it is so that I can know who to contact to get the high-quality image."
13. Contextual elements	4	"I want to know the artist, I want to know the title, I want to know the artist's caption, if it's different than the catalog record, I want to know when it was taken, I would like to know the medium, the size, the collection it's in, obviously your repository. A stable URL would be nice, so that I can navigate back to this again."
14. Artifactual thinking	5	"I think online, students forget that these are physical artifacts. You know, because they're not used to thinking of a photograph as a physical thing. And what I like is this looks like a physical object. You can see the Kodak on the margins, and it has catty-corners, and you see the little color-bands on the bottom. So, I like that even though they're looking at it online, it looks like a physical artifact."
15. Functionality/usability	7	"I really like the different ways you can download things from their website, just depending on what kind of graphic needs and how you're going to utilize them."
16. Quality	6	"The resolution of image matters a whole lot, especially when I'm trying to find some things that I might want to use in a presentation."

empathy" or "make it more exciting for students." P2, a historian of alternative green culture, explained, "I look for anything that catches my eye . . . and I don't always know what I'm looking for, but I'm looking for anything interesting and unusual." Respondents also noted how affective dimensions of photographs assisted in translating historical concepts in pedagogical efforts. P11, a historian of music who has taught about the minstrel shows in the era of Jim Crow, described how photographs engage students in ways that listening to music often cannot:

You know, if we're listening to music from minstrel shows, they're very, very racist, horrifically racist, but college students are always really in tune to—they don't understand the racist images—or the racist language—they don't always understand that "Jim Crow" is a racist thing, or whatever. But you see the image of Jim Crow, that's really obvious. And then when you hear it, and so then I can say, "Well, this image, you can see how racist this is, this is easy to understand." But in the music, they get sort of caught up in how can music be racist, and how can you have musical markers for racism, and how is this language racist?

Photographs also provided valuable historical reference for verification, documentation, or corroboration. They helped to contextualize a specific time and/or place of interest, for fleshing out "what things looked like then." For example, P3 is a public historian who used archival photographs to re-create accurate details in restoring details to furnishings and layout in Orville Wright's mansion, the Hawthorn Hill house. Similarly, P4 used archival photographs to

justify restoration recommendations for historic preservation work, noting how “a lot of times we need to look at these historic photos to actually know what it actually looked like and not just *our idea* of what it looked like.”

As a form of visual evidence, photographs prompted participants to make deeper historical connections. In several cases, the discovery of particular photographs helped to counter existing historical perspectives. P6, a public historian studying labor movements, described how the discovery of photographs showing African American women participating in the 1930s St. Louis nut processor strike led to a reexamination of the event:

So I knew that this strike had happened, but to find the images really drew me in deeper. And it was about the nut processor's strike in the thirties, where these African American women went on strike, and they were just literally unseen by the whole society. They were working longer hours than the Polish women who worked in the factory, and they worked in the basement, so some of the Polish women did not even know that there were African American women present in the factory . . . when this strike happened, it was really about them becoming visible for the first time. And this massive strike taking place in St. Louis, and really changing their conditions as they became unionized. Because the way African American women were able to go out on strike, is they aligned themselves with the unemployed councils, which were black women in the neighborhood. And white women in the neighborhood. So, they got white women to come to their picket lines. So when the white women saw the strike going on, they saw white women out on the picket line and joined the picket line. And it was images of that that really drew me into the fact that there was a whole, much more extraordinary history linked to the power of images, that hadn't been told before.

Several participants mentioned that addressing these absences in the historical record became an explicit motivational goal for further image use.

One significant change in contemporary historical practice is the amassing of personal collections of digital sources. Scholars can now use portable digital cameras to snap images in archival reading rooms, download digitized online sources, and/or use home scanning equipment—all factors that have undoubtedly contributed to the making of new forms of research collections.⁴⁸ Melissa Terras noted this trend in 2010: “Enthusiastic digitisation by amateurs, a phenomenon previously ignored by information professionals, is providing a rich source of online cultural heritage content which often documents areas not covered via traditional institutions.”⁴⁹ P1, whose dissertation work on African American musicians' self-expression in early twentieth-century Alabama, described a hybrid research process that included both print and digital sources as well as archival and nonarchival access points. For example, P1 used Google image search initially to browse images based on already-established criteria (in this case, pictures of musicians in certain poses), in turn facilitating a connection to source materials found on independent scholars' blogs. P1 mentioned tracking down a photograph that originally appeared on the

cover of a folk album, having previously encountered it on the cover of a book on West Virginia fiddle music. P1 was thus able to “circumvent the traditional archive” by obtaining a digital scan of the photograph from the author of the book directly.

These new pathways can introduce additional challenges for scholars who may be used to relying on an archival repository for authentication and sourcing of materials. P11 discovered first-hand the complexities that can arise from locating an unsourced photograph online. In a PowerPoint Presentation for a class, P11 used what the participant *thought* was a digitized photograph of Anna Held, a performer from the early twentieth century. P11 initially found the photograph via Google Image Search, on a blog dedicated to vintage photographs of women at the turn of the twentieth century. The original photograph, digitized as part of the Macauley Theatre Collection at the University of Louisville Photographic Archives, tells a different story. According to its title, the woman pictured in the photograph is actually one of Anna Held’s fencing girls.⁵⁰

The concept of trustworthiness played an important role in participants’ decision-making. Factors such as the reputation of an institution or that an image originated from an archival institution helped to establish trust in using that image further. The notion of the archives as a harbinger of truth repeatedly surfaced in many participant descriptions, with P8 asserting, “I generally tend to take what the archive tells me as truth.” Additionally, personal relationships with archivists also helped to ensure trustworthiness. P15, a historian of the nineteenth-century American South, was more willing to use a photograph in personal scholarship because P15 knew the archivist who helped to digitize it, as well as the original donor’s family.

In interactions with digital environments, functional aspects such as an ability to download images at different resolutions played a significant role in determining further use. Respondents wanted as much original descriptive information as possible (for example, the handwritten captions on the back of photographs) to be made available. P10, a historian who has studied the photographs of Lewis Hine, described the benefits of archival access and delivery thusly: “You know, having everything, having all the captions and having everything means you don’t actually have to visit the repository. We can do it from a distance.” Indeed, the presentation and display of contextual information such as keywords, subject headings, original medium, size, and photographic captions were all important influences on selection and use, regardless of format preference.

Material aspects of interactions with photographs mattered for participants who used both digital surrogates and analog counterparts. Six participants stated an explicit preference for experiencing photographs in digital or analog formats (four preferred digital; two preferred analog). Digital surrogates provided possibilities for seeing intricate details, including those that might not

be discernible in an analog counterpart. At the same time, examining photographs as analog objects prompted serendipitous discoveries. P2 discovered new details when viewing a photograph with a magnifying glass, altering the formulation of a research argument:

So, there are a number of things that I never would have seen, I think. . . . you know, the physical image has a whole affect to it that you don't get from a glowing screen, I think. Especially these nineteenth-century glass-plate collodion-albumen prints. And I just wouldn't have seen it—I've seen it, now that I know it's there, I can look at the digital image from the Beinecke, and zoom and zoom in to see it, but I never would have seen it if I was just looking at a 2-inch-by-3-inch digital version.

Regardless of analog or digital status, participants fluidly recalled interpretive choices and decision-making, in ways that cut across techno-social dimensions of their viewing experiences.⁵¹ For example, one participant noted that the ability to zoom in (a function of the viewing environment) was as useful and relevant as the photographic content itself. In other words, participants situated their descriptions within their specific viewing experiences, rather than in their interactions with the photograph itself. This embodied perspective suggests a form of digital visual literacy that places significance on the activity of the viewing experience itself.⁵²

Limitations and Future Work

This research study had numerous limitations. One limitation concerns the relatively small sample size ($n = 15$). There are no strict guidelines regarding sample size in qualitative case study research; instead, the emphasis is on the information-richness of cases. Toward that end, I used purposeful sampling to target information-rich cases and observed the principles of data saturation in my data collection. Relatedly, case study research is typically not generalizable; the goal of case studies is not to “infer findings from a sample to a population, but to engender patterns and linkages of theoretical importance.”⁵³

Another limitation concerns the interdisciplinary nature of my sample population. Despite using the umbrella term “historian,” the majority of my study participants were not teaching in academic history departments. However, prior to data collection, I made the decision to expand my sample population for a number of reasons. First, it was difficult initially to locate individual historians working in academic history departments who were using digitized photographs to make historical arguments. Through informal conversations conducted in the early stages of my research, I learned that institutions were not yet formally tracking scholarly use of their digital collections, preventing identification of potential recruits.⁵⁴ My particular focus on studying scholars using photographs from archival collections (as opposed to all visual materials) proved to be an additional challenge. Since I

was most interested in *how* and *why* historians use digitized images as forms of evidence, expanding my sample population to encompass self-identified historians doing historical work allowed me to gather important aspects of those interactions while providing me with an adequate number of participants for case study research. I found great value in addressing the broad practices of individuals doing historical work with photographs, recognizing that my sample had unique qualifications and training. In fact, though most of my participants were not teaching in academic history departments, eight of fifteen had received their doctorates from “traditional” history departments.

The findings of this research paint a changing picture of the ways in which historians interact with archival sources. The formerly bounded physical experience of discovering, accessing, and using materials in an archival repository now has vastly different dimensions. Rather than designing for specific access points or information retrieval strategies, archival professionals should consider how use of digitized archival photographs is a multifaceted, multilayered experience in which meaning is constructed (or not) through a series of complex mediations. Archival research environments should aim to support fluid, generative interactions with materials rather than focus on accommodating specific access and use points. Future research should emphasize the *information experiences* of historians to holistically understand interpretive techniques in digital research environments and changes in critical scholarly practices. In particular, the role that affective factors such as empathy play in the selection and use of visual information is a promising area for further exploration.⁵⁵

This study identified potential shifts in where historians are locating photographs for use in their scholarly activities. Only one participant mentioned finding aids at all, while eight participants mentioned using Google image search. The emergence of different kinds of digital collections (e.g., amateur/hobbyist online collections and personal digital archives) might indicate that the institutional archives is not the starting point for image search. While trust in source materials remained a central concern for my participants, this study did not explore whether and how historians evaluated photographs located exclusively through Google image searches. Standardizing practices around the embedding of metadata into digitized photographs, as well as tracking use throughout the life cycle of images, remain two crucial areas of future research.

Although the study sample does not represent all historians, my findings suggest that historians are more comfortable using photographs as primary sources of evidence than previously anticipated. A significant number (thirteen) used digital surrogates as the basis for making historical arguments—in contrast to assertions made in both the historiographical and LIS literature regarding image use. This discrepancy points to the need for developing better metrics for understanding and analyzing use and users of digital collections.

Historians and archivists would benefit intellectually from sharing information about evolving work practices. The participants in this study wanted to know more about the appraisal and processing decisions archivists make and to see that information reflected in the archival record. At the same time, observing historical work *in situ* could help archivists learn more about historians' scholarly practices. Attending each other's professional conferences to serve on panels or at least perusing disciplinary journals would also help familiarize each constituency with emerging trends.

In this research, mediating factors influenced historians' selection and use of particular images, from how they first noticed and appraised materials to the obstacles that prevented them from using materials further. Regardless of digital or analog status, the process and practice of interpreting and using visual materials as evidence in scholarship is a complex endeavor that requires motivation and skill. In fact, it became clear that historians employ particular rhetorical strategies and perspectival orientations to construct their evidential case. Nearly all of the historians in this study named particular spectators in constructing their arguments. For example, four participants argued that photographs demonstrated specific evidence of public opinion from the time period. Exploring the strategies and tactics employed by historians in the making of historical evidence can prompt further development of discursive methods, helping to mature and broaden methodological scope in LIS research.

How can archivists and archival information systems best accommodate evolving information needs and practices amid such changes? A particular challenge lies with the difficulty in describing visual materials; photographs can have many interpretations, and this range in interpretive possibilities in turn has ramifications for description and use. What is to be done? Writing in 1988, Eric Margolis asserted, "In fact, the meaning of a particular photograph typically is generated as much by the context in which it is found—site, collection, date, photographer, caption—as by the image itself."⁵⁶ Margolis underscored the importance of grounding study in information experiences to understand meaning making in digital environments. The value in studying these spaces is that they can reveal *how information emerges* rather than focusing on *defining what information is*. The latter is well-trodden territory, but orienting toward the former is critical for developing new understandings of, and literacies for, visual information use.

Appendix A: Interview Recruitment Post

Date _____

Dear Colleagues,

Are you a (self-identified) historian? Have you used digitized versions of archival photographs in your teaching activities, publications, presentations, or related research pursuits? If so, please consider participating in an interview session as part of my doctoral research.

The interview should take approximately one hour and can be conducted in person, over the telephone, or using Skype. Your responses to these questions will be kept confidential. There is no compensation for participating in this study; however, I am confident that your participation will contribute significantly to this emerging area of research.

If you are willing to participate, please send an email to: xxxxxx to confirm your interest. I am happy to answer any questions for you as well.

Again, thank you so much for considering participating in this research.

Sincerely,

Alexandra Chassanoff

Please note: This study has been approved by the University Institutional Review Board (#15-0566).

Appendix B: Interview Recruitment Email

Date _____

Dear _____,

I am a doctoral student conducting my dissertation research on how historians are using digitized photographs as forms of evidence. I am writing to ask you to participate in an interview session with me to discuss how and why you have used images in your research.

Few empirical studies have explored historians' use of visual materials as forms of evidence. As a historian who has used images in your scholarship, you are in an ideal position to provide valuable first-hand perspectives on your experiences.

The interview should take approximately one hour and can be conducted in person, over the telephone, or using Skype. Your responses to these questions will be kept confidential. There is no compensation for participating in this study; however, I am confident that your participation will contribute significantly to this emerging area of research.

If you are interested and able to participate, please email me confirmation of your interest no later than _____. I am happy to answer any questions for you as well.

Again, thank you very much for considering participating in this research.
Sincerely,

Alexandra Chassanoff

Please note: This study has been approved by the University Institutional Review Board (#15-0566).

Appendix C: Fact Sheet

University of North Carolina–Chapel Hill
Consent to Participate in a Research Study
Adult Participants
Social Behavior Form

IRB Study # 15-0566

Title of Study: Historians and the Use of Digitized Photographs as Evidence

Principal Investigator: Alexandra Chassanoff, Doctoral Student

UNC–Chapel Hill Department: Information and Library Science

UNC-Chapel Hill Phone Number: xxxxxx

Faculty Advisor: Cal Lee

Faculty Email Address: xxxxxx

Study Contact Telephone Number: xxxxxx

Study Contact Email: xxxxxx

What are some general things you should know about research studies?

You are being asked to take part in a research study. To join the study is voluntary. You may refuse to join, or you may withdraw your consent to be in the study, for any reason, without penalty. Research studies are designed to obtain new knowledge. This new information may help people in the future. You may not receive any direct benefit from being in the research study. There also may be risks to being in research studies.

Details about this study are discussed below. It is important that you understand this information so that you can make an informed choice about being in this research study. Please keep a copy of this information sheet. You should ask the researchers named above, any questions you have about this study at any time.

What is the purpose of this study?

This research study intends to explore the information practices of historians using digitized photographs in their research endeavors. In particular, I am interested in understanding how historians interpret, evaluate, and use digitized photographs as forms of visual evidence.

Are there any reasons you should be in this study?

You should participate in this study if you are a self-identified historian who has used digitized archival photographs in teaching activities, publications, presentations, or related research pursuits.

How many people will take part in this study?

If you decide to be in this study, you will be one of approximately 15–20 people in this research study.

How long will your part in this study last?

You will be asked to participate in one interview session, lasting approximately 1–1.5 hours. At the close of the interview, you will be asked if you are willing to participate in a short follow-up interview to further explore or clarify themes and issues raised in the original interview or from supplementary documents.

What will happen if you take part in the study?

At the beginning of each interview session, I will introduce myself, the purpose of the study, and obtain verbal consent. You will be asked to answer demographic information and a short questionnaire about your image use practices (see Questionnaire). In the second part of the interview session, I will present you with two digitized photographs that you selected for use in this interview. I will then ask you a series of questions relating to how you interpret, evaluate, and have used each photograph in scholarly activities (see PEI protocol). You do not have to answer any questions that you do not wish to answer, for any reason. With your permission, these interviews will be recorded for transcription. The recordings will be deleted after the transcriptions are created.

What are the possible benefits from being in this study?

Research is designed to benefit society by gaining new knowledge. Your participation is important to help us understand historians' experiences with digitized photographs as forms of evidence. While you may not benefit personally from being in this research study, you will be contributing to empirical research that seeks to better understand evolving information practices so that scholarly infrastructure can better support changing needs and habits.

What are the possible risks or discomforts involved from being in this study?

There are no risks anticipated should you participate in this study.

How will your privacy be protected?

Your name or other identifying information will not be used in the presentation of this research to others nor disclosed in the material that is published.

Will you receive anything for being in this study?

There is no financial benefit for your participation. The cost to participate is your time, and for that we are very appreciative.

Will it cost you anything to be in this study?

There are no costs for being in the study.

What if you have questions about this study?

You have the right to ask, and have answered, any questions you may have about this research. If you have questions, or concerns, you should contact me at xxx-xxx-xxxx or by email at xxxx.

What if you have questions about your rights as a research participant?

All research on human volunteers is reviewed by a committee that works to protect your rights and welfare. If you have questions or concerns about your rights as a research subject, or if you would like to obtain information or offer input, you may contact the Institutional Review Board at [redacted] or by email to [redacted].

Appendix D: Verbal Consent Script

The purpose of this research is to explore the experiences of historians using digitized photographs as forms of evidence in scholarship. Approximately 15–20 self-identified historians will be enrolled in this study. You will be asked to participate in an interview which should take between 60 and 90 minutes. Supplementary artifacts (course syllabi, conference presentations) will also be collected. At the close of the interview, you will be asked if you are willing to participate in a short follow-up interview to further explore or clarify themes and issues raised in our original interview or from supplementary documents.

There are no risks anticipated should you participate in this study. However, your name and other identifying information will not be used in the presentation of this research to others nor disclosed in the material that is published.

This study will be recorded for the purposes of transcription. This recording will be destroyed as soon as the transcription of this interview takes place. Do you consent to being recorded during this conversation? *(If the person says yes, proceed. If they say no, ask: "Do you consent to note-taking during the interview?" If they say yes, proceed. If they say no, thank them for their time and explain that they are not eligible.)*

Appendix E: Semistructured Interview Protocol

A. Demographic Information

1. What is your current title? _____
2. Gender:
 - ☐ Male
 - ☐ Female
 - ☐ I prefer not to answer
3. Age:
 - ☐ 25–35
 - ☐ 36–45
 - ☐ 46–55
 - ☐ 56–65
 - ☐ Over 65
 - ☐ I prefer not to answer
4. Number of years teaching history at a college or university: _____
5. Number of years teaching history at your current institution: _____
6. Primary courses you teach: _____
7. Primary area(s) of research: _____

B. Image Use Practices

Think about research activities where you used digitized photographs.

Please describe the following:

8. Topic of research: _____
9. Chronological period (e.g., 1950–1965): _____
10. Year you started this research: _____
 Year you ended this research or ongoing: _____
11. Main archives, special collections and repositories used in this research: _____
12. Can you describe what techniques you used when you were searching for [Image x]?
 - a. [probe] used Google image search; used digital library collections, etc.
 - i. [probe] what specific collections did you use?
 - ii. [probe] did you have specific image in mind? What point in the process?
13. [probe: read back list mentioned] What did you consider to be the most useful technique when you were searching for an image?
14. How were you planning on using the images? For teaching? Presentation at a conference? In your research?

15. What are the factors that are most important to when you are deciding whether to use a digital image or not?
 - a. [probe] e.g., Trustworthiness of image repository; ability to access collection
 - i. [probe] How do you ensure that [factor x]?
 - ii. [probe] What other factors matter to you?
16. Are there particular types of images that resonate with you as forms of historical evidence?
 - a. [probe with examples]
17. What does “historical evidence” mean to you?

Appendix F: Photo-Elicitation Interview Protocol

SCENARIO 1: Photograph selected by participant for use in teaching

Interviewer: You were asked to preselect a digitized photograph you have used in teaching.

1. Can you describe the techniques you used in your search for materials?
 - a. [probe] used Google image search; used digital library collections, etc.
 - i. [probe] What specific collections did you use?
 - ii. [probe] Did you have specific images in mind?
2. *[Read back list mentioned]* Out of that list, what do you consider to be the most useful technique in your search? Why?
3. How did you find this image?
 - a. [probe] Did you look at other related materials in the collection?
 - i. [probe] Do you remember how you established any important details about this photograph?
4. Tell me more about how you would interpret this image.
 - a. [probe] What can you tell me about the context?
 - b. [probe] What do you know (if anything) about the photographer?
 - c. [probe] Have you seen this image used previously as historical evidence?
 - d. [probe] Are there particular details related to the arrangement or composition of this photograph?
 - e. [probe] What is being represented? What is being excluded?
5. Why did you decide to use this image in your teaching?
6. What do you see as the most important factors in the presentation of this photograph?
 - a. [probe]: descriptive info—which are most useful?
 - b. [probe]: provenance and context?
 - c. [probe]: ability to zoom? quality?
7. Do you trust that this photograph is an accurate historical representation? Why or why not?
8. Who do you think was the original audience(s) for this image?

SCENARIO 2: Photograph selected by participant for use in research

Interviewer: You were asked to pre-select a digitized photograph that you have used in research.

9. How did you find this image?
 - a. [probe] Did you begin your search for this particular image or a more broad idea?

10. Please describe how you used this image in your scholarship.
 - a. [probe] publication or presentation? Illustration, primary source of evidence, etc.?
 - i. [probe] illustration, primary source of evidence, etc.
11. Tell me more about how you would interpret this image.
 - a. [probe] What can you tell me about the context?
 - b. [probe] What do you know (if anything) about the photographer?
 - c. [probe] Have you seen this image used previously as historical evidence?
 - d. [probe] Particular details about arrangement in photograph—significance of relationships.
 - e. [probe] Who do you think was the intended audience for this photograph?
 - f. [probe] What is being represented? What is being excluded?
12. Why did you decide to use this image in your scholarship?
 - a. [probe] Are there specific factors that might prevent you from using this image as a form of evidence?
 - i. [probe] trustworthiness of image repository, ability to access collection
13. What do you see as the most important factors in the presentation of this photograph?
 - a. [probe]: descriptive info—which are most useful?
 - b. [probe]: provenance and context?
 - c. [probe]: ability to zoom? quality?
14. Do you trust that this photograph is an accurate historical representation? Why or why not?
15. What does “historical evidence” mean to you?

NOTES

- ¹ For discussion on historians' changing research practices in digital environments, see Jennifer Rutner and Roger Schonfeld, *Supporting the Changing Research Practices of Historians, Final Report from ITHAKA S+R* (2012); Alexandra Chassanoff, "Historians and the Use of Primary Source Materials in the Digital Age," *The American Archivist* 76, no. 2 (2013): 458–80; Donghee Sinn and Nicholas Soares, "Historians' Use of Digital Archival Collections: The Web, Historical Scholarship, and Archival Research," *Journal of the American Society for Information Science and Technology* 65, no. 9 (2014): 1794–1809, doi:10.1002/asi.23091.
- ² Cheryl Bolick called digitization the "democratization of historical research." Cheryl Bolick, "Digital Archives: Democratizing the Doing of History," *The International Journal of Social Education* 21, no. 1 (2006): 122. In a special issue on "Photography and History in the Pacific Islands," Quanchi wrote, "Visual histories based on photographic evidence might reveal for the first time, quite different stories, incidents, memories, attitudes, and cross-cultural relationships." Max Quanchi, "Visual Histories and Photographic Evidence," *The Journal of Pacific History* 41, no. 2 (2006): 165, doi:10.1080/00223340600826052.
- ³ Elizabeth Yakel and Deborah Torres conceptualized some of these dimensions as forms of "archival intelligence," an advanced level of expertise in navigating and using archives. Elizabeth Yakel and Deborah Torres, "AI: Archival Intelligence and User Expertise," *The American Archivist* 66, no. 1 (2003): 51–78.
- ⁴ Joe D. Thomas, "Photographic Archives," *The American Archivist* 21, no. 4 (1958): 420.
- ⁵ Barbara Lewis Burger, Introduction, *Guide to the Holdings of the Still Picture Branch of the National Archives and Records Administration* (Washington, D.C.: National Archives and Records Administration, 1990), <http://www.archives.gov/research/guides/still-pictures-guide.html>.
- ⁶ For a helpful discussion of the implications and importance of describing the physical characteristics of archival materials, see Helena Zinkham, Patricia D. Cloud, and Hope Mayo, "Providing Access by Form of Material, Genre, and Physical Characteristics: Benefits and Techniques," *The American Archivist* 52, no. 2 (1989): 315.
- ⁷ Allen C. Benson, "The Archival Photograph and Its Meaning: Formalisms for Modeling Images," *Journal of Archival Organization* 7, no. 4 (2009): 148–87.
- ⁸ Joan M. Schwartz, "Coming to Terms with Photographs: Descriptive Standards, Linguistic 'Othering,' and the Margins of Archivry," *Archivaria* 54 (2002): 143.
- ⁹ Jane Greenberg, "A Quantitative Categorical Analysis of Metadata Elements in Image-Applicable Metadata Schemas," *Journal of the American Society for Information Science and Technology* 52, no. 11 (2001): 917–24.
- ¹⁰ Tim Schlack, "Framing Photographs, Denying Archives: The Difficulty of Focusing on Archival Photographs," *Archival Science* 8, no. 2 (2008): 85–101.
- ¹¹ William H. Leary, *The Archival Appraisal of Photographs: A RAMP Study with Guidelines* (Paris: United Nations Educational, Scientific, and Cultural Organization, 1985), Section 2.5.2.
- ¹² Elisabeth Kaplan and Jeffrey Mifflin, "'Mind and Sight': Visual Literacy and the Archivist," *Archival Issues* 21, no. 2 (1996): 96.
- ¹³ Helena Zinkham, "Reading and Researching Photographs," in *Photographs: Archival Care and Management*, ed. Mary Lynn Ritzenthaler and Diane Vogt-O'Connor (Chicago: The Society of American Archivists, 2006), 59–77.
- ¹⁴ Schlack, "Framing Photographs, Denying Archives," 96.
- ¹⁵ See Jenna Hartel and Leslie Thomson, "Visual Approaches and Photography for the Study of Immediate Information Space," *Journal of the American Society for Information Science and Technology* 62, no. 11 (2011): 1–11; Jamie Snyder, "Image-Enabled Discourse: Investigating the Creation of Visual Information as Communicative Practice" (PhD diss., Syracuse University, 2012).
- ¹⁶ Joan E. Beaudoin, "A Framework of Image Use among Archaeologists, Architects, Art Historians and Artists," *Journal of Documentation* 70, no. 1 (2013): 37.
- ¹⁷ In his essay "Rhetoric of the Image," Roland Barthes noted how images imply a "floating chain of signifieds," some of which are attended to, while others are ignored. Roland Barthes and Stephen Heath, *Image Music Text* (New York: Hill and Wang, 1977), 39.

- ¹⁸ Krystyna K. Matusiak, "Studying Information Behavior of Image Users: An Overview of Research Methodology in LIS Literature, 2004–2015," *Library & Information Science Research* 39, no.1 (2017): 53–60.
- ¹⁹ Linda H. Armitage and Peter G. B. Enser, "Analysis of User Need in Image Archives," *Journal of Information Science* 23, no. 4 (1997): 287–99.
- ²⁰ Karen Collins, "Providing Subject Access to Images: A Study of User Queries," *The American Archivist* 61, no. 1 (1998): 36–55.
- ²¹ Collins, "Providing Subject Access to Images," 52.
- ²² Youngok Choi and Edie M. Rasmussen, "Searching for Images: The Analysis of Users' Queries for Image Retrieval in American History," *Journal of the American Society for Information Science and Technology* 54, no. 6 (2003): 498–511.
- ²³ Choi and Rasmussen, "Searching for Images," 506–7.
- ²⁴ Raya Fidel, "The Image Retrieval Task: Implications for the Design and Evaluation of Image Databases," *New Review of Hypermedia and Multimedia* 3, no. 1 (1997): 181–99.
- ²⁵ Lori McCay-Peet and Elaine Toms, "Image Use within the Work Task Model: Images as Information and Illustration," *Journal of the American Society for Information Science* 60, no. 12 (2009): 2416–29.
- ²⁶ Marjo Markkula and Eero Sormunen, "Searching for Photos—Journalists' Practices in Pictorial IR," *Challenge of Image Retrieval Workshop* (University of Northumbria at Newcastle, Newcastle upon Tyne, 1998): 1–13.
- ²⁷ Markkula and Sormunen, "Searching for Photos—Journalists' Practices in Pictorial IR," 4.
- ²⁸ Paul Conway and Ricardo Punzalan, "Fields of Vision: Toward a New Theory of Visual Literacy for Digitized Archival Photographs," *Archivaria* 71 (2011): 63–97.
- ²⁹ Kathleen Fear, "User Understanding of Metadata in Digital Image Collections: Or, What Exactly Do You Mean by 'Coverage'?", *The American Archivist* 73, no. 2 (2010): 26–60.
- ³⁰ Beaudoin, "A Framework of Image Use among Archaeologists, Architects, Art Historians and Artists," 37. One complicating factor to note is the author's broad use of the term "image" to mean anything from a digital mock-up on a screen to a picture of a painting.
- ³¹ Amanda Spink and Charles Cole argued that in some information behavior research, "information use" is misconstrued. Rather than investigating "user's use of sources of information," studies are actually "asking about the user's use of accessing channels to information sources." Amanda Spink and Charles Cole, "Human Information Behavior: Integrating Diverse Approaches and Information Use," *Journal of the American Society for Information Science and Technology* 57, no. 1 (2006): 28.
- ³² Laura Sheble and Barbara Wildemuth, "Transaction Logs," in *Applications of Social Research Methods to Questions in Information and Library Science*, ed. Barbara Wildemuth (Westport, Conn.: Libraries Unlimited, 2009), 174.
- ³³ Dan Albertson, "Visual Information Seeking," *Journal of the Association for Information Science and Technology* 66, no. 6 (2015): 1091–1105, doi:10.1002/asi.23244.
- ³⁴ Ronald McIntyre and David Woodruff Smith, "Theory of Intentionality," in *Husserl's Phenomenology: A Textbook*, ed. J. N. Mohanty and William R. McKenna (Washington, D.C.: Center for Advanced Research in Phenomenology and University Press of America, 1989), 148–49.
- ³⁵ In *Logical Investigations*, the phenomenologist Edmund Husserl referred to this philosophy as "back to the 'things themselves.'"
- ³⁶ I sent a recruitment post to the members of ten electronic mailing lists that are part of the Humanities and Social Sciences Net Online (H-NET), a large online discussion network. I selected thematic lists focusing on a wide-range of historical subdisciplines. I made a conscious decision to post to professional mailing lists in an attempt to broaden the sample population beyond recruitment of only historians at academic institutions. I also posted a recruitment notice on the websites of the Organization of American Historians (OAH) and the American Studies Association (ASA) Visual Culture Caucus, and distributed an invitation through my personal Twitter account. The recruitment post invited self-identified historians who have used digitized archival photographs in scholarly pursuits to contact me if they were willing to participate in my doctoral research.

- ³⁷ The five institutions were the University of North Carolina at Chapel Hill, the University of North Carolina at Greensboro, Duke University, North Carolina Central University, and North Carolina State University. I chose these institutions because they all offer graduate-level degrees in history and are located within a sixty-mile driving radius of the researcher. I created an initial list of historians along with their contact information and thematic research area(s) using faculty Web pages at each institution. I then assigned a ranking to individuals according to the likelihood that they fit the inclusion criteria for this study. For example, I ranked historians who specified an interest in digital history with a 1. Once the ranking was complete, I emailed a recruitment invitation to individuals assigned to either 1 or 2 categories.
- ³⁸ I anticipated recruiting at least four individuals through snowball sampling. During the course of my research proposal development, I received the names and contact information for six historians who actively used digitized photographs. I also expected to gather additional names and contacts through recommendations from other participants.
- ³⁹ See Appendix A for Recruitment Post and Appendix B for Recruitment Email.
- ⁴⁰ Researchers can use phenomenology as both a method and a methodology. This research employs the latter approach, seeking to uncover how a phenomenon of interest is experienced. T. D. Wilson, "Alfred Schutz, Phenomenology and Research Methodology for Information Behaviour Research," *New Review of Information Behaviour Research* 3 (2002): 71–82.
- ⁴¹ See Appendix E for Semistructured Interview Protocol.
- ⁴² In PEI, "the researcher assumes that the images, the meaning(s) we attribute to them, the emotions they arouse in the observer, and the information they elicit generate insights that do not necessarily or exclusively correspond to those obtained in verbal inquiry." Elisa Bignante, "The Use of Photo-Elicitation in Field Research," *EchoGeo* 11 (2010): 2.
- ⁴³ Verbal probing is an interviewing technique that offers a "focused and productive approach" to eliciting cognitive responses. Gordon Willis, *Cognitive Interviewing: A Tool for Improving Survey Design* (Thousand Oaks, Calif.: Sage Publications, 2005), 50.
- ⁴⁴ See Appendix F for Photo-Elicitation Interview Protocol.
- ⁴⁵ Jennifer Fereday and Eimear Muir-Cochrane, "Demonstrating Rigor Using Thematic Analysis: A Hybrid Approach of Inductive and Deductive Coding and Theme Development," *International Journal of Qualitative Methods* 5, no. 1 (2006): 1–11. Their approach integrates inductive-deductive coding with theme development, allowing codes to emerge from the data while also supplying theoretical propositions to bind analysis for each case.
- ⁴⁶ W. Newton Suter, *Introduction to Educational Research: A Critical Thinking Approach* (Thousand Oaks, Calif.: SAGE Publications, 2006), 346.
- ⁴⁷ In her discussion of cataloging visual materials, Orbach noted that photographs "can convey a mood or the sheer visual impact of a situation in a way that few other types of documents can." Barbara Orbach, "So That Others May See: Tools for Cataloging Still Images," *Cataloging & Classification Quarterly* 11, nos. 3–4 (1990): 164.
- ⁴⁸ The practice of acquiring and managing digital objects for personal use has come to be known broadly as personal digital archiving, in which "individuals manage or keep track of their digital files, where they store them, and how these files are described and organized." Gabriela Redwine, *Personal Digital Archiving*, DPC Technology Watch Report 15-01, 2015, <http://dx.doi.org/10.7207/twr15-01>.
- ⁴⁹ Melissa Terras, "Digital Curiosities: Resource Creation via Amateur Digitization," *Literary and Linguistic Computing* 25, no. 4 (2010): 436.
- ⁵⁰ See University of Louisville Digital Libraries, <http://digital.library.louisville.edu/cdm/ref/collection/macaulay/id/1377>.
- ⁵¹ A limitation in this study is that participant-elicited descriptions of information experiences were relayed retrospectively.
- ⁵² Johanna Drucker has written compellingly about the need to reconfigure our understandings of knowledge production in digital environments. She argues that the interface should serve as an "event space of interpretative activity." Johanna Drucker, "Performative Materiality and Theoretical Approaches to Interface," *Digital Humanities Quarterly* 7, no. 1 (2013).
- ⁵³ Alan Bryman, *Research Methods and Organization Studies* (London: Unwin Hyman 1989), 173.

- ⁵⁴ In 2010–2014, I had conversations about current practices related to digital collection use with individuals at three large public universities and one large cultural heritage institution.
- ⁵⁵ Emotion is a relatively recent research area in LIS. The work of Diane Nahl provides a useful foundation for further study. In particular, see Diane Nahl, “The Centrality of the Affective in Information Behavior,” in *Information and Emotion: The Emergent Affective Paradigm in Information Behavior Research and Theory*, ed. Diane Nahl and Dania Bilal (Medford, N.J.: American Society for Information Science and Technology, 2007), 3–38.
- ⁵⁶ Eric Margolis, “Mining Photographs: Unearthing the Meanings of Historical Photos,” *Radical History Review* 40 (1988): 36.

ABOUT THE AUTHOR



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