About the Cover

Bronx Borough President Robert Abrams (seated) receives a dental hygiene demonstration from Wendy Wallace, who in August 1972 would become the first graduate of the Dental Hygiene Program. Looking on are Dr. Cyril Price, Dean of Health Sciences (left) and the second President of Hostos Community College, Candido de Leon. In spring 1972 the newly opened dental clinic began offering free dental services including cleaning, examinations and x-rays to all members of the community. Magda Vasillov, photographer. Magda Vasillov Collection, Hostos Community College Archives/The City University of New York

Shhhh! Is it a Secret? How Archivists Should Handle Potentially Classified Documents

by Jodi Boyle

Note: A version of this paper was presented November 9, 2013 at the Mid-Atlantic Regional Archives Conference Fall Meeting in Philadelphia, Pennsylvania.

Abstract

How should an archivist process a document stamped "This document contains classified information affecting the national defense of the United States…?" Or a memo from a scientist working on a government contract marked "Confidential?" Are these always classified records? Should an archivist restrict them from researchers, arrange and

describe as normal, or telephone the National Archives in a panic? Drawing on the author's experiences with processing classified records from Congressional papers and archival collections of retired university faculty, this article will provide guidance on how to mitigate this challenge. By working with the National Archives and Records Administration's Information Security Oversight Office to safeguard items and declassify older documents, archivists can appropriately manage these types of sensitive materials and ultimately provide access to researchers.

Beginning in the spring of 2011, faculty and students of the M.E. Grenander Department of Special Collections & Archives unexpectedly encountered potentially classified materials labeled "Secret" or "Confidential" and which mentioned national defense and espionage laws of the United States. Archivists discovered the documents while arranging the papers of the late New York Congressman Frank Becker (22 cubic feet) and those of the late Vincent Schaefer (135 cubic feet), an atmospheric research scientist at General Electric in Schenectady, New York, who later became director of the Atmospheric Science Research Center at the University at Albany, State University of New York. This discovery prompted concern over how to properly manage these records.

Two curious files in the Becker Papers discussed United States air defenses and specific weaponry, suggesting they related to the Congressman's tenure on the Armed Services Committee in the early 1960s. Both had cover pages with a bright red border, red text with "Secret" in capital letters at the top and bottom, and declassification options listed in between. The option that was circled on both was

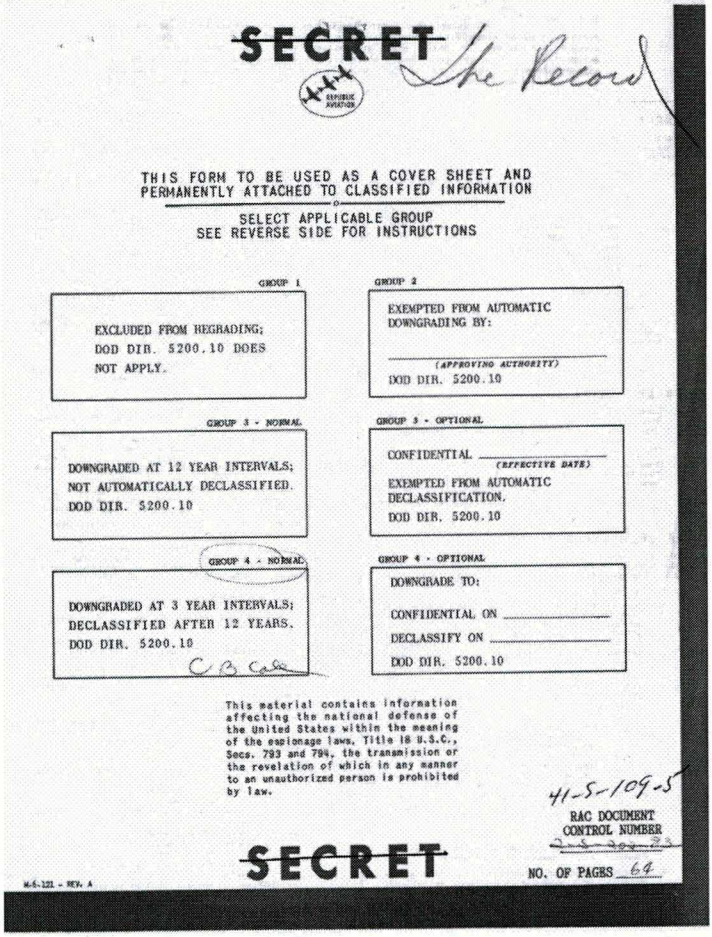

Figure 1. Cover page from "Secret" document in the Becker Papers with declassification markings. Original in red ink with red border on white paper.

"Group 4 – Normal," which stated that the respective document was to be downgraded at three year intervals and declassified after a dozen years (Figure 1). Congressman

Becker signed an accompanying slip acknowledging receipt of the classified information.

While at General Electric, Schaefer worked on a number of weather experiments and research projects for the United States Air Force, Army Signal Corps, and Navy during World War II and the years immediately following. The three potentially classified records in his collection dated from the late 1940s and were all created by the National Advisory Committee for Aeronautics (NACA), the predecessor to NASA. They discussed icing and heat issues with regard to specific aircraft. Two of the documents were stamped "Restricted" in black ink and accompanied by language stating, "This document contains classified information affecting the National Defense of the United States within the meaning of the Espionage Act, USC 50:31 and 32. Its transmission or the revelation of its contents in any manner to an unauthorized person is prohibited by law."[1] The third document contained the same language denoting classification, but was stamped "Confidential" in black ink.

Congressman Becker died in 1981 and Schaefer in 1993, and their professional and personal papers were not fully processed until 2011. Our institution received the Becker Papers in 2006 from another repository, while Vincent Schaefer, and subsequently his family, donated his papers to the University at Albany over the course of several decades beginning in 1979. Both men retained the possibly classified records until late in their lives. In addition, although these five documents seemed to have been classified at one time, we were uncertain as to their current status. We were unsure how to proceed except to separate the materials in question and lock them in a filing cabinet in a locked room. Until we procured a definitive answer, we were

not comfortable sharing the contents of these files with any researchers.

Classified Records of National Security Information

The United States government's records classification system has been in place since the early 1940s to safeguard and categorize information that might affect national security. Classified records may not remain classified indefinitely, but the duration of classification varies depending upon the information's sensitivity. Although records were declassified throughout the twentieth century, the process of opening up classified records began in earnest in 1995 with Executive Order (E.O.) 12958, which required review of government records for declassification within a prescribed timeframe.[2] There have been subsequent executive orders amending, adjusting, and sometimes lengthening this process in the two decades hence.[3]The most recent, E.O. 13526, was issued at the end of 2009 and became effective in 2010. Under the current policies, protected documents generally are assigned a date of declassification relative to the sensitivity of the information within. If a date of declassification cannot be determined, the information is set for automatic declassification ten years from the date of original classification. However, this may be lengthened to twenty-five years in some situations. There are even further special circumstances that warrant exemptions to this guideline, namely records that reveal the identity of a confidential source or reveal information that would assist in the development, production, or use of weapons of mass destruction.[4]

Among other requirements, E.O. 13526 outlines three current levels of classification: "Top Secret,"

documents which could cause "exceptionally grave damage" to national security if disclosed without authority; "Secret," documents that could result in "serious damage"; and "Confidential," documents that would likely cause "damage."[5] These classification distinctions apply to national security information and fall into eight general areas. These areas include: "military plans, weapons systems, or operations; intelligence activities (including covert action); United States Government programs for safeguarding nuclear materials or facilities" and more.[6] Importantly, as James David, curator at the Smithsonian National Air and Space Museum, notes in the Fall/Winter 2013 issue of *The American Archivist*, the declassification review processes outlined in E.O. 13526 and its predecessor executive orders only apply to the executive branch and "no formal procedures exist for declassification review of legislative or judicial branch records."[7] In addition, automatic declassification only pertains to permanent records of national security information.[8]

A recent literature review demonstrates that scholars and news reporters have published a number of articles about Freedom of Information Act (FOIA) requests, the system of classification, and declassifying or potentially reclassifying records held at the National Archives and Records Administration (NARA), Presidential Libraries, and other federal agencies. In particular, James David has thoroughly tracked issues related to automatic declassification of federal records during the past decade.[9] In 2004, then Society of American Archivists (SAA) President Timothy Ericson spoke of a potential "Iron Curtain" in American record keeping at the SAA Annual Meeting in Boston amid federal, state and local governments' increased

use of secrecy in the early twenty-first century to shield records from the public view.[10] In this presidential address and subsequent article in 2005 in *The American Archivist* he also traces the history of government record keeping and efforts since the early days of the republic to keep some materials off limits to the public.[11]

There also is substantial attention given in the general news media and trade journals to the revelation and publication of previously declassified records from the twentieth century concerning World War II and the Cold War. Most recently, newly declassified records revived the debate about whether Manhattan Project physicist Robert Oppenheimer's security clearance was unnecessarily revoked in 1954.[12] In addition, following Edward Snowden's 2013 disclosure of classified National Security Agency documents detailing surveillance of telecommunications, the words "national security," "information" and "access" have taken on even more nuanced and controversial meanings for the American and international public.

According to a 2007 speech by David Mengel, chief of Special Access and FOIA Staff at NARA, only about five percent of NARA's holdings are closed because of classified security concerns or other statutory restrictions.[13] But this number does not include the vast amount of records held outside the federal government by academic archives and libraries, museums, and historical societies. An examination of the broader declassification schedules and policies of government records is related and important. More information, however, is needed about how archivists, librarians, and curators who work outside federal governmental institutions should treat potentially classified

documents they encounter so that researchers may eventually be provided access to these materials.

Navigating the Declassification Process

Fortuitously, soon after the discovery of the potentially classified records among our institution's collections, I attended the 2011 Association of Centers for the Study of Congress (ACSC) annual meeting in Washington, D.C. At the meeting, a senior executive from the Information Security Oversight Office (ISOO) at NARA spoke about identifying classified records. He indicated classified records from the era in which Congressman Becker and Schaefer worked were likely to be stamped or labeled "Top Secret," "Secret," "Restricted," or "Confidential," or marked with other language indicating issues of national security. Given these criteria, all the documents in question seemed likely to be previously or currently classified materials.

Soon after the meeting I contacted ISOO, whose authority to help repositories in these types of situations is stated in E.O. 13526.[14] Established in 1978, ISOO's mandate is to "support the President [of the United States] by ensuring that the Government protects and provides proper access to information to advance the national and public interest. [It] lead[s] efforts to standardize and assess the management of classified and controlled unclassified information through oversight, policy development, guidance, education, and reporting."[15] ISOO currently attempts to accomplish this critical mission with a staff of around twenty-five individuals, including administrators and support staff.[16]

Because the University at Albany does not have a research facility with approved storage for classified national

security information, per the request of ISOO, I shipped the originals overnight to it for temporary storage while ISOO coordinated a review of the materials. The agency also dictated the packaging procedures for the items in question: the documents stamped "Secret" were double-wrapped in envelopes sealed with tape. I wrote "Secret" on the inner envelope, while noting nothing about the classification on the outer envelope, and then placed the files in the shipping company's envelope. ISOO monitored shipping and confirmed receipt of all items.

Within a week, I learned that all three documents from the Schaefer Papers were declassified and they were promptly returned to me. Each one was marked as declassified with the "Confidential" and "Restricted" stamps and the national security language crossed out with acid free ink. These items went right back into the established arrangement scheme. ISOO denoted all subsequent declassified items it returned to me in the same fashion (Figures 2A and 2B, p. 11).

Surprisingly, I learned from ISOO that the two files from the Becker Papers about air defenses were not yet declassified. Although these two were originally classified as "Secret" almost fifty years earlier, the cover pages on both of these documents stated they were to be downgraded at three year intervals and declassified after a dozen years. Clearly this course of action did not occur, and I thought it most responsible to follow through with the subsequent declassification procedures ISOO advised.

ISOO stated that I could request a mandatory declassification review of the records from the United States Air Force, the referred agency. I formally made this request in writing in June 2011 to ISOO.

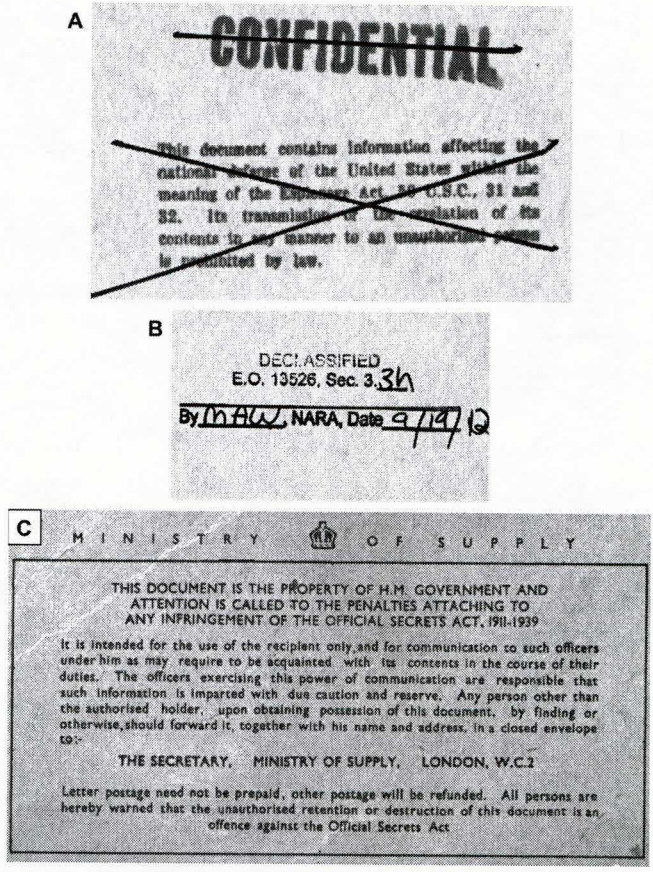

Figure 2: Classification warning following ISOO declassification (A) and declassification stamp and date from ISOO (B) in Schaefer Papers. United Kingdom classification example (C) in Vonnegut Papers.

In spite of the mandate, the Air Force did not render a decision about the records during the following year. ISOO did not provide a reason for this inactivity, but it informed me that since more than twelve months had passed, I needed to file a written appeal with the Interagency Security

Classification Appeals Panel (ISCAP). E.O. 12958 created ISCAP in 1995 to assess and render decisions about mandatory declassification review appeals, appeals to classification challenges, and exemptions from automatic declassification.[17] This appeal, submitted in August 2012, compelled the Air Force to act. Within three months, the Air Force reviewed and declassified one of the two documents, and ISOO returned it to me. The second document remained in temporary custody at ISOO pending review by ISCAP at an indeterminate future date.

During the interim, our institution located two more potentially classified documents in the Schaefer Papers, and I sent these off to ISOO for review in early 2012 following the same shipping protocol as before. In addition, although I initially communicated with one ISOO manager and two program analysts, I began working exclusively with one program analyst at the start of 2012. This program analyst managed the declassification process for these two new items from the Schaefer Papers.

One Schaefer document was 1944 NACA subcommittee meeting minutes regarding icing issues and the other was a 1948 study about binaural perception relating to the direction of a sound source. Although missing their cover page, the minutes had "Confidential" typed at the top and bottom of all numbered pages, but not the appendices. The study had "Confidential" stamped in red on the cover with accompanying language about the document containing information affecting national security. ISOO determined these two new items no longer met the standard for classification and quickly returned them to me.

According to the 2012 Annual Report to the President of the United States issued by ISOO, my

documents were just a small fraction of the work completed or monitored by the organization that year. Most relevant to the files from the Becker Papers, ISOO stated that "agencies received 7,589 initial mandatory declassification review (MDR) requests and closed 6,533 requests. The average number of days to resolve each request is 228. A total of 6,666 requests have remained unresolved for over one year. This number includes requests that have been carried over from prior years."[18]

My experiences with classified materials continued with positive results. At the end of October 2013, a graduate student under my supervision encountered a 1958 document labeled "Restricted" in the papers of former atmospheric research scientist and University at Albany faculty member Dr. Bernard Vonnegut.[19] The report discussed lightning strikes and their effects on the United Kingdom's Royal Air Force aircraft. As this new report did not mention language referring to the Espionage Act, the graduate student was unsure of its classification status. However, after reviewing the document, I realized it contained similar language referencing the United Kingdom's Official Secrets Act (Figure 2C). The report also had very faded stamps labeled "U.S. Confidential" on it, so its status was something of an international mystery. After contacting ISOO and submitting the report to it, ISOO informed me this document was already a public record in the United Kingdom. Therefore, ISOO marked the report as declassified, returned it, and the student was able to file it with the remainder of the collection.

In the summer of 2014, ISCAP finally rendered its unanimous decision to declassify the remaining document in ISOO custody from the Becker Papers (Figure 1). Following

a sixty-day period during which the agency head could appeal the decision to the President of the United States, ISOO returned the declassified report to me. I interfiled it in the Becker Papers, thus overcoming the last access barrier for researchers among that initial group of classified records.

Considerations for Archivists

As this experience illustrates, archivists in repositories outside the federal government need to be aware that classified materials may reside in unprocessed (or even processed) collections among their holdings. To help identify these files, manage the possible declassification process, and, ideally, open the records to researchers, archivists should take the considerations described below into account:

Be Alert to the Possible Presence of Classified Materials

Classified materials may be found in all types of manuscript or archival collections. However, Congressional papers and the papers of retired federal government officials, academics (such as physical and life scientists, economists, political or social scientists) who worked on federal government contracts, especially military ones, or even individuals who simply interacted with the federal government at various points in their careers are more likely to contain classified materials. Although nearly all the classified documents in the Becker, Schaefer, and Vonnegut collections were studies or reports, classified materials could be in any format. In addition, classified materials might be classified by governments other than ours; be mindful of international materials. Archivists should rely on (even faded) classification stamps, markings, and language to help identify these materials. Importantly, do not forget to remind

colleagues, student employees, volunteers, and interns about the possibility of finding classified records in a collection they are processing or helping to process.

Do Not Depend Upon Researchers

Contingent upon an institution's policies and the size of its backlog, some repositories may allow researchers to review unprocessed collections. In these instances, a researcher may be the first to view the materials in great detail. Archivists should not expect most researchers to alert them if the researcher comes across a potentially classified document. That researcher may not want to lose access to the information, even if the loss is only temporary.

Carefully Manage the Process

After discovering a potentially classified document, archivists uncertain about its classification status need not panic. Instead, they should contact the Information Security Oversight Office at the National Archives and Records Administration for guidance and support. ISOO's easy-to-navigate web site lists a general e-mail address and telephone number, as well as more detailed contact information for all staff members.[20] Overall, this office was efficient and helpful with my institution's multiple challenging situations. As an office of NARA, ISOO must respect federally mandated procedures and protocols which can be time consuming. ISOO staff members, however, were always very responsive to my e-mail communication and questions, and provided clear instructions for me to follow. My primary contact at ISOO also shared updates about the declassification process as they developed.

Be patient and persistent. This process may move slowly at times, but ISOO was able to declassify several of the "Restricted" and "Confidential" records in a relatively short period and promptly returned them. The second document from the Becker Papers that was marked "Secret" and finally declassified in 2014 after more than three years of (minimal) paperwork and wait time was obviously more frustrating. Researchers, though, may now review previously classified material thanks to careful adherence to ISOO's directions, and its work on our behalf.

Most importantly, from a processing perspective, be optimistic and assume these records will eventually be returned, so retain appropriate documentation and physical space in the collection as arrangement continues.

Experience a Reality Check

While all the documents from my institution were declassified in full, archivists should note that a document may only be declassified in part, in which case ISOO will retain temporary custody until the entire record is declassified. In addition, the highest level of classification held by any of our documents was "Secret," and one of these documents took more than three years of persistence to declassify. Declassifying "Top Secret" records would likely be significantly more complex.

From an archival perspective, however, this was a small but meaningful success for an academic repository. We can now promote access to government documents that were previously off limits to researchers.

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the supervisory archivist. She holds a B.A. from Douglass College, Rutgers University, and a M.A., with concentration in Public History, from American University in Washington, D.C.

NOTES

1. William A. Fleming and Martin J. Saari, *Inlet Icing and Effectiveness of Hot-Gas Bleedback for Ice Protection of Turbojet Engines*, NACA Research Memorandum, November 26, 1948, cover.
2. Executive Order 12958, http://fas.org/sgp/clinton/eo12958.html.
3. James David, "Progress and problems in declassifying U.S. government records," *Journal of Government Information* 30, no. 4 (September 2004): 444; James David, "Can We Finally See Those Records? An Update on the Automatic/Systematic Declassification Review Program" *The American Archivist* 76 (Fall/Winter 2013): 422-427.
4. Executive Order no. 13526," *Federal Register* 75, no. 2, January 5, 2010, sec. 1.5, http://www.archives.gov/isoo/pdf/cnsi-eo.pdf.
5. Ibid., sec. 1.2.
6. Ibid.
7. David, "Can We Finally See Those Records?" 434.
8. Ibid., 420.
9. In addition to his 2004 and 2013 articles cited, see James David's "Two Steps Forward, One Step Back: Mixed Progress Under the Automatic/Systematic Declassification Review Program," *The American Archivist* 70 (Fall/Winter 2007): 219-251.
10. Timothy L. Ericson, "Building Our Own 'Iron Curtain': The Emergence of Secrecy in American Government," *The American Archivist* 68 (Spring/Summer 2005): 18-22.
11. Ibid., 22-29.
12. William J. Broad, "Transcripts Kept Secret for 60 Years Bolster Defense of Oppenheimer's Loyalty," *New York*

Times, October 11, 2014, http://www.nytimes.com/2014/10/12/us/transcripts-kept-secret-for-60-years-bolster-defense-of-oppenheimers-loyalty.html?_r=0.

13. David J. Mengel, "Access to United States Government Records at the U.S. National Archives and Records Administration" (address at the Japan-U.S. Archives Seminar, Tokyo University, May 2007), https://www.archivists.org/publications/proceedings/accesstoarchives/07_David_MENGEL.pdf.
14. Executive Order no. 13526. While the Information Security Oversight Office is mentioned throughout the document, see sec. 5.1 and 5.2 for the granting of authority.
15. Information Security Oversight Office web site history page, http://www.archives.gov/isoo/about/history.html, and National Archives and Records Administration, Information Security Oversight Office, *Report to the President, 2013*, (2014), 2.
16. Information Security Oversight Office web site staff contact page, http://www.archives.gov/isoo/contact/general.html.
17. Executive Order 12958, sec. 5.4. See also National Archives and Records Administration web site, Interagency Security Classification Appeals Panel sub-section, http://www.archives.gov/declassification/iscap/. In Executive Order 13526, refer to sec. 5.3 for the Interagency Security Classification Appeals Panel.
18. National Archives and Records Administration, Information Security Oversight Office, *Annual Report to the President, 2012*, (2013), 5.
19. The late Dr. Bernard Vonnegut was a close colleague of Vincent Schaefer's and the brother of novelist Kurt Vonnegut.
20. Information Security Oversight Office web site staff contact page, http://www.archives.gov/isoo/contact/general.html.

Community Archives and Autonomy: Meeting the Challenge to Preserve Vital Records of the College and the Community

by William Casari

Introduction

Hostos Community College, one of seven City University of New York community colleges, will celebrate its 50th anniversary in 2018. This milestone event creates a perfect chance to review archival documentation strategy relating both to the college and the community that gave rise to it in 1968. The unique legacy of Hostos and its political struggle for survival in the 1970s underscores the reasons to preserve this history for future researchers and for the sake of the neighborhood. Community-based archival collections can best serve their local neighborhood by providing a counter-narrative to mainstream or marginalizing narratives and by being accessible to those nearby. Hostos must support a broad-based documentation strategy incorporating local area racial and ethnic diversity and meet the changing demographic needs of the community. Using the college's mission and strategic plan to help support the collection development policies of the archives and strengthening outreach and community ties are paramount. Partnering with local or non-profit organizations may help in the stewardship of archival collections and create a local support network thereby broadening the scope and influence of the Hostos Archives. The collections will become ingrained in the community fabric rather than just being a special collection in the library.

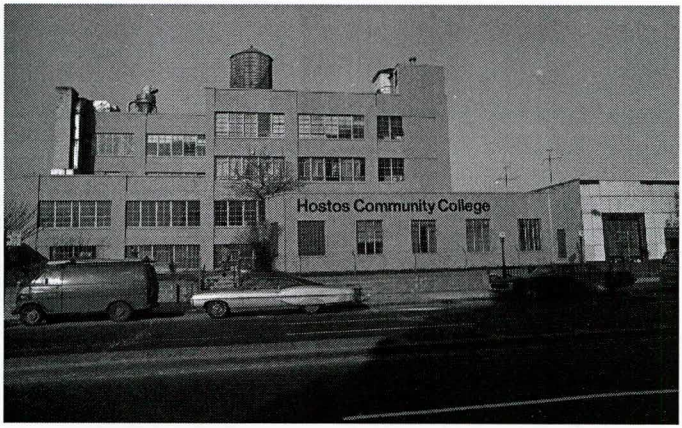
This article will explain how important an archive is to creating a collective sense of place and using that history

to foster a relationship between the place, research, and discourse. Preserving the vital records of the college and community represents a challenging undertaking and also one that must not be ignored considering Hostos's unique history of serving populations that historically have been denied access to higher education. Establishing and growing community-based archival and special collections has the potential not only to document a place but help anchor and possibly remake it as time passes and neighborhood demographics change. Due to a pervasive sense of doubt as to whether Hostos and its surrounding neighborhood are being thoroughly documented, it is time to address these bigger picture issues and chart a broad collecting strategy that represents the college and the community. It is imperative to select options that permit future growth of the collections housed at Hostos while acknowledging the resurgence of the college despite its nearly closing in 1976.

Community College Number Eight

Hostos Community College thrives today with robust enrollment, many new faculty hires, and a stabilized neighborhood surrounding the South Bronx campus, less than a mile from Manhattan but a world away. The outlook was not always so rosy for this college named after Eugenio Maria de Hostos, the 19th century scholar, educator, and trailblazer for the rights of women, Latinos, and people of color.

In the mid-1960s, Puerto Rican community residents and local elected officials felt the higher education needs of the South Bronx community were not being addressed by mainstream colleges and in essence, the whole of the City University of New York (CUNY). Most CUNY



Hostos Community College: February 1, 1971. Later that day students would wage a strike for better campus conditions and more space. Hostos classes had begun the previous September in the 475 Grand Concourse building, a rental space that previously housed a tire factory. After passing through a courtyard enclosed in barbed wire, students and faculty entered the building through a single metal door. Magda Vasillov Collection, Hostos Community College Archives/ The City University of New York.

resources landed at its popular and selective senior colleges like Brooklyn, Hunter, City, and Queens Colleges. Predominantly white, these colleges served middle-class populations and had entrance exams that excluded less well-prepared students.

> Hostos was established, along with other units of CUNY, as a direct response to the burgeoning enrollment in the university brought about by the implementation in 1970 of open admissions, which permitted any city resident who had earned a high school diploma or the equivalent thereof entry to the university.[1]

Ceding to pressure from the nearby community and the imminent beginning of open admissions, CUNY officials agreed to support a new college in the heart of the South Bronx. Founded in the tumultuous year of 1968 and temporarily named "Community College Number Eight," the school began operations at the corner of 149th Street and the Grand Concourse in the Bronx, serving a predominantly Puerto Rican and African-American student body. Classes started in the fall of 1970 and were held in a renovated tire factory. The 1970s proved to be a challenging time for the college and for the Bronx itself. Just as the college began life, neighborhoods around it succumbed to waves of arson fires, white flight, and racial and ethnic tensions. The Hostos story is one of survival and resurgence and one that must be preserved and told again and again for future generations.

Save Hostos

Dr. Gerald J. Meyer joined the Hostos faculty in 1972 and immediately became active in the political life of the college while saving newsletters, articles, and correspondence that documented the fledging college's existence. He would not wait long before he got the chance to put his political organizing skills and charismatic manner to work. In the fall of 1975 New York City had run out of money and was on the verge of defaulting on its debts. Many measures were taken to control spending, including increasing subway fares and cutting the budget of CUNY. One proposal to reduce spending at CUNY was to merge several smaller campuses with larger ones: John Jay with Baruch and Hostos with Bronx Community College. Hostos was the newest campus in the system, having been founded just seven years earlier to meet the workforce and

educational needs of the economically struggling area residents. In this short time Hostos had become, and remains to this day, a symbol of the vitality and potential of the community. In response to the proposed merger the South Bronx and campus community launched an ultimately successful campaign to save Hostos as an independent campus within the City University system. Newspaper articles, photographs, and reports from the press describe the "Save Hostos" movement. They attest to the determination and dedication of various groups from campus administration to students and community organizations as they successfully worked in the winter of 1975 through the spring of 1976 to keep Hostos alive.

The movement is also covered in great detail by two articles written by professors who each had a different role in the struggle to save Hostos: Meyer and Ramon Jimenez, his colleague for a short time in the 1970s.[2] Now retired yet still teaching as an emeritus professor at Hostos, Gerald Meyer donated the records that would comprise the college's first archival collection in 2004. He is the author of *Vito Marcantonio: Radical Politician, 1902-1954*, and with Philip Cannistraro, coeditor of *The Lost World of Italian American Radicalism*. He has published over seventy articles and reviews on a wide range of subjects including the intersection of radicalism and immigrants, culture and the Left, and the history of the Communist Party. From 1972, when he first joined the Hostos faculty, until his retirement in 2002, Professor Meyer was an unusually active member of the Hostos community. From 1973 until 1978, when he served as Chair of the Hostos Chapter of the Professional Staff Congress (PSC), Meyer helped lead three campaigns

that won the college facilities and caused the City University of New York to rescind its resolution to close Hostos.

Hostos Community College Archives and Special Collections

The college began in earnest to address the issue of preserving its history when it hired William Casari as archivist and instruction librarian in 2003. Until then, some records had been saved piecemeal but no coherent organization for archival records existed at the college. Chief Librarian Lucinda Zoe suggested applying for a grant to provide seed money for the archival program. The Documentary Heritage Program (DHP) of the New York State Archives provided grant funding to document the first ten years of this unique bilingual community college, including the acquisition and processing of the Meyer Collection. The first grant was followed by four others providing funding for arrangement and description: a local community documentation survey, processing of the records of the Museum of Contemporary Hispanic Art (MoCHA), and a grant to preserve the photographs and negatives of a founding member of the college, Professor Magda Vasillov. These grants spanned the years 2004-2010 and put the college archives on the map. The grants stipulated that an Archives Advisory Committee be formed to help guide the unit. The group meets twice yearly to discuss pertinent issues and help publicize the unit on campus. Other options for dedicated funding have been pursued and each year the archive receives some funds from the library budget to transfer moving image collections and digitize photographs. However, no permanent funding has been established for the unit except for the salary of the archivist. Today the archives

grapples with issues familiar to many in the archival world: lack of space for new collections, no space for researchers, constant need for promotion and outreach, and integrating primary and visual resources into classroom instruction. However, the vital records of the college and an invaluable museum collection have been preserved for future generations and are available for researchers. Hostos has built a solid foundation though there is more work to be done.

Community Documentation

Now that a brief history of Hostos and its archival program have been presented, the issues surrounding documentation strategy with regard to the local community need to be discussed. Based on discussions that began separately at an Archivists Round Table of Metropolitan New York meeting, and more specific to the college, among the Hostos Archives Advisory Committee, it has been suggested that Hostos must take an in-depth view toward collecting records that document not only the college but the South Bronx community that created and fought for it.

This effort aligns with the Hostos Strategic Plan and requires a deep commitment from the college. While Hostos still serves a large immigrant and minority community, the mix of ethnicities and the neighborhood have changed markedly since 1970. Since the college is so closely aligned with the local community, and the majority of its students are from the Bronx, this will prove a valuable investment in local history and preservation.

With repositories like the Center for Puerto Rican Studies at Hunter College, the Dominican Studies Institute at City College, and some emphasis on archival collecting at

most CUNY schools, it may seem that the recent past has been well preserved with regard to local college and community documentation. While certain time periods and areas are well documented, gaps exist. This raises the issue of what and whose history is being collected and what areas are being ignored, whether intentionally or not. Going forward archival advisory committees, community groups, and faculty and staff can evaluate what gaps exist and whose voices are missing from the archival record at the local level. Many people associate college archives with institutional records such as yearbooks, minutes, faculty papers, and photographs; however, archivists and librarians must address the communities they serve. This is the call to be mindful and recognize what vital archival records non-profits, churches, performance centers, and alternative spaces may have. For example, at Hostos this collecting strategy could be in relation to Latino/a records or documentation of the broader mix of ethnicities and groups in diversifying New York neighborhoods like the Mott Haven, Melrose, Morrisania, and Grand Concourse neighborhoods that border the college.

Literature Review

Current literature offers insight into these issues and can provide colleges guidance on how to proceed. In the case of documenting regional Latino arts, culture, and community, the call for archivists to collect documentary evidence of minorities and other historically marginalized groups remains largely unanswered according to two archivists who studied the issue in depth and have extensive experience in Latino Studies, Latino Art and media, and teaching in community-based archival practice.

Tracy Grimm and Chon Noriega revisit this topic in a 2013 *American Archivist* article. Grimm and Noriega assert: "With the exception of a relatively few specialized institutions and dedicated programs, the identification and preservation of Latino archives are not keeping pace with the nation's fastest growing and increasingly geographically dispersed population."[3] The authors argue that a shift in acquisition policies and collecting strategies are needed to record the history of immigrant and minority communities. This statement dovetails with literature that first appeared in the 1980s dealing with identity, ethnicity and the role of the archivist. More than forty years after this new emphasis, the push to document historically marginalized groups remains a challenge: "This is particularly true in the case of Latino archives for which few case studies have appeared to provide practical models."[4]

The authors go on to argue that the Latino community has undergone large geographical expansion and now reaches far outside traditional gateway communities like New York, Chicago, and Miami. Latino history is being made in many new places across the country and on a completely new scale.[5] In this sense diversity initiatives need to be much more broad and meaningful to truly represent community members and the institutions that reflect them.

Many smaller institutions do not have administrative capacity or storage space to reach out more broadly to the local community and acquire their records. Collections like the Meyer Collection may be completely appropriate considering Hostos's collection development guidelines; other collections may be less useful based on future research value and community interest. However, many donors feel their records are important and need a

permanent home. Finding the right fit for both donor and the collecting repository is important because many donors rightfully feel their records, like a local music collection, belong in the neighborhood where the music was created and performed. That is the predicament: how can archives be most inclusive of the community while collecting the most appropriate records from which future researchers may want to consult and work with? The response to this question, based on what material is available for research use, will inform a future generation of scholars. It is often difficult to refuse a collection from an influential community organization or member even though it may not fit well with the archival collection development policies.

Even though Hostos has a solid base of collections, the holdings should be intentionally representative of the South Bronx Community. Writing in an *American Archivist Perspective* article, Rabia Gibbs recommends that to make diversity initiatives more authentic and meaningful, "we must set aside our assumptions, examine the diversity within diverse groups, and modify our objectives to incorporate the full range of perspectives available with these respective communities."[6] One suggestion made by an archives advisory group member and donor is to create a South Bronx Urban Institute that will incorporate records from the community and house them at Hostos, creating a locally based research center.

With this concept of broader inclusivity in mind it is important to recognize the singular place Hostos holds in the neighborhood. While parts of the South Bronx were literally burning in the mid-1970s, Hostos was alive with teaching, educating hundreds of students and providing a counter-narrative to the destruction happening in Bronx

neighborhoods. As the worldwide reputation of the South Bronx came to be so notorious, Hostos stood tall against the headlines and bad news infiltrating the Bronx during a turbulent time. These strong ties to the community are only strengthened through archival collections, oral histories, and other evidence.

Donors of archival collections may often be Hostos faculty and staff; however, community groups and other local organizations reach out to local repositories as well, knowing they may be better able to care for records in the long term. As part of the New York State Archives Documentary Heritage Program grant, Hostos performed a community survey of important local records in 2006. While several important local collections were identified, Hostos lacked the space to house any new materials. Made clear during the process was the fact that donors wanted their records stored in a secure place, accessible to those in the neighborhood: in essence, by the community and for the community. For instance, researchers may visit the collections without leaving their local area or travelling far away to visit a governmental repository like the National Archives. Oftentimes if records are separated from the community of origin they are not as widely consulted or are seen through the filter of a mainstream organization. Digitization and online access may help mitigate required travel but eventually most serious researchers or writers need to physically visit the collections they are studying and consult with the archivist. Additionally, many collections are only partially digitized and may not have been made available through a content management system or online finding aid.

Shaunna Moore and Susan Pell present a convincing argument that repositories should be located in the community that created the records. In "Autonomous Archives" the authors present conceptual frameworks for archival collections:

> The preservation of archives is a highly political work of memory. In providing proof of actions, words and deeds carried out by governments, politicians, social rights advocates, concerned citizens and community groups, archives are crucial to the struggle to define social contexts and hold those in positions of power accountable.[7]

Not only do archival collections help establish public opinion while preserving a record of what happened, through their constitutive and relational capabilities archives act as spaces for public formations as they bridge how people may construct the past and imaginations for the future.[8] This line of thinking supports the argument of having a neighborhood repository that researchers and community members can easily access.

As time passes having interactions among the general public and the college faculty, staff, and students is important in the effort to keep the narrative complete. Gentrification and new construction may also cause pressure and changes in physical space and residents possibly relocating. These issues, coupled with retirements and changes in administration, force us to ask who and what is left to tell the story or provide documentation? While the history of Hostos is relatively recent as it only began in 1968, the archival collections, although intended to represent the story of the past 47 years, may not be adequately comprehensive. In some cases collections only represent

those who actually kept documents as events happened, thus preserving story fragments. Other faculty members and community residents from that time period may not be part of the collective voice, perhaps because they were not identified or perhaps a more thorough community documentation survey needs to be undertaken immediately. This could be accomplished through grant support or outreach to Bronx non-profits and local organizations. Collective action is required as Hostos cannot afford to lose the memory of the recent past.

Moore and Pell assert that many groups have taken a stronger role in forms of grassroots archival practice aimed at documenting the heritage of those on the peripheries of society, largely without the intervention of outside entities.[9] Practices typically associated with community archives have gained more importance and visibility in recent years. These include archives throughout the world documenting the histories of particular ethnic groups and gay and lesbian organizations. "Some view these practices as methods of political contestation and resistance against dominant social and cultural narratives. Others looking at archives that arise from groups with a common interest or within a particular geographical region present them in a more neutral light."[10] Regardless of the political leanings or basis of the organization in the community itself, many would argue preserving unique aspects of individual communities is important, especially if these groups operate outside the mainstream society and therefore may have less support.

Within this conversation is the importance of place in the community. It can be argued that by locating Hostos at the prominent corner of 149th and the Grand Concourse in the South Bronx, the Puerto Rican community members and

local officials were sending a strong message of exactly where the institution needed to be. Located directly above three subway lines and across the street from the New Deal-era Bronx General Post Office, this location spoke to the importance of the college's mission and of place within the community. And that the college namesake, Eugenio María de Hostos, was a 19th Century Puerto Rican scholar, educator, and author further underscored the importance of this undertaking and its roots outside the mainstream CUNY college experience in the late 1960s. "By connecting stories of past experiences to present localities, public histories give places meaning. This connection to place affects the relationships between community members, their sense of responsibility for their environment and, ultimately, collective memory."[11] It cannot be ignored that public institutions like colleges often anchor communities in a way private industry does not. Public schools, libraries, and historical societies have deep roots going back generations and in this case, Hostos preserves a special part of South Bronx history that other organizations cannot.

This raises the question of how a nearly abandoned corner reinvents itself and creates life anew. Across from the rehabbed factory where Hostos rented classroom and administrative space stood the abandoned Security Mutual Insurance headquarters building at 500 Grand Concourse. Constructed only a few years before Hostos's founding, it was vacated by the company to move out of state in the early 1970s. On this changing corner where restaurants, bars, the post office, and a gas station still existed, what sense of community cohesion began to take over when Hostos moved in and established a foothold? More than a generation later the neighborhood continues to evolve and develop—in the

fall of 2014 it was announced that the Bronx General Post Office building, occupying an entire block across the street from Hostos, was sold to a private corporation for $19 million. The landmark structure will be renovated into retail, restaurant, and office space. Post office functions will be moved to another part of the building while a bar and restaurant will open on the roof. Additionally, in April 2015, the college community learned that a large abandoned school building adjacent to campus and dating to 1899 would be demolished to make way for new housing and retail space. Once again the Mott Haven neighborhood continues to change and evolve, while welcoming new populations and many would say, gentrifying. These changes in the built environment will create openings for new residents, retail and dining opportunities, possibly changing the fabric of the neighborhood. This can happen in any locality but is perhaps exacerbated in New York City where there is so much value placed on real estate and growth.

The development of a collective sense of place many times involves struggles between (and within) various groups and perspectives with different understandings of the same place.[12] These shared perceptions perform a crucial function in community cohesiveness and identity with regard to changing spaces and the built environment. For example, many of the same neighborhoods that were once majority Jewish and Italian became Puerto Rican and African-American and eventually Dominican and African. Many new white residents are also moving into the Grand Concourse neighborhoods around Hostos. The previous groups had a claim to the area in the past and the newer residents call the neighborhood theirs now. The new arrivals should not erase

the history of the past and there must be a way to preserve that record of diversity across generations.

When thinking about diversity within the community and possible political implications coupled with changing demographics, gentrification, new businesses, and non-profits all set against the backdrop of a college with a rich history of protest, it is best to strategize how these disparate factions might be documented.

> Documentation of such understandings in texts often forms the basis for the establishment of archives. The archive is then central to the relationship between place and discourse and the ways in which these coalesce as resources for the formation of emergent publics.[13]

Some would argue that the Hostos Archives are in fact already part of a mainstream institution, CUNY, and by accepting government funding for processing and surveying collections makes it not really a "community controlled" archival enterprise. What voices do neighborhood residents have in telling their story or guaranteeing its preservation? While questions like these are compelling, the very existence and struggle of Hostos challenged the mainstream itself and the fact that Hostos still operates is a victory against the status quo. In that sense Hostos very much belongs to the community that created and fought for it. To have someone else in another place tell or preserve the story is unacceptable. It is quite unlikely that another organization in a distant location would care as much, or work as hard.

In "Whose Memories, Whose Archives? Independent Community Archives, Autonomy and the Mainstream," the authors describe grassroots projects and initiatives that have been created to record and preserve the

memories and histories of different communities that are often under-voiced and under-represented within the mainstream heritage. The authors state:

> Most community archives offer an important and empowering assertion of community resistance to otherwise exclusionary and (often) marginalizing dominant narratives. They offer mainstream heritage institutions not only a reminder of their obligation to diversify and transform collections and narratives but also perhaps the opportunity through equitable and mutually beneficial partnership to achieve some of that transformation.[14]

Cristine Paschild argues that for institutions dependent on private or other funding sources, "very often the solution to remaining viable is through a clear definition of mission. Institutions that identify a core function are better able to seek funding strategically and allocate resources effectively."[15] She cautions against identifying the archives too closely with one ethnicity while leaving others in the "community" behind.

Even as we read these articles through a lens of the Hostos environment it is also important to consider their universal appeal: the articles share themes of community, ethnicity, and place, among others. Significantly, the relationship among these themes and archival documentation helps inform identity and can anchor a location as time passes or the area is subject to gentrification as outlined in the readings. Archives and historical collections can include their assets in mission statements and outreach plans that secure their place as a community partner.

As part of the same conversation, archivists increasingly hear the word diversity but are they answering

the call by diversifying their holdings? Evidently not so much progress has been made toward this goal, as Paschild writes that marginalized groups and especially Latino/ Hispanic collections are not keeping pace with population shifts and other migration patterns. Collecting institutions often overlook the chance they have to strengthen community ties and contribute to the production of new knowledge based on their holdings. From studying these articles it must be argued that community-based archives equal the identity of a place and therefore promote, in their own voice, the heritage of that same place. These issues are applicable to all collecting institutions, however, those repositories where the mission can be tied to the collecting strategy may have the most success, according to Flinn, Stevens, and Shepard. Focusing on and addressing the themes raised in this literature can contribute to more varied collections and a stronger connection to the surrounding neighborhood. An archive must not exist in isolation from its community. Outreach needs to be a key component of the collection development plan. Archives, libraries, local museums, and other heritage collections must consider these themes going forward rather than waiting for the community to come to them simply because of the perceived research value of their holdings.

Strategic Plan and Community Building

The Hostos strategic plan goals can be enhanced by engaged, community-focused archival initiatives that may include a survey, and outreach events where the various community groups feel included and are made aware of how preserving vital documents can create historical memory. These activities can be implemented to directly support the

strategic goals of the college. The demographics of Hostos have changed from a primarily Puerto Rican and African-American student body at its founding to one in 2015 that is largely Dominican, West African, African-American, and Mexican. These groups attend Hostos in record numbers. The activity, campus, and social life happening around these communities must be documented along with college life. The local community is also emphasized in recent college publications. The "grounding elements" of the 2011-2016 Hostos Strategic Plan state the following:

> Hostos Community College is determined to be a resource to the South Bronx and other communities served by the College by providing continuing education, cultural events, and expertise for the further development of the community it serves.[16]

Hostos values are further elaborated in the plan under Community Building item number 6:

> We believe our college's primary strengths are embedded in our diverse, multicultural, and historic community roots. We are inspired by our community origins and our mission, and seek to embrace its spirit each day.[17]

Goal Area 2 of the document specifically addresses campus and community leadership in that Hostos will nurture the leadership capacities of its employees and Bronx Community Organizations so they can better engage as active members of their neighborhoods and communities.[18] As the college is quick to embrace the local community and wants to provide services and education for constituents while building on its historical neighborhood role, now is the time to implement changes that will lead to both strengthening this role and

creating access to college resources beyond simply taking courses or continuing education programs.

Conclusion

Since the importance of the local community is so strongly expressed in its strategic plan, Hostos is poised to strengthen its archives going forward. Identifying and securing storage space for collections so that college and community-based records can be accessioned and processed remain a major concern. Working with other Bronx CUNY colleges and the community to provide full-time access to our valuable resources and developing a strong program of integrating primary sources on college history and the history of Eugenio María de Hostos into the curriculum will also help promote the archives and library's rich collection of materials. While a solid archival foundation exists today, much more can be done to strengthen it as evidenced in the current literature. Hostos needs to commit resources—both technical and human—to support a highly diverse archival program that embraces and reflects the community that is so important to its development.

The dynamic history of Community College Number Eight is a testament to survival and progress. Representing all aspects of life at Hostos and having a full-time repository that nurtures a collective sense of place is paramount. A community-based archive can best serve the neighborhood and provide a counter-narrative to mainstream or marginalizing narratives. Lastly, as a public institution with such a history of community relations and support, the development of an extensive archives repository is essential. The collection will document the historical memory of how

the college came into being through popular political struggle that demanded a public institution perform its democratic obligation to be accountable to all—no matter their race or class—and not just to a few. This speaks to the heart of Hostos Community College and to the ideals of our namesake Eugenio Maía de Hostos.

William Casari, Associate Professor at Hostos Community College of the City University of New York, also serves as the College Archivist and Instruction Librarian. Professor Casari lives nearby in an Art Deco building on the Grand Concourse and has presented on Bronx history topics at local conferences. Casari completed his Master of Arts in Liberal Studies at the CUNY Graduate Center with his thesis, Concourse Dreams: A Bronx Neighborhood and Its Future (2008), focusing on the built environment and history of the neighborhood right outside his door.

NOTES

1. Gerald J. Meyer, "Save Hostos: Politics and Community Mobilization to Save a College in the Bronx," *Centro Journal* 15, no. 1 (2003): 72.
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Migrating *The Breeze*: A Case Study In Cooperative Staffing

by Laura Drake Davis

Abstract

Staffing challenges are common in digital collections, especially in a newly-formed department. This paper describes a project that utilized skilled staff from other library departments to accomplish a key project in launching a new institutional repository. The migration of ninety-two years of *The Breeze*, the student newspaper of James Madison University (JMU), yielded many challenges, but the project was completed ahead of schedule, due to the efforts of many across JMU Libraries. The digitized and born digital versions of *The Breeze* currently serve as a marquee collection within JMU Scholarly Commons.

Introduction

In 2013, James Madison University (JMU) acquired the Digital Commons platform from bepress. The institutional repository capabilities and the strong online publishing element matched the campus needs identified by the Scholarly Communications Task Force.[1]

The implementation strategy for the Digital Commons platform, locally branded as JMU Scholarly Commons, included the development and execution of four pilot projects: faculty and staff content as typically found within an institutional repository; a manuscript collection; the student newspaper; and electronic theses and dissertations (ETDs). These four projects were selected as representative of the types of content that eventually may be housed within

JMU Scholarly Commons. A project manager was assigned to each of these projects.

This paper will focus on the migration of *The Breeze*, the student newspaper of James Madison University, including the unforeseen partnerships within the JMU Libraries that enabled the successful migration of *The Breeze* to JMU Scholarly Commons.

Project Overview

The Breeze has been published continuously since 1922 and numbers over 3,600 issues. It is available in a number of formats including print, microfilm, and digitized and born-digital files. The digitized files were created from the microfilm in 2011, and born-digital files were digitally deposited beginning in 2012. The project consisted of migrating digitized microfilm and born-digital content, enabling full-text searching of the existing PDF files, and developing a new workflow for current issues to be deposited into JMU Scholarly Commons.

Prior to the migration, digitized issues of *The Breeze* were stored in JMU Library's Madison Digital Image Database (MDID), a platform developed for displaying art and architecture images within the classroom but which over time evolved into a digital platform for storing and providing access to other digital and digitized materials. In MDID, access to *The Breeze* was limited to a drop-down menu with a list of all the available individual issues. When JMU acquired the Digital Commons platform, *The Breeze* and other text-based content became candidates for migration to JMU Scholarly Commons, or another platform within the envisioned suite of repository services that would be developed over time.

The Breeze pilot project team was assembled prior to the arrival of the new Digital Collections Librarian, and drew on colleagues throughout the Technical Services and Collection Management departments. Team members were selected based on ability to contribute to various aspects of the project including metadata, public access, and electronic serials expertise. The project manager for the migration of *The Breeze* was from the E-Resources department; other project team members included the Metadata Librarian, the History Liaison Librarian, and the Rare Book Librarian. The Digital Collections Librarian was added to the team upon her arrival in this new position. Members of the project team had specific roles for management, consultation, and evaluation.

Project Implementation

The first step in the project was to establish the project plan and define it in a one-page document.[2] In this "one-pager," the project scope was defined, team members were identified, and a timeline was created. The one-pager was intended to serve as a guide, but it was understood that the timeline would have some flexibility to meet unanticipated challenges faced during the project.
The project requirements were as follows, with the lead pilot project team members assigned to each in parenthesis:

1) Assess current metadata associated with *The Breeze* in MDID (Digital Collections Librarian & Metadata Librarian);

2) Determine and document administrative, structural, and descriptive metadata needs (Digital Content Coordinator & Digital Collections Librarian);

3) Determine and document workflow requirements for the collection within JMU Scholarly Commons (Pilot Project Manager and Digital Collections Librarian);

4) Prepare *Breeze* files for upload to JMU Scholarly Commons with associated metadata (Digital Collections Librarian and Digital Content Coordinator);

5) Update access points, including *The Breeze* and MDID websites and the library catalog to redirect URLs to JMU Scholarly Commons (Pilot Project Manager); and

6) Test usability and functionality of *The Breeze* in JMU Scholarly Commons post-migration (Pilot Project Manager, History Liaison Librarian, Rare Book Librarian, and Digital Collections Librarian).

Members of the Digital Collections department were assigned to lead the quality control and metadata work in preparation for upload to JMU Scholarly Commons. This newly-formed department consists of the Digital Collections Librarian and the Digital Content Coordinator, both full-time positions, and two student workers. Based on the available staffing and the initial evaluation of *The Breeze*, which was performed by the pilot project team prior to the establishment of the department and the arrival of the Digital Collections Librarian, the proposed project timeline appeared reasonable.

Following the arrival of the Digital Collections Librarian, Digital Collections department staff performed an

initial image quality-control evaluation by spot-checking the 3,600 existing PDF files. During this evaluation, staff observed discrepancies in both the original microfilm, evidenced in the digitized images, and the later in-house automated creation of the issue-level PDF files. The Digital Collections Librarian determined that a comprehensive, issue -level evaluation was necessary to document the problems, including duplicate pages, pages out of order, pages belonging to a different issue of *The Breeze*, and inconsistent volume and issue information on the digitized PDFs. Given the more extensive review of the collection and remediation of the existing metadata, the Digital Collections Department staff needed additional assistance to complete this project in time to meet the initial launch in the fall of 2014. Fortunately, other units within the JMU Libraries were willing and available to assist in preparing the collection for upload into JMU Scholarly Commons.

Digital Collections Department staff did not initiate formal conversations with other library personnel about contributing to the project. Casual conversations, often in the hallway or lunch room, describing the work underway in Digital Collections often resulted in positive responses from co-workers, including interest in assisting in the project. Upon hearing of an individual's interest, a formal conversation was broached with the individual, and then with the individual's supervisor. These discussions included an assessment of what tasks could be performed by the individual, what experience they possessed, and what time they could devote to the project. Often the time commitment was variable based on the needs of his or her primary position. Work with *The Breeze* was described as basic metadata entry, though it later expanded to include digitizing

a small number of items. Conversations with supervisors in other departments focused on the time to be spent on the project, expected timeline, and a confirmation that primary job responsibilities take precedence over the work performed for Digital Collections.

The Digital Content Coordinator took on the responsibility of training the volunteers, who were student employees from Technical Services and a part-time staff member from the Interlibrary Loan department, and coordinating their workflows. These individuals evaluated the individual issues of *The Breeze*, recording problems with individual PDF files, including missing pages, duplicate pages, and missing issues in detailed spreadsheets. The Digital Content Coordinator managed the distribution and evaluation of the spreadsheets and consulted with the Digital Collections Librarian on priorities and workflow based on the findings.

The detailed review of *The Breeze* revealed that approximately 11% of the original PDF issues would need to be re-created from the original page-level JPG files. Individual pages as well as entire issues were missing in the existing files. In addition, volume and issue information was incorrect for approximately eighty years of the ninety-two year run of *The Breeze*.

To complete the digitization of missing individual pages and issues, the Interlibrary Loan department staff member volunteered to digitize single pages and full issues as needed. Fortunately, this staff member had access in the Interlibrary Loan department to both a microfilm scanner and a flatbed scanner that allowed quality digitization of both microfilm and the print content not captured during previous microfilming or commercial digitization processes. Due to

the conscientious efforts of the Interlibrary Loan staff member, many of these pages were found in the microfilm reels, digitized, and new PDF files were created for the affected issues. For those items not available on the microfilm, original print issues were retrieved from Special Collections and were digitized.

The Interlibrary Loan staff member ultimately created new PDF files for seventeen issues of *The Breeze* and re-created the PDF files for over 400 issues from new scans of the microfilm or from the original newspaper copy. Student workers in the Digital Collections Department and the Interlibrary Loan staff member captured basic descriptive metadata during the full issue-level evaluation. Metadata capture at this stage was limited to those fields where content would be variable from issue to issue: title, date, file size, and the volume and issue information as printed on the original item. Capturing this information during the thorough, item-by-item review minimized the number of times staff would have to go through these materials. This information was reviewed for consistency with established practice by the Digital Content Coordinator and the Digital Collections Librarian. Additional descriptive and technical metadata that would not necessarily vary from item to item, including institution, subjects, and file type, were added in bulk at a later date by Digital Collections staff.

As this work was being completed, other aspects of the projects progressed ahead of schedule. The Digital Collections Librarian and the Metadata Librarian developed the metadata template to be used for *The Breeze*, which can be adapted for similar collections. The space for the digital collection was established in JMU Scholarly Commons, and the public interface evaluated by the History Liaison

Librarian, the Rare Book Librarian, the Digital Collections Librarian, and the Pilot Project Manager. The Pilot Project Manager and the Digital Collections Librarian developed and tested the strategy for the transition for digital deposit from *The Breeze* to JMU Scholarly Commons, and compiled the list of access points to be updated at the completion of the project.

As a result of the collaboration of staff across departments, the metadata portion of the project was completed four months ahead of schedule and the migration of *The Breeze* was completed on time in August 2014. Project staff added issues not included in the original online collection, inserted missing pages into existing online issues, and ensured all online issues were complete and without duplicate pages.

Project Assessment

Despite the success in completing the project ahead of schedule, there were two significant challenges encountered during the process. The largest challenge was managing the work of personnel in other departments. While the Digital Collections department was fortunate to have other staff members who were available and interested in the project, this assistance came in addition to their day-to-day work. Anticipating progress on the project was difficult as the time these individuals were able to commit to the project varied from week to week. Nevertheless, no performance issues related to these volunteer personnel were encountered. Work completed by these individuals was of high quality and required minimal editing for compliance to established local standards.

A second challenge was the time-sensitive deadline. *The Breeze* is a high-impact collection and was important to increasing the visibility of JMU Scholarly Commons during the fall 2014 launch. Delaying the project was not a viable option. The project team resolved this challenge through careful coordination of effort and effectively monitoring progress towards the targeted completion date. As deadlines approached for completion of the initial phase of the project, tasks were adjusted to maximize efficiencies. By the summer of 2014, Digital Collections also had hired an additional part-time staff member who could be tapped to undertake final quality control tasks following the creation of the PDF files and metadata.

Conclusions

As expected, *The Breeze* is the most-accessed collection within JMU Scholarly Commons. This is due, in part, to the additional search features that increase accessibility and discoverability of the content. The current staff of *The Breeze*, for example, initiated a weekly feature highlighting items from the back issues as a result of the new full-text search capability.

The successful migration of *The Breeze* is the result of the efforts of many individuals within the JMU Libraries. By utilizing existing skill sets and expertise, combining tasks, and effectively managing a diverse and motivated group of staff from departments outside of Digital Collections, the goals of the project were achieved ahead of schedule. These individuals have expressed an interest in assisting in future projects as needed. As the Digital Collections Department continues to grow and develop

projects, we are certainly keeping this in mind as we make plans for the future.

Acknowledgements

The author would like to acknowledge the support of the following individuals from James Madison University Libraries and Educational Technologies: April Beckler, Mikki Butcher, Cheri Duncan, Lynn Eaton, David Gaines, Patricia Hardesty, Kevin Hegg, Steven W. Holloway, Mark Lane, Kate Morris, Genya O'Gara, Mark Peterson, and Mark Purington.

Laura Drake Davis is currently the Digital Collections Librarian at James Madison University in Harrisonburg, Virginia. In this position, the author manages the Digital Collections department within the JMU Libraries, is the administrator for JMU Scholarly Commons, an institutional repository and publishing platform, and consults and collaborates with campus constituents on digital projects.

APPENDIX

Project: Breeze Migration
Objective

Migrate the Breeze from the Madison Digital Image Database (MDID) to the Digital Commons platform in order to make this digital collection more accessible for our users. In addition to the migration, we will document current metadata issues, recommend metadata enhancements, and establish workflow for future collection additions.

Requirements

1. Assess current metadata associated with Breeze in MDID – file location, type, size, etc.

2. Determine and document administrative, structural, and descriptive metadata needs.

3. Determine and document workflow requirements for collection in Digital Commons.

4. Prepare Breeze files for upload to Digital Commons with associated metadata.

5. Update access points to redirect URLs to Digital Commons.

6. Test usability and functionality of Breeze in Digital Commons post-migration.

Out of Scope

1. Fully complete metadata. Breeze metadata enhancements and recommendations will continue post-migration as the collection is tested and used.

2. Metadata schema for ALL digital Special Collections.

3. Preservation standards for all formats of digital objects.

Team

Mark Lane (Project Manager)
Laura Drake Davis (Digital Collections use)
Patricia Hardesty/Mark Peterson (Curricular/Special collections use)

Steven Holloway (Metadata lead)
Jen Short (Migration & Systems lead)

ad hoc

David Gaines (Digital Commons technical contact)
Kevin Hegg (MDID contact)

Schedule

2014 January – Breeze has been migrated
2014 February – descriptive metadata has been added
2014 April – usability testing begun

NOTES

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2. See Appendix.

Environmental Safety vs. Historical Integrity: Stewardship of a Pharmaceutical Collection

by Dawne Lucas

Abstract

In this article, the author describes the process of working with multiple departments to safely dispose of substances found in a pharmaceutical collection while maintaining the historical integrity of the containers. The author had to consider safety and legal issues that sometimes outweighed appraisal decisions and preservation concerns. The author concludes with guidelines for confronting similar situations in the future.

Introduction

In October 2013, I became the special collections librarian at a health sciences library with a well-established rare book collection and a less well-established manuscripts collection. I expected one of my first tasks to be implementing a workflow for producing finding aids, but quickly realized that there were several more pressing tasks to tackle before worrying about EAD and DACS.

One of my first priorities was to inventory a large collection of medical instruments, including doctors' bags, microscopes, surgical kits, and dental tools. There were also several blue plastic bins filled with old medicine bottles, vials, ampoules, metal containers, tubes, and tubs. Although some of these containers were empty, many still held at least some of their contents: some liquids, some powders, and some pills. Due to numerous complaints about their smell, these containers had been rehoused into the plastic bins and

placed within metal storage cabinets inside a locked room in the basement. Whereas this rehousing stopped the complaints, anyone who entered the room could still smell them. The bottles were not well-inventoried, were not being stored according to best practices (see Figure 1) and in many cases contained hazardous substances such as strychnine, bismuth, and a variety of arsenates. Furthermore, loose pills or powder would fall out of some of the containers upon handling. After consulting with other members of my department and concluding that keeping these containers in their current state posed an unnecessary risk, I contacted the university's Department of Environmental Health and Safety (EHS) to discuss safe disposal of the contents. The process that followed proved that in some cases, safety and legal factors trump historic preservation efforts.

Figure 1. Plastic bin of pharmaceutical containers evaluated by the Department of Environmental Health and Safety (EHS).

Provenance and Research Value

The majority of the containers were donated to the library in the early 1990s. They had belonged to the donor's great-grandfather, who had practiced medicine in rural Virginia in the early-to-mid 20th century.

The collection provides an overview of the pharmaceutical industry during this time period and demonstrates ways that this industry has both changed and stayed the same. For example, most of the bottles are made out of tinted glass in order to protect the contents from light, just as we receive orange, red, green, and white pill bottles from pharmacies today. In contrast to today's practices, these bottles do not have safety caps. The U.S. Consumer Product Safety Commission did not require medicine bottles to have child-resistant safety caps on medicine bottles until 1972, after several decades of accidental poisonings by children, many of who mistook coated chewable tablets for candy. The collection also demonstrates how labeling has changed over time, as many of the oldest bottles contain nothing more than the product name, with no explanation of the contents. The packaging becomes more detailed over time, with the newest items bearing labeling resembling what we see today.

In addition to the full-size bottles, the collection also includes pharmaceutical samples, similar to the ones you might receive from your doctor today.

Whereas none of these containers is particularly valuable on its own, the totality of the collection has research value for students and scholars studying the history of the pharmaceutical industry. Keeping as much of the collection as possible, while at the same time addressing safety concerns, was therefore a priority.

Contacting Environmental Health and Safety

During the first week of February 2014, I contacted EHS, the department tasked with picking up chemical and radioactive waste from offices and laboratories throughout campus for safe disposal. The chemical hygiene officer assured me the department could discard the contents of each container without damaging the labels or destroying historical integrity, despite preservation not typically being a concern. In order to accomplish this goal, EHS emptied and destroyed the contents of the containers, but did not clean the containers. It is therefore important to stress that anyone who handles these items should wear nitrile gloves as a safety precaution, and throw the gloves away once they take them off.

Most of this process happened fairly quickly. The chemical hygiene officer first visited the library to assess the extent of the collection. During this visit, she noticed that several containers contained mercury, some in liquid form. In 2009, the university implemented a policy to reduce mercury pollution, and keeping these containers conflicted with these efforts.

The chemical hygiene officer returned with the hazardous materials manager several days later to pick up the containers; however, they decided that the project was big enough to warrant calling in a university-approved waste contractor. While making this assessment, the hazardous materials manager identified several containers housing substances such as morphine that are classified as controlled substances by the Drug Enforcement Administration (DEA). Since disposing of controlled substances must go through the state's Department of Health and Human Services (DHHS),

Figure 2. Bottle of a syrup of a phosphates compound with quinine muriate. EHS recommended photographing the bottle in case they could not empty it without damaging it.

Pills and Powders

The fate of the powders found in the collection was more ambiguous than that of the liquids, mainly because they did not present an odor problem. Pharmaceuticals in pill or

these items were locked in a secure location while awaiting the authorized personnel to take possession of them.

During the last week of February, an EHS environmental specialist and an approved vendor employee picked up the containers and moved them to a facility with a fume hood in order to safely segregate and repackage the contents. With the exception of the controlled substances and a handful of containers with non-hazardous contents that we decided not to discard, the pair emptied and returned all of the containers in a little more than 24 hours.

Disposal

EHS incinerates or recycles all chemical waste. The EHS and approved vendor employees assigned to this task worked closely with us to ensure a balance between environmental safety and historical integrity. The employees emptied the contents into suitable containers and contacted us before disposing of anything that was not part of our original understanding. EHS recommended photographing certain items that they could not ensure would pass through the disposal process undamaged. This process, as well as modifications due to safety concerns, are outlined below.

Liquids

Mainly due to the library's concerns about odor, we agreed that all liquid contents would be destroyed. EHS contacted us to photograph a small number of bottles before the disposal process due to uncertainty that the items would not be damaged. An example is the bottle of phosphates comp[ound] with quinine muriate (see Figure 2) which fortunately was returned empty and in good condition.

powder form that were good candidates to be used in future exhibits were allowed to stay in the collection as long as long as they were not classified as controlled substances and were not acutely toxic. As with the liquids, containers were preserved as well as possible. In a few instances, EHS feared that opening metal containers would cause unnecessary damage. EHS therefore cut holes in the bottom of the containers in order to remove the contents while preserving display value (see Figure 3).

Figure 3. Hole cut in the bottom of a metal container in order to remove the contents while maintaining display value.

Mercury

As mentioned earlier, EHS employees identified substances containing mercury, which conflicted with the university's mercury policy. This policy requires that all non -essential uses of elemental mercury be eliminated from campus laboratories by December 31, 2009. EHS determined that safely emptying and returning the containers was not an option. We therefore photographed the containers before they were destroyed (see Figure 4).

Controlled Substances

Figure 4. Examples of creams containing mercury destroyed by EHS. The containers were not returned due to the safety risk.

In March, the drug inspector from the Department of Health and Human Services' Drug Control Unit came to the library to take possession of the controlled substances, including morphine, phenobarbital, and pentobarbital. The mission of EHS and the Drug Control Unit are not the same. Whereas EHS strives to ensure that substances are disposed of in a manner to protect human and environmental safety, the Drug Control Unit strives to ensure that humans do not illegally ingest controlled substances. EHS and DHHS therefore worked together to ensure that the drugs were destroyed and disposed of in a manner acceptable to both departments. This means that EHS could not dispose of the substances without the supervision of the drug inspector, and the department also had to add steps to the normal destruction procedure. EHS used a product called the Drug Buster Drug Disposal System, which creates a reaction similar to digestion, destroying the controlled substances and making them irretrievable.

Under the Drug Enforcement Administration's Controlled Substances Act (CSA), only personnel registered with the appropriate state and federal licenses can order and manage controlled substances. Since no one at my library has these qualifications, knowingly keeping any of these items was not an option. Unfortunately, many of these substances could not be thoroughly discarded without destroying the packaging. A further complication is that EHS erred on the side of caution with some containers that were not labeled clearly or not labeled at all, meaning that some of the destroyed containers might not have contained any controlled substances. Knowing that many of these containers might not be returned, we photographed

everything before the drug inspection officer arrived (see Figure 5).

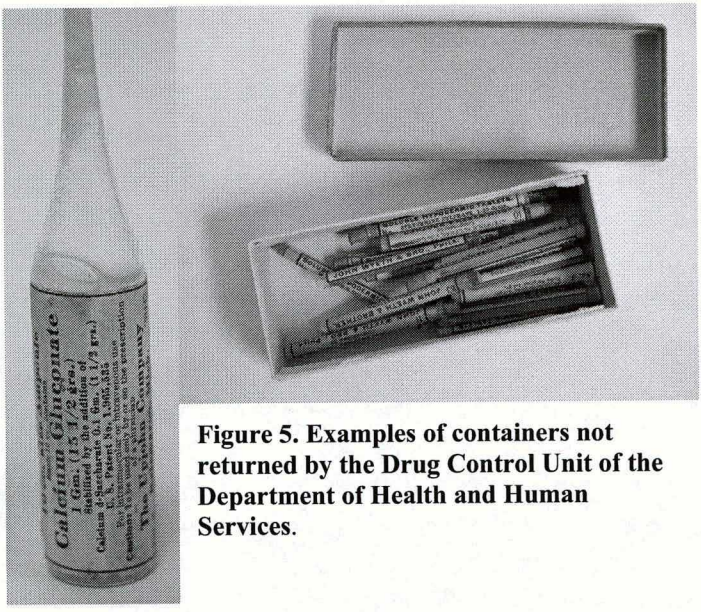

Figure 5. Examples of containers not returned by the Drug Control Unit of the Department of Health and Human Services.

Conclusion

The process of disposing of these substances was a learning experience. Despite the best efforts of the archival profession to preserve historical integrity, sometimes other factors, such as environmental safety and legal concerns, win the day. I certainly felt pangs of guilt when I learned that morphine ampoules would not return to the collection. However, keeping them would have put the university in legal limbo, and the inability to display them or catalog them meant they would have no research value. Furthermore, keeping the mercury would have conflicted with university policy.

On the other hand, this process has also led me to create more lenient guidelines for the future discovery of additional pharmaceutical materials. Although I do not plan to add to this collection, it is possible that I could find additional materials in medical bags or other realia. In these instances, I would evaluate the substances to determine if contacting EHS is necessary. Following these guidelines achieves a good balance of eliminating risk, while at the same time not burdening EHS with an urgent request every time I find something new (See Figure 6).

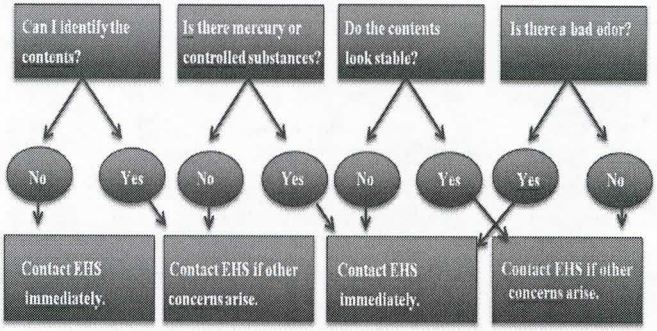

Figure 6. Decision chart for contacting EHS

In conclusion, good stewardship of a collection can sometimes require collaboration with unexpected partners. Establishing best practice procedures that are acceptable to all parties is a key to making this relationship work, even if these procedures require compromise. Now that this work has been completed, we are working on a finding aid to provide access to this collection. A long-term goal is to incorporate photographs of each item into the finding aid, similar to the finding aid for Duke University's History of Medicine artifacts collection.

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NOTES

1. For more information about the Department of Environment, Health and Safety, see: http://ehs.unc.edu/.
2. This practice is used for many beer and wine bottles, for the same reason.
3. Some pharmaceutical companies implemented child-resistant safety caps earlier than 1972. For more information about the development of the safety cap, see the Jay M. Arena Papers (https://archives.mc.duke.edu/mcaarena.html) and the Duke Poison Control Center Records (https://archives.mc.duke.edu/mcapoison.html), both housed at the Duke University Medical Center Archives.
4. Mercury Free UNC: http://ehs.unc.edu/ih/mercury.shtml
5. Title 21 United States Code (USC) Controlled Substances Act: http://www.deadiversion.usdoj.gov/21cfr/21usc/index.html.
6. For a full list of DEA controlled substances, see http://www.deadiversion.usdoj.gov/schedules/orangebook/c_cs_alpha.pdf.
7. Cat litter can also be used to destroy controlled substances.
8. http://ehs.unc.edu/ih/chemical/controlled.shtml
9. http://library.duke.edu/rubenstein/findingaids/homartifacts/

2015 Gene J. Williams Award Winner

The Gene J. Williams Award, presented annually *by the Society of North Carolina Archivists, recognizes excellence for a paper on an archival topic written by a North Carolina student for a graduate-level course. This award honors the late Gene J. Williams, archivist at the North Carolina Division of Archives and History and at East Carolina University, and charter member of the Society of North Carolina Archivists.*

Searching High and Low: Faceted Navigation as a Model for Online Archival Finding Aids (A Literature Review)

by Rachel Walton

ABSTRACT

There has yet to be a consensus about what an ideal user interface might look like for online archival finding aids, and certainly no proposed model has been adopted by the archival community. In this literature review, completed as part of a 2015 master's paper for the School of Information and Library Science at the University of North Carolina at Chapel Hill, the author suggests faceted search as a potential solution for the exploratory browsing challenges posed by online archival finding aid interfaces. This paper represents an effort to not only merge two sets of distinct literature, but also bridge the conceptual gap that exists between user-centered methodologies from the field of Interactive Information Retrieval and archival science best practices related to description and access. Is faceted navigation in the

context of an online archival finding aid interface an effective, efficient, and user-valued feature? The author's forthcoming finding aid usability study aims to answer this very question.

"With a significant number of finding aids now online, we need to assess the various formats that have been employed and how effective they are for search and retrieval of information."
— Christina J. Hostetter, "Online Finding Aids: Are they Practical?" *Journal of Archival Organization* 2, no. 1-2 (2004): 127.

Traditionally, the archival finding aid was a physical document, crafted by an archivist, intended to represent the structure and content of a collection of materials which users could access within the controlled environment of a supervised reading room. However, in the last few decades the finding aid has transitioned from stagnant document to online interface. Online archival description represents a groundbreaking step forward in that it facilitates enhanced discovery through remote interaction with collection content and allows for wider and easier access to previously sequestered archival materials.

In the last decade in particular, the professional literature has dealt deeply with archival description in the context of the World Wide Web. Since its emergence in the mid-1990s, there have been more than 30 articles dealing with online finding aids and Encoded Archival Description (EAD) in the *American Archivist* journal alone, and dozens more have been published in other major journals including the *Journal of Archival Organization*, *Technical Services*

Quarterly, *Archives and Manuscripts*, and *The Journal of the Society of Archivists*. This professional discourse reveals that while the merits of online archival description have been noted by many,[1] most agree that there remains significant room for improvement for online finding aids, especially in the realms of usability, navigation, and user interface design.[2]

It is understood that the uniqueness and diversity of archival collections, their complicated history and context, and their hierarchical structure all make effective presentation of archival information on the web a challenge. Well-recognized problems with online finding aids include confusing profession-specific jargon, lengthy blocks of text, long lists of folders and subfolders, and numerous links embedded within extensive descriptive hierarchies.[3] Suggested solutions to these challenges have included simplified labeling terminologies,[4] advanced keyword search options,[5] and "quick links" for topical searching.[6] While the professional literature has not suggested faceted navigation as a solution for the exploratory browsing challenges posed by online finding aids, a few examples of faceted search for online finding aids can be found "in the wild" at North Carolina State University[7] and Princeton University.[8]

Faceted navigation has been used in the commercial world and the realm of academic libraries in order to combat these very same issues with hierarchical context and search refinement. Specifically, facets can provide structured guidance in the form of a visual content map and reveal search paths so that searchers can progressively explore online content without "losing their place" in the site's structure. Breadcrumb web navigation of faceted sites allows the searcher to easily return to previous search pages. And

importantly, there is no risk of an empty result set with faceted searching; this is, of course, not the case with keyword searching and other more typical search features found in online archival finding aids. Some web experts have argued that facets provide more useful and transparent labeling, adding a great deal of flexibility, depth, and structure to the search process and can quickly and easily reflect complex concepts unique to a particular domain.[9] However, these potential benefits remain untapped by the majority of academic archives.

In the past, archivists have been accused of developing and implementing online archival description without consideration of user needs.[10] While, to date, there have been a dozen or so published usability studies focused on online archival interfaces, most of these were relatively small in scope and scale.[11] Today, Christina Hostetter's call for assessment of online finding aid interfaces through usability testing resonates as loudly as it ever did.[12] There has yet to be a consensus about what an ideal user interface might look like for online archival content, and certainly no model has been proposed. Few institutions have begun to ask in earnest if there is an ideal user interface design for online archival description in the context of an academic archive's website, and even fewer have considered the potential improvements that faceted navigational features could offer online finding aids users.

Online Archival Finding Aids: The Good, the Bad, and the Ugly

Now nearly two decades old, online finding aids have had a complicated history within the archives profession. The first and most prominent champion of the

online finding aid was Encoded Archival Description (EAD) creator Daniel Pitti. As the principal investigator of the famous Berkeley Project (1993 to 1997), where the idea of machine readable finding aids began, Pitti saw standardized computer based data structures as a way of moving toward universal intellectual access and setting the stage for remote viewing of actual archival materials.[13] After a long, thorough, iterative, and community-driven process — involving the Library of Congress, the Society of American Archivists, and multiple leading universities throughout the country — EAD1 was released as a "work in progress" standard in 1998. After a period of further feedback and commentary from practitioners, additional changes were made to the EAD schema to meet the needs of XML and related technologies, and EAD2 appeared in 2002. Today, at the dawning of EAD3 (scheduled for release winter of 2015), it seems clear that the standard is here to stay and Pitti's goal has been realized.

When EAD and online finding aids were new to the scene, they received a wealth of scholarly support and attention. The entire Fall and Summer issues of the 1997 *American Archivist* journal were dedicated to a discussion of EAD and its implementation. In these issues EAD was heralded as a potentially groundbreaking technology that should be supported and contributed to by the archival community. Proponents of EAD were confident in the schema's features, optimistic about its incorporation into professional practices, and even predicted that EAD finding aids were the logical next step for archival description.

In these early moments for online finding aids, Kris Kiesling argued that the EAD schema had a great deal of potential as a description standard because it offered a

widely adaptable data structure and fostered common practices amongst diverse institutions in terms of online data content.[14] Likewise, Janice Ruth, a part of Pitti's original Berkeley team, explained that EAD was both vetted and thorough as it was constructed by "continued input and assistance from the entire archival community" and had undergone an "extensive fine-tuning" process.[15] Several articles within the 1997 *American Archivist* issues noted the specific technical advantages that EAD finding aids offered. For example, Steven J. DeRose applauded the more recent XML-compatible version of EAD as a "semantically simple" language that archivists could wield with ease.[16] Additionally, Ruth's article explained in detail the ways in which EAD allows the archivist to "encode rich, hierarchical descriptions," and repeat descriptive elements at each level of that hierarchy, including value-added "linking, display, and search term elements."[17]

Moving beyond the use of EAD as a descriptive language for online archival content, Michael Fox called for EAD finding aids to be institutionally backed through administrative support, funding, and the development of new institutional workflows.[18] Overall, there was a sense that it was never too soon to begin adopting EAD and putting archival content online, at any institution. Elizabeth Dow, as a lone arranger at University of Vermont, took it upon herself to implement EAD at her institution during those early years. She felt that EAD was "quickly becoming fundamental to the web presence of small and micro-repositories," like local historical societies and cultural heritage institutions.[19] On the other end of the institutional spectrum, Leslie Morris supported the implementation of EAD for Harvard's online finding aids, claiming that for

large institutions interested in inter- or intra-repository collaboration, EAD was a logical and strong choice.[20]

While EAD's reception was undeniably positive, one would be remiss in not mentioning any of the cautionary tales found in these same issues of the *American Archivist.* For example, Dennis Meissner warned that finding aids still needed substantial amounts of reengineering in terms of look, feel, and structure before they could be made into effective online collection descriptions.[21] He stressed that "it is important to create finding aids that contain sufficient wayfinding tools to enable users to understand them and the materials they describe without the mediation of archivists."[22] On whole, the professional community seemed to be embracing Daniel Pitti's idea of standardized online archival description, without concerns about usability and interface. However, online archival description and its EAD schema would come under a significant amount of fire in the following years as practitioners began to question the functionality, display, and effectiveness of EAD finding aids in the context of the World Wide Web and its users.

The first to critically consider the content and format of online displays in archival information systems were Wendy Duff and Penka Stoyanova. Just a year after the release of EAD1, Duff and Stoyanova were asking users what information about archival materials they would like to see online and how would they prefer it to be displayed.[23] The first usability study of its kind for online archival content, these researchers used focus group feedback to critique existing finding aid interfaces. Their results indicated that users had trouble with abbreviations and specialized terminology like "linear extent" and "fonds," and preferred archival information presented on the page

according to bibliographic display guidelines and not current archival practice.[24] While recognizing that more research was still needed on multi-level description, the authors made the following suggestions to archivists: 1) use current research on system designs to provide a better interface for their users, and 2) conduct more usability studies to better understand archive users' needs.[25] Their call for more usability testing was answered in the following decade.

In 2001, Burt Altman and John Nemmers evaluated the usability of archival finding aids and their searching functions for the Pepper OnLine Archival Retrieval and Information System (POLARIS) at Florida State University. Their research revealed that navigation was a central concern for finding aid functionality because, given the hierarchical nature of archival description, users need to be aware of "where they are" in the collection at all times.[26] They also discovered that there was a need for both basic and advanced search interfaces to allow for different types of searching within the collection. Finally, study participants showed a preference for item level rather than folder level description when searching for content. [27]

Elizabeth Yakel's usability study from a few years later revealed similar issues. Her research showed that subjects had trouble understanding archival terminology and how to best search for information within the websites of archival institutions.[28] Added to this, the structure of the finding aid proved itself difficult for study participants. Many participants stated that they had "gotten lost" within the descriptive hierarchy.[29] Yakel suggested a navigation menu and improved online reference as potential solutions but did not elaborate fully on these concepts. Rather, she pushed archivists to begin incorporating established design

principles from the field of human-computer interaction into EAD interfaces to improve the user's experience.

Another study by Jihyun Kim focused on data elements and labeling within EAD finding aids as well as the searching, browsing, and other navigational functions that some repository websites provided. Kim found that there were significant element inconsistencies across institutions making it difficult for users to understand the meaning of labels when moving from one website to another.[30] In addition, it appeared that data elements in the EAD tag library were not being sufficiently utilized and, therefore, finding aids did not provide diverse enough access points for users. Notably, Kim determined that EAD finding aids tended to contain narrative forms of information and long container lists without appropriate navigational elements, thereby making it very difficult for users to effectively identify information and determine their location within the finding aid hierarchy. Finally, browsing by collection was proven to be a time-consuming and inefficient activity that did not assist in information retrieval.[31]

Responding to Kim's note that "search functions are a growing necessity on EAD sites,"[32] Xiaomu Zhou offered an analysis of fifty-eight EAD websites and their searching capabilities. Zhou's results showed that a disappointingly low number of EAD finding aids were aided by searching functions, and those that did allow searching did not arrange search results for users in a structured way.[33] Zhou lamented that "the advantages of EAD finding aids for hierarchical searching have not yet been fully realized. It seems that archivists focus much more on the issue of encoding finding aids than the subsequent process of delivery."[34]

In 2008, all of the above concerns about online archival description were reflected upon by J. Gordon Daines and Cory Nimer, as they prepared for an interface redesign at Brigham Young University. Daines and Nimer recognized that there were at least four major problems with EAD finding aids to date: 1) labeling terminology, 2) long blocks of text, 3) item-level access, and 4) hierarchical display of finding aid information.[35] After a decade of practice with EAD, there was a growing consensus within the community of archival professionals that unresolved interface issues represented significant barriers to user access and were the result of serious design flaws brought on by the implementation of EAD.

Even archivists who had once ardently supported EAD finding aids were becoming detractors of EAD standardized description. For example, by 2009, Elizabeth Dow, an optimistic early supporter of EAD when the technology was in its infancy, called it a "halfway technology;" explaining that the descriptive standard was not successfully connecting researchers to materials in the way Pitti and his colleagues had originally intended. She indicated that the profession should begin looking for a fuller technology to replace it.[36] Likewise, Richard Cox declared that despite the fact that we have entered the "golden age of archival description, [...] EAD's goal of easy access has been more dream than realization."[37] Cox even went further with his critique, stating that archivists have been creating their online description "in violation of system analysis [...] and carrying out their descriptive work apart from and with little knowledge of how researchers find and use archival sources."[38] This statement implies a level of ignorance on the part of archivists creating online description and calls for a

greater understanding of who archival users are and what information needs they bring to an online finding aid interface.

Online Finding Aid Users: Who are they and what do they want?

Despite Cox's accusation, since the advent of EAD, several usability studies, surveys, and other types of investigations have made a conscious and deliberate effort to understand who the target audience is for online archival content and, beyond this, what their information needs might be.

In 2004, in an effort to inform developers about user requirements for new online services, Anna Sexton and the other members of the LEADERS Project at the University College London asked the important question: "Who uses archival repositories' online description?" In their study, the LEADERS team recognized various types of end-users of online archival content including "personal leisure" users, "individuals using archives as part of their professional occupation," and "those using archives to support an educational or training program."[39] These types of users would be confirmed by other authors and usually grouped into "advanced" and "novice" categories in later writings about online finding aids. In addition to these findings, Sexton's team also determined that a majority of archives users approach online finding aids through "an interest of individuals, families, or organizations," and the remainder of searchers tend to frame their research topically.[40] Nearly all users represented in the study were interested in limiting their search to a certain time period. Most users also enter the online archival content already knowing what they are

looking for and with some kind of knowledge of the subject area of research. However, less than half of users surveyed claimed to be familiar with using archival material on the internet.[41] These statistics, when gathered regularly, can help predict the kinds of search functions online finding aid users might need in order to successfully retrieve the information they are looking for.

Around the same time as the LEADERS project, Rosalie Lack of the California Digital Library (CDL) used focus groups, questionnaires, interviews, and usability testing at her institution to determine what users wanted from online finding aids via the CDL. Lack discovered that, for most novice users, the concept of finding aids was extremely difficult to comprehend — there was no immediate understanding of the usefulness of a list of physical objects they had no direct access to via the digital interfaces.[42] Similarly, in an earlier article, Christopher Prom noted that novice searchers expect finding aids to include digitized material and not just serve as a guide to collections.[43] Wendy Scheir has also written about novice user experiences with online finding aids, confirming that online finding aids were sometimes "confounding and frustrating for novice users" as they are unfamiliar with key terms, subject content, and the inherent structure of archival description.[44]

Gretchen Gueguen (formerly) at East Carolina University investigated user interaction with digitized special collection materials in an attempt to support multiple access interfaces and suit the needs of two distinct user groups — undergraduate students and humanities researchers. Her results indicated that humanities scholars prefer to first search more broadly across archival materials, and, therefore, benefit from browsing a large and diverse set or resources.[45]

Their searches often involve retrieving large sets of results, and then sifting through the items until they find one of interest. Gueguen goes on to explain that "this technique allows scholars to serendipitously retrieve records that meet their specific - though perhaps unarticulated - needs, while keeping the possibilities open for potentially overlooked or unconventional sources.[46] In contrast, undergraduate students, even while having a relatively high knowledge of online library tools such as catalogs and databases, had little to no familiarity with how to use online finding aids. Therefore, the finding aid interface was not an effective searching platform for undergraduate students at ECU. Rather, students preferred to engage with an online exhibit interface especially designed to direct focus and provide item -level descriptions for already digitized materials.[47] Such results lead to the conclusion that different access points may be needed for different "levels" of online finding aid users in order to best support usability.

The aforementioned J. Gordon Daines and Cory Nimer, after completing multiple rounds of usability testing at Brigham Young University, confirmed that there was a clear difference between user groups accessing their online archival content and that these groups were reacting in very different ways to the interface they had designed. The primary user group — college students and casual researchers — reacted positively to the item-level display feature of the new interface and were able to find the information that they wanted more quickly.[48] However, the site's secondary audience, advanced researchers, tended to select the expandable tree menu feature of the new interface, due to their belief that it provided greater context for the materials being displayed.[49] Wendy Duff and Catherine

Johnson also confirmed that historians represented a separate, distinct, and advanced group of archive users. They explained that while historians' research methods may seem "haphazard" and their discovery path almost "accidental," in actuality "historians are systematic and purposeful in the way they go about building contextual knowledge" and this process requires "broad searches through vast amounts of archival material."[50]

In summation, most studies see at most three (casual researchers, college students, and professional researchers) and at least two (advanced and novice) types of users for online archival content. In most cases, casual researchers and college students are classified as novice researchers with strong computer skills but little experience with online finding aids. In contrast, professional researchers are typically classified as advanced users who have far more expertise in using archival materials. Although these categories are somewhat problematic as they make assumptions about large populations of users and their skillsets, one can say that these groups use different searching strategies to accomplish their research goals and represent divergent information needs. Such discrepancies are crucial to keep in mind when evaluating the effectiveness of faceted navigation for EAD finding aids.

Faceted Search: An Introduction

In almost all computer search systems, the user must enter the correct words — the words used by the system designer and recognized by the machine — for the desired objects to be retrieved. This means that, without extensive training of the searcher, or in "first-try" situations for new search targets, the success of the search is limited by

"the fundamental property of language limits."[51] The variability of vocabulary choice and the inability for designers, searchers, and systems to always reference the same terms is a major challenge facing Information Retrieval professionals today.

This is particularly true in online or enterprise search systems relying on keyword search. Some solutions have included providing searchers with specific thesauri, such as MeSH (Medical Subject Headings) — the National Library of Medicine controlled vocabulary thesaurus used for indexing articles for PubMed — and Library of Congress Subject Headings (LCSH) — a national thesaurus of common terms for use in bibliographic records. However, these solutions require a massively coordinated effort by members of a particular field to agree upon vocabulary terms (a long and painful process in most cases) and it still puts the vocabulary selection burden on the searcher, who must know about thesauri resources and consult them correctly in order to create a successful search query.

Another solution for some systems has been full-text search — when a search system examines all of the words in every stored document within the known collection of documents in a full-text database, not just the title fields, the subject headings, or other easily referenced metadata. The thinking is that if multiple terms exist in the collection which reference a single concept or object, then each of those terms will likely appear somewhere within the desired document set, even if not within the collected and indexed metadata. Therefore, an in-depth or complete search of those documents will likely yield an appropriate result for users not utilizing typically indexed terms like document titles. Some bibliographic databases have begun offering this

option in an effort to accommodate searching of more specific and/or less common terms, and of course the use of thesauri and full-text search are by no means mutually exclusive; these strategies can and often are used together to help retrieval success in keyword searching scenarios. However, this process can be computationally expensive, as it requires a full-text database, causes significant lag in viewing results, and still assumes the searcher knows a term that might appear somewhere in the known collection of documents.

In the last ten years, another increasingly prevalent alternative to "best-first" search interface designs has emerged, and it has become particularly popular in the context of online information access systems for e-commerce such as eBay and Zappos — this solution is known as faceted search.[52] In faceted search systems, a selection of navigational elements called facets — ways of classifying information — are provided for searchers to help refine the search target via groupings or "filters" already applied to the document collection in question. In this way, facets take some of the vocabulary selection burden off of the searcher and avoid the requirement of more rigid thesauri terms to yield relevant results. In addition, faceted searching circumvents the null result set or "dead end" that keyword searches sometimes yield because searchers choose from existing and known categories rather than trying to configure their own query without any context. Furthermore, the progressive and consecutive nature of faceted search systems is particularly helpful in exploratory searches, when searchers do not have a known target document and may not even have a well-established information need.[53]By "drilling down" through various facets incrementally, searchers can

quickly begin the process of discovering what the contents of the system are and how they are grouped. Finally, faceted navigation can also serve as a kind of road map, revealing the overall organization of a web page or search system, pointing to possible next steps that the user could take with the site's hierarchy, and offering breadcrumb-like trails to show which groupings have already been selected.[54] For all of these reasons, some web experts have argued that faceted navigation is one of the most significant innovations in searching in the last decade.[55]

Faceted Search: A Review of the Literature

The earliest and still most visible project focusing on faceted search is the FLAMENCO Project (FLexible information Access using MEtadata in Novel COmbinations) at UC Berkeley. This pioneering research on faceted navigation started in the mid-1990s under the direction of Marti Hearst with the goal of "developing a general methodology for specifying task-oriented search interfaces across a wide variety of tasks."[56] Hearst and her team have been highly successful in accomplishing their original goal; they have been involved with a number of usability studies focused on faceted searching, and contributed to research on both interface design and automatic metadata creation.[57] In a prominent 2006 article, Hearst explained the benefits of facets over simple clustering in a web interface environment: "while clustering is the grouping of items according to a similar measure, facets provide more meaningful and organized labeling which reflect domain-specific concepts and, importantly, hierarchies."[58] Though clustering can be useful for clarifying and sharpening a vague query, the results are typically incomplete, inconsistent, and not

intuitive for users. In contrast, facets can be grouped in a variety of intuitive ways at the same time — theoretically or by subject, by author/creator, by year/date, by price/cost, etc. — and layered in hierarchies that build on the initial category of selection.

Based on her early work with the FLAMENCO Project, Hearst drew overwhelmingly positive conclusions about the potential benefits of faceted navigation. She noted that faceted navigation allows for more complex querying because users can build up their searches within the site's hierarchy as they learn more about the results available.[59] It is also more flexible because it reveals not only where searchers can go next but also how to return to previous search pages. This reduces the amount of mental work the searcher has to utilize, and it allows users to consider logical but perhaps unexpected alternatives at each stage in their search.[60] Likewise, Daniel Tunkelang has argued that facets provide guidance to the searcher and let him/her elaborate a query progressively, whereas more traditional, or parametric, searching gives the user only "one shot" with their query.[61]

Edward Clarkson highlighted similar benefits for users in faceted search interfaces, especially novices. He explains that faceted user interfaces present only "valid" selections, allowing the user to "hide" non-relevant values from view. And, by exposing the vocabulary used in the collection, facets make the user better prepared to construct more useful keyword searches in the future rather than just crafting their own query without a sense of how the collection is organized and labeled.[62] Clarkson's work focused on variations in faceted user interface design components which determine the queries a user could specify and how the system changes to show query output. In a

survey of eight total systems, Clarkson pulled out prominent patterns and drew conclusions about how faceted browsing and querying can be modeled and allow for flexible searching. For example, a hierarchy of facets can have either iterative categories, meaning the same facets can be provided at each level, or sub-categories, meaning each facet can have sub-values to provide further granularity within the single grouping.[63] In addition, while many faceted systems like e-commerce sites assume a single set of focus items (that is, a single group of items which is the target of the user's information seeking behavior) — usually the product being sold — some systems must consider situations when users might have multiple target sets. For instance, in an architectural dataset the users might be interested in focusing their search on the architect, the works, or the works'

Table 1: A comparison of faceted classification, faceted search, and symbolic links across various attributes[65]

Traits	Faceted Classification	Faceted Search	Symbolic Links
Flexibility	✔	✔	✔
Disorienta-tion	x	some	✔
Context Switch	x	✔	x
Enumeration	✔	x	some
Anticipation	x	x	✔
Goal Articulation	x	✔	x

locations.[64] Clarkson's deductions illuminate the major ways faceted interfaced can be modified and exploited in real-world search environments to benefit the searcher.

In a later survey, Saverio Perugini compares three types of navigational information hierarchies — faceted classification, faceted search, and web directories with embedded symbolic links — in an effort to demonstrate how each approach supports users who seek information via multiple access pathways.

Perugini's work[66] (see Table 1) is helpful in pointing to the differences between these three approaches and weighing the potential benefits of faceted search against other possible navigational hierarchies. As the article explains, faceted classification uses clearly defined, mutually exclusive, and exhaustive properties of a class or a specific subject in order to organize site contents. Faceted search is a natural extension of faceted classification, wherein the system solicits and captures keywords supplied by a user from which non-relevant branches of the hierarchy are pruned out and relevant branches are expanded. In contrast, a symbolic link is a special hyperlink that creates natural parent-child relationships within a website hierarchy such as shortcuts, backlinks, and multi-classification links.[67] Importantly, Perugini's survey indicates that faceted search does not suffer from problems of disorientation because of its structures and intuitive environment, while symbolic links often destroy context and increase "lostness" on the part of the user. In addition, a faceted search interface does not require the extensive enumeration of all possible results like simple faceted classification does, reducing the amount of redundancies on the page. Finally, because faceted searching is user-directed, it does not require the designer to anticipate

points in the search where further navigational aids might be needed. It does, however, require the user to articulate their goal in words at the onset. Table 1 summarizes all of Perugini's conclusions concisely.

While the authors mentioned above are, for the most part, optimistic about the potential for facets to solve web search problems unaddressed in previous years, they and their fellow practitioners urge web designers to be aware of the practical problems related to implementing faceted navigation. For instance, in a later 2009 article, Hearst points to some unresolved problems with the presentation of navigation options in faceted search interfaces. Specifically, she notes that poor design choices could lead to decreased usability within faceted search interfaces, and furthermore, that large category systems, like subject category systems, are not still not well supported by faceted interfaces.[68]

Daniel Tunkelang has explained that faceted search can be computationally demanding because it has to allow for continual refinement and typically shows the counts associated with each refinement, which can lead to latency issues for a web page interface and therein negatively affect the user experience.[69]In addition, the wealth of information offered by faceted navigation search systems can threaten to overwhelm users in an experience called "information overload." Therefore, web designers need to prioritize what information is shown to users very efficiently so that they can optimize the allocation of users' attention, rather than overburdening it.[70] Finally, Tunkelang returns to the impetus for faceted navigation designs — "the vocabulary problem" — and claims that it is "both the motivation and the challenge for faceted searching" because faceted search systems necessitate that "users understand the refinement

options presented to them."[71] This requires us to know our users, how they search, and what words they will recognize and value in the construction of the queries and searches — a tall order indeed. It also requires in-depth metadata for all searchable content as well as continued attention to each facet category, whether global or local.

Other authors have noted the limitations of faceted navigation as well. For example, Jamie Teevan and fellow researchers at Microsoft have spoken up about the dilemma of applying faceted searching to large heterogeneous collections like the World Wide Web, corporate intranets, or federated search engine systems that access several different data silos.[72] In these instances, Teevan explains, it is difficult to assign quality metadata to every retrievable document because the corpus of retrievable documents is too large to manage at the item level. In addition, the diversity of the documents in question prevents standard metadata from being applied to every result or every query.[73] Moritz Stefaner and Boris Muller have also pointed to the problems that inconsistent metadata causes for faceted search systems, specifically two factors that make click transitions across different web pages within the same site difficult to manage: (1) the relative proportion of metadata occurrences in the collection compared to the global profile, and (2) the irregularity of metadata occurrences from one click to the next.[74] These weaknesses prompted Stefaner and Muller to develop an enhanced faceted browsing feature called "elastic lists," which shows the relative weight of each faceted value (therein expressing the value's relationship with the global distribution), and provides a smoother transition from page to page with animated filtering.[75] However, for many

websites today, click transitions still represent a major challenge for faceted interfaces, and few are done well.

Jonathan Koren has commented on the difficulty that designers face when determining which facets and facet-values to make available to the user at any one time, an especially important determination in the context of a large document domain.[76] Some systems show users all available facets, but this can lead to information overload as Tunkelang explained, and yet restricting the user view to only a subset of facets may not serve all users of the system equally or adequately. Therefore, Koren proposes using explicit user ratings to generate an "intelligent" faceted search interface that selects facet-values automatically to create a customized interface tailored to the user's perspective.[77] Koren suggests three possible methods for personalizing facets for unique users: (1) showing the facets most frequently chosen by the larger community to the individual user; (2) grouping documents in facets according to their probability of being relevant to that particular user based on search history; and (3) using information retrieval calculations like mutual information and document-query relevance to display only the most informative facet values.[78] Koren's work is in the same vein as the later research of Nicolaas Matthijis and Filip Radlinski who showed that using a combination of content information and data about previously visited websites could provide effective personalization for individual users with unique information needs.[79]

Echoing the earlier concerns of Teevan, Edward Clarkson (also mentioned earlier) has expressed doubts about the ability of faceted user interfaces to aid in the browsing of more complex data relationships such as ternary or even

arbitrary relationships between objects that might be present in larger complex collections like the World Wide Web.[80] Similarly, Marcelo Arenas explains that although hierarchical facets can establish simple value dependencies, the underlying semantic relationship between values remains undefined and this limitation affects the queries that a user can pose, the number of relationships that can be expressed through faceted interfaces, and context in which faceted interfaces can be successfully implemented.[81] To remedy this, Arenas suggests utilizing semantic web technologies such as RDF, OWL 2, and SPARQL 1.1 to provide richer domain knowledge, even for documents with more loosely-structured metadata, and allow automatic generation of facets with selective display features in the context of much more diversified and massive collections, like that of the World Wide Web.[82] One can see another attempt at extending faceted search to the general web in the recent work of Weize Kong, who experimented with facet generation and facet feedback models in the context of general web search queries. For example, if a user is searching for "baggage allowance information" about an international flight they will be taking, their results in the Faceted Web Search (FWS) system proposed by Kong would return auto-generated groupings of pages by flight types ("domestic," "international,"), airlines ("Delta," "JetBlue," "American Airlines," etc.), and/or class type ("first class," "business," "economy," etc.).[83] In an effort to tackle the heterogeneous nature of the web, Kong uses query-dependent automatic facet generation, which creates facets for a query rather than an entire corpus, giving the searcher a great degree of control over what facets would be available to them during their discovery process.

In summary, for the web designer, faceted navigation can be a challenge to implement due to potentially high computational costs, insufficient metadata, and interface design problems. And, for the end user, facets could possibly result in information overload or inconsistent interface transitions. However, as this review of literature has revealed, Information Retrieval specialists and practitioners today are increasingly confident about the ability of facets to serve as helpful navigational features in a variety of contexts, both large and small in scale. These information professionals have theorized, created, and tested a variety of solutions to faceted interfaces' prospective pitfalls in an effort to prove the continued relevancy and effectiveness of facets as an online discovery aid. A look at the online searching environments of libraries and museums reveal an equally positive outlook for faceted navigational components.

Faceted Search: Libraries and Museums

Libraries have already begun looking at the possibilities that faceted interfaces offer for online searches of library materials. One usability study looked at faceted navigation in the online public access catalog (OPAC) at North Carolina State University to determine what interface features engaged users most and what characteristics and attributes are seen as most essential in exploratory searching tasks. The results revealed that users spent about half of their overall search time in the OPAC looking at facets and users saw faceted navigational elements as high valued interface features.[84]

In another library-focused study, Xi Niu and Bradley M. Hemminger compared the use of facets for two

library environments, the University of North Carolina at Chapel Hill (UNC) Library catalog and the Phoenix Public Library (PPL) catalog.[85] They discovered that facet usage for the public library catalog was higher than that of its university counterpart and suggested that this discrepancy was due to the better support of faceted browsing on the PPL interface, including content-driven metadata (rather than administrative metadata) and facet refining options on the initial search page. Niu and Hemminger's work show that facets should clearly and accurately reflect content categories for library website browsers and be made available in the earliest parts of search stages as they are vital refinement tools.

Faceted search has also made its way into the museum world. In an article discussing the use of a new facet -friendly exploratory search interface called ImageSieve for the online content of a collection from the Carnegie Museum of Art, Yiling Lin explained how named entities can be extracted from descriptions of retrieved images and used to organize a faceted browsing interface.[86] Lin argued that by pairing existing museum metadata with faceted navigational elements on the museum webpage, museum professionals can help users to make sense of and further explore the retrieved collection images. And the results of a user study of ImageSieve demonstrated that faceted search systems can help museum website searchers explore large, diverse collections and find relevant information more effectively.[87]

In addition, Marti Hearst has described in one of her articles the work the J. Paul Getty Museum has done to implement a faceted interface for its online image collection called "Getty Images." Museum collections are often subject -oriented collections with a seemingly endless number of

potential facets to search by considering the breadth and depth of the collection content and associated metadata.[88] In order to confront this problem and deal with the fact that some facet concepts mixed with only a subset of other concepts, the "Getty Images" interface groups all facets into large, intuitive sections or "super-facets" with high-level categories like "Formats," "People," "Location," "Style," and "Viewpoint," and then situates several layers of section-specific facets beneath each "super-facet."[89] These institutions show that there is a need to creatively but intuitively group, and hierarchically arrange, facets in the context of a museum and library collections. All of these studies point to a growing interest in faceted web interface designs for academic and public library websites as well as museum web environments. However, the arena least familiar with faceted searching is, arguably, the one that could utilize it most — that is, archives and the online archival content.

Conclusion: Faceted Searching for Archives?

This paper has suggested faceted search as a potential solution for the exploratory browsing challenges posed by online finding aids as faceted navigation arguably addresses many of these issues plaguing the interfaces of online archival content. Specifically, facets are ideal organizing features for lengthy vertical listings as they provide supportive scaffolding for exploration and discovery.[90] And, as the authors here have made clear, facets are also effective in displaying layered and/or hierarchical content since they allow for extensive refinement and a significant degree of granularity.[91] Likewise, facets can prevent users from getting "lost" or disoriented during their

search by providing breadcrumb navigation.[92] And finally, facets can prove a useful tool when engaging in complicated and multilayered queries like those conducted by archival finding aids' primary users – historians and genealogists.[93]

Because of the recently adopted and updated Encoded Archival Description (EAD) standard — an industry specific, descriptive XML schema used for the encoding of finding aids for use in a networked (online) environment — there is already sufficient metadata underlying much of the online archival content on the web today. Faceted web interface applications for archives would have sufficient metadata fields to capture a range of desired facet categories including title and subtitle (fields found within the [eadheader]) as well as content creator, repository title, and dates (found within [archdesc], the archival description section of the EAD standard). This means it would be possible to harness the power of an existing XML schema to create a faceted and functional user interface model for finding aids.

It is time for archivists to start seriously considering faceted navigation as a possible model for online finding aid interfaces. A few pioneering institutions have begun to implement facets in their finding aid interfaces, but even fewer have conducted usability studies to determine if the faceted interface is resulting in a better user experience. The opportunity to bring user-centered methodologies and Interactive Information Retrieval experimentation into the realm of archival science remains unexplored by most in the field today. However, the author of this paper plans to pursue this topic — faceted search in the context of online archival finding aids — as the focus of her pending master's paper in

spring of 2015, in order to bridge the conceptual gap that exists within the literature and in practice.

One central research question, which has yet to be asked by archivists in the professional literature, will be driving this forthcoming research study:

> **Is faceted navigation in the context of an online archival finding aid interface an effective, efficient, and user-valued feature?**

Answering this question will require 1) understanding the needs and expectations of online archival finding aid users; 2) conducting usability tests of faceted interfaces to get qualitative and quantitative feedback from real-life searchers; and 3) marrying two distinct literatures—academic archives and interactive information retrieval —in a cross-disciplinary discussion of user interface best practices for online archival description.

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REVIEWS

Sidney E. Berger. *Rare Books and Special Collections*. Chicago: Neal-Schuman, 2014. 537p. Appendixes, illustration, index, and notes. $129.

In his work *Rare Books and Special Collections*, Sidney E. Berger (director of the Peabody Essex Museum) seeks to provide aspiring and current rare book librarians with a practical, inclusive overview of the world of rare books and special collections. From the arrangement of workspaces to the distribution of paper fibers, there are very few topics that escape his notice. Underpinning every topic is a constant thread: the significance of the researcher. Berger argues that while the rare book librarian must wear many hats, his/her activities must always stem from the desire to create access points for researchers.

Berger himself has worn many hats throughout his forty-year career, with stints as a "papermaker, typefounder, compositor, printer, collector, antiquarian bookseller, author, bibliographer, librarian, and teacher" (xii). These experiences very clearly shape his understanding of libraries, and every chapter is steeped in practical approaches to managing the many workflows found in special collections. The first chapters pay particular attention to those practicalities, stressing the operational and human resource needs of special collections, the behind-the-scenes work that rarely receives public notice. Berger offers grounded advice on how to manage employees, how to plan and use collection development policies, and how to drive stacks management activities. Unsurprisingly, rare books are Berger's main focus. Consequently, those seeking more information about

the complicated interplay between rare books, archives, and special collections management might not find quite what they're looking for in this work.

As might be expected from the author's background, book materiality (the physical makeup of a rare book) is a principal concern and main strength of *Rare Books and Special Collections.* Printmaking, papermaking, and bookbinding are covered in incredible depth, particularly for a book intended only as an overview. In these sections, Berger defines hundreds of terms and takes a linear approach to the evolution of printing, breaking down complexities into smaller, easily digestible chunks. Just as importantly, he offers clear reasoning behind the importance of book materiality. At any given moment, books may move from "makers to collectors and dealers to other collectors, dealers, scholars, librarians and archivists, investors, and many others" (77). Without an understanding of the physical attributes of books, rare book librarians may not be able to distinguish editions and impressions. And without that ability, they may be unable to facilitate that critical movement of materials and information and create opportunities for access. This concept serves as the basis for later conversations on bibliography, conservation and preservation, fundraising, and other relevant topics.

After looking inward at the operations of the special collections and downward to the tangible printed work, Berger then looks outward to the ways rare book librarians interact with external stakeholders. These later chapters consider the minutiae and more controversial aspects of rare book librarianship, including HVAC systems and facilities management, purchasing processes and deaccessioning collections, the antiquarian book trade and issues

surrounding fair use. Berger concludes his work with an overview of special collections today and looks toward tomorrow, highlighting born-digital and digitized materials, digital humanities, and exhibitions. These chapters, perhaps more than any others, stress the growing number of hats rare book librarians must wear and the challenges and opportunities looming ahead.

By taking a maximalist approach to rare book librarianship, Berger systematically lays out his central theme: rare book librarians must take on many job functions in order to create access points for researchers, to ensure that "patrons come first" (29). His continued emphasis on collaboration, a strong foundation in book history, and proper management serve as the silent partners in this quest to aid researchers. Berger knows, understands, and reiterates that rare book librarians create conduits to information, to the materials that researchers desire the most.

There is a slight caveat to Berger's strong support of research-driven activities, however. His discussion of research services is mostly confined to a single chapter. While this chapter does cover exhibitions, instruction, and underserved populations, it does so at a very high level. As researchers are the "primary reason for the library's existence" (31) and play important roles in *Rare Books and Special Collections*, research services (the activities related specifically to researchers) might be expected to hold a more prominent place.

The chapters of *Rare Books and Special Collections* conform to the textbook model and are clearly presented. When appropriate, illustrations are included, and the appendixes provide necessary expansion on collection development concepts. Two of Berger's presentation

decisions require additional attention: 1) Berger includes thought bubbles highlighting his own experiences with the given topic and 2) each chapter concludes with a list of authorial notes. The first decision humanizes the work, allowing for greater insight into the real-world decision-making processes required in special collections libraries. The latter decision proves to be slightly more problematic. The secondary sources highlighted in these notes (*Digital Humanities Quarterly*, *Library Trends*, *Research Library Issues*, etc.) often come from very reputable sources and provide more granularity than Berger's overview can. And yet, throughout the text itself, Berger repeatedly cites Wikipedia, a source that is far from credible and has no place in an academic tome. This decision undermines the validity of those authorial notes and may actually hurt the credibility of the overall work.

Ultimately, *Rare Books and Special Collections* does offer something previously lacking in rare book textbooks: a comprehensive overview. Very few textbooks today are as "comprehensive as is needed for a student to become conversant in this wide world of special collections" (xvi). With this work, Berger pulls together in a single source diverse topics ranging from call slip creation to collation to emergency planning. Aspiring and newly minted rare book librarians will appreciate the practical approaches Berger brings to these diverse topics, as well as the many resources listed throughout the work. More importantly, Berger delves into the critical importance of collaboration and accessibility and the roles they play in research-driven activities.

Liz Adams
Duke University

Anne J. Gilliland. *Conceptualizing 21st-Century Archives.* Chicago: Society of American Archivists, 2014. 321p. Bibliography, index, and tables. $55.95 (nonmember); $39.95 (member).

Given the current pace of change, articles, books, and presentations on the future of the archival profession are understandably hot topics. What archivist couldn't use a good guide or two for navigating the ever-increasing economic, social, and technological shifts that are now part of the normal course of our work? Predictions of trends and the best altered approaches to workflows have their place, but Anne J. Gilliland offers a different approach from the typical forecasts or case studies.

The focus here is on historical context and theoretical grounding. Indeed, the key to this work is found in the first word of the title, "Conceptualizing." Gilliland seeks to give her readers an understanding of the development of underlying archival concepts and how they have shaped the work of archivists. She is also arguing for deeper awareness of the role and power of theory as our profession moves into the 21st century. Her approach is not a sweeping historical narrative. Instead she provides clear and concise examinations of research and theoretical underpinnings of specific aspects of archival practice and explanations of how this history can inform future planning.

The book is organized thematically with the opening chapters addressing contemporary concerns around political and social issues alongside technological challenges. The gift of these chapters is Gilliland's ability to articulate clarifying questions around the issues of archival activism, digital repatriation and the rights of communities to

their records, co-creation of records, and the possibilities inherent in the digital proliferation of records. Chapter Three sets the historical stage, looking at archives and the international documentation movement from 1900 to 1950. The remaining seven chapters focus on the development of standards for description and access particularly around online access, descriptive metadata practices, electronic records and electronic records management, recordkeeping models, and digital repositories.

This work's value hinges on Gilliland's skillful synthesis. In manageably brief chapters, she capably untangles the activities of the myriad of committees, conferences, and working groups and delineates in clear prose their significant moments and movements. She has the advantage of having been an active part of the process in recent decades; knowing the players and the work well allows her to provide personal and professional insights. Her skill as a writer shows in her ability to step back from the history and to reflect objectively. The text is greatly enhanced with tables and figures that expand upon the text by providing a visual synthesis of data. Two tables of particular note are Table 2.1 and Table 7.1. Table 2.1 charts the expansion of archival responsibilities from the 1970s to the 2010s. This table is eye-opening and potentially an invaluable tool for educating administrators and donors. Table 7.1 highlights key research projects from the 1990s to the present and reinforces her argument for the value of research that addresses core issues such as the definition of a record as well as those exploring software solutions. Careful readers should take time to look at the notes at the end of each chapter. Among the bibliographic citations (of sometimes almost overwhelming detail) there are textual

notes that add depth and occasionally offer inside looks at archival history.

Gilliland convincingly shows the connections and influence of this research to current local practices and extends it into the future with her call for archival work to grapple with community archives and post-custodial collections. Her vision of archives in the 21st century, grounded in the theoretical work of the past century, calls for rethinking physical custody and the definition of documentation to embrace the diverse histories of the communities around us while forging links between peoples across the globe. Archivists well into their careers and those new to the profession will find this work both a useful refresher of lived history and a challenging call to rethink and refocus.

Jan Blodgett
Davidson College

Daniel Santamaria. *Extensible Processing for Archives and Special Collections: Reducing Processing Backlogs.* Chicago: Neal-Schuman, 2015. 248p. Appendixes, figures, illustrations, notes. $75 (print).

In *Extensible Processing for Archives and Special Collections: Reducing Processing Backlogs,* Daniel Santamaria takes software engineering's concept of extensibility and applies it to 21st century issues of archival processing and provision of online access to collections. Published in 2015 and combining equal parts archival theory, review of content standards, and practical strategies, the book has immediate currency as it cuts through the mire of issues related to the backlog problem at institutions large and

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small and across diverse collections. Daniel Santamaria is currently the director of Tufts University Digital Collections and Archives and draws on his extensive career to provide a toolkit for seasoned practitioners, new professionals, and students alike. Inclusion of bibliographic notes for each chapter and appendixes with sample finding aids, policies, case studies, and professional resources provide comprehensive coverage.

Greene and Meissner's 2005 coining of MPLP (More Product, Less Process)[1]and Dooley and Luce's 2010 report *Taking Our Pulse: the OCLC Research Survey of Special Collections and Archives*[2] form the backdrop for Santamaria's approach and are addressed in the book's introduction. In the wake of MPLP, *Taking Our Pulse* reported sobering statistics on the state of processing backlogs and hidden collections: substantial percentages remained unavailable via online catalogs — with 44 percent of archival and manuscript collections, 58 percent of cartographic materials, and an astounding 75 percent of visual and audiovisual materials (153). In the meantime, MPLP sparked ongoing discussion, attracting supporters and opponents.

Santamaria's book moves beyond what has been seen by some as MPLP's contentious "minimalism" to focus on the concept of *extensibility*. He defines extensible processing as distinct from limited processing: "extensible processing is more than simply cutting back on physical processing and discontinuing the removal of metal fasteners" (119). He offers extensible processing as an iterative activity, grounded in established archival principles, to optimize effort to make 100 percent of collections visible via baseline access instruments. From accessioning to

description and digitization, extensibility focuses on integrated strategies — of archival procedures, planning, policies, and project management — to effectively and appropriately apply an institution's resources.

Santamaria bases extensible processing on a flexible and iterative approach based upon six principles: creation of baseline records for all collections; use of standardized description; management in the aggregate; limited physical processing; systematic additional processing; and holistic management (16). Providing access without perfectionism is a guiding principle of extensibility, and Santamaria provides support for archivists who may find this change in approach difficult. He anticipates questions that have been raised in light of MPLP and devotes a chapter to answering concerns such as: professional status; issues of appraisal and accessioning; issues of copyright, privacy, confidentiality, and security; preservation; and challenges of non-paper and born-digital formats.

From this foundation, Santamaria presents the mechanics of an "extensible processing cycle" (30) and devotes the book's chapters to defining workflows and supportive strategies. Chapters cover: general processing workflows; tackling backlogs; incorporating extensible processes in accessioning; descriptive standards and access; digitization; and management strategies. Readers will also discover that the extensible structure of *Describing Archives: A Content Standard* (DACS)[3] can be readily linked with extensible processing. Here Santamaria provides a detailed approach to applying established archival principles with a point-by-point crosswalk to foundational DACS principles that are the most relevant to and supportive of a streamlined, extensible baseline description and processing program. He

also provides detailed discussions of integrating extensibility into appraisal, accessioning and digitization. Managers will find helpful strategies for conducting baseline surveys of backlogs, creating processing plans, establishing policies, and capturing metrics.

Although the book tends at times to be heavy on large blocks of paragraphed text, consistent use of section headings helps readers orient to key process points. Additionally, tables enumerating each specific workflow help concretize the concepts and promote access and use of the book for repeat reference. At times key ideas, insights, and useful approaches get lost in the heavily paragraphed format and would benefit from use of bulleting and call-outs to keep them on the reader's radar, particularly in key discussions that do not lend themselves directly to process workflows. For example, in the section "Beyond Baseline: Deciding When to Do More" (a core decision point of extensible processing), a catalog of elements of the decision and strategy puzzle gets lost in the text. These details include analyzing types of use, ranking reference room and remote queries, finding tools to capture user comments and corrections, survey and rating systems, and stakeholder views, among others. And although Santamaria acknowledges that there is no single formula here, the driving principle of additional processing "on demand" gets lost along with them (102).

In addition to Santamaria's comprehensive discussion and principled approach, a key strength of the book is its marriage of methodology and strategy with a position of neutrality on technical infrastructure. This makes the resource relevant, accessible, and useful for a broad range of institutional types and needs and may help ease the

concerns of smaller institutions and those beginning processing programs or addressing backlogs. With the book's mantra to get ALL collections described and noted online, the discussion encourages all types of institutions to acknowledge that access instruments can be produced in a wide range of formats, such as simple HMTL documents and PDFs and MARC records in OPACS, and/or from integrated archival management systems such as Archivists' Toolkit or Archon.

Eight encouraging case studies have been included and should not be missed as they directly test the philosophy of extensible processing, demonstrate its effectiveness, and illuminate concerns institutions might have. These come from a diverse range of institutions and demonstrate how they have used extensible principles and strategies to tackle, in some cases daunting, processing and digitization projects. Case studies include: an institution-wide backlog reduction and hidden collection survey at the Brooklyn Historical Society; backlog of unprocessed material at a preparatory school; an extensive backlog processing project (over 2,000 linear feet) at the American Civil Liberties Union; accessioning and digitization at UC-Irvine's Department of Special Collections and Archives; a survey assessment of hidden collections at member institutions in the Philadelphia Area Consortium of Special Collections; and a study helping small repositories start from "square one."

In this book, Daniel Santamaria has brought his expertise to an important and needed reorientation of the backlog problem and the MPLP debate. He has provided a methodology for staying on top of processing, grounded in archival principles and the ethic of access. Most importantly, he has written the book in the spirit of

inclusivity, inviting the entire archives and special collections community, regardless of size and resources, to adopt extensible processing programs.

NOTES

1. Greene, Mark A., and Dennis E. Meissner. "More Product, Less Process: Revamping Traditional Archival Processing," *American Archivist.* 68 (2005): 2.
2. Dooley, Jackie M., and Katherine Luce. 2010. *Taking Our Pulse: the OCLC Research Survey of Special Collections and Archives*. Dublin, Ohio: OCLC Research. http://www.oclc.org/research/publications/library/2010/2010-11.pdf.
3. Society of American Archivists. *Describing Archives: a Content Standard.* Chicago: Society of American Archivists, 2013. http://files.archivists.org/pubs/DACS2E-2013.pdf

Kelly Agan
North Carolina Government & Heritage Library
State Library of North Carolina

Patricia C. Franks. *Records and Information Management.* London: Facet, 2013. 410p. Appendixes, bibliography, illustrations, and index. $76.

Patricia Franks's *Records & Information Management* streamlines the multi-faceted, innovative, and complex field of records management for the archivist. Franks presents her vast knowledge in a logical sequence beginning with record-keeping in early human history and closing with effective records governance. She covers all aspects of the vast field in twelve chapters, including

inclusivity, inviting the entire archives and special collections community, regardless of size and resources, to adopt extensible processing programs.

NOTES

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capture/creation, offsite storage, vital records, retention schedules, and social media as record. Summaries are at the end of every chapter, making it easy to go back and cite. Supplementing each chapter are effective visualizations of information management processes. The useful appendix includes both a glossary and a sampling of records law.

An inaugural records manager undoubtedly encounters the ongoing question "what is a record?" Discussions regarding "recordness" are common as an institution establishes a records management program or policy. Using a history of the record and record-keeping, Franks points out in her first chapter, *The Origins and Development of Records and Information Management*, that record-keeping dates back to humans in 15,000 BCE documenting animals of the hunt on cave walls. These caverns used by our prehistoric ancestors were "specially chosen repositories for the secrets of civilization" (1). Franks expertly leads from Mesopotamian clay tokens tracking animal types as "tangible and portable memory aids" (1) to 14th-century European clerks, ending with new technologies such as Twitter and microblogs.

Chapter 7, *Emerging Technologies and Records Management*, focuses on a rampantly discussed area of archival theory. Capturing social media records is in its infancy and Franks walks us through identifying and understanding it and several approaches for capturing this content. Franks does this by assessing risk and control levels of the centralized approach (high control, low risk), decentralized approach (moderate control, moderate risk), and laissez faire approach (low control, high risk). There is a helpful and succinct chart on page 180 titled "Models for

Managing the Development of Content from Social Media Sites." Records managers are faced with issues of capture, disposition, and transfer for preservation. With the onslaught of records created purely in a digital realm, records managers need to promote the tracking of digital records in two ways. Franks suggests identifying social media, email, blogs, etc. as official "records," then using evolving capture technologies to grab records. By providing concise explanation on what is considered a record (social media records are not ephemeral in the traditional sense), this in turn encourages organizations to continue supporting records management programs. These guidelines provide valuable promotional tools for the records manager in corporate and higher education environments.

Establishing a vital records program is central to managing records at any institution, regardless of size. In Chapter Eight, Franks describes theory and practice of inventories, analysis, protection, and storage of vital records. A vital records schedule template is provided, making it is easy to re-use to fit an institution's needs. The author highlights an overlooked area, *Disaster Recovery in the Cloud*, and provides a list of relevant questions regarding acceptable risk for third party cloud service vendors such as Amazon. Franks outlines questions that need to be addressed when determining what vendor to choose: first, where data is stored geographically, and second, how easy it is to export data. The author explains that records managers and archivists need to be vocal regarding long-term preservation and extensibility of digital content, especially with their information technology counterparts.

Storage of inactive records are part of effective records programs. Records centers also serve as a promotional service for archives. Franks points out that records centers are designed to house inactive records until they meet their disposition requirements. This can mean paper records, digital media, or even digital files. In Chapter Eight, Franks includes designs for a records center and media vaults. Additionally, she points out climate control standards, which can easily be downplayed unless records managers continue to remind organizations and administrators that material can be damaged by humidity and temperature fluctuations. A handy chart provides ideal temperature and humidity guidelines for paper, film, and electronic media. Franks also describes the crucial differentiation between recycling, shredding, maceration, and pulping. Organizations may miss the subtlety between shredding to recycle and shredding of confidential records. Franks writes: "records destruction should be authorized, appropriate, secure and confidential, timely and documented" (259). Also, the records manager should be aware of destruction methods as to best support their institution.

Establishing and supporting a records management program in 2015 requires great social skills and knowledge of emerging technologies, capture and use of new technologies, and best practices for storage and destruction. Patricia Franks provides helpful additions to a modern practicing archivist and/or records manager in the way of templates, charts, and most of all, bringing in the information into one text. Best practices, retention schedules, and trainings can be found elsewhere in disparate digital and analog forms. There is, however, something nice about a handbook that one can cite repeatedly and Franks gives the

ever-in-flux field of information and records management a fine addition to its canon.

Jessika Drmacich-Flach
Williams College

Katharine Lehman, editor. *Interacting with History: Teaching with Primary Sources*. Chicago: American Library Association, 2014. 121p. Bibliography, illustrations, index, notes. $46.

Aimed primarily at K-12 educators, *Interacting with History: Teaching with Primary Sources* provides an overview of the Library of Congress's primary source online resources, examples of primary source engagement at various educational levels, and recommendations for educators wishing to discover local primary sources. The book stems from editor Katherine Lehman's experience as a member of the 2011 Library of Congress Summer Teacher Institute, a week-long program at the Library of Congress which provides K-12 educators with in-depth training on effectively integrating primary sources into the classroom. As a result, the content of the book is strongly focused on Library of Congress collections and online resources.

The book is divided into five chapters, with the first four dedicated to an examination of the resources and professional development opportunities for K-12 educators offered by the Library of Congress. The fifth chapter, titled "Discovering Local History Resources in Your Own Backyard," provides guidance for educators wishing to find local history information, both through the Library of Congress and, to a lesser degree, through other outlets.

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While the primary focus of the book is on the use of Library of Congress materials, certain aspects can be quite helpful to archivists and librarians looking to actively engage K-12 educators in the use of their local collections. For example, the second chapter, titled "Teaching Resources from the Library of Congress," begins with a discussion of reusable lesson plans and other content provided on the Library of Congress website. However, the latter part of the chapter guides educators in best ways to select accessible primary sources for particular age groups and consider the presence (or lack) of contextual information needed for students to interpret primary sources. The questions presented can help an archivist or librarian who is not incredibly familiar with K-12 education think through the selection of primary sources to be displayed or used in outreach to these age groups. Whether the archivist or librarian is developing an educational component to a digital project or creating a photocopied packet of resources for distribution to local teachers, knowing which primary sources are best for which age groups is critical to the success of a K-12 engagement project.

The second chapter's discussion of the Primary Source Analysis Tool (developed by the Library of Congress's Educational Outreach Team) is also useful for archivists and librarians, as it provides a framework for leading K-12 students through a critical questioning of a primary source document. Students examine a document and make observations in three columns. The "observe" column allows students to make clear statements of what they see or hear. The "reflect" column "is used to record inferences or hypotheses drawn from observed details" (31). The "question column encourages students to ask lingering questions after

observation and reflection—questions that will be the starting point for further investigation" (31). Archivists and librarians working with K-12 students—or any other group new to primary source analysis—can use this framework to guide students through the critical thinking process necessary for interpreting primary sources.

In the fourth chapter, "Action Lessons: Interacting with History," the editor compiles a variety of case studies of effective integration of primary sources in classroom activities. This chapter includes strategies for engaging students from kindergarten through high school in interpreting and critically questioning primary sources. In addition to bridging different age groups, the case studies also make use of a variety of formats of primary sources, from photographs to maps to text documents. Any of these high-quality learning experiences can be duplicated on the local level by an archivist or librarian working with a K-12 class. Additionally, the chapter includes an important lesson for any archivist or librarian wishing to engage educators, noting that "once teachers and students begin to uncover the wealth of images and artifacts available through the Library of Congress collections, the learning opportunities and connections to local curriculum and interests grow and grow" (83).

While the bulk of the book is focused specifically on Library of Congress resources, the final chapter emphasizes the importance of local history. The author notes that "studying local history makes the past more relevant as students learn about their community's past, customs, and culture—the who, what, when, where, and why become more tangible and real" (88). Online Library of Congress resources such as the *American Memory Collections* are mentioned as

key resources for local history, but the chapter also encourages K-12 educators to seek out nearby collections.

As an archivist, I was quite disappointed to find very little mention of archives (or even libraries) as repositories of local primary sources open to K-12 educators. In fact, libraries and archives are grouped with county courthouses and cemeteries in a resource list titled "History Off the Beaten Path." Instead, the editor focuses on museums as the foremost resource for local primary sources, with most of the non-Library of Congress case studies focused on local museum collections. Perhaps this reflects many educators' (and maybe some archivists' and librarians') view of archives as a place reserved for advanced study, not K-12 students. But with the growth of programs such as *National History Day* (www.nhd.org) and projects such as the National Archives' DocsTeach (www.docsteach.org), many archivists are actively looking to partner with local K-12 teachers on classes and projects.

On the whole, *Interacting with History: Teaching with Primary Sources* provides a great overview of the Library of Congress's resources for K-12 educators and can give archivists and librarians tips for best practices in engaging and working with this community on use of local primary sources. The book is far from a comprehensive look at effective means of incorporating primary sources in K-12 classrooms. However, it is a good starting point for K-12 educators looking for a focused resource that provides a strong introduction to effective use of primary sources at various learning levels.

Erin Lawrimore
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Adrian Brown. *Practical Digital Preservation: A How-To Guide for Organizations of Any Size.* Chicago: Neal-Schuman, 2013. 336p. $88.

Practical Digital Preservation, which won the 2014 Netherlands Coalition for Digital Preservation (NCDD) Award for Teaching and Communications, is an easy-to-follow guide for preserving digital objects. With a focus on best practices, and drawing from his own experience as assistant clerk of records for the Parliamentary Archives in London, author Adrian Brown guides his readers through everything from making the case for digital preservation to providing access. Brown divides the book into ten chapters (the introduction numbered among them) that build on one another in taking a systematic approach to digital preservation. Each chapter ends with a summary of key points and a bibliography. In addition, Brown includes a glossary and an appendix of systems, tools, and services.

The introduction begins by debunking the myths that digital preservation requires a large budget and extensive technical knowledge, can be put off until later, and can only be addressed by international organizations. Brown argues instead that the minimal requirements are motivation and means, and that due to an abundance of mature, affordable, and readily available tools, digital preservation is now more feasible for smaller institutions. Chapter Two outlines the first steps to digital preservation, which involve building your business case. The keys here, Brown writes, are understanding your institution's circumstances and creating both a digital-preservation policy and a digital-asset register. In Chapter Three, the author explains how to identify and

catalog an institution's functional, non-functional, and service requirements based on the stakeholders involved.

In Chapter Four, Brown discusses models for implementing digital preservation, outlining the pros and cons of each. The first option is to do nothing, but as Brown notes, inaction often proves costly in the long-term. Other models include the minimal repository, in-house solutions, open sourcing, commercialization, outsourcing the service, partnership, and private approaches. He also discusses training needs, the concept of trusted digital repositories, and the digital preservation maturity model. Brown provides a case study for each model. Among those discussed are the minimal approach used by English Heritage in the United Kingdom, the commercial off-the-shelf approach of the Wellcome Library, the outsourced approach taken by Greater Manchester Archivists Group, the hybrid approaches of Burritt Library and London School of Economics Library, and the collaborative model by MetaArchive Cooperative. Brown provides other case studies in each chapter describing the various parts of the digital life cycle and preservation processes.

The fifth chapter moves on to the selection and acquisition of digital objects. It emphasizes working with depositors and legal representatives to make informed decisions about the transfer of digital objects. For instance, Brown insists that transfer standards be realistic for depositors. The sixth chapter covers the specifics of accessioning and ingesting digital objects, focusing in particular on documentation, standards, and quarantine procedures. Here Brown advises creating a solid, efficient

accession and ingest process as a foundation for future preservation.

The next two chapters focus on description and preservation. To make the digital preservation process more efficient and less costly, Brown offers practical advice. He suggests that institutions use automation as much as possible for ingest, accessioning, and description. He also proposes realistic metadata standards, which involve carefully considering what metadata is needed, what can be extracted automatically, and where the clear needs for preservation lie within any collection. The book closes with a chapter on possible trends for the future, with Brown's predictions for preservation tools and services, representation information registers, storage, and training. He sums up the chapter by saying that the greatest challenge for digital preservation will be to embed it into regular Information Technology processes and personal-computing functions.

In contrast to other books on digital preservation, such as David Giaretta's *Advanced Digital Preservation* (Springer, 2011), this guide targets the non-specialist rather than those trained in information technology. Defining basic terminology and employing a conversational tone, Brown avoids unnecessarily complex discussions of technology and utilizes a transparent logic in his organization. The book is also international in scope, with resources from various countries and institutions cited and provides practical strategies and case studies for a wide range of situations. It is particularly useful for institutions with few resources available for digital preservation. While the author freely admits that the book isn't comprehensive (for example, he does not delve deeply into forensics or dealing with data

sets) it is hard to quibble with the coverage. The author provides a solid introduction to digital preservation, one suitable both for practitioners and students.

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Freda Matassa. *Organizing Exhibitions: A Handbook for Museums, Libraries, and Archives.* London: Facet, 2014. 302p. Bibliography, figures, index, notes, references. $99.95.

Creating an effective exhibit is a challenging prospect at best. Whether it is a small exhibit or a large one, it takes a great deal of planning and organization. In her new book, *Organizing Exhibitions: A Handbook for Museums, Libraries, and Archives*, Freda Matassa has drawn from her considerable experience and expertise in collections management and museum practice to create a step-by-step guide on how to design and implement an effective exhibit that will generate interest and feature collections in new and innovative ways. Although the book focuses primarily on large-scale displays, the general theories and practices discussed can be applied to any size exhibit in any type of venue.

Collaboration, communication, and documentation are important themes throughout the book and all figure prominently in a simple breakdown of the author's ten tips for a successful exhibit. These tips include establishing a clear plan and budget, designating specific areas of responsibility to an exhibit team, creating a timeline, and keeping to a schedule. Matassa also lists common pitfalls

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that often plague exhibitions such as an unclear purpose, a lack of communication, and a loss of interest. Each chapter of the book is designed to avoid these difficulties, and the author leaves no stone unturned.

The book is divided into two distinct parts. The first part gives an extremely detailed description of how to execute an exhibit, from its initial concept to its closure. The second part serves as a directory for more technical and detailed information, including resources for international exhibits. Mattassa's approach is always clear, organized, and practical. Particularly helpful are the comprehensive images, forms, checklists, and documentation templates that give a clear illustration of the author's precise and systematic planning methods.

Matassa begins by stressing the importance of developing a clear vision for any potential exhibit. A thoughtful, unique, and well-researched concept naturally translates to decisions involving title, scale, and featured objects. This initial phase is crucial, as it will result in a viable proposal that will lay the groundwork for the planning stage of the exhibit. The author recommends taking time to evaluate the available exhibit space, consider the potential audience, create a list of objects to be displayed, and estimate the cost. As goals and objectives for the exhibit are established, projected outcome, general strategies, and possible risks can be identified and assessed.

Once the vision for the exhibit is set, the planning phase begins and it is at this time that project management becomes a key component. Matassa emphasizes the importance of assembling a skilled, cohesive project team with a strong project leader, no matter the size or duration of the exhibit. The project leader will delegate responsibility

among team members, ensuring that all areas of exhibit planning are given adequate attention. Scheduling consistent team meetings, monitoring a comprehensive timeline, and establishing clear and direct lines of communication cannot be underestimated when planning an exhibit. After the installation, the exhibit team will transfer its attention to measuring the originally proposed objectives against the actual results, altering the exhibit as needed. This well-planned organization and communication workflow will continue until the exhibit is dismantled.

After the planning phase is completed and project team has been put into place, the organization of the exhibit can truly begin. The author gives a great deal of attention to object selection, which can be particularly complicated, especially if some items need to be borrowed from private collections or institutions. Stressing communication and documentation, Matassa suggests detailed questions to ask when borrowing objects. Issues such as dimensions, insurance, transportation, and special requirements for display, are handled in the initial planning phase. More involved information about this and all other topics covered in the book are cross referenced with more detailed information in the directory (Part II). The author gives every matter proper attention, from broad topics such as planning touring exhibits to more mundane concerns like signage and visitor barriers. She also covers the details regarding maintaining and promoting the exhibit, as well as events and programming that must be addressed after installation.

One of the most interesting subjects covered in the book is the importance of legacy. While exhibits are temporary, their impact and influence can last for years to come and it is for that reason that creating a lasting legacy

should figure prominently in all phases of the exhibit. A very practical part of an exhibit's legacy is its documentation. Records of all aspects of the exhibit should be kept and archived, including details of the design, forms and agreements, budget data, printed material, statistics, photographs of the displays, and visitor feedback. These will be important factors when evaluating the exhibit to ascertain accomplishments as well as lessons learned.

Matassa points out that there are many long-term benefits that result from a successful exhibit, including research and publication opportunities, fundraising prospects, and new relationships developed with individuals and the community. The author gives specific examples of exhibits that have made significant impacts and had lasting influence on the public, such as the 1862 International Exhibit in London when Japanese porcelain was introduced to Europe, the 1913 Armory Show in New York which displayed modern art to an American audience, and finally the more recent Chinese terracotta warrior exhibit which shared a major archeological discovery with the world. Although these are obviously exceptional examples, even more modest exhibits can have a lasting influence; therefore, legacy should be a constant consideration.

Ultimately, each exhibit is a unique event and choices made about the aspects such as the topic, objects to be displayed, and programming must be tailored to the available space, the financial resources, and the individual taste of the museum, archives, or library staff who create it. To this end, Freda Matassa intends her book for curators, archivists, librarians, public history students, or anyone who needs assistance planning and implementing an exhibit. This extraordinarily comprehensive, well thought-out guide will

certainly serve as a model for all types of exhibits, whether they be held in an international venue, or at the local library.

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