

Master of Library and Information Science Portfolio

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CONTENTS

MASTER OF LIBRARY AND INFORMATION SCIENCE PORTFOLIO	1
CURRICULUM VITAE.....	3
PROFESSIONAL DEVELOPMENT STATEMENT	6
ADVISING HISTORY	9
ISSUE STATEMENT	10
ISSUE PAPER	11
MAJOR PAPER.....	24
RELEVANT COURSEWORK	43
<i>Core Courses</i>	43
<i>Elective Coursework</i>	60
<i>Internship Work</i>	89
ACCESSIBILITY STATEMENT	91
COURSES TAKEN	93

Curriculum Vitae

Education

University of California, Los Angeles | Los Angeles, CA | Expected graduation 2023

- ◆ Master of Library and Information Science

Temple University | Philadelphia, PA | Graduated 2017

- ◆ Bachelor of Arts in art history and a minor in English



Key Skills

Web Design

- ◆ WordPress ◆ GitHub Pages ◆ Square Space ◆ HTML and CSS

GIS Software and Data Viz

- ◆ ArcGIS Online ◆ QGIS ◆ Tableau ◆ Flourish ◆ Voyant

Data Management

- ◆ Microsoft Excel ◆ OpenRefine ◆ Airtable ◆ Open Science Framework

Content Management

- ◆ Archivists' Toolkit/ArchivesSpace ◆ OCLC Connexion/Surpass ◆ Springshare ◆ Omeka
- ◆ Consortium of California Herbaria (CCH2) ◆ The Museum System ◆ SQLite and SQL language

Audio/Visual Media and Photo Editing

- ◆ WaveLab ◆ Adobe Audition, Photoshop, and Lightroom ◆ Audacity ◆ Analog A/V media such as magnetic media, grooved media, film, and equipment used in analog to digital transfers

Professional Experience

June L. Mazer Lesbian Archives Intern | West Hollywood, CA | September 2022-June 2023

- ◆ Currently processing the Christy Amschler collection consisting of over 500 photographs, and totaling 10 linear feet using Airtable to inventory and arrange materials.
- ◆ Maintaining a number of digital collections, the website blog, and generating new digital content through the digitization of the Lillian Faderman Audio Tape Collection.

Graduate School of Information Science Media Lab and Library Staff | Los Angeles, CA | January 2022- Present

- ◆ Manage the library reference desk, scheduling for 10 media workstations and hybrid learning technology, and the print collection holdings using Excel and OpenRefine.

- ◆ Assist students and faculty with library and media preservation equipment and software, such as the Kinetta film scanner, WaveLab, and ArchivesSpace with in person support, and through creating workflow documentation.

Whole Foods Market Floral Buyer | Philadelphia, PA | October 2017- May 2021

- ◆ Supervised the sales floor as well as purchases, inventory, and department administration such as, navigating store policy, city labor laws, benefits, and computer literacy.
- ◆ Communicated with seasonal vendors, coordinated holiday events that capitalized on higher margins, trained new hires on a team of 30, while continuously educating myself on plant and cut flower care.

The Barnes Foundation Archives and Library Intern | Philadelphia, PA | May 2017- June 2019

- ◆ Position assisting the archivist and librarian on cleaning and creating metadata with Archivists' Toolkit, The Museum System, OCLC Connexion/Surpass, and Springshare, doing minimal processing, digitization, and rehousing special collection ephemera and rare books.
- ◆ Committed to collaborating with historians, docents, instructors, and conservationists over reference and research needs in person and remotely.

Projects

Islamic Center of Southern California (ICSC)

- ◆ I had the opportunity to be part of a team of 8 other archival studies students to assist the ICSC in creating a metadata schema and workflow for using Dublin Core in Omeka. This schema would be used to describe almost 200 digitized issues of *The Minaret* during the course of 10 weeks, and by future archivists continuing this work.

Social and Public Arts Resource Center (SPARC)

- ◆ With four other archivists I planned the space and supplies needed to create a home for a newly accessioned collection of 100,000, 35mm photo slides taking up 288 linear feet. I also continued the work of digitizing other collections of 35mm photo slides, and organizing print ephemera.

Data Management for Humanities Scholars

- ◆ Collaborating with two of my classmates, we created a web-based learning module to help humanities scholars conceptualize their research as data, and give guidance on how to preserve that data for future use and reuse.

Spider News

- ◆ I used a dataset on online news articles of spiders and humans encountering each other to investigate the boundary between humans and arthropods, and what role the media and urbanization has to play in that division. I used Flourish data visualization tools and ArcGIS Online on a website designed in GitHub Pages to tell [this story](#), and see what can be understood from this dataset.

UCLA Herbarium

- ◆ I volunteered for two quarters checking transcription of digitized herbarium specimens in the data portal Consortium of California Herbaria (CCH2), and also working with the specimens themselves, providing labels and repairing or remounting.

Professional Development Statement

Choosing an MLIS degree

I was first able to conceptualize information studies while engaging with public history and art history after doing research in my university's archive, and spending my undergraduate career examining the history of collecting through my coursework. This is how and where I observed the impact acts of preservation, memory work, and artistic creation had on the city and the communities around me. These experiences gave rise to questions in my mind of archival silences, power, ethics, and how archives are able to serve communities. I came into the MLIS program at UCLA eager to learn how these questions were explored in the field, and how information professionals used their skills to support people. Beyond exploring these issues, I found room to expand my interests and learned foundational skills that I can carry with me into my professional career.

Integrating my interests

Part of the reason I decided to move across the country for this MLIS program is because I am particularly passionate about how science can intersect with information studies, and related areas of work including: science communication, life sciences, science history, environmental humanities, and community science. There are many Los Angeles institutions where I could explore my interests like the Natural History Museum of LA County, the Lorquin Society, UC Riverside's Entomology Museum, and UCLA's robust life sciences programs. Because I am only an amateur enthusiast in all things bugs, plants, and animals, and my background is in arts institutions and the humanities, this gave me reservations about pursuing work in science collections and more data management positions. Despite my concerns I have focused my projects in this program on science collections, and I began volunteering at the UCLA Herbarium in the Spring quarter of my first year. The UCLA Herbarium is a specimen collection of vascular plants of Southern California and was a welcoming space to learn more about how information science meets life sciences, and what I can do to apply what I've learned in my degree to get

more involved in community science programs, entomological outreach, and community gardens or seed libraries.

Influential courses

In this program, I was especially drawn to the courses that related to computing, web technologies, and digital infrastructure's importance in relation to libraries, archives, and museums. After taking Digital Preservation with Dr. Anne Gilliland and the Systems and Infrastructures core course with Dr. Miriam Posner, I was encouraged to pursue digital humanities coursework, and courses that have developed skills such as web design, user experience design, digital asset management, data visualization, and data curation. I hope to seek positions that prioritize continuous learning about front-end technologies, information technology systems, tools for data management practice, and participatory design. These technologies are an integral part of the transformation of archival practice, to move away from gatekeeping, and can help to make archives more accessible, transparent, and collaborative places. I have a strong mission to sustain relationships, share power, honor feelings, and focus on use, activation, and access within roles that generate description, publications, user interfaces, and communication.

Professional experience

This program has also expanded the scope of my professional skills by exposing me to media archiving and preservation work. My position at the IS Library and Media Lab not only created a space where I could learn collaboratively with my cohort after having been isolated on Zoom for a year, but also facilitated a space where I became passionate about preserving recorded sound, film, and video. To further my knowledge around media archiving, I am also a part of the student chapter of Associations for Recording Sound Collections (ARSC) at UCLA and am excited to continue learning about how to assess and preserve vulnerable media with my cohort through events and workshops.

The Community Archives course with Dr. Michelle Caswell prompted me to apply for and receive the Mellon funded Community Archives Lab Internship at the June L. Mazer Lesbian

Archives, where I could also exercise commitments and actions towards community-focused work, and play with the methods that disrupt archival professional practice while honing my skills in digital content management. It was here that I was able to explore questions I had about how archives are able to serve communities; and discuss the challenges and considerations of identity-based archival work.

At the Mazer I was also able to continue pursuing working with recorded sound media. I worked on two collections of oral histories: digital interviews conducted by students from Dr. Marie Cartier's Queer Studies course at California State University, Northridge; and tapes from the Lillian Faderman Cassette Tape Collection, which I digitized in the IS Media and Preservation Lab. This experience led me to begin the creation of a zine on digital oral history file management for donating oral histories to the Mazer, and share and collaborate on other audio preservation projects with IS faculty and students.

Other professional organizations

My path through this program led me to become a member of Code4lib, ARSC, and become a signatory of the Design Justice Network. In my future professional development, I will attend conferences with these organizations, and others such as the Zine Librarians Conference, Henry Stewart DAM conferences, and Alliance of Digital Humanities Conferences. I hope to take an active role in working groups and committees from these organizations that will allow me to develop teaching and collaborative tools to bring these principles further into my work. I am also a student member of the Society of California Archivists, where I actively take part in their professional development workshops, and very recently joined the California Archivists' Collective. I am excited to do work and make connections within both of these local professional organizations, and stay on top of current topics in the field.

Advising History

Fall 2021: Ramesh Srinivasan introduces me to the program and connects me to work by Christine Borgman, sparking my interest in knowledge infrastructures and data management.

September 14, 2021: I am paired with Rikke Ogawa through the iSchool Mentorship program. Rikke becomes my biggest advocate during the stress and struggle of year one in the MLIS program. She read cover letters, debriefed interviews with me, and talked through ways to channel my interests.

Fall 2023: With a new interest in the digital humanities, I switched advisors. I was interested in Dr. Miriam Posner's work since beginning the program, and am thankful she was able to take me on as an advisee. She is an invaluable part of my experience in this program and I feel so fortunate to have been able to take her classes and learn from her.

August 2022: I complete two courses through the California Rare Books School where I dialogue with working professionals and other academics in LIS fields, as well as artists, writers, and educators. I met professional peers, some of who were alumni of UCLA's MLIS program, who are currently completing a Phd, or members of my current cohort I had never met. It was a really wonderful learning experience as well as an incredible opportunity to find community.

October 6, 2022: I take part in the iSchool Mentorship program again for my second year. I am paired with Ashley Peterson who has been wonderful to talk with through my uncertainty over a professional direction, has been a patient listener to my portfolio ideas, and our mutual love for crafting and fiber arts.

I would also like to thank Dr. Shawn VanCour who encouraged me to take on audio archiving, and made my work in the lab a constant education and discovery.

Issue Statement

The finding aid has existed as a benchmark for access in archives for as long as archives have existed in the United States. This attention to the finding aid as an internal tool for archivists to describe and organize information, and as a user interface to connect people to materials has limited archivists from actually addressing problems of access. As archives have moved online with the rest of the world, the finding aid's faults were more fully exposed, failing to meet the capabilities the Internet offered. I propose principles to guide archivists publishing archival content online. These principles will address problems of power, digital literacy, and participation that have always affected access to archival materials, while hopefully moving ideas of access in the profession in a new direction.

Issue Paper

Definitions of Access: Examining Digital Archival Description

Introduction

The Internet has become the primary source of access to collections held at museums, archives, and libraries. In archives specifically, whether they are a digital archive with born-digital materials or digital surrogates, and no physical location, or a physical repository with partial digital collections or digital descriptions of collections, the main tool for online access is still the finding aid. The Society of American Archivists defines access as “the ability to locate relevant information through the use of catalogs, indexes, finding aids, or other tools.”¹ Additionally, the International Council of Archives’ Dictionary of Archival Terminology also defines access through the finding aid as “the availability of records/archives for consultation as a result both of legal authorization and the existence of finding aids.”²

This centrality of the finding aid in the definition of access has limited how archives have moved from operating as physical information centers to digital ecosystems by its attempt to act as both an internal tool for archivists, and an external tool for users. When the finding aid was placed online, it not only became more difficult to use by users, who were now navigating it alone, but also as a system to adequately structure description for computers to read. The EAD document type definition (DTD) in XML became the solution to make archival data computer readable; and the resulting XSLT, XTF, or HTML markup that was displayed to internet users mirrored a paper finding aid.³ Elizabeth Yakel expressed fears that because the finding aid’s encoding process is an add-on, at the end of the descriptive process, it would be impossible to re-envision with new technology.⁴ These fears were realized when EAD standardized structure, rather than content, and effectively limited the way archivists could communicate collection information. As Gregory Wiedeman puts it, this “led archivists to prioritize listing materials

¹ “SAA Dictionary: Access,” accessed March 27, 2023, <https://dictionary.archivists.org/entry/access.html>.

² International Council on Archives – Committee on Best Practices and Standards Working Group on Access, “Principles of Access to Archives – Glossary” (Adopted by the AGM on August 24, 2012)

<http://www.ica.org/13619/toolkits-guides-manuals-and-guidelines/principles-of-access-to-archives.html>.

³ Gregory Wiedeman, “The Historical Hazards of Finding Aids,” *The American Archivist* 82, no. 2 (Fall/Winter 2019): 402.

⁴ Elizabeth Yakel, “Archival Representation,” *Archival Science* 3 (2003): 24.

rather than addressing the broader challenges that users face accessing and using material...[and] transcend the barrier of the reading room."⁵

The duality of the finding aid as both a user interface that connects people to resources, and as a conceptual framework of how access is performed in the profession, perpetuates an idea of neutrality and objectivity of the archivist, but is unsuccessful at representing the relationships between archivist, user, and subject. There is still an absence of guidelines for access that represent how archives need to adapt to support online environments, and evolve to become more equitable spaces where the past and the present merge into one conversation about the use and activation of resources. This paper will use post-custodial and feminist frameworks to form principles to guide the creation of supplementary digital content that is necessary for digital archives and digital archival description.

Literature Review

In the literature pertaining to the online finding aid, topics of usability and discoverability dominate. Studies on usability make recommendations on display and web design based on actual user testing, or systems analysis of interfaces and search functionality.⁶ Most notably work by Daines and Nimer, who made recommendations on single-level display for online finding aids,⁷ and Anne Gilliland's creation of evaluation criteria to assess the adherence to ISAD(G) and integrity of descriptive data in the Online Archive of California.⁸ Within issues of discovery, discussions revolve around technical solutions to optimize both internal collection search processes, and searches performed in Internet browsers. Some of the

⁵ Gregory Wiedeman, "The Historical Hazards of Finding Aids." *The American Archivist* 82, no. 2 (Fall/Winter 2019): 383.

⁶ Heather MacNeil and Jennifer Douglas, "Generic Evolution and the Online Archival Catalogue," *Archives and Records* 36, no. 2 (July 3, 2015): 107–27, <https://doi.org/10.1080/23257962.2015.1070094>; Elizabeth Hopwood, "Discoverability and the Problems of Access: Thoughts on Responsive Digital-Research Interfacing," *American Periodicals* 26, no. 1 (2016): 7–9; Amy Hildreth Chen, "Finding the Modernist Archive: Why UX Matters," *Modernism/Modernity Print Plus*, (August 25, 2018): 1-10.

<https://modernismmodernity.org/forums/posts/finding-modernist-archive>; Rachel Walton, "Looking for Answers: A Usability Study of Online Finding Aid Navigation," *The American Archivist* 80, no. 1 (March 2017): 30–52.

⁷ J. Gordon Daines and Cory L. Nimer, "Re-Imagining Archival Display: Creating User-Friendly Finding Aids," *Journal of Archival Organization* 9, no. 1 (January 2011): 4–31, <https://doi.org/10.1080/15332748.2011.574019>.

⁸ Anne J. Gilliland-Swetland, "Evaluation Design for Large-Scale, Collaborative Online Archives: Interim Report of the Online Archive of California Evaluation Project," *Archives and Informatics* 12 (1998): 177.

solutions explored are the online archival catalog, utilizing the Semantic Web and Linked Data, and simply linking finding aids to Wikipedia.⁹ It is almost important to note the decades of development and implementation of content standards and various controlled vocabularies to improve the largely unstructured data in finding aids.

Understanding all of these technical and data-based methods of putting finding aids online is integral for archivists who may need to adapt their technical skill sets to match the fast rate that technology is changing. These solutions also speak to the context of digital archival resources within the large digital ecosystem of the Internet. If no one can search and retrieve the website, the resources, the descriptions, or the digital surrogates—everything else becomes less relevant. However, the design of these technical solutions often disregards the social context of access in digital spaces; treating collection records and digital surrogates as innately equitable, or understandable and wide-reaching, now that they are online.

In my studies in archival science and digital humanities, the questions I continued to ask about archival access were: how do tools of access, like finding aids, support relationship building between archivists and users? How can multiple viewpoints and participation in record creation be represented? How do finding aids empower users to activate, mobilize, and create with archival records? I began to see that the finding aid fell short in every answer. The answers to these questions may not be found inside this highly technical literature, but rather in community-based archiving practices, in affect theory, in data feminism, decolonial archival praxis, and the digital humanities. I'm choosing to write about archival work that does not center the finding aid and its technical expansion as a tool or concept of access, but instead involves the construction of supplementary digital content that begins to divest from the finding aid.

⁹ Karen F. Gracy, "Archival Description and Linked Data: A Preliminary Study of Opportunities and Implementation Challenges," *Archival Science* 15, no. 3 (September 1, 2015): 239–94. <https://doi.org/10.1007/s10502-014-9216-2>; Ashleigh Hawkins, "Advocating for Linked Archives: The Benefits to Users of Archival Linked Data," in *Proceedings of Linked Archives International Workshop 2021*, 1–12, 2021. http://ceur-ws.org/Vol-3019/LinkedArchives_2021_paper_6.pdf; Jason A. Clark, Helen K.R. Williams, and Doralyn Rossmann, "Wikidata and Knowledge Graphs in Practice: Using Semantic SEO to Create Discoverable, Accessible, Machine-Readable Definitions of the People, Places, and Services in Libraries and Archives," ed. Bonnie Lawlor, *Information Services & Use* 42, no. 3–4 (December 16, 2022): 377–90, <https://doi.org/10.3233/ISU-220171>.

Ontological Frameworks and Principles of Practice

The approach to this issue comes from post-custodial thinking, anti-colonial praxis, and data feminism. Christian Kelleher describes post-custodial work, as a practice of “decoupling the value of archival records” from the repository, and reprioritizing the context of records creation, rather than the records content.¹⁰ The finding aid was an exercise in standardizing structure wholly dependent on the context of archival professionalism, singular authority, and singular process, which post-custodial practice counters by sharing the authority, often through the creation of digital surrogates, and expanded provenance where acknowledgement of community, society, and subjects of a record become co-creators, with ownership. Daniela Agostinho adds that, “post-custodial thinking recognizes that collecting and preserving records is no longer enough to fulfill archival obligations.”¹¹ Meaning, records alone do not create access to users, let alone connections, purpose, or understanding.

Speaking to the process of knowledge creation, the temporal framework of the *slow archive*, introduced by Kimberly Christen and Jane Anderson, emphasizes slowing down to make space for attention to how knowledge is produced, circulated, and exchanged through relationships.¹² Christen and Anderson remind us that the history of collecting is the history of colonialism, and based on versions of access and description that prioritize the power and ownership of the author or property holder.¹³ The finding aid is a professional tool in the archival workflow that is used to circulate materials and determine cultural authority and ownership; but it often obscures the archival process that accomplishes this.¹⁴ To create new archival systems and practices is to constantly contextualize the work archivists do, keeping in mind the colonial history, and places of privilege these practices were created from. The authors argue that slowing down is the only way to build archives that stand for accountability,

¹⁰ Christian Kelleher, “Archives Without Archives: (Re)Locating and (Re)Defining the Archive Through Post-Custodial Praxis,” *Journal of Critical Library and Information Studies* 1, no. 2 (July 7, 2017): 1. <https://doi.org/10.24242/jclis.v1i2.29>.

¹¹ Daniela Agostinho, “Archival Encounters: Rethinking Access and Care in Digital Colonial Archives,” *Archival Science* 19, no. 2 (June 1, 2019): 145. <https://doi.org/10.1007/s10502-019-09312-0>.

¹² Kimberly Christen and Jane Anderson, “Toward Slow Archives,” *Archival Science* 19, no. 2 (June 1, 2019): 87.

¹³ Christen and Anderson, “Towards Slow Archives,” 98.

¹⁴ Christen and Anderson, “Towards Slow Archives,” 98.

engagement, relationality, and reciprocity. Christen and Anderson present the content management system Murkutu, an open-source platform showing what technology design looks like when honoring these principles.

Parallel to these conversations is one on a feminist ethics of care. Michelle Caswell and Marika Cifor argue that archivists enter into relationships with the record creator, the record subject, the user, and larger communities, and have an *affective responsibility* to use radical empathy when working.¹⁵ This idea recognizes that access is not suited to one format, method, or idea, but requires multiple ways of centering people in archival work, and making all steps in the process of describing and displaying resources with them in mind. It is similar to the call Shaowen Bardzell makes in systems design, where starting first and foremost with the perspective of the "marginal user" ensures social inequality is being considered.¹⁶ Failing to recognize this when designing digital archives or digital description again limits nuanced and imaginative notions of access.¹⁷

It is exactly this flux of meaning and contexts that defines archival work that the finding aid is incapable of handling. It is a static object that only captures the context of the record in relation to other records, and provenance of the archivists choosing. The finding aid rarely, if ever, reaches a description of the contemporary context of those who created it, arrange, describe it, house it, and use it. To recognize this requires that principles of affect, relationship building, and care are applied to the systems of access archivists create.

On a similar trajectory, data feminism uses affect as a way to intervene when people within records have been left out of the design process, when the people who are affected by the collection and preservation of materials and metadata are only treated as resources to be extracted.¹⁸ Data feminism is acutely aware of the rhetorical power held by those who describe

¹⁵ Michelle Caswell and Marika Cifor, "From Human Rights to Feminist Ethics: Radical Empathy in the Archives," *Archivaria* 81 (2016): 33. <https://muse.jhu.edu/article/687705>.

¹⁶ Shaowen Bardzell, "Feminist HCI: Taking Stock and Outlining an Agenda for Design" (CHI: HCI For All, Atlanta, GA, 2010).

¹⁷ Agostinho, "Archival Encounters," 153.

¹⁸ Catherine D'Ignazio and Lauren F. Klein, "Bring Back the Bodies," in *Data Feminism*, Strong Ideas Series (Cambridge, Massachusetts: The MIT Press, 2020), 17-18.

and present information.¹⁹ A data feminist approach asks of this power, how can activating emotion, rather than distancing it from the work, leverage it within description to help people learn, remember, and communicate with digital records?²⁰ Sandra Harding calls this denial of neutrality and objectivity *standpoint theory*, in which we do not sink in “absolute relativism” but work towards truth, by disclosing the standpoint of the designer, or in this context, the archivist.²¹ Distinguishing and acknowledging multiple points of knowledge creation in the record is not common archival practice, even in participatory projects,²² and it is very difficult to accomplish through the finding aid’s hierarchical structure. This adds to a decolonial praxis and a feminist ethics of care’s emphasis on affect and relationships, by asking archivists to be reflexive in combination with other principles that acknowledge structural power differentials such as justice, co-liberation, and equity.

These three frameworks in conversation ask us to imagine better archival futures, and from them I have distilled a set of shared principles that archivists should approach access through: engagement, reflexivity, emotion, accountability, shared-authority, justice, and empathy.²³ These principles closely align to Michelle Caswell’s 5 principles of community archives, and as illustrated through Caswell’s chapter and the literature above, it is these archives who are leading the way in reimagining what digital access looks like with cultural heritage.

What I’d like to add to this conversation is a way of using these principles to work toward remaking methods and systems of archival description and access through the creation of supplementary digital content that acts as guides for collections, builds relationships, aids in digital literacy, and curates how resources from the collection are being used. Digital content to

¹⁹ Catherine D’Ignazio and Lauren F. Klein, “On Rational, Scientific, Objective Viewpoints from Mythical, Imaginary, Impossible Standpoints,” in *Data Feminism*, Strong Ideas Series (Cambridge, Massachusetts: The MIT Press, 2020), 5.

²⁰ D’Ignazio and Klein, “On Rational, Scientific, Objective Viewpoints,” 5.

²¹ Sandra Harding, “‘Strong Objectivity’: A Response to the New Objectivity Question,” *Synthese* 104 (1995): 331-49.

²² Greg Bak, et al., “Knowledge Organization as Knowledge Creation: Surfacing Community Participation in Archival Arrangement and Description,” *Knowledge Organization* 46, no.7 (2019): 502-521.

²³ Michelle Caswell, “Affective Bonds: What Community Archives Can Teach Mainstream Institutions,” in *Community Archives, Community Spaces: Heritage, Memory and Identity*, ed. Jeannette A. Bastian and Andrew Flinn (Facet, 2018), <https://doi.org/10.29085/9781783303526>.

guide users in various ways through websites and digital collections has picked up momentum in recent years, mostly led by librarians and digital humanists. This work is often not prioritized by archivists, unless their role is specifically in instruction or primary source literacy. Of course, not all of this content abides to a set of principles, but it begins the process of designing more intentional work in the future. Access approached with these principles in mind will hopefully create content that gives respect and acknowledging the subjects of records, creates room for institutions to reckon with colonial complicity and other forms of violence and surveillance,²⁴ form reciprocal and compensated relationships through budget allocation and project building, invites more people in, other than just academic scholars in order to collaborate, share knowledge, and learn, and lastly to provide pathways for understandable digital design.

Principles in Action

Digitization and online environments often promise increased access and usability, but the social structures that hinder engagement and establish power inequities are still present in the information architecture of the internet. These environments create new layers of meaning through the choices web designers and system designers make for accessing digital content, and the effects of these decisions must be carefully evaluated. Digital archives and open access movements still do not fully consider perspectives other than Western, cis-hetero, white, modes of curation and design, where access can be synonymous to being surveilled and controlled by anyone who is part of a group marginalized or recorded against their will.²⁵ This is why there is a focus on digital description as a whole, not just digital archives with fully available content in this paper.

The essential next steps after digitization in any capacity is to share with users what it means to interact with the information architecture of online collections,²⁶ and share ways users can participate and learn with the materials. Creating content that explains the choices archivists have made in digital environments means that access is contextualized, and can set

²⁴ Agostinho, "Archival Encounters," 145-154.

²⁵ Agostinho, "Archival Encounters," 145-154.

²⁶ Harriet E. Green, "Building from the Inside Out: Librarians as Nodes in Digital Scholarship," in *Libraries and Archives in the Digital Age*, ed. by Susan L. Mizruchi (Boston: Palgrave Macmillan, 2020), 186-187.

expectations for users, while also creating a path to channel the principles discussed previously. These tools can look like curated collection guides, zines, blogs, and oral histories as participatory projects, and digital toolkits that share knowledge about the archival process, preservation, and resources.

The Digital Library of America assembled groups of teachers from all subjects, age groups, and backgrounds to look at materials and give opinions on how things should be organized for educators, tagging age groups that certain materials are appropriate for. The output was not a static record, but supplemental archival content called 'primary source sets', small sets of selected items that could be integrated into lesson plans and courses.²⁷ Educators could also add their own materials that were relevant to their town or their students to make the learning more applicable to their own lives.²⁸ The Digital Transgender Archive also curates primary sources sets, as well as starter guides, race and ethnicity research guides, transgender and queer histories, and search tips, all presented on their website as infrastructure that supports casual visitors and researchers.²⁹ These are examples of engagement on large and small scales, but both speak to the opportunity this type of supplemental content offers to orient an archive's position as non-neutral and non-objective stewards of information. Creating this content means contending with where an archive and the archivists who work there stand in the social fabric.

Participatory projects like zines, blogs, oral histories, and digital exhibitions, or annotations that appear when records are accessed, can support empathy, reflexivity, emotion, and shared-authority in supplement content. The *See You at the Paradise* zine was created by researchers and community members on Norfolk Island focusing on the Kingston and Arthur's Vale Historic Area as a way to strengthen voices marginalized by the historic record.³⁰ Zines therefore are engaging ways to reach more people, but also serve as a disruption to institutional authority. Digital exhibits using Scalar, Omeka, or any other web-publishing platforms can also

²⁷ Daniel J. Cohen, "From Open Access to Maximal Access." In *Libraries and Archives in the Digital Age*, ed. by Susan L. Mizruchi (Boston: Palgrave Macmillan, 2020), 30-31.

²⁸ Cohen, "From Open Access to Maximal Access," 30-31.

²⁹ <https://www.digitaltransgenderarchive.net/>

³⁰ Sarah Baker and Zelmarie Cantillon, "Zines as Community Archive," *Archival Science* 22, no. 4 (December 2022): 539–61, <https://doi.org/10.1007/s10502-022-09388-1>.

facilitate community-led participation, highlight collection materials, or educate users on digital literacy. For instance, Michaela Ullmann, a librarian at University of Southern California, has done this using Scalar to create a toolkit for students using primary source materials.³¹ This is beneficial because it meets students with empathy and teaches them about the limits of archives and the privileged history of collecting. Other examples of participatory archival records are Michelle Caswell's work in the South Asian American Digital Archive where digital projects often use oral history, art, walking tours, as well as data visualization through which to explore the archive.³² Similarly, the June L. Mazer Lesbian Archive integrates oral histories with community members as part of their finding aids and collection materials. Both of these community archives remix and layer archival materials with other content that honors emotion and personal memory from many perspectives in the archival record.

In order for accountability to be fully practiced, archival processes, policy, and decisions need to be more visible rather than privileged to large institutions or for those who have completed graduate degrees. In some institutions collection development policy is made public, explaining what currently is held by an institution and where they are looking to grow. Post-2020, when predominantly white institutions rushed to enact diversity, equity, and inclusion initiatives, adjusting collection development policies was one place they started. Expanding upon this, processing and preservation guides, as well as administrative hierarchy and workflows should also be made public. These resources as digital toolkits can provide smaller institutions inspiration for how to manage and preserve their records, it can also open paths of access that help form partnerships and collaborations. UCLA's Digital Library Program currently has a Digital Library Program Toolkit (DLPTK) that is meant for exactly that: "to serve as a reference for other institutions while planning and implementing digital projects."³³ This not only engages other archives, but enables others to give feedback on the workflow, and the work the DLPTK has produced.

³¹ <https://scalar.usc.edu/works/primary-source-literacy---an-introduction/introduction?path=index>

³² <https://www.saada.org/browse>

³³ <https://www.library.ucla.edu/help/services-resources/digital-projects-for-special-collections/>

Conclusion

In my own archival practice, I will advocate for additional content to accompany digitized archival resources and digital representations of archival collections to be included in a processing plan or scope of a grant. Part of this involves promoting a budget that prioritizes compensated collaborative work with community members, artists, and activists on participatory projects within the archive. Through these actions, I will strive to make content that is guided by engagement, reflexivity, emotion, accountability, shared-authority, justice, and empathy. Changing conceptions of access in the archival profession will be a long process, one based on deprofessionalization, skill-sharing, and efforts to make people more comfortable using digital technology; but it is a process that is worthwhile to create the next generations of archivists who will reflect and question the way things have been done, and imagine and build expansive and inclusionary digital infrastructure for archival resources.

Bibliography

Agostinho, Daniela. "Archival Encounters: Rethinking Access and Care in Digital Colonial Archives." *Archival Science* 19, no. 2 (June 1, 2019): 141–65.
<https://doi.org/10.1007/s10502-019-09312-0>.

Bak, Greg, Danielle Allard, and Shawna Ferris. "Knowledge Organization as Knowledge Creation: Surfacing Community Participation in Archival Arrangement and Description." *Knowledge Organization* 46, no. 7 (2019): 502-521.

Baker, Sarah, and Zelmarie Cantillon. "Zines as Community Archive." *Archival Science* 22, no. 4 (December 2022): 539–61. <https://doi.org/10.1007/s10502-022-09388-1>.

Caswell, Michelle, and Marika Cifor. "From Human Rights to Feminist Ethics: Radical Empathy in the Archives." *Archivaria* 81 (2016): 23-43. muse.jhu.edu/article/687705.

Caswell, Michelle. "Affective Bonds: What Community Archives Can Teach Mainstream Institutions." In *Community Archives, Community Spaces: Heritage, Memory and Identity*, edited by Jeannette A. Bastian and Andrew Flinn. Facet, 2018.
<https://doi.org/10.29085/9781783303526>.

Chen, Amy Hildreth. "Finding the Modernist Archive: Why UX Matters." *Modernism/Modernity Print Plus*, (August 25, 2018): 1-10.
<https://modernismmodernity.org/forums/posts/finding-modernist-archive>.

Christen, Kimberly, and Jane Anderson. "Toward Slow Archives." *Archival Science* 19, no. 2 (June 1, 2019): 87–116. <https://doi.org/10.1007/s10502-019-09307-x>.

Clark, Jason A., Helen K. R. Williams, and Doralyn Rossmann. "Wikidata and Knowledge Graphs in Practice: Using Semantic SEO to Create Discoverable, Accessible, Machine-Readable Definitions of the People, Places, and Services in Libraries and Archives." *Information Services & Use* Preprint, no. Preprint (January 1, 2022): 1–14.
<https://doi.org/10.3233/ISU-220171>.

Cohen, Daniel J. "From Open Access to Maximal Access." In *Libraries and Archives in the Digital Age*, edited by Susan L. Mizruchi, 27–34. Boston: Palgrave Macmillan, 2020.

D'Ignazio, Catherine, and Lauren F. Klein. "Introduction." In *Data Feminism. Strong Ideas Series*, 1-13. Cambridge, Massachusetts: The MIT Press, 2020.

— "Bring Back the Bodies." In *Data Feminism. Strong Ideas Series*, 1-22. Cambridge, Massachusetts: The MIT Press, 2020.

— "On Rational, Scientific, Objective Viewpoints from Mythical, Imaginary, Impossible Standpoints." In *Data Feminism*. Strong Ideas Series, 1-16. Cambridge, Massachusetts: The MIT Press, 2020.

Daines, J. Gordon, and Cory L. Nimer. "Re-Imagining Archival Display: Creating User-Friendly Finding Aids." *Journal of Archival Organization* 9, no. 1 (January 2011): 4–31.
<https://doi.org/10.1080/15332748.2011.574019>.

Gilliland-Swetland, Anne J. "Evaluation Design for Large-Scale, Collaborative Online Archives: Interim Report of the Online Archive of California Evaluation Project." *Archives and Informatics* 12 (1998): 177-203.

Gracy, Karen F. "Archival Description and Linked Data: A Preliminary Study of Opportunities and Implementation Challenges." *Archival Science* 15, no. 3 (September 1, 2015): 239–94.
<https://doi.org/10.1007/s10502-014-9216-2>.

Green, Harriet E. "Building from the Inside Out: Librarians as Nodes in Digital Scholarship." In *Libraries and Archives in the Digital Age*, edited by Susan L. Mizruchi, 27–34. Boston: Palgrave Macmillan, 2020.

Harding, Sandra. "'Strong Objectivity': A Response to the New Objectivity Question." *Synthese* 104 (1995): 331–49.

Hawkins, Ashleigh. "Advocating for Linked Archives: The Benefits to Users of Archival Linked Data." In *Proceedings of Linked Archives International Workshop 2021*, 1–12, 2021.
http://ceur-ws.org/Vol-3019/LinkedArchives_2021_paper_6.pdf.

Hopwood, Elizabeth. "Discoverability and the Problems of Access: Thoughts on Responsive Digital-Research Interfacing." *American Periodicals* 26, no. 1 (2016): 7–10.

Kelleher, Christian. "Archives Without Archives: (Re)Locating and (Re)Defining the Archive Through Post-Custodial Praxis." *Journal of Critical Library and Information Studies* 1, no. 2 (July 7, 2017). <https://doi.org/10.24242/jclis.v1i2.29>.

MacNeil, Heather, and Jennifer Douglas. "Generic Evolution and the Online Archival Catalogue." *Archives and Records* 36, no. 2 (July 3, 2015): 107–27.
<https://doi.org/10.1080/23257962.2015.1070094>.

Walton, Rachel. "Looking for Answers: A Usability Study of Online Finding Aid Navigation." *The American Archivist* 80, no. 1 (March 2017): 30–52.
<https://doi.org/10.17723/0360-9081.80.1.30>.

Wiedeman, Gregory. "The Historical Hazards of Finding Aids." *The American Archivist* 82, no. 2 (Fall/Winter 2019): 381–420.

Yakel, Elizabeth. "Archival Representation." *Archival Science* 3 (2003): 1–25.

Major Paper

Crowdsourcing for Reuse: Imagining the Participatory Archive

IS289B Archival Description and Access | Jonathan Furner | Winter 2022

Introduction

Crowdsourcing is not a new concept, originating even before the rise of the World Wide Web, but primarily taking hold in the early 2000s. It was built around emerging Web 2.0 capabilities at the time like Del.icio.us and Flickr, where user communities could interact, socialize, and collaborate over shared content. In its use with digital heritage and the humanities, Mia Ridge offers the definition of crowdsourcing as, “an emerging form of engagement [...] that contributes towards a shared, significant goal or research area by asking the public to undertake tasks that cannot be done automatically, in an environment where the tasks, goals (or both) provide inherent rewards for participation.”¹ This definition is fairly vague, but is important because it speaks to a symbiotic relationship between the users, referred to as the nebulous public, and the institution or environment, recognizing that each has different motivations, and places responsibility on each to meet each other’s needs. While acknowledging Ridge’s definition, Melissa Terras offers another, “the harnessing of online activities and behavior to aid in large-scale ventures such as tagging, commenting, rating, reviewing, text correcting, and the creation and uploading of content in a methodical, task-based fashion to improve the quality of, and widen access to, online collections.”² ³ This definition places emphasis on the way tasks will be carried out using technology and digital environments. Terras focuses on the link between the crowdsourcing project’s design to effectively generate descriptive content, and the effects that this would have on access.

The differences between these definitions are representative of the variety of ways crowdsourcing projects have been approached, and the large body of scholarship that exists, meaning that the definition often relies on the context of its use. Among others, Daren

¹ Mia Ridge, ed., *Crowdsourcing Our Cultural Heritage* (Burlington, VT: Ashgate Publishing Limited, 2014): 2.

² Melissa Terras, “Crowdsourcing in the Digital Humanities,” in *A New Companion to Digital Humanities*, eds. Susan Schreibman et. al. (Wiley Online Library: John Wiley and Sons Limited, 2016), 420.
<https://doi.org/10.1002/9781118680605.ch29>.

³ Rose Holley, “Crowdsourcing: How and Why Should Libraries Do It?,” *D-Lib Magazine* 16 no. 3-4 (2010): 1-21.
<http://www.dlib.org/dlib/march10/holley/03holley.html>.

Brabham's proposed typology for crowdsourcing projects provides a way to step back and think about the type of problem being addressed, and the mechanism used to solve it.⁴ Brabham identifies information management issues, most typical of galleries, archives, libraries, and museums (GLAMs) and the humanities, which deal with locating, creating, assembling, sorting, or analyzing information with the use of micro-tasks.⁵ His solution to these problems is what he calls, distributed human intelligence tasking: when "a corpus of data is known and the problem is not to produce designs, find information, or develop solutions, but to process data."⁶ Tasking to this end, is how crowdsourcing is organized.

This paper will explore how archival description is recreated in crowdsource tasking, arguing that crowdsourcing reveals the infrastructure of archival processes which are usually hidden from the user, and forces them to be closer examined as extensions or expansion of archival power and the role of the archivist. This examination not only furthers postmodernist views that the archive asserts power by classifying and constructing knowledge around the objects they contain, but also asks for solutions to how that description can best be represented, integrated to promote access and reuse, sharing the archival power description affords, and lastly, calls for a reimagining of what archival stewardship and records management looks like within the future of digital archives. Ultimately this paper seeks to act as a condensed review of the literature on crowdsourcing, while also focusing on a few specific projects that deal with describing existing archival holdings through transcription and classifying tasking types. The projects closely examined are The Huntington Library's Decoding the Civil War, and the Library of Congress' By the People campaign Clara Barton: Angel of the Battlefield, all other projects briefly mentioned were from sources, or only reviewed for specific information. These crowdsourcing projects are distinguished from user-generated born-digital archives, or digital community archives like Journal of the Plague Year, We are Wales, the Willi Smith Community Archive, StoryCorps Archive, or Deep Cities (Curbatheri), as these projects, while often referred to as crowdsourcing and rely on some of the same principles, face different challenges compared to physical repositories transitioning to a digital environment.

⁴ Daren C. Brabham, *Crowdsourcing* (Cambridge, MA: MIT Press, 2013), 45-51.

⁵ Brabham, *Crowdsourcing*, 45-51.

⁶ Brabham, *Crowdsourcing*, 45-51.

Background

Since the early 1990s postmodernism has affected archival studies to more openly acknowledge the power and privilege that are at play in the archival process.⁷ Every point within the lifecycle of archival records is inherently biased, reflecting particular world-views, and constructed to meet specific purposes.⁸ There is no way to escape this. With the lack of resources, and overwhelming amount of historical material, even after archival selection ingests fractions of it, some objects will receive, full, partial, or no attention.⁹ Archival arrangement and description is just one moment of the archival process that constructs meaning and knowledge. It is concerned with the classification and organization of historical objects in an archive, and the data of historical objects, or the data of data (the metadata) that entails describing the content and the context of those objects. Postmodernism as a theoretical framework, asserts that description comes with the power to make and remake archival records, determining how they will be used in the future; because each description becomes a part of a story that the objects and their records tell, a story that is continuous, constantly shifting and part of the broader context of society, archivists have the power to impact what story is told, or in effect create meaning from their descriptions.^{10 11}

Building on this recognition of archival description as dynamic and interpretational, Greg Bak proposes that description is an archival object, where the process of how information was gathered should be represented alongside the information itself.¹² In this conception of archival description, it creates a responsibility and a method of accountability for archivists, records managers, community members, and researchers who inform archival description, by being

⁷ Terry Cook and Joan M. Schwartz, "Archives, Records, and Power: From (Postmodern) Theory to (Archival) Performance," *Archival Science* 2 (2002): 171–85.

⁸ Wendy M. Duff and Verne Harris, "Stories and Names: Archival Description as Narrating Records and Constructing Meanings," *Archival Science* 2 (2002): 263–85.

⁹ Terry Cook, "What is Past is Prologue: A History of Archival Ideas Since 1898, and the Future Paradigm Shift," *Archivaria* 43 (1997): 46.

¹⁰ Duff and Harris, "Stories and Names," 265, 272.

¹¹ K. J. Rawson, "The Rhetorical Power of Archival Description: Classifying Images of Gender Transgression," *Rhetoric Society Quarterly* 48, no. 4 (2018): 328–330.

¹² Greg Bak, et al., "Knowledge Organization as Knowledge Creation: Surfacing Community Participation in Archival Arrangement and Description," *Knowledge Organization* 46, no. 7 (2019): 503.

more transparent about the policies surrounding descriptive practice, who performs it, and the end use.¹³ In this conception of archival description there is not necessarily a divide between community description and institutional description, but layers of archival objects that inform each other through shared practices. It calls attention to the differences between digital repositories and physical repositories, acknowledging that these environments enable different goals, and different practices to help achieve them. The logic of the digital archive being different from that of a physical one.¹⁴

In the tradition of physical repositories, description has been constructed through hierarchical structures, grouped by the principles of provenance, *respect des fonds* and original order, to form context and relationships between historical objects and subjects. Ontologies, or classification systems, and controlled vocabularies are imposed to further define context, relationships, and content. These aspects of the process of description function to both control access and authenticity, while still connecting researchers and users to materials, making them more effectively searched and retrieved.¹⁵ It should be recognized that what arrangement and description is for, and how the principles are used, are highly debated and outside the scope of this paper.^{16 17 18} It is generally considered that more description means furthering the reach of collections, and providing more access.

The final product meant for users and enabling this access, is usually a finding aid. When finding aids were hosted by institutions on the Internet, their conception was reworked to become more searchable, whether in a text-based PDF or a webpage with headings and sections to guide a user, or more unconventional methods. In both the physical and the digital context, finding aids do not reveal all of the metadata and description an institution may have on a historical object it holds, nor will it reveal any information about how that description was

¹³ Bak, et al., "Knowledge Organization," 504-5.

¹⁴ Rawson, "The Rhetorical Power," 330, 340.

¹⁵ Alexandra Eveleigh, "Crowding Out the Archivist?," in *Crowdsourcing Our Cultural Heritage*, ed. Mia Ridge (Burlington: Ashgate Publishing Limited, 2014), 212.

¹⁶ Geoffrey Yeo, "Debates and Description," in *Currents of Archival Thinking*, eds. Terry Eastwood and Heather McNeil (Westport, CT: Libraries Unlimited, 2010), 89-114.

¹⁷ Luciana Duranti, "Origin and Development of the Concept of Archival Description," *Archivaria* 35 (1993): 47-54.

¹⁸ Ciaran B. Trace, "Maintaining Records in Context: A Historical Exploration of the Theory and Practice of Archival Classification and Arrangement," *The American Archivist* 83, no. 1 (2020): 91-127. <https://doi.org/10.17723/0360-9081-83.2.322>.

created. Especially when finding aids and collection search boxes work well, researchers and users do not often question it, the process acts as hidden infrastructure guiding them to what they need. The user only knows of the input (the historical objects or holdings of an institution) and the output (the finding aid or website search box), making the archive perform as a black box, hiding the complex internal descriptive process, and subsequently effecting how they are used and reused.¹⁹ This is possible primarily because this work is being performed by professional archivists sometimes physically and intellectually separated from the context and subjects of these archival objects, coming from a legacy of archival work where the archivists' role and aspirations were tied to archival description, allowing them to be the mediator between the holdings and the users, as well as a history of archival work within the colonial and administrative processes of the state.²⁰ Postmodernism was a shift not only in the way these processes were conceptualized as power, as infrastructure, but also a shift in thinking about the archivist's role within these processes.

Beyond the transformation of the finding aid, digitization efforts had created (are still creating) digital representations of analog collections in unstructured formats like image files, sound files, video files, that while now online, are not searchable, interoperable, or interrogable.²¹ The potential of the digital collection depends on the structure of metadata and descriptive content, all of which has to be generated to perform for these contexts based on a machine's ability to read and extract information based on a search. The use of crowdsourcing was conceived to make this process quicker, addressing backlog, improving access points, while also presenting opportunities to engage with an established community in a deeper way, allowing different classifications, tags, and language to be used in description.²² The digital environment of the Internet, Web 2.0, and crowdsourcing became a tool of the participatory archive, to face the constructed, biased nature of individuals and institutions, the power they

¹⁹ Trace, "Maintaining Records," 93.

²⁰ Trace, "Maintaining Records," 115.

²¹ Ashleigh Hawkins, "Archives, Linked Data and the Digital Humanities: Increasing Access to Digitised and Born-Digital Archives via the Semantic Web," *Archival Science* (2021): 2. <https://doi.org/10.1007/s10502-021-09381-0>.

²² Ridge, *Crowdsourcing Our Cultural Heritage*, 6.

held through description, and as a means to be able to bring new voices to archival objects, distributing the power and authority to others.²³

This has created tension in a variety of ways, whether between practical collections management issues and theory-based professional ideals, as well as between professional archivists and user groups in their motivations or authority, between physical repositories and digital repositories, or as is the focus of this paper, between data collected and its subsequent access and reuse, all largely centered around professionals letting go of their control of archival processes and adapting to new technologies.²⁴ The dominant practices archivists have devised to receive contributions from users are sharing information, adding new content, commenting, tagging with folksonomies or local controlled vocabularies, transcription, and text-correction of optical character recognition (OCR) or speech-to-text software generated files. Whether their motivations are to distribute the power of that description affords, to just see new perspectives, or to work faster through backlog and increase access points, it has forced them to recreate the process of archival description in some capacity. Crowdsourcing thereby reveals archival infrastructure and opens the black box to users, while also asking archivists to confront their processes.

Examining Tasking

This brings us back to Brabham's typifying of crowdsourcing, as "micro-tasks," and distributed human intelligence tasking. From what has been outlined about the archival description as a practice of professional archivists, it is not "just processing data," but involves a variety of interpretive skills and information gathering to construct meaning and stories about historical objects. Looking at archival description within microtasking using the projects Decoding the Civil War, where information was viewed online, and supplemented with phone correspondence from the project's lead at the Huntington Library, and with By the People's Clara Barton: Angel of the Battlefield campaign, resources were only examined online through the crowdsourcing platforms, institutional website, blog posts, and GitHub pages.

²³ Edward Benoit III and Alexandra Eveleigh, eds., *Participatory Archives Theory and Practice* (London: Facet Publishing, 2019), 4-5.

²⁴ Eveleigh, "Crowding Out the Archivist," 212-5.

There are many stages and elements that aid in designing a compelling crowdsourcing project, the structure of tasking and its implications will be the only ones covered here.²⁵ ²⁶ ²⁷ ²⁸ Knowledge organization and structure of generated content must be considered from the start of a project.²⁹ This is to ensure the content generated has meaning beyond a general feeling of participation and socialization, and is integrated into established archival systems or records, becoming findable, accessible, interoperable, and reusable according to FAIR guiding principles.³⁰ This looks like encoded machine-readable text, linked data formatting, datasets, images, video or audio, all hosted in a public and open access setting with additional explanation of how to read each file.³¹ Microtasking, or the breaking down of archival description into quick, intuitive, distinctive, manageable tasks, became the answer to project organization in crowdsourcing because it was easy to oversee in a digital medium, and provided results that easily translated into the formation of structured data. It is a strategic project management method, where smaller goals are created to eventually form one larger goal.

Tasks can represent one of many levels of description, gaining complexity as each task is completed. For example, in Decoding the Civil War project on Zooniverse, participants on the platform were asked to transcribe and classify telegrams and codebooks in the form of high-resolution image files. This was phase one of a project, then phase two would ask participants to extract specific metadata from the transcriptions, like sender, recipient, date sent. In the Clara Barton campaign, after transcription of personal papers and manuscripts was completed, tags and classifications could be added to materials. These are levels of description that in the analog archive may have been accomplished simultaneously by one or two professionals, moving between data extraction and other levels of interpretation simultaneously, relying solely

²⁵ Holley, "Crowdsourcing," 1-21.

²⁶ Terras, "Crowdsourcing in the Digital Humanities," 420-38.

²⁷ Johan Oomen, and Lora Aroyo, "Crowdsourcing in the Cultural Heritage Domain: Opportunities and Challenges," paper in the proceedings of the Fifth International Conference on Communities and Technologies (New York: Association for Computing Machinery, 2011), 138-149. <https://doi.org/10.1145/2103354.2103373>.

²⁸ Ridge, *Crowdsourcing Our Cultural Heritage*, 2-16.

²⁹ Ina-Maria Jansson and Isto Huvila, "Social Tagging and Commenting: Theoretical Perspectives," in *Participatory Archives Theory and Practice*, eds. Edward Benoit III and Alexandra Eveleigh (London: Facet Publishing, 2019), 40.

³⁰ Hawkins, "Archives, Linked Data and the Digital Humanities," 3.

³¹ Hawkins, "Archives, Linked Data and the Digital Humanities," 3.

on the processing archivist's perspectives about the materials relationships and their wider context.

By expanding the process of description to the crowd, levels of the process are made distinct by tasks. Though each level builds upon each other, at each level there is opportunity to make room for contrasting, interpretive, and expansionary description if the project supports it. What crowdsourcing relies on, what distinguishes it as either an extension of the archivist's vision, or expanding to share power, including other perspectives and knowledge, is the structure of the project, how much time, energy, and thought goes into the digital platform and the tools to support participation. In a blog post on the Clara Barton campaign written by a historian in the Library of Congress's manuscript division, the author writes lengthily about the detective work performed to transcribe a name used in a diary entry. The historian consulted numerous sources all digitally available, to corroborate the name unknown by volunteers. This blog post is an example of the division between the expectations of how professionals contribute to resources, and how volunteers contribute, and the use of tasking levels reinforces this. Users process the data quickly, skipping over things they do not know in these projects. The design is not for volunteers to do their own interpretive work, even though it is readily available to them through digital archival collections.

Education was a large part of Decoding the Civil War. Learning modules split into three types of pedagogy, Inquiries, Explainers, and Activities, where the codebooks and telegrams of the project were contextualized with other materials from The Huntington's collection, as well as enforcing a foundation of skills to help participants analyze 19th century handwriting and subjects.³² Even though the institution was extremely invested in providing support and resources to investigate what they were transcribing, it still only amounted to tasks that were data processing, preparing materials for the professionals to review and take closer looks. Tasks need instruction that is thorough and clear to ensure a good standard of work, ease of use and understanding, and a starting point for all users to invest in a project. There also needs to be systems to check interpretations, so workflows encapsulating levels of review still need to occur.

³² "Primary Source Instructional Tools," The Huntington Library, accessed march 18, 2022, http://huntington1.com/ps/_decoding_the_civil_war/_decoding_the_civil_war.html.

Though transcription is not a neutral process, constructed like any other form of archival description, as reading is a personal and subjective activity, and reading from difficult handwriting that never anticipated being poured over by others, holds the potential for some interpretations to be privileged over others, it is not exactly the radical imaginings of the participatory archive where free form knowledge is shared, a “deeper involvement and more complex semantics,” is occurring between participant and archivist over historical materials.³³

³⁴ There was not a structure to encourage research and investigation by volunteers after a foundation of transcription had been set. It is this division set by “if you do not know, move on,” type of tasking and the archivist’s review that is still coming from an overall vision of the archivist as singular authority.

In some cases, the more complex tasks are never realized due to funding. Phase two of Decoding the Civil War was not realized, but if it had, super-volunteers would have been emailed directly, asking for another level of commitment in using the transcribed code books to decode the telegrams.³⁵ More education to explain professional standards, contexts, knowledge, and digital tools, would need to be provided, but users would be more involved in the process than before, informing its structure and engaging in interpretation. These interpretations would form a new record, linked to the code books and corresponding telegrams, though made clear that the decoding had been done in the present day. Other examples of more complex and interpretational tasking are out there, where projects gave users the skillsets and pedagogical framework of professionals in the field.³⁶ But this is still not the same as sharing authority, as the methods and process of the crowdsourcing project is not maintained in the archival record, remaining an invisible archival infrastructure. It is only the final product that a new record, or is added to an existing one. This is a problem also identified

³³ Sumayya Ahmed, “Engaging Curation: A Look at the Literature on Participatory Archival Transcription,” in *Participatory Archives Theory and Practice*, eds. Edward Benoit III and Alexandra Eveleigh (London: Facet Publishing, 2019), 75.

³⁴ Isto Huvila, “Participatory Archive: Towards Decentralised Curation, Radical User Orientation, and Broader Contextualisation of Records Management,” *Archival Science* 8, no. 1 (2008): 15-36. <https://www.diva-portal.org/smash/get/diva2:287959/FULLTEXT01.pdf>.

³⁵ Mario Einaudi, Phone call to author, March 18, 2022.

³⁶ Terras, “Crowdsourcing in the Digital Humanities,” 432.

by Bak, and is continued in the examination of how data is integrated and offered as publicly available.³⁷

Here it will be noted that with the right pedagogy, digital tools, and online platform in combination with the layering of task complexity, users can be taught to recreate professional skill sets and apply standard ontologies, but this extends Elizabeth Yakel's question of how much are archivists willing to share, to how much are they able to share?³⁸ Besides the limitations of funding and time to build these platforms and education tools, meet and collaborate with participants over the construction of each ontology and descriptive practice, there is an ethical question of how much labor you can require of user participants, especially when what is being asked may disrupt the nature of volunteer work, to easily come and go, working as you please, as well as take away salaried work from new professionals in the field, limiting the expansion of job titles, specializations, and shared responsibilities among professionals. This is another examination of crowdsourcing in itself, calling into question how crowdsourcing participates in capitalist distinctions of skilled or unskilled labor, and Marxist ideas of the effects of cheap labor on industry and fair compensation. Using crowdsourcing at more complex levels of interpretation, ideation, and collaboration have been touched on by Melissa Terras, who points to organizations grappling with crowdsourcing in this way.³⁹

Integrating Crowdsourcing Data

As for how the structured descriptive content that was generated from crowdsourcing is used by the archive, is an area that is still being explored, usually by using specific projects as case studies.^{40 41 42 43} For most part though, the processes and complexities connecting knowledge organization, generating the content, and sharing or using the content are not

³⁷ Bak, "Knowledge Organization," 505, 518.

³⁸ Elizabeth Yakel, "Who Represents the Past? Archives, Records, and the Social Web," in *Controlling the Past: Documenting Society and Institutions (Essays in Honor of Helen Willa Samuels)*, ed. Terry Cook (Chicago: Society of American Archivists, 2011), 258.

³⁹ Terras, "Crowdsourcing in the Digital Humanities," 432-4.

⁴⁰ Bak, "Knowledge Organization," 502-21.

⁴¹ Eveleigh, "Crowding Out the Archivist?," 211-30.

⁴² Terras, "Crowdsourcing in the Digital Humanities," 420.

⁴³ Hawkins, "Archives, Linked Data and the Digital Humanities," 3.

represented in the literature as one would expect.⁴⁴ ⁴⁵ The issue of transparency in the archival record is directly correlated in the literature about crowdsourcing projects, with much more focus being on how to involve a wide participant base, how to create a task, funding, and attention. Though this shift is being made, and newer projects are supplemented with more technical materials. This observation again centers the question: if archival description informs interactions, interpretations, research, and social memory, must that not be extensively reported on and recorded in archival records like finding aids and institutional websites?⁴⁶ A problem faced when writing this paper was that closer analysis of how user generated data was formatted, made accessible, and recorded was difficult to grasp without having actually worked on a project or done more extensive interviews with all the teams that collaborate on a project like this.

Decoding the Civil War linked the crowdsourcing project to the institutional holding webpage as a method of integration. They provide the transcription that was created by volunteers under the heading “transcript,” which is separate from the more conventional looking metadata under, “object description,” it is not a separate file. Speaking with Mario Einaudi, developers from Zooniverse worked with them on the entire project. Zooniverse has its own internal programs that reviewed transcriptions, comparing versions of volunteers, and producing a final copy.⁴⁷ It also aggregated classifications and transcriptions generated by volunteers into .csv files and JSON elements that can then be used later, though it is unclear where those are hosted.⁴⁸ Credit is only given to Zooniverse volunteers in a catalog note. The institutional record is relying on the continual hosting of the Zooniverse site to provide deeper insight into the process of description. When this is removed the catalog note will most likely be the only record of the project. Regarding more complex phases of the project, the archival record would have never reflected the process of description, or as reliance on specific groups of volunteers grew, their names.⁴⁹

⁴⁴ Bak, “Knowledge Organization,” 513.

⁴⁵ Terras, “Crowdsourcing in the Digital Humanities,” 429.

⁴⁶ Bak, “Knowledge Organization,” 518.

⁴⁷ Mario Einaudi, Phone call to author, March 8, 2022.

⁴⁸ Mario Einaudi, Phone call to author, March 8, 2022.

⁴⁹ Mario Einaudi, Phone call to author, March 18, 2022.

Looking at the Clara Barton campaign from By the People, the institutional record is linked from the project page. In the institutional record there is a linked text file. There is no mention of how the transcription was generated, the campaign, or the volunteers. In a separate blog published piece, the By the People workflow is documented, and in a description on By the People's website there is mention of how to access zipped .csv datasets from collections.⁵⁰⁵¹ So far Clara Barton's manuscripts do not have an associated dataset. But looking at other campaigns that do, the dataset is its own record, with a link to the campaign website, the historical collection that formed the dataset, and the contributor lists the creator of the historical objects and the By the People program.⁵² This is a good example of how archival description can be created as its own record, and linked in a productive way that starts to illuminate a process. There is also documentation on the process in a published article, though this is still removed from the record on a permanently hosted website.

In linking between project platform and institutional platform, volunteer participation is still working in the context of the physical repository, presenting only input and output, access mediated by professionals. Using the expanded definition of archival description where descriptive data is itself an archival object, could open new ways of structuring the platforms and project outcomes of crowdsourcing.⁵³ The By the People's dataset records is a start to how this might be achieved. This paper continues to wonder what does transparency look like in the archival record? What does valuing distributed power and diverse representation look like? Is the ideal of the participatory archive meeting institutions where they are? If not, how are institutions going to develop to match the pace of technology and user expectations? What is this asking archivist and the archive to become? How has the role of the archivist changed? As digital collections grow, and more attention and resources are given to these online platforms

⁵⁰ V. Van Hyning, et al., "By the People Crowdsourcing Datasets from the Library of Congress," *Journal of Open Humanities Data* 8, no.5 (2022): np. <http://doi.org/10.5334/johd.67>.

⁵¹ "By the People: LC Crowdsourcing," Library of Congress, published October 2018, <https://labs.loc.gov/work/experiments/crowd/>.

⁵² "Dataset from Susan B. Anthony Papers," Library of Congress, accessed March 18, <https://www.loc.gov/item/2020445591/>

⁵³ Bak, "Knowledge Organization," 503.

and digital tools, is space for the user's input in the ontologies of archival description being considered?

Conclusions

Through the investigations of crowdsourcing tasking and the solutions to integrating user contributions, show that the values of archival practice are ambivalent, unwilling to move completely towards participatory models, with little attention given back to the institutional record. While the process of archival description is broken down, it has not changed, evident in the lack of allowances for more interpretive projects, and transparency of the process as a record itself in the institution's holdings. It is ultimately up to each project manager, institution, archivist, and crowdsourcing platform to decide how much information and training participants receive, and this directly affects how much input users have over the process and construction of description. Most of the literature consulted, concluded that crowdsourcing is not the answer to shared archival power.^{54 55} Instead, it has been decidedly demonstrated that, "user engagement is portrayed as a recognition and reinforcement of established identities through the incorporation of additional user knowledge into the existing professional domain of practice, rather than necessarily a source of innovation and creativity via an encountered heterogeneity of external opinion."⁵⁶ Alexandra Eveleigh's saw the future of crowdsourcing in Susanne Justesen's "incremental innovation," where small-scale change will be made in individual institutions, redefining archival practice to blur the boundary between professional archivist and user participant.^{57 58}

To move beyond solutions crowdsourcing has offered, will start with more radical conceptions of the archivist's role, both in education and practice. It will also largely depend on the investment in the digital repository. Digital environments for archival collections offer

⁵⁴ Eveleigh, "Crowding Out the Archivist?," 215, 224.

⁵⁵ Lorraine A. Dong, "Subtle Transformations: Increasing Participation and Access through Transcription," in *Participatory Archives Theory and Practice*, eds. Edward Benoit III and Alexandra Eveleigh (London: Facet Publishing, 2019), 92.

⁵⁶ Eveleigh, "Crowding Out the Archivist?," 215-17.

⁵⁷ Eveleigh, "Crowding Out the Archivist?," 226.

⁵⁸ Susanne Justesen, "Innoverity in Communities of Practice," in *Knowledge Networks: Innovation through Communities of Practice*, eds. P.M. Hildreth and C. Kimble (Hershey, PA: Idea Group, 2004), 79-95.

chances to reexamine the way things are done and a new role for the archivist.⁵⁹ This adapted role must accommodate digital tools and platforms, with the continued expectation for the archivist to provide advocacy, guidance, advice, and education, as well as adapting to be project manager, motivator, user experience designer, moderator, and collaborator.⁶⁰ Lorraine Dong asks if by decentralizing the record, reconceptualizing the finding aid, will the archival profession similarly be fragmented?⁶¹ Instead of viewing this adaptation as fragmentary, it can be thought of as community building, centering values of responsibility through transparency and accountability. This comes through lasting documentation of how records are described as Bak argues.⁶² Online, users now have similar resources as the professionals, and information is not linear, but scattered, linked, waiting to be assembled and explored according to searches, investigations, and collaboration.⁶³ Archivists may shake the need for guarded access of materials, singular trust in their own interpretative and detective skills, broadening metadata schemas, controlled vocabularies, and hierarchical structures, finding new ways to add layers of interpretation and information to collections, creating dialog and engaging deeply with history and social memory.⁶⁴

Community archives, inclusion of critical race theory, women and gender studies, cases for the de-standardization of archival practice and the rise of the digital humanities as a field support this reevaluation of how the archivist manages and curates historical materials.^{65 66 67 68} The focus of user participation becomes not just about the construction of archival description,

⁵⁹ Dong, "Subtle Transformations," 89.

⁶⁰ Terras, "Crowdsourcing in the Digital Humanities," 424-5.

⁶¹ Dong, "Subtle Transformations," 92.

⁶² Bak, "Knowledge Organization," 505.

⁶³ Rawson, "The Rhetorical Power," 330, 340.

⁶⁴ Mia Ridge, et al., "What is Crowdsourcing in Cultural Heritage?," in *The Collective Wisdom Handbook: Perspectives on Crowdsourcing in Cultural Heritage* - community review version-1st ed. (Collective Wisdom Project, 2022): np. <https://doi.org/10.21428/a5d7554f.1b80974b>.

⁶⁵ Ramesh Srinivasan, "Re-thinking the Cultural Codes of New Media: The question Concerning Ontology," *New Media & Society* 15, no. 2, (2012): 203–223.

⁶⁶ Maria Montenegro, "Subverting the Universality of Metadata Standards: The TK Labels as a Tool to Promote Indigenous Data Sovereignty," *Journal of Documentation* 75 No. 4, (2019): 731-749. www.emeraldinsight.com/0022-0418.htm.

⁶⁷ Ricardo L. Punzalan and Michelle Caswell, "Critical Directions for Archival Approaches to Social Justice," *Library Quarterly: Information, Community, Policy* 86, no. 1 (2016): 25–42.

⁶⁸ Anthony W. Dunbar, "Introducing Critical Race Theory to Archival Discourse: Getting the Conversation Started," *Archival Science* 6 (2006): 109–29.

but an additional evaluation of the construction of digital environments that enable this participation; the practices of *how* content is put online, not just the practices that generate the content.⁶⁹ In agreement with these approaches, a movement towards small scale change, thinking of each crowd as communities of practice, and therefore treating each archive as a community archive where there are specific, intentional approaches to provide the interface and mechanisms for users who are motivated and connected to historical material, is what will eventually make way for larger forms of connection.⁷⁰

The crowd, much like the public, has never been a faceless, nebulous, unknown entity, but for most institutions it means a core group of researchers, retired professionals, descendants, enthusiasts, collectors, and regular readers. In order to move away and transform the type of description that, as Luciana Duranti put it, “in order to be useful for every kind of research, had to serve none in particular,” will require more customizable approaches, tools, and platforms.⁷¹ Acknowledging and being transparent about the bias description carries, can be taken further, where intentional-biasing can act as a research question, and as foundations of digital representation are built, more voices and perspectives, more questions, can be used to extract data and form layers of archival records. With flexible web platform design, these descriptions can be layered as digital records, each equal in the weight they carry.⁷²

Digital visualizations like this are part of the digital humanities, it is possible that this type of experience, where description will be created like research data with the goal and construction of the research agreed upon by close-knit users, generating a final digital product acting as an archive, where more users can supply input, interact, and openly communicate with the creators, will become the new archival experience. But this is speaking to the future, as archivists are still struggling to represent the current complexity of descriptive processes digitally, and real practical issues are still impeding many digital efforts.⁷³ Projects that were found due to this research that are due more investigation are the European Digital Treasures project, and Mia Ridge’s Collective Wisdom project. Change is slow and a wider foundation of

⁶⁹ Terras, “Crowdsourcing in the Digital Humanities,” 428.

⁷⁰ Ridge et al., “What is Crowdsourcing in Cultural Heritage?,” np.

⁷¹ Duranti, “Origin and Development,” 52.

⁷² Bak, “Knowledge Organization,” 505.

⁷³ Bak, “Knowledge Organization,” 503, 510.

digitization needs to be realized, but it is essential to think of the implications for emerging archival and library professionals, the education, experience and background that they will need, and it can never be a bad thing to continually remind the field at the beginning of projects that more radical development and construction needs to be explored.

Bibliography

- Ahmed, Sumayya. "Engaging Curation: A Look at the Literature on Participatory Archival Transcription." In *Participatory Archives Theory and Practice*, edited by Edward Benoit III and Alexandra Eveleigh, 73-84. London: Facet Publishing, 2019.
- Bak, Greg, Danielle Allard, and Shawna Ferris. "Knowledge Organization as Knowledge Creation: Surfacing Community Participation in Archival Arrangement and Description." *Knowledge Organization* 46, no.7 (2019): 502-521. PDF.
- Benoit III, Edward, and Alexandra Eveleigh, ed. *Participatory Archives Theory and Practice*. London: Facet Publishing, 2019.
- Brabham, Daren C. *Crowdsourcing*. Cambridge, MA: MIT Press, 2013.
- Brumfield, Ben. *Text Theory, Digital Documents, and the Practice of Digital Editions*. Panel session at the Digital Humanities Conference. University of Nebraska, Lincoln, 2013.
- Cook, Terry. "What is Past is Prologue: A History of Archival Ideas Since 1898, and the Future Paradigm Shift." *Archivaria* 43 (1997): 17-63.
- Cook, Terry, and Joan M. Schwartz. "Archives, Records, and Power: From (Postmodern) Theory to (Archival) Performance." *Archival Science* 2 (2002): 171–85.
- Dong, Lorraine A. "Subtle Transformations: Increasing Participation and Access through Transcription." In *Participatory Archives Theory and Practice*, edited by Edward Benoit III and Alexandra Eveleigh (London: Facet Publishing, 2019), 85-94.
- Duff, Wendy M., and Verne Harris. "Stories and Names: Archival Description as Narrating Records and Constructing Meanings." *Archival Science* 2 (2002): 263–85.
- Dunbar, Anthony W. "Introducing Critical Race Theory to Archival Discourse: Getting the Conversation Started." *Archival Science* 6 (2006): 109–29. PDF.
- Duranti, Luciana. "Origin and Development of the Concept of Archival Description." *Archivaria* 35 (1993): 47-54. PDF.
- Eveleigh, Alexandra. "Crowding Out the Archivist?" In *Crowdsourcing Our Cultural Heritage*, edited by Mia Ridge, 211-30. Burlington, VT: Ashgate Publishing Limited, 2014.
- Hawkins, Ashleigh. "Archives, Linked Data and the Digital Humanities: Increasing Access to Digitized and Born-Digital Archives via the Semantic Web." *Archival Science* (2021): 1-26. <https://doi.org/10.1007/s10502-021-09381-0>.

- Holley, Rose. "Crowdsourcing: How and Why Should Libraries Do It?" *D-Lib Magazine* 16 no. 3-4 (2010): 1-21. <http://www.dlib.org/dlib/march10/holley/03holley.html>.
- Huvila, I. "Participatory Archive: Towards Decentralised Curation, Radical User Orientation, and Broader Contextualisation of Records Management," *Archival Science* 8, no. 1 (2008): 15-36. <https://www.diva-portal.org/smash/get/diva2:287959/FULLTEXT01.pdf>.
- Jansson, Ina-Maria, and Isto Huvila. "Social Tagging and Commenting: Theoretical Perspectives." In *Participatory Archives Theory and Practice*, eds. Edward Benoit III and Alexandra Eveleigh, 33-44. London: Facet Publishing, 2019.
- Justesen, Susanne. "Innoverity in Communities of Practice." In *Knowledge Networks: Innovation through Communities of Practice*, edited by P.M. Hildreth and C. Kimble, 79-95. Hershey, PA: Idea Group, 2004.
- Montenegro, Maria. "Subverting the Universality of Metadata Standards: The TK Labels as a Tool to Promote Indigenous Data Sovereignty." *Journal of Documentation* 75 No. 4, (2019): 731-749. www.emeraldinsight.com/0022-0418.htm.
- Oomen, Johan, and Lora Aroyo. "Crowdsourcing in the Cultural Heritage Domain: Opportunities and Challenges." Paper in the proceedings of the Fifth International Conference on Communities and Technologies, 138-149. New York: Association for Computing Machinery, 2011. <https://doi.org/10.1145/2103354.2103373>.
- Punzalan, Ricardo L., and Michelle Caswell. "Critical Directions for Archival Approaches to Social Justice." *Library Quarterly: Information, Community, Policy* 86, no. 1 (2016): 25-42. PDF.
- Rawson, K. J. "The Rhetorical Power of Archival Description: Classifying Images of Gender Transgression." *Rhetoric Society Quarterly* 48, no. 4 (2018): 327-351. PDF.
- Ridge, Mia, ed. *Crowdsourcing Our Cultural Heritage*. Burlington, VT: Ashgate Publishing Limited, 2014.
- Ridge, Mia, Blickhan, S., Ferriter, M., Mast, A., Brumfield, B., Wilkins, B., and Y. B. Prytz. "What is crowdsourcing in cultural heritage?" In *The Collective Wisdom Handbook: Perspectives on Crowdsourcing in Cultural Heritage* - community review version-1st edition. Collective Wisdom Project, 2022. <https://doi.org/10.21428/a5d7554f.1b80974b>.
- Srinivasan, Ramesh. "Re-thinking the Cultural Codes of New Media: The question Concerning Ontology." *New Media & Society* 15, no. 2, (2012): 203-223. PDF.

Terras, Melissa. "Crowdsourcing in the Digital Humanities." In *A New Companion to Digital Humanities*, edited by Susan Schreibman, Ray Siemens, and John Unsworth, 420-38. Wiley Online Library: John Wiley and Sons Limited, 2016.
<https://doi.org/10.1002/9781118680605.ch29>.

Trace, Ciaran B. "Maintaining Records in Context: A Historical Exploration of the Theory and Practice of Archival Classification and Arrangement." *The American Archivist* 83, no. 1 (2020): 91-127. <https://doi.org/10.17723/0360-9081-83.2.322>.

Van Hyning, V., Algee, L., Jones, M., Osborn, C., Owens, T., Seroka, L., and Shelton, A. "By the People Crowdsourcing Datasets from the Library of Congress." *Journal of Open Humanities Data* 8, no.5 (2022): np. <http://doi.org/10.5334/johd.67>.

Yakel, Elizabeth. "Who represents the Past? Archives, Records, and the Social Web." In *Controlling the Past: Documenting Society and Institutions (Essays in Honor of Helen Willa Samuels)*, edited by Terry Cook, 257-78. Chicago: Society of American Archivists, 2011.

Yeo, Geoffrey. "Debates and Description." In *Currents of Archival Thinking*, edited by Terry Eastwood and Heather McNeil, 89-114. Westport, CT: Libraries Unlimited, 2010.

Relevant Coursework

Core Courses

Zine, on Zines in Libraries

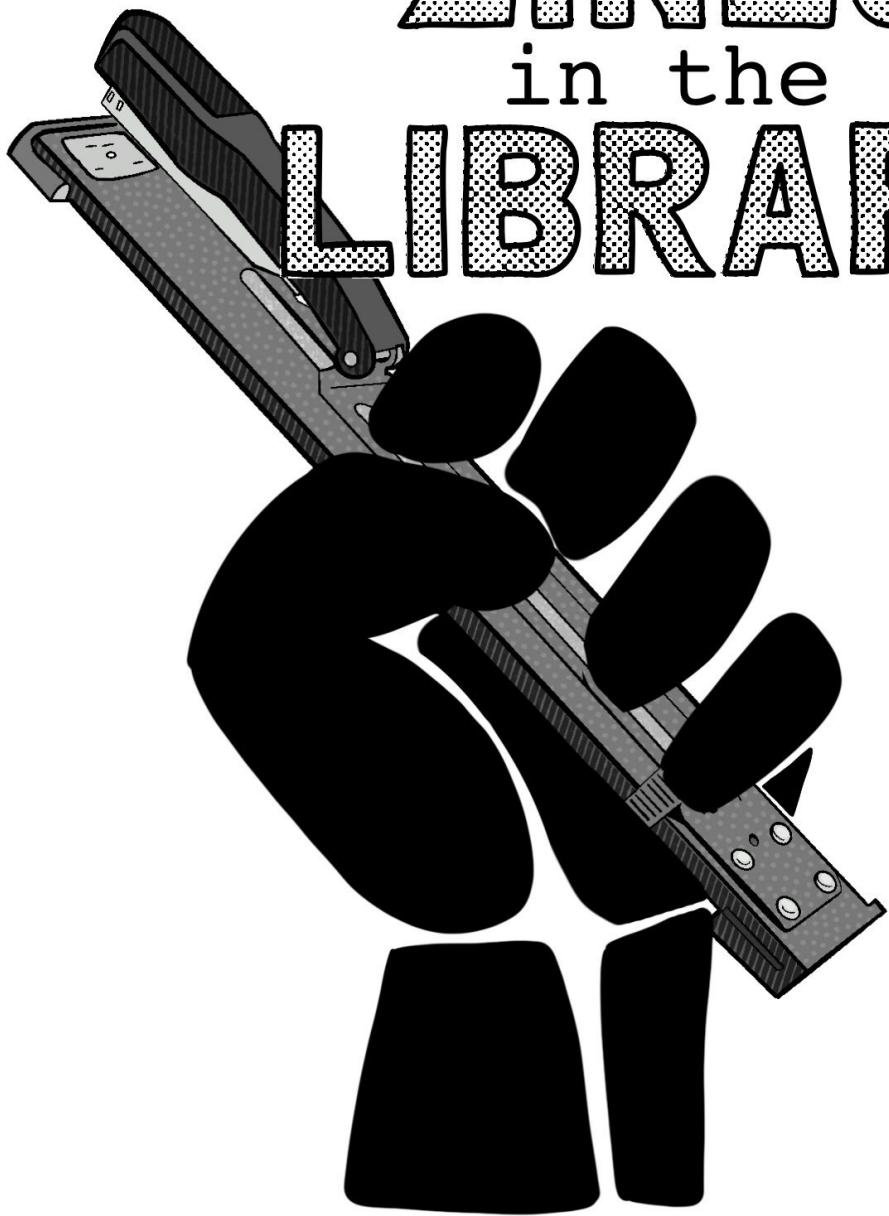
IS212 Communities and Values | Dr. Ulia Gosart | Fall 2021

- *For a final group project in this course, we chose the research topic zines in libraries. As a group we created a 25 page annotated bibliography on the relationship between the communities that create zines and libraries that collect them. As part of our presentation, we created a zine. Glen Theory Sturgeon completely designed and formatted the zine, while the rest of our group generated information that contributed to the text.*

Abstract: This multimedia project will explore the relationship between community members, authors, librarians, archivists, and zines. Zines are short form, do-it-yourself, small-batch magazines made by independent authors and artists. Since this alternative media operates outside traditional mainstream hierarchies of cultural production, both historians and academics have studied zines as representations of hypertemporal trends and embodied communities. Using zines in this way, we will delve into how these works impact topics of equity, access, privacy, intellectual freedom, the limitations of academia and publishing, agency, and social justice. This project examines local zine collections at public libraries in Southern California, specific zines as evidence, the historical context of zines, and communication with those who build and maintain these collections institutionally. We do not investigate zines from the perspective of zine makers, but instead rely on scholarship and praxis surrounding zines within archive and library spaces from library and information professionals. We will also discuss the ways in which technological and cultural trends have influenced the LIS field's ability to include zines in their collections. Through these methods, this project ultimately advocates for zines as essential parts of academic and institutional spaces, as their presence furthers conceptual topics and practices within LIS fields.

The following pages are printable versions of the zine my group created for IS 212 Communities and Values.

ZINES in the LIBRARY

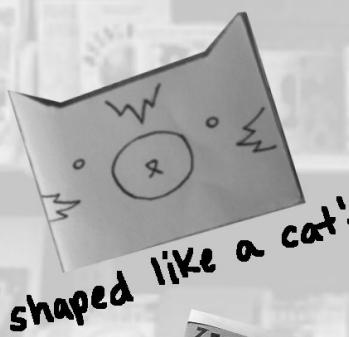
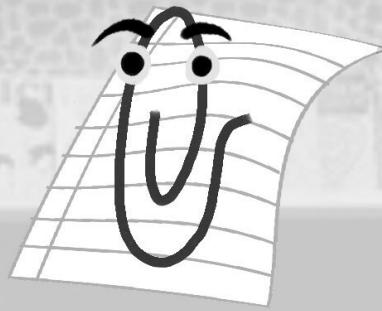


***SMASH BARRIERS,
PUBLISH COMMUNITIES'
OWN WORDS
AND JOIN THE ZINE
REVOLUTION!***

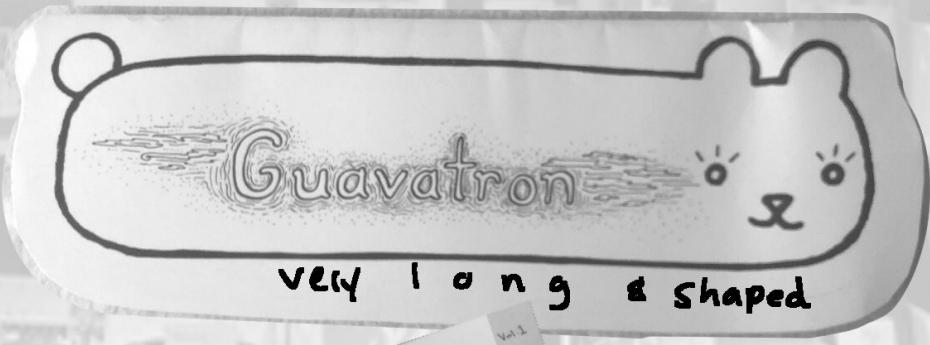
WHAT IS A ZINE?

ZINES are short-form, do-it-yourself small batch magazines made by independent authors and artists

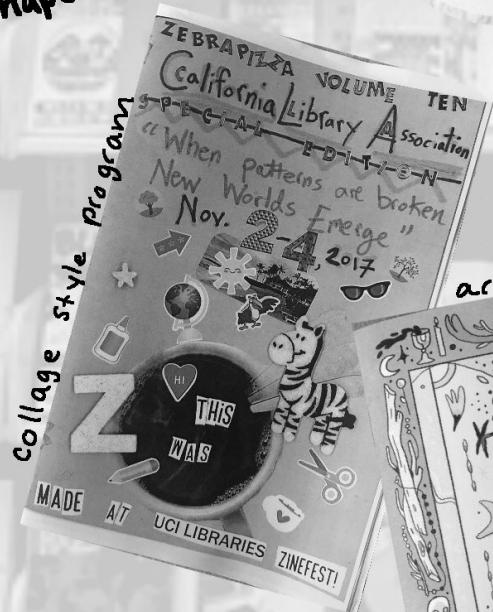
Zines can be: rough, Xeroxed single-page folded zines; professionally produced glossy art books; tiny or weird-shaped! Here are some zines from one of our group member's personal collection:



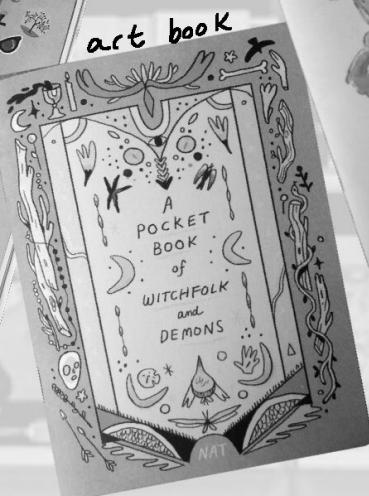
shaped like a cat!



very long & shaped



collage style program



art book



THE WORLD
DONUT JOURNAL

styled like an
anthropological
journal



@namehere360

vaporwave vibes

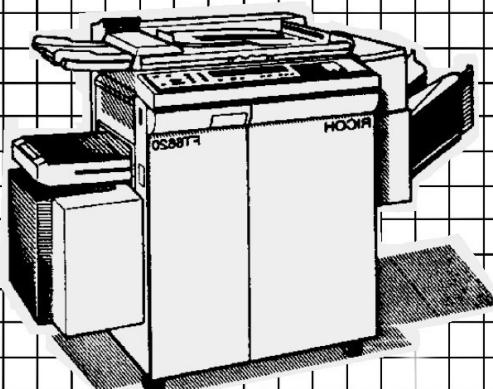
History of the Zine

a zine is a handcrafted (ripped ‘n’ torn, in zine parlance), short run periodical (but oftentimes only in a period of a single edition) that has anywhere from 5-1000 copies. These numbers are mostly arbitrary, and serve only to underscore the fact that zines are unique in both their content and the small readership base they have. Zines, shorthand for “magazines” or “fanzines” are frequently handwritten, collaged, hand drawn periodicals on topics of every kind, or none at all, according to the author(s) desires. Even the authors can be single or collective.

The heart of what drove historical trends in zines, aside from social movements and oppression, is printing and publishing technology. When fanzines first originated in the 1930s, mass scale printing was by then easy enough for those in possession of a printing press, but largely impossible for anyone else and as such, the first zines were entirely hand written or typed on a typewriter and reproduced at great time expense. However, the invention of the mimeograph a few decades later made zine creation far more accessible and less time-consuming (Jorgensen-Sakum, 2018). The invention that injected zine creation with its most potent fuel, however, was the Xerox copier, which roughly coincided with the rise of the punk scene. Now, zines could be made and reproduced extremely quickly and cheaply, and the game was changed.

EVERYONE COULD DO IT

EVERYONE DID



their influence on the formation of influential communities who are traditionally marginalized, such as the queer community (from the 1960s onward), punk music in the 1970s-80s, feminists, the incarcerated, civil rights activists, and others is probably very immense.

At their heart, zines are a representation of an anarchic, alternative media that operates outside the mainstream and contain the multiplicity of voices and interests in any given society, community, or culture. By design zines have an extremely narrow distribution window and low readership and operate at fringes of society, making their influence on society as a whole difficult to measure, and probably not quite so large.

potential topics are only limited by the imaginations of creators in any given community

with zines appearing throughout history about

women's suffrage

**LABOR
MOVEMENTS**

*SCIENCE
FICTION
FANDOM*

**PUNK
MUSIC**

**RIOT
GRRRL**

BIRDS?

... virtually any experience

INTERVIEW

A. Wynn, zine
librarian at Alta
Dena Zine Library

Q

How many zines do you have?



We have 117 zines. They range from political, to perzines, to music.

A.



How do you choose to display them?

The zines are displayed in between the magazine display [...] On one of the middle shelves, I have a zig zag acrylic display that was sent to me by Jenna Freedman, zine librarian at Barnard Library.

COOL!!!

I am currently displaying them so that colorful ones are more in a rainbow spectrum with plain ones thrown in, and smaller ones and larger ones are respectively grouped together.

What topics are the most popular? Who do you find reading zines the most often?



Our zine reading demographic can be found in the adult age range, from 25 to 65, but there are also younger zine readers - as in, early twenties! - at this library. I am not sure about the amount of teens that check out zines, if at all, but when I realize that zines are checked out and I look to see the age range of who is checking them out, it is usually older adult.

The zines that are most popular here are political. They have slowly been circulating, but that's what I've noticed.

How do you go about collecting them/ choosing what to buy?

I look at various zine distros, or distributors, to check up on what is new or popular. When we got started, I knew there was a handful of zines that I wanted to buy because of their popularity. I also keep tabs on what my friends are making. The zine community is very supportive and friendly, so it is easy to become colleagues with a zine librarian or a peer of a zinester!

Ethics

"ZINE LIBRARIANS AND ARCHIVISTS SHOULD STRIVE TO MAKE ZINES AS DISCOVERABLE AS POSSIBLE WHILE ALSO RESPECTING THE SAFETY AND PRIVACY OF THEIR CREATORS"

Zine Librarians Code of Ethics

"RECEIVING DONATIONS FROM THIRD PARTIES:

It can be difficult to determine where the donor acquired their zines, so this can be an ethical quandry."

zine culture has its own set of core values

"Always notify sellers that you are a library, not a private individual, and that their content will be available on the shelf for all to enjoy."

"Though it helps me on a personal level to know preferred pronouns for creators, there is a sphere of privacy that zine librarians try to accord to zinesters and try not to breach."

Acquisition, or: WHERE DO I GET ZINES?

Image courtesy Isabella León-Chambers



zines exist outside of corporate publishing models, created abroad.

Since zines exist outside of corporate publishing models, zine librarians are forced to use unconventional methods to locate them.

unconventional methods

There is no "zine publisher's database" listing zines regularly pushed out to subject librarians for their consumption. There are resources available to zine librarians online via the ZineLibraries.info WordPress site,⁷ but as every zine library is different, it is necessary, to a certain extent, to cultivate your own network of zine resources.

appreciation of the work zinesters create,

spread the word about zines

build our own network of contacts.

social media.

following zine libraries, zine distros, and zinesters.

hashtags such as #zines and #poczines.

problems is through social media. Communication

with the zinester's social media accounts, we

introduce them to our collection, we

notifications¹ whenever there is new content

available in your favorite shops.

overlooked. It was Twitter that led us to purchase

such titles as *Black Women & Self Care: Thoughts*

on potentially discover new

Feminist perspectives on Harry

content.

Another quasi-social media site where you can

locate zines is Etsy. A number of zinesters sell

their creations in Etsy shops, and it is worthwhile

for zine libraries to create an Etsy account. This

functionality will allow you to "favorite" the zine

zinester's social media accounts

available to you.

follow (or favorite)

make a conscious effort to tweet

about new acquisitions,

mentions of the

In order to expand our network of zine

contacts, it has been found that interacting

small interactions



with them, if possible.

Small interactions are often the most effective way to connect with zinesters.

are simply part of being a good zine citizen.

zinester. In our view, these types of small

interactions are simply part of being a good zine

citizen. We like to publicly acknowledge our

appreciation of the work zinesters create, and

tweeting about our library contact allows us to

publicly acknowledge our

appreciation of the work zinesters create,

spread the word about zines

build our own network of contacts.

⁷ Her job talk was about acquiring and cataloging zines at the University of Chicago Library.

⁸ Or zine librarians to meet and exchange insights and expertise on a range of topics.

Collection Management, or:

**NOW I HAVE ALL THESE LOOSE ZINES
HOW DO I ARRANGE OR CATALOGUE THEM???**

*Check out this article for an
in-depth guide!*

Cutter & Paste: A DIY Guide for Catalogers Who Don't Know About Zines
and Zine Librarians Who Don't Know About Cataloging
By Jenna Freedman and Rhonda Kauffman

describe what you can

only have title and subject matter? ok!
got author, title, year, volume, isbn? woah! awesome!

**treat zines like a book or
magazine and catalogue
accordingly**

**try to keep two copies of each
zine**

one for safekeeping, one for circulation or
reference. Zines can get worn out easily!

**look into adopting an existing
catalogue strategy like xZinecorex**

Learn as you go!

CONTRIBUTORS

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Glen Theory Sturgeon

and special thanks to

Kyla Worrell



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Four Assignments on an Artifact for a Cultural Heritage Institution

IS211 Artifacts and Cultures | Dr. Jonathan Furner | Fall 2021

- *The four assignments were exercises that allowed us to imagine ourselves in roles at fictional or real cultural heritage institutions, and were meant to guide us through different responsibilities within these roles anchored by one artifact we thought would be a valuable addition to a collection. Specifically, these responsibilities were acquisition, exhibition description, evaluation criteria, and a lesson plan as an example of outreach. The last assignment was thought of with other students looking at our artifacts as a small collection and uniting them with larger themes, though we each wrote individual lesson plans.*

Acquisition

Acquisition Object: Spotted Lanternfly specimen, and US Department of Agriculture Pest Alert

https://www.aphis.usda.gov/publications/plant_health/alert-spotted-lanternfly.pdf

In 2019, through 2021 *Lycorma delicatula* or the Spotted Lanternfly (SLF) became a constant presence in Pennsylvania, Maryland, Delaware, and New Jersey. It has continued to spread, having now been reported in Massachusetts, Ohio, Indiana, and Virginia. It has changed the landscape physically by being an overwhelming seasonal presence when in its adult form, and as a threat to agriculture, ecology, and economy. People were alerted to these insects as a threat, being advised to report and kill when seen. The unified effort to kill these insects, information about their life-cycle, movements, preferred diet, all became part of mainstream culture. People were stomping, chasing, photographing, making jewelry and art, and they still are. Majority of people in affected areas were actually invested in an insect in their environment. Adding a specimen and the USDA's pest alert to the collection at the Invasive Species Field Museum of Philadelphia will document a citizen-science campaign to track and eliminate an invasive species, and the efforts of government organizations, and science and land professionals to solve pest management issues.

As a collections manager in the Academy of Natural Scientists in Philadelphia, I have a responsibility to document ecological and social effects of living things, while educating and

inspiring people to care about their environment dictated by this institution's mission. Part of my role is assisting in the management of entomology specimen collections, and creating exhibits and programming. *Lycorma delicatula* this addition to the collection would complement the mission to curate specimens that contribute to research on critical environmental issues. As a specimen, it would not only illustrate invasive species' effects on biodiversity, but begin conversations about urban entomology and humans' roles in mitigating the negative effects of insect population surges. It also offers an opportunity to examine how government agencies respond and interact with communities about environmental threats.

The spread and consistency of the SLF also coincided with the spread of the novel coronavirus COVID-19, and the language surrounding both has overlap in calls for quarantine, preventing the spread, tactics to keep plants or people safe respectively, and in anti-Asian sentiment as the SLF is native to China and Vietnam. In the context of the COVID-19 pandemic the SLF provides an opportunity to fill a gap in collections, shifting from historical to current issues. The SLF can facilitate displays that open a dialogue about globalization and collective responsibilities, the ensuing rise of public acts of violence in the name of racism, xenophobia, and white supremacy, and again government agencies or systems of power and their role in how we engage with our surroundings. Ultimately the SLF is classic case of "the other", a topic that is rarely handled or acknowledged in historical scientific spaces, giving this museum to a chance to speak about this history, and how to reconcile natural threats on the environment, such as pests or invasive species, and the persistence of living things, and possibly bring the conversation into a broader perspective about the consequences of labeling "the other" in societies.

Description

Exhibition: Take Care of Where you Live

Philadelphia Orchard Project at the Woodlands

Audience: Children 8 to 12

You may not see it at first, oval shaped, blue-grey wings, black spots, scurrying up a tree trunk. Then you go to pick some cherries or apples, just like from the trees that are around you now.

Suddenly it leaps, flashing bright red, and white. Then you see the tree is covered in spotted lanternflies. The ability to jump allows the bugs to spread quickly from tree to tree. These bugs are not supposed to be on trees or any other plants that we can see around us. The spotted lanternfly likes to eat trees, just like we like the fruit. But they are messy eaters, creating a mold which hurts the trees, attracts other bugs, and disturbs outdoor areas. How can we keep the spotted lanternflies away? Hop, hop, hop. They are fast, but after 3 hops you can stomp on them. Identify spotted lanternflies, STOMP, and help protect the trees around you.

Exhibition: Presentations on Labor Dynamics in Forestry

Penn State College of Agricultural Sciences

Audience: University students

This is a spotted lanternfly. Red, white, and black spotted wings are outstretched, floating to its next victim. Will it be a hardwood tree? Pennsylvania is the largest producer of hardwood timber products, an industry worth \$5 billion dollars annually.¹ Or a grape vine? The grape and wine industry brings \$4.8 billion dollars annually to the state.² This planthopper, roughly an inch in length, holds the fate of hundreds of jobs, and plants, in its small, small sap sucking smile. The estimated loss statewide is close to \$1 billion dollars,³ falling most heavily on certain agricultural industries: nursery operations, fruit growers, and forestry. Though Pennsylvania regions have been quarantined, this network of agriculture extends beyond Pennsylvania, and beyond the United States. The demand for construction supplies and paper products pushes forestry into a global market, simultaneously creating problems that undermine its goal. The spotted lanternfly brings our attention to challenges of globalization that we do not yet have the answers to solve.

¹ Caitlyn Johnstone, "The Lanternfly Effect," *Chesapeake Bay Program*, August 15, 2018. https://www.chesapeakebay.net/news/blog/the_lanternfly_effect.

² Amy Duke, "So Long Spotted Lanternfly," *Agricultural Science Magazine*, April 19, 2021. <https://agsci.psu.edu/magazine/articles/2021/winter-spring/so-long-spotted-lanternfly>.

³ Jayson K. Harper, William Stone, Timothy W. Kelsey, and Lynn F. Kime, "Potential Economic Impact of the Spotted Lanternfly on Agriculture and Forestry in Pennsylvania," (economic study, Center for Rural Pennsylvania, 2019). <https://www.rural.palegislature.us/documents/reports/Spotted-Lanternfly-2019.pdf>.

Evaluation

I am the assistant curator at the UC Riverside Entomology Research Museum writing to discuss the admittance of the Spotted Lanternfly (*Lycorma delicatula*) to the museum collection and permanent exhibition. The museum's collection serves entomology students at graduate and undergraduate levels, researchers, the general public, as well as those in the fields of pest management, public health, forensic medicine, agriculture, and environmental biology.¹ These user groups primarily utilize this collection for research in their field, and it is the museum's purpose to aid in facilitating that research as well as education by providing a diverse range of insects and arthropods. The criteria for determining whether a new specimen will add to this purpose and work are expressed in the following dimensions:

Authority:

- Is this a specimen from another historical collection, private collection, or product of fieldwork, and geographically where was it collected from?
- Was this specimen acquired through a legal, humane, and fair method?

Utility:

- Is it representative of any kind of ecological change in an environment and what is its role in that change?
- Will this specimen contribute to new research in a related field?

Usability:

- Are all life stages present in the specimen collection, making it easy to use for research and identification?

The first criterion uses two questions to determine whether the spotted lanternfly sample has authority as a record for further use. It does this by establishing provenance and context. In this case, the sample was acquired from research and information from the USDA, collected in Pennsylvania. It was acquired legally, humanely, and fair as there is an abundance of these insects. Its geographic location also can illustrate evidential value of where this insect lives, or to trace where it has spread.

The second criterion questions the insect's utility, how it can be used. Both its intrinsic and instrumental functional value can be assessed respectively with the questions asked. In an ecological context, this insect is regarded as a pest. It has no intrinsic functional value besides existing, and it does that well as it is spreading rapidly through the world. But in its rapid spread it has made it an invasive species, new to the United States, and new to Korea and Japan. This context, and its role in environmental change, gives it functional value as a specimen, providing data to fields that have different motivations for wanting to educate, identify, and study this insect. As has been illustrated by the work at Cornell University, its existence has also contributed to research in integrated pest management and biotechnology with discoveries about using fungi as pest killers.² Its compounded contextual role and its use when collected and observed dictates its value as evidence, information, educational of environmental change and ecological conditions.

The third criterion asks questions of usability. How well or how easy is it to use this specimen is determined by how it is preserved in a museum setting. Research and education museums dealing with specimens of insects rely on the pinning and labeling of each accession. In this case all life stages have been collected, though still need to be pinned, mounted, and labeled. When it is properly preserved, and documentation of its lifecycles are complete, it can be used effectively for research and education.

These criteria, by meeting them, solidifies this specimen's value and ability to meet the goals of this institution and its users. The spotted lanternfly would therefore be a good addition to this research collection.

Lesson Plan for 11th Grade History Students

Learning objectives: The topic of the lesson is biopolitics and labor, as well as how people participate in these systems to survive and resist. This course focuses mostly on the 20th and 21st century history and literature, so topics of discussion will be centered in that time period. Students will gain an understanding about the concepts biopower, biopolitics, necropolitics, and bare life. The course will use selected readings from Michel Foucault, Achille Mbembe, and Giorgio Agamben. These readings will have been assigned before class, so students will come

prepared having read them. A visit to the Fowler exhibit, "Labor in the Service of Survival of Extreme Environmental Change," was attended before this lesson to connect these concepts in an alternative context to see how objects and experiences relate to these concepts.

Teaching goals: The students should be able to take what has been learned in the readings, classroom activity, and the exhibition and use it to critically evaluate micro level events or objects within macro level sociopolitical contexts relating to labor, the environment, and politics. The goal is to get students accustomed to engaging with a specific lens when analyzing literature, events, policy, and artifacts to help in their future academic endeavors. Relating academic scholarship to their own knowledge and respective communities will then help ground the lesson practically, and provide tangible examples while moving through difficult and complex topics. It is important for young adults to realize, examine, and make connections about how people and objects exist within economies, systems, and power structures that control life.

Checking for understanding: Student's will be displaying what they have learned through active participation in a museum field-trip, classroom activities, and a take home assignment.

Classroom Activities:

- Introduction of the lesson will be asking the students to share what they thought of the exhibit. This will assess how students are relating to the material before the main lesson.
- For a short period of time the students will split up into groups to discuss the readings, define key concepts in their own words, and think about examples from contemporary events or their own life.
- For the main body of the lesson, as a class we will outline on the board definitions of concepts and key points made by each author. Taking examples chosen by the students we will walk through how to analyze them with the lens of these social theories.

- To further assess what the students have learned, they will be asked to write a reflection on how they see or interact with labor in their own life, and apply key concepts from the reading to their views to form an analysis.

Materials:

- Last chapter of Michel Foucault's *History of Sexuality Volume I* (1976)
- Mbembe's *Universal Right to Breathe*
<https://www.journals.uchicago.edu/doi/full/10.1086/711437>
- Excerpts from A. Mbembe's *Necropolitics* (2003)
https://warwick.ac.uk/fac/arts/english/currentstudents/postgraduate/masters/modules/postcol_theory/mbembe_22necropolitics22.pdf
- Excerpts from G. Agamben *Means without End* (2000)

Elective Coursework

Research Guide for Cluster Course Spaces of Biotechnology

IS439 Special Collections | Dr. Robert Montoya | Spring 2022

Our final project was to create [a primary source research guide](#) for an undergraduate course taught at UCLA. I created a guide for students in Cluster M71CW: Spaces of Biotechnology as an exercise in primary source literacy instruction.

UX Report for JPL Nasa's Imaging and Cartography Node

IS279 User Experience Design | Lynn Boyden | Fall 2022

With a group of other students, I worked with JPL Nasa's Cartography and Imaging Node to [compile a report](#) making recommendations for changes to their website in order to enhance user understanding, usability, and ease of access. We tested their site among different user groups, then analyzed these interviews to generate recommended changes, which we then presented to them.

Data Curation Profile for Mycology

IS262A Data Management and Practice | Dr. Jillian Wallis | Fall 2022

The culmination of this course was the creation of a data curation profile for the field of mycology using OpenRefine, and publishing to UCLA's Dataverse and Open Science Framework. I worked on this project with two of my classmates. The project and data can be viewed [here on Open Science Framework](#).

Spider News

DH201 Introduction to Digital Humanities | Dr. Miriam Posner | Winter 2023

This course prepared me to create a digital project exploring how data can be visualized and used to tell a story. [This project can be viewed on my website](#).

The following pages are printable versions of my Research Guide for Cluster course Spaces of Biotechnology, and the final report presented to our point person at JPL Nasa's Cartography and Imaging Node.

SPECIAL COLLECTIONS RESEARCH GUIDE

FOR CLUSTER M71CW
SPACES OF
BIOTECHNOLOGY

CONTENTS

Introduction to Special Collections

- Welcome
- Identifying Primary Sources

Neutrality, Silences, and the Importance of Physical Presence

- Neutrality and Silences
- Viewing Materials In-Person

Starting Your Research

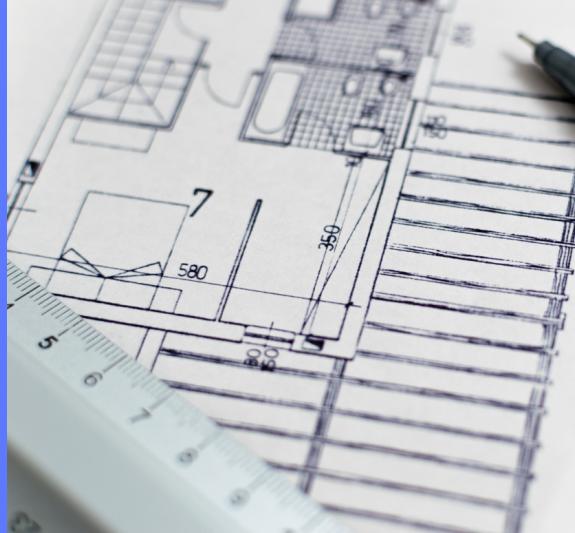
- Where Do I start?
- How To Search
- Expert Search Functions

What to Expect

- Accessing Materials
- Reading Room Regulations

Primary Sources

- Visual Analysis
- Analyzing Primary Sources
- Activity





INTRODUCTION TO SPECIAL COLLECTIONS

Welcome to Special Collections!

Special collections in academic institutions arose out of a history of private collectors in Europe and America, the subsequent donation of these collections, and the collection building of encyclopedic museums in the late 19th century and early 20th century. As universities invested in rare book holdings, these special collections rapidly grew, expanding to primary sources of various formats, increasing in importance and recognition as integral parts of research institutions. This long and complicated history, while only briefly summarized here, reflects the wealthy white men who dominated the market where value and purpose was determined. Today, special collections are reckoning with that past, and most are embracing a future of transparency and open accessibility. (1)

Identifying Primary Sources

Special collections are repositories for fragile, scarce, rare, unique, miscellaneous, outdated, and in some cases totally bizarre materials representing parts of the past. These materials are primary sources: sources created within the time period they represent. They are first hand accounts, evidence of events in time, and reflect direct knowledge of experiences. Anything can be a primary source if it contains original information contemporary to the period in which it was produced.

Examples of primary sources are:

- Letters
- Diaries
- Manuscripts
- Court cases
- Interviews
- Original research
- Maps
- Architecture
- Field notes
- Lab notes
- Patents
- Technical reports
- Clinical trials
- Sketches
- Blueprints

Analyzing primary sources compiles information surrounding those sources, providing a foundation of knowledge to make claims about the effects sources and their contexts have had on individuals, groups, culture, and society.

1. "A Brief History of Rare Book Libraries." In *Rare Book Librarianship: An Introduction and Guide*, edited by Galbraith, Steven K., and Geoffrey D. Smith. Santa Barbara, California: Libraries Unlimited, an imprint of ABC-CLIO, LLC, 2012.



NEUTRALITY, SILENCES, AND THE IMPORTANCE OF PHYSICAL PRESENCE

Neutrality and Silences

Special collections and the materials they hold are not neutral or objective. Records, objects, and architecture all carry with them the bias and partiality of the people, cultures, and social necessity that created them. Additionally, every institution, system, and physical infrastructure has a legacy or a history that determines and affects its collecting practices, organizational structure, its policies, design, use, employment, and outreach. This means that absence and silence in archives is valuable information, often exposing active harm against individuals and communities. As you do research in any discipline, with any type of material, pay attention to what you do not find and what is not there, what this means, and what power dynamics are present as a result of this.

The Importance of Viewing Primary Sources In Person

Primary source analysis requires detailed observation. This means looking at particular features that are often dependent on being physically present with the object, like touch, smell, affect, scale, and replications of the original environment. While digitization is an ongoing effort, it is a slow process, and still cannot replace how important it is to see materials in person. The two can co-exist together, each providing their own value as methods of extracting information from sources.

As Chris Bourg notes, "libraries are not now nor have they ever been merely neutral repositories of information....But what I mean when I say libraries are not neutral is not just that libraries absorb and reflect the inequalities, biases, ethnocentrism, and power imbalances that exist throughout our host societies and (for those of us who work in academic libraries) within higher education...we live in a society that still suffers from racism, sexism, ableism, transphobia and other forms of bias and inequity; but libraries also fail to achieve any mythical state of neutrality because we contribute to bias and inequality in scholarship, and publishing, and information access." (2)

More resources on neutrality and historical silences

- Ketelaar, E. "Archival Temples, Archival Prisons: Modes of Power and Protection." *Archival Science* 2, (2002): 221–238. <https://doi.org/10.1007/BF02435623>
- Carter, Rodney G.S. "Of Things Said and Unsaid: Power, Archival Silences, and Power in Silence". *Archivaria* 61 (2006): 215-233. <https://archivaria.ca/index.php/archivaria/article/view/12541>
- Solis, Gabriel. "Documenting State Violence: (Symbolic) Annihilation & Archives of Survival." Texas After Violence Project. Accessed June 7, 2022. <https://texasafterviolence.org/documenting-state-violence-symbolic-annihilation-archives-of-survival/>
- Duff, Wendy M., and Verne Harris. "Stories and Names: Archival Description as Narrating Records and Constructing Meanings." *Archival Science* 2 (2002): 263–85.

2. Bourg, Chris. "The Library is Never Neutral." In *Disrupting the Digital Humanities*, edited by Jessie Stommell and Dorothy Kim, 456-57. Santa Barbara, CA: Punctum Books, 2018.



STARTING YOUR RESEARCH IN SPECIAL COLLECTIONS



Where do I Start?

Start with your own school's library research guides. Your school will have a research guide related to your field of study. Special collections will be listed there as a resource, as well as specific collections, and other guides, catalogs, and databases to help you search. This link will take you to [UCLA's research guide for the Louise M. Darling Biomedical Library History and Special Collections for the Sciences](#). This link will take you to [UCLA's research guide for Architecture and Landscape Architecture in Special Collections](#).

If you are in California, a great place to start looking for materials is [the Online Archive of California \(OAC\)](#). This site allows you to search the collection guides of over 300 institutions in California.

If you have a specific institution in mind, and they are not listed in the OAC, try going to their website and seeing if there is a page for their archive, library, or special collection. They will either connect you to their own collection guides, finding aids, and digital collections, or a consortium where their holdings are listed.

Primary sources like institutional Press Kits and Fact Sheets are resources with which you can familiarize yourself with contextual information about buildings, as well as terms, subjects, and time periods to help you further search special collection databases. These are especially helpful when doing research on modern buildings and newer spaces or exhibitions.



Other starting points for primary source research are listed below:

- MIT Library Research Guide for Architecture
<https://libguides.mit.edu/architect/special>
- MIT Library Research Guide for Biotechnology
<https://libguides.mit.edu/bioleng>
- Science History Institute Special Collections
<https://www.sciencehistory.org/collections>
- California Revealed
<https://californiarevealed.org>
- Calisphere <https://calisphere.org>



HOW TO SEARCH

Often when you reach a collection guide or database that seems applicable to your research, you are confronted with an empty search bar. How do you search when you don't know what you are looking for?

Before aimlessly browsing, ask what questions do you want to answer with your research? What topics do you want to investigate? Are there periods of time that are of special interest? You can start broadly and as you search, become more specific. Return to your class readings to help spark inspiration.

After establishing answers to any of these questions, think of keywords. These can be general or specific, subjects, titles, and phrases. Come up with as many as possible, including alternates for the same thing. Explore using a thesaurus, wikipedia, or encyclopedia to compile a comprehensive list. Other search terms to start with are names, dates, time periods, styles, places, organizations.

If you are very stuck, nothing is grabbing you, reach out to your professor during office hours. If you have a topic and questions, but are not finding results that move your research further, contact a librarian at your university. Subject librarians and special collection librarians available by email, or through a chat function on the library's website.

Expert Search Functions... x

- To narrow down your search, use quotations marks “ ” around the word or phrase you are searching. This will ensure your results match that word or phrase exactly.
- Try searching spelling variants based on culture. Like rubbish/garbage, artifact/artefact
- Use the advanced search function to add more parameters and focus your search. Specify material type as "object" or "archival material/ manuscript or rare book".
- To broaden your search results, use truncation symbols. Truncation symbols can be added to your search terms to account for various spellings, word endings, and other variables. Different databases use different symbols, the most common are *, ?, !, or #.

Examples:

For a search to return results for both women and woman, search wom*n. Searching with ?phobia will give you results that end with phobia.



WHAT TO EXPECT WHEN USING SPECIAL COLLECTIONS

Accessing Materials

You want to view the materials you've found, but they are not online or the digital surrogates are not giving you the information you need. Digitizing special collections material is a monumental and expensive task, therefore not all materials are going to be online. Most special collections use a system called Aeon to automate requests for materials. It can require a special account. For example, on the [UCLA Special Collections](#) asks users to create an account in order to check materials out to view.

If an institution does not use an automated system to allow users access to their collections, usually an email is provided for researchers to contact librarians and archivists directly.

When you locate the materials you need in the collection guide, catalog, or finding aid take note of identifying information such as...

- the title of an item
- the call number or unique ID
- the date
- and the format

Make sure you reference what you need as specifically as possible when requesting materials.

Checking out or requesting materials in special collections is not the same as using the library. These materials are usually unique and fragile, so they cannot leave the place they are held. By requesting to use materials, you are scheduling an appointment to view and examine these materials in a reading room with the supervision of a librarian or archivist.



It can take a few days for the materials to be pulled, and to schedule an appointment, so give yourself plenty of time to do research with primary sources.



WHAT TO EXPECT CONTINUED...

Reading Room Regulations

Special collections have strict rules. They will likely tell you these rules before you visit, they may even determine whether you can visit at all. In the most severe circumstances, your academic level, purpose of research, as well as letters of recommendation and interviews can be required to visit and use a collection.

The structure and rules of special collections at many institutions comes from a legacy of white supremacy, colonialism, racism, classicism, sexism and professional gatekeeping. So while the freedom and right to access information is a value most information professionals keep, it is important to remember systems of oppression are still at work.



While this is intimidating, special collections are meant to be used. The librarians and archivists want you there, and should encourage and help you in your efforts to do research. The security and care collections are treated with is to ensure that materials can be used for a long time. Do not let any person or any rule convince you otherwise.

- No pens, highlighters, or art materials
- Pencil only
- No food or drink or gum
- With some materials you will wear gloves
- No scanners
- Photos are usually allowed without flash, unless notified. They can only be used for research purposes
- No binders, sticky notes
- Notebooks and personal notes must be approved by staff, writing utensils and paper can be provided to you

Though, in most universities and public institutions, anyone can schedule to do research. The most basic rules of working in a reading room and handling special collections materials are as follows:

- Materials must remain flat and in plain view
- The order of materials must be preserved
- Nothing can be placed on top of materials, except book weights
- Handle everything with care
- Do not removed protective coverings
- Bound volumes must be supported with book cradles, or held in a way where the spine is supported



VISUAL ANALYSIS

The Basics of Visual Analysis

Before analyzing primary sources it is helpful to understand how to do visual analysis, which is a common research method in art history and design related fields. This is also called formal analysis, and can be paired with a functional analysis.



[Here is a longer video where someone is actively analyzing Grand Central Terminal in New York City.](#)



ANALYZING PRIMARY SOURCES

Activity to Engage with Primary Sources

This activity will walk you through the process of analyzing primary sources. Be careful not to leap to inferences (otherwise known as arguments and conclusions). The goal is to help you critically examine objects or architecture, forming analytical data that will back up the arguments about meaning, social, cultural, political implications, that materials communicate. In this activity item, resource, object can easily be replaced with architecture, furniture, system.

Observe

- What are you looking at?
- What are the shapes, lines, colors that stand out?
- What are the materials used?
- What is the content of the item?
- What stands out to you about the item?

Contextualize

- Who is the creator? Producer? Designer? Laborer?
- Is there a date on the item? Are there any markers of time? What was happening in that time period?
- Were all of the elements created at the same time?
- What is the item needed for? How is it used?
- What questions do you have about the item?

Infer

- Who is the intended audience?
- Was the item meant to be shared publicly or privately?
- Based on your observations, how does the item or space make you feel?
- How do your observations contribute to the work?
- What is the significance of the item?
- What message is the creator of the item trying to get across?
- What bias or power dynamic is expressed?
- What is missing, what is not represented in the item?

observe+contextualize=inference

The paper is worn, fraying, and discolored, it smells like mildew + the object was printed in 1673
= **This book is really old (and it's probably been stored improperly)**

REFERENCES

BIBLIOGRAPHY

Bourg, Chris. "The Library is Never Neutral." In Disrupting the Digital Humanities, edited by Jessie Stommell and Dorothy Kim, 456–57. Santa Barbara, CA: Punctum Books, 2018.

"A Brief History of Rare Book Libraries." In Rare Book Librarianship: An Introduction and Guide, edited by Galbraith, Steven K., and Geoffrey D. Smith. Santa Barbara, California: Libraries Unlimited, an imprint of ABC-CLIO, LLC, 2012.

LINKS

- Ketelaar, E. "Archival Temples, Archival Prisons: Modes of Power and Protection." *Archival Science* 2, (2002): 221–238. <https://doi.org/10.1007/BF02435623>
- Carter, Rodney G.S. "Of Things Said and Unsaid: Power, Archival Silences, and Power in Silence". *Archivaria* 61 (2006): 215-233.
<https://archivaria.ca/index.php/archivaria/article/view/12541>
- Solis, Gabriel. "Documenting State Violence: (Symbolic) Annihilation & Archives of Survival." Texas After Violence Project. Accessed June 7, 2022.
<https://texasafterviolence.org/documenting-state-violence-symbolic-annihilation-archives-of-survival/>
- Duff, Wendy M., and Verne Harris. "Stories and Names: Archival Description as Narrating Records and Constructing Meanings." *Archival Science* 2 (2002): 263–85.
- UCLA Biomedical Special Collections <https://guides.library.ucla.edu/library-special-collections/biomed>
- UCLA Architecture Library Resource Guide <https://guides.library.ucla.edu/library-special-collections/architecture>
- Online Archive of California <https://oac.cdlib.org/>
- MIT Library Research Guide for Architecture
<https://libguides.mit.edu/architect/special>
- MIT Library Research Guide for Biotechnology <https://libguides.mit.edu/bioleng>
- Science History Institute Special Collections
<https://www.sciencehistory.org/collections>
- California Revealed <https://californiarevealed.org>
- Calisphere <https://calisphere.org>
- How To Do Formal Analysis <https://youtu.be/sM2MOyonDsY>
- Formal and Functional Analysis <https://youtu.be/AqGbsMx5Ypc>
- Example of Architectural Analysis https://youtu.be/_b4XQUE_u8o
- USC Special Collections Guide <https://scalar.usc.edu/works/primary-source-literacy--an-introduction/on-materiality?path=analyzing-various-kinds-of-primary-sources>

Final Report

NASA JPL Cartography and Imaging Node Site
Information Studies 279
Fall 2022

Client: Sara Bond, Information Science Specialist

Team Responsibilities:

Ingrid Chang

- User interviews + coding, site mapping, experience mapping, final report methods

Judy He

- User interviews + coding, site mapping, experience mapping, final report user persona creation and updates

Laura Dintzis

- User interviews + coding, site mapping, experience mapping, final report synthesis of findings, conclusions, and updates

Pei Xi Kwok

- User interviews + coding, site mapping, experience mapping, final report introduction, goals, and appendix

Rebecca Farmer

- User interviews + coding, site mapping, experience mapping, final report synthesis of findings, conclusions, and updates

Executive Summary

Research Goals

Imaging Node's website is the primary entry point for users wishing to access NASA's imaging archives, which makes the site's user experience critical for the organization. Through constructing an understanding of current user and stakeholder perspectives on the site, this report provides insight into the site's usability and proposes potential pathways to improve it.

Methods

Informational interviews were conducted with two JPL stakeholders and a site architecture map was created in order to understand the pain points of the site. User interviews consisting a usability test was conducted with individuals of varied previous experience to gather insight into typical users' experience with the site. An experience map illustrating a representative persona, stages of site interaction, and the variable components of user experience on the site was developed to compositely present the challenges and desires of an average user.

Findings

- **Uninformative navigational content**

Uninformative text, inconsistent style, and discreet contextual information meant that many users were confused by links and ignored information pathways.

- **Unclear organization of content and visual overload**

Users were uncertain with how to navigate pages on the site due to crowded information and page elements that fought for prominence.

- **Inconsistent and redundant architectural elements**

Information was represented differently in disparate places on the site leading to unclear user pathways and context connecting site pages.

Recommendations and conclusion

- Describe and format links to be more consistent, visible, and understandable.
- Resolve redundant pages formatted inconsistently, specifically in the navigation bar.
- Create distinct site pages, and reinforce their context and connections for easier pathways through the site.
- Search bar is necessary for the site, though this is already in progress.

Final Report

Introduction

The Cartography and Imaging Node ("Imaging Node") of JPL's Planetary Data System ("JPL") is home to NASA's primary digital image collections. As the central hub for the organization's raw planetary imaging data, Imaging Node caters to all individuals with an interest in images from space: this includes scientific researchers of various experience levels, as well as homegrown astronomers who may not have formal training in fields of astronomy.

Imaging Node's website is the primary entry point for users wishing to access imaging data, which makes the site's user experience critical to the organization's mission of providing access and information to NASA's imaging archives. By constructing an understanding of current user and stakeholder perspectives on the site, this report provides insight into the site's usability and potential pathways to improve it.

Research Goals

The goal of our research was to identify specific user needs and challenges when accessing imaging data on Imaging Node's website. Recommendations on changes to be made to the user experience of the site would be made based on our findings.

The objective of the stakeholder interviews was to define the scope of our research by understanding the site's role in fulfilling Imaging Node's broader mission. User interviews and testing were then conducted with the goal of assessing the site's user experience. The team also created a map of the site architecture, experience maps and user personas to ensure clarity in the documentation of our findings.

Methods

Site architecture

We parsed through all of the PDS site's pages and their linked sites. We noted repeats of pages, the possibilities of getting to the same page through different routes, broken links, links to external sites, and confusing/misleading hyperlinks. This is all documented in a composite master site map, complete with a legend.

Experience map

We developed a composite persona based off of information gathered from our user interviews. We used the same information to develop a user journey modeled for the persona, illustrating the five main stages of a typical user's time on the site: identifying the data needed, finding the site, exploring the site, and successfully finding the data. (cont'd)

Methods

Experience map (cont'd)

We broke their interaction with site into also 5 categories: goals and experiences, feelings and thoughts, touch points, and pain points. The experience map helped us the most acutely in pinpointing common challenges and what the priorities of changes to the site should be.

Stakeholder interviews

Stakeholder interviews were conducted with the client, who is the Information Science Specialist for the Imaging Node, as well as the lead UI/UX designer for the Imaging Node's site. Interview questions focused on the background of the site and the organization, the stakeholder's evaluation of the site's current user experience, success metrics for the site, as well as requests for access to user behavior data. See Appendix II. for full list of questions.

User interviews

Recruitment

A total of 11 participants participated in the user interviews. Participants were recruited through a combination of personal connections and public outreach efforts on the UCLA campus). The latter involved posting flyers in UCLA's Physics and Astronomy Building and cold-emailing astronomy-related student organizations, as well as faculty and graduate-level students from UCLA's Division of Astronomy & Astrophysics (see Appendix I. for materials). A portion of the publicity material advertised educational merchandise from JPL as an incentive for those who completed the interviews. Participants recruited through public avenues were asked to complete a screener and selected for user interviews based on their experience level with using planetary imaging data in research settings.

Interview script

The interviews followed a uniform script, and participants were chosen based on their alignment with the identified user groups. Participants were briefed on the format of the interviews and then asked for permission to record the interviews, including screen sharing.

The interview starts with an informational portion, in which they were asked to share about their background, experience, and methodologies with research in astronomy specifically as well as in academia generally.

The interview then goes into the cognitive walkthrough portion, in which participants were prompted with tasks asking them to navigate to specific pieces of information. Though the script was predefined and task-based, the questions were open-ended and left room for interpretation, allowing participants to explore the website freely and complete tasks in their natural way. There were eight questions total. Throughout the walkthrough process, participants were encouraged to talk their thoughts out to explain their decision making.

Methods

User interviews (cont'd)

Interviewers were to clarify with the participant on their logic whenever it is not self-explanatory. For example, the interviewer may ask "Is this what you expected to see?" and "What are you thinking during the process?" to elicit more explicit responses from participants.

Finally, the interview concludes with reflective questions asking the participants about their experience with the site, including what they liked, what they found challenging, what they would want to be added, confidence in using the site effectively, and general impression of the site. Participants were also encouraged to give feedback on the session in general and to follow up with any other comments or questions they think of following the interview's formal conclusion.

Limitations and Bias

Our study notes that no one went to Atlas to complete any of the usability tasks, except the one where we specifically asked them to use it. Bias played a role in the way we worded and ordered our questions. The order was leading, making the interviewee assume that the previous question would point them to the information pertinent to the next. We also interviewed one of our stakeholders after we had performed our task analysis, alerting us to the importance of Atlas, over the more visible architecture of the site. While this information may have directed our task analysis differently, it is still productive to acknowledge that this legacy architecture hides more valuable areas of the PDS site, supported by our 11 users, not one of whom went to Atlas even by mistake.

The other major limitation of our study is the small sample population. Each of us interviewed 2 to 3 people, and for a more generalizable and representative study, a larger sample population would be necessary to check our findings.

Findings

Our interviews with two stakeholders, and 11 users from varying experience levels, with varying goals in regard to the PDS Cartography and Imaging node, allowed us to discover three ways that users were challenged when interacting with the content and site architecture. These are, uninformative navigational content, unclear organization of content, and inconsistent and redundant architectural elements.

Uninformative navigational content

As we asked users to engage with the site, it was evident in the process that 81% of them were confused by where each link would take them, and which links they should use to find specific information. When attempting to find information on missions and targets, people explained that the first thing they saw was only, “data, data, data.” When they did enter deeper into the site, we found that links to information were confusing and unclear due to their visual style and the use of vague link text. For instance, links in Data Portal and All Data Holdings pertaining to mission information, do not stand out as links, but only as headings acting as page delineation. These were ignored by 27% of users, even when specifically asked to find this information. Contributing to this is, link text color switches from blue to black depending on the page. There is instruction at the top of the page in All Data Holdings and Data Volume Index, but users did not read it. Uninformative text, inconsistent style, and discreet contextual information meant that many users were unaware of links on a page, ignored information pathways, and grew frustrated when links suddenly went to external sites or auto-downloaded files. Additionally, while most link text is independently clickable, many in Data Volumes Index are grouped together; this caused frustration and confusion to users who saw this information elsewhere as separate.

Unclear organization of content and visual overload

On many of the pages users were asked to interact with, the organizational structure and page elements determined the user's understanding of the site and their emotional reaction. All of the users we tested the site with expressed feeling overwhelmed and frustrated at least once through the series of tasks. Starting with the home page, users read the site left to right. Of the early career researchers and general public participants, they interacted with the home page in a series of random clicks, expressing uncertainty over where to go first, whether the top navigation menu or the left side navigation icons would be most productive. The left navigation icons are much more useful to experienced researchers and enthusiasts, as it contains Atlas and Photojournal. While this location was very visible to 64% of users, it was not explored by any participants, who instead prioritized the top navigation bar. As discussed above, the lack of description and overwhelming amount of information on the home page left users to default to the top navigation, equating it to the primary navigation.

Findings (cont.)

Due to the reliance of the top navigation the three navigation tabs Data Volumes Index, All Data Holdings, and Data Portal were where users spent their time exploring the site. While these pages exist as an archive for reference, not for interrogation and manipulation, this was not made clear when users entered the site due to the organization of the home page. It was even unknown to us, until our interview with one of our stakeholders. These three pages had many granular elements that made them difficult for users to navigate, such as long scrolling, unclear contextual information and heavy amounts of text. The real issue was that these three tabs all represented the same top level information differently, only for users to end up in the same place after clicking deeper in each page. This leads us to our next finding.

Inconsistent and redundant architectural elements

The lack of description for navigational elements, the prioritization of the same information in separate locations, each organized differently, compounds leading to our last way users were challenged by the PDS site. Inconsistent redundancy on the PDS site is most evident in the top navigation bar. 72% of participants voiced that the navigational tabs Data Volumes Index, All Data Holdings, and Data Portal should be consolidated. One user said, "I don't understand the differences between the tabs...[they] all get you to the same things in different ways—missions and data products." When users found the same information through different paths (questions 2, and 5-7), 72% of users were uncertain that they had all the information they were looking for. For example another user said, "They made it so difficult to find it, that once I did find it, I'm still skeptical I found it." The site's structure gave the impression that because there were disparate places to access data, each place would present different data holdings; this is reinforced by how different each redundant page looked. In our site map we found page overlap between all three tabs for mission information, data holdings, file trees, and documentation. The paths to these four essential components were disorganized, and inconsistent.

Inconsistency also appears in user pathways for Atlas and Photojournal. Our stakeholders made it clear that Atlas is the main data portal that PDS wants users to utilize when coming to the site, along with the Photojournal, a feature most useful to astronomy enthusiasts and amateurs. The paths for users to engage with Atlas are through the home page and through the Data Portal. The Photojournal is visible to users through the home page, and the mission information pages linked in the Data Portal and All Data Holdings. Atlas and Photojournal links on the homepage, and within the Data Portal and on mission information pages are not consistent, failing to reinforce them as a resource on the site.

Recommendations and Conclusion

Based on each finding outlined above, we make the following recommendations to the PDS site. Many users had similar recommendations, but we have used our knowledge of design to create more specific solutions that make the PDS site more universally navigable.

Clearer navigational formatting

Regarding uninformative and inconsistent navigational content, like link text, link style, and easily ignored or out of sight help or documentation, it is recommended that link text becomes more descriptive, is consistently one color, and is marked by an underline that is constantly visible. All links that prompt a file to download should require the user's permission. In addition to the link text itself, additional description should accompany links whenever possible, especially with featured content that may guide users, and with links acting as contextual information within the page.

Consolidation of content and visual simplification

Due to users' reactions to the current organization of content and stakeholder views, we suggest that the most important information be placed in one navigation bar. Photojournal and Atlas should become a central focus of this singular navigation, the redundant data pages–Data Volume Index, All Data Holdings, and Data Portal– should be consolidated, and in accordance with our first recommendation, each link on the navigation bar should be described within a secondary navigation drop down. The need for description of each navigation link was something 63% of our participants mentioned, and 36% said this was the most important feature to them.

Create better user pathways through the site

Our recommendation is to make user pathways simple, enjoyable, and logical in response to inconsistent yet redundant information architecture. To do this the areas of the site should be distinct, but connected and working to reinforce each other. Redundancy should only occur when its style and naming is consistent, and its purpose is to reinforce users' orientation as they move through different areas of the site. For example Atlas should be in a singular navigation bar, but to reinforce its role in the PDS site it could also be featured next to a prominent search bar, or as an announcement with a tagline in the body of the homepage. A good example of this is NASA's image galleries page. On this page, mission galleries are featured in the body, as well as being represented in the top navigation bar with the navigation tab 'missions'. This provides two solid and logical pathways to mission images.

It also should be noted that the lack of a search bar was mentioned by 81% of our users as something they felt was missing from their experience through the site. This is already in progress for the site's ADA compliance, but we recommend that it be a major feature on the front page.

Updated User Persona: Nina Anderson



- 19 years old
- Second-year undergrad at UCLA
- Cognitive Science Major
- From Los Angeles, CA
- Lives on campus at UCLA

Astronomical Background

- **Early-career researcher**
- Enjoys learning about astronomical knowledge.
- Taking an Astronomy GE this quarter.
- No experience working with imaging data.

Quotes

"I'm looking for the place it says mission....[but] all I'm seeing is data data data data..."

"They made it so difficult to find it, that once I did find it, I'm still skeptical I found it."

"Most things are where they should be, where I expect them to be."

"Maybe someone more experienced would have known what [file names] meant."

Goals

- To finish assignments in astronomy class with great quality.
- To understand more about how to access public imaging data.
- To browse through the site for learning more about astronomy .

How does Nina use the site? (Tasks)

- Does not notice the top navigation bar until notified, or actively avoided it because it did not include keywords she is looking for such as "mission".
- Has trouble differentiating between the naming of different tabs.
- Uses "Control+F" a lot to search for the data wanted because she is unfamiliar with the formatting.
- Not sure what is clickable on the data portal and data volume index.
- Confused about whether she has found all of the data needed because the same information is located in different places.
- Found all of the links to external sites disruptive, not well-identified or described.

Expectations

- Expects the site to have more search functions.
- Expects the site to have fewer links to external sites.
- Expects the site to have clearer naming of folders, tabs, etc.
- Expects the site to have consistent clickability and categorization.
- Expects the site to have an instructional description of what each element of the menu refers to.
- Expects the site to be more visually appealing with clearer and more interesting images.

Updated User Persona: Mark Roy



- 25 years old
- Third-year Astronomy PhD student at UCLA
- From San Jose, CA
- Currently lives off campus at UCLA

Astronomical Background

- **Experienced researcher**
- Worked for JPL on planetary data in his undergraduate years
- Has extensive experience in using astronomy-related databases

Quotes

"[I] don't understand the differences between the tabs - all get you to the same things in different ways - missions and data products. Data releases is different, other three are the same. Images are byproducts for public display and funding, [which] scientists don't care about."

"[This site] is on the better end of the scientific sites. Think I just need to get used to the formatting."

Goals

- To obtain high-quality imaging nodes data for research purposes.
- To get easy and quick access to the data needed.

How does Mark use the site? (Tasks)

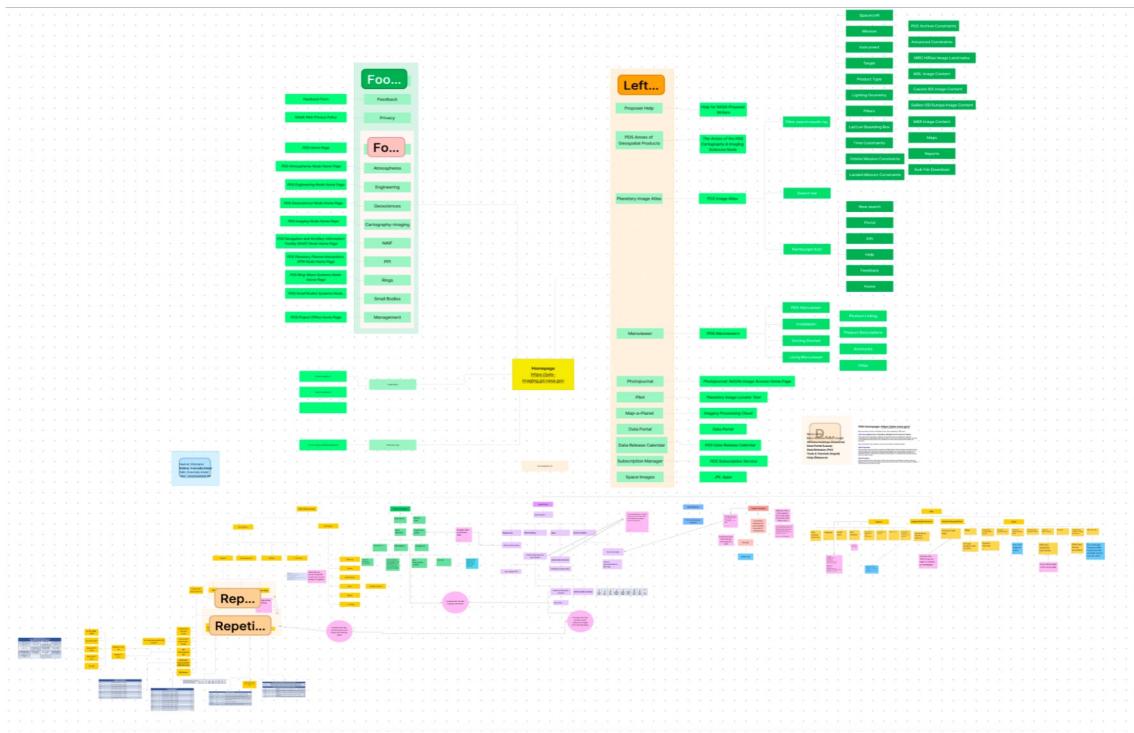
- Used intuition based on experience and background knowledge on "how scientists usually name and put stuff" to locate the data needed.
- Had trouble finding data through data volume index, missed LRO on the left column until second trial.
- Didn't notice the side navigation bar that includes the Atlas on the Homepage.
- Confused about whether the "data" folder contains the needed images because of the naming.
- Confused about the inconsistent categorization of data across different tabs/pages.
- Frustrated about automatic image extension and downloading.

Expectations

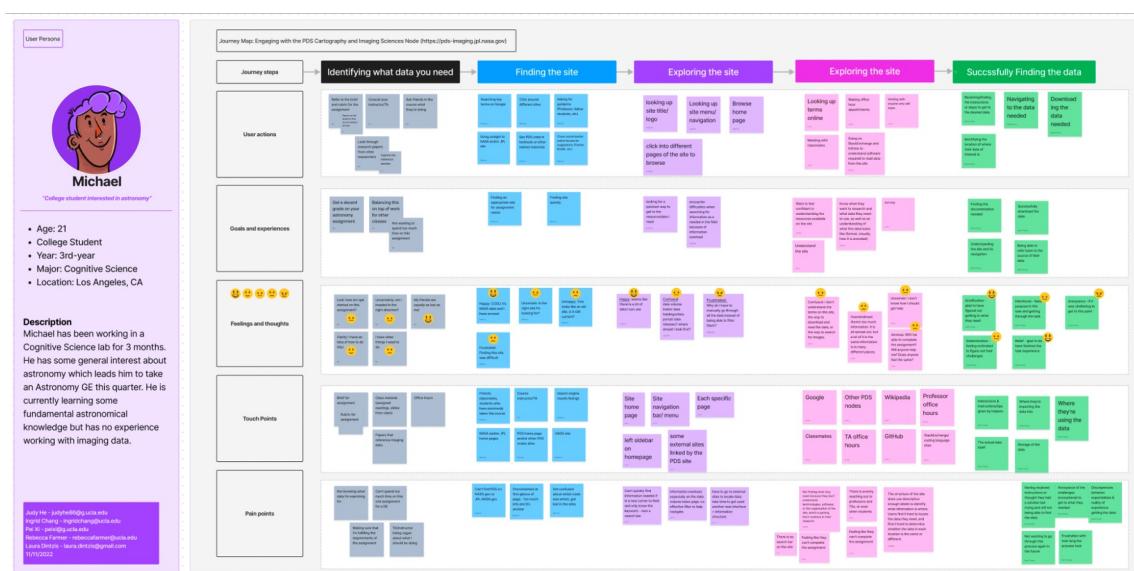
- Expects JPL to have clearer labeling of tabs and data.
- Expects clearer explanation of the tabs on the top navigation bar.
- Expects extensions and file sizes to be provided when need to download files.
- Expects to be warned when something is about to be downloaded.
- Expects to be able to find data filtered by mission, target, instrument depending on needs.
- Expects file trees with a better layout so no need to scroll up to see the column names.

Site Architecture and Experience Map

Site Architecture available on Figma



Experience Map available on Figma



Appendix

I. Outreach materials

Email template for graduate-level candidates in UCLA's Division of Astronomy and Astrophysics

Dear [recipient name],

My name is [sender name] and I'm a [X-year undergrad/grad] student here at UCLA. I'm also part of a team of user researchers from the UCLA Information Studies Department collaborating with NASA Jet Propulsion Lab (JPL) to improve the user experience of JPL's Planetary Data System (PDS) - Cartography and Imaging Sciences Node site. We are looking for participants with astronomy and/or astrophysics-related research backgrounds and experience using planetary imaging data to take part in our study.

The study will comprise two parts: a screener survey of your experience level working with imaging data which takes around 5 minutes to finish, and a 20- to 30-min user interview to help us understand your need and experience navigating through the site.

This study will be a class capstone project for Information Studies 279 - User Experience Design. Even though we are a student project and aren't able to provide you with anything too substantive as incentives, we did try our best to attain some cool and limited release NASA JPL swag from the JPL Education Department. So by participating in this study, you will have a chance to earn some of them.

If you are interested in participating, please take around five minutes of your valuable time to fill out this survey and someone from our team will be in touch soon. We would greatly appreciate your help by contributing your time and thoughts along the way.

Best regards,
[sender name]

Email template for astronomy-related student organizations

Subject line: Recruiting participants for NASA JPL user experience research

Hello!

We're a group of students working with JPL's PDS Cartography and Imaging Node to help improve the user experience of their website. This is part of our final project for an Information Studies course, IS279: User Experience Research taught by Professor Lynn Boyden.

We're reaching out to [organization name] to see if any of your members would be willing to participate in our user interviews as part of our research process. There are two components to this: a screener survey of their experience level working with planetary imaging data (<5 minutes), and a 30-35 minute user interview to help us understand their needs as a user of the site.

Participants can also expect to receive some JPL swag as thanks for their contribution!

If any of your members are interested, please have them fill out the screener survey linked here and someone from our team will be in touch shortly. Please also feel free to reply to this email with any additional questions you may have about our project.

Thank you!

Sincerely,
[sender name]

I. Outreach materials (cont'd)

Email template for Astronomy GE announcements

Dear [recipient name],

My name is [sender name], and I am part of a group of UCLA students working with Sara Bond, an Information Science Specialist at JPL to improve the user experience (UX) of the website for JPL Planetary Data System (PDS)'s Cartography and Imaging Sciences Node. This project is part of an Information Studies course taught by Professor Lynn Boyden (IS279: User Experience Design).

We would like to ask for your permission to publicize a call for interview participants at the start of your [course name] lectures that take place from [course timing]. The announcement will take around a minute, and will follow the script below:

Hi everyone! My name is [sender name], and I'm looking for folks to interview as part of a user experience research project for NASA JPL's PDS Imaging Node. This will involve a 40 minute interview where we get you to share a little about your experience with research and complete a few tasks on the Imaging Node's website. If you have experience working with planetary imaging data, or you're interested in astronomy at all, we'd love to chat with you! I'll be passing out flyers with a QR code - just fill out the Google form linked and someone from our team will be in contact. Thank you!

We would greatly appreciate your help with this matter. If you have any additional questions about the project, please feel free to reach out to me at this email and I'd be more than happy to answer them.

Thank you!

Sincerely,
[sender name]

Email template for non-UCLA researchers

Subject line: Help us improve JPL PDS Imaging site's user experience!

Hello!

We are a group of UCLA students working with Sara Bond, an Information Science Specialist at JPL to improve the user experience (UX) of the website for JPL Planetary Data System (PDS)'s Cartography and Imaging Sciences Node. We are looking for participants with research experience using imaging data from the PDS Imaging site as part of our project.

This study is a part of a capstone project for a user experience course with UCLA's Department of Information Studies [Information Studies 279 - User Experience Design] and comprises two parts: a screener survey of your experience level working with imaging data (<5 minutes), and a 30-35 minute user interview to help us understand your needs as a user of the site.

If you are amenable to participating, please fill out the screener survey linked here and someone from our team will be in touch shortly. Any additional questions about the project can also be directed towards Laura at dintzis@g.ucla.edu.

Your contribution towards improving the user experience of the PDS Imaging site and advancing the education of budding UX researchers would be greatly appreciated. Thank you!

Best regards,
Ingrid Chang
Judy He
Laura Dintzis
Pei Xi Kwok
Rebecca Farmer

I. Outreach materials (cont'd)

Flyers posted in the UCLA Physics and Astronomy Building

General outreach message for students



Hi everyone! We're a group of UCLA students working on a user experience research project for NASA JPL's PDS Imaging Node. If you have experience working with planetary imaging data, or you're interested in astronomy at all, we'd love to chat with you. You can expect to go through a 40 minute interview where you share about your experience with research and complete a few tasks on the Imaging Node's website - in exchange, you'll get some JPL swag! Please fill out the Google form linked here (<https://forms.gle/qiPZwAaC3qWVoj6d9>) and we'll be in touch shortly.

I. Outreach materials (cont'd)

Screener Google form [[link](#)]

Improve NASA JPL site experience

We're a group of UCLA students doing user experience research for the JPL Planetary Data System (PDS) Cartography and Imaging Sciences Node for an Information Studies class (IS279). We're looking to interview participants to better understand the experience of accessing planetary imaging data on the site.

If you have any questions, please reach out to Laura at Idintzis@g.ucla.edu.

 peixi@g.ucla.edu (not shared) [Switch account](#) 

* Required

Name *

Your answer

Email *

w

Phone number

w

Do you work in astronomy, planetary, or earth science research? *

Yes
 No

Which of these categories best describe you? *

Undergraduate student
 Graduate student (Ph.D./M.S)
 Post-doctoral candidate
 Researcher
 Faculty
 Other: _____

How often do you search for planetary imaging data to use in research? *

Not at all Sometimes Often

Frequency

Have you used data from [JPL's Cartography and Imaging Sciences Discipline Node](#)? *

Yes
 No

[Submit](#) [Clear form](#)

II. Interview questions and script

Stakeholder interview: client

[Introduction]

[Mission]

What are your institutional goals?
How can a website help with that?
Why are you doing this project?

[People]

Who is your target audience?
How do they find the site?
Is there departmental interest in making the site more usable for casual users?
Who should be included in the project? Who will make the final decisions?

[Deliverables]

What does success look like? How can we measure that?
What is working right now on your site today?
What's not working?
How do you know?

[Context]

What risks do you foresee, or concerns do you have?

[Access to users]

Can you get us in touch with more specialized users of your site for the purposes of testing and interviews?
Can you get us in touch with stakeholders for the purpose of interviews concerning site goals?
Are there incentives you can give us to motivate user participation?

[Analytics]

How do you currently keep track of user behavior on the site?
Do you have dedicated resources for managing the site? Is it updated regularly or static?
(cont'd)

User interviews

[Introduction]

Hi, xx (participant's name), thank you for signing up to participate in our research project!

My name is xxx, and I'm going to be walking you through this session today. We're asking people to try using a NASA JPL site that we're working on so we can see whether it works as intended.

Before we begin, I just want to get your consent of this meeting being recorded. We are doing this because we don't have another group member who is available at this time to take notes simultaneously and recording will only be seen by the people working on this project.

[Participant's response] [Begin recording]

A quick reminder is that there are no right or wrong answers that we are looking for; our goal is to learn more about how the participants feel about the experience of using JPL site. Please don't worry that you're going to hurt our feelings. We're doing this to improve the site, so we need to hear your honest reactions.

As you use the site, I'm going to ask you as much as possible to try to think out loud: to say what you're looking at, what you're trying to do, and what you're thinking. This will be a big help to us.

This interview will be two-part. The first part is an informational interview. We will be asking you mostly open-ended questions describing your experience with imaging data, particularly challenges and desires.

The second part is a task walkthrough. We will ask you to perform a specific task through using the PDS website, and talking through your thought process navigating the site. We will give more detailed instructions so don't worry about this for now.
(cont'd)

II. Interview questions and script (cont'd)

Stakeholder interview: client

What are the most common tasks users perform on your site?

[Wrap-up]

Stakeholder interview: lead UI/UX designer

[Introduction]

[Background questions]

What is your involvement with the PDS site?
What do you view as the institutional goals of Imaging Node? And how does a website help with that?
What is the history of the PDS site? Was it inherited?
How frequently is the site updated?

[Strengths and limitations]

What does success look like for this site? How do you currently measure that?
What do you think are the strengths of the website?
What issues do you see?
What limitations prevent you from making the changes you want to the site?

[Understanding the audience]

Could you describe, to your knowledge and understanding, the different target audiences of the site?
Do you prioritize different audiences using the site, or are they of the same importance? If yes, how?

[Access to data]

Could we get access to usage metrics to understand which pages are the most used?
Are there query logs we can gain access to?
Does the team make use of the feedback/help form?

[Wrap-up]

Anything else about the site you think we should know?

User interviews

Tell me about yourself: what kind of research do you do? What kind of experience do you have related to astronomy? What about imaging data?

Could you walk me through your process of searching for source material/raw data for your research?

[Transition into task analysis]

1. Find the Mission Info for the Clementine mission
Ask:

Why did you choose x over y?

Why did you think to navigate to this area?

2. Then find all online data holdings from the mission
Ask: Why did you choose x over y?

Why did you think to navigate to this area?

3. Within all data holdings from the Clementine mission, locate this specific data holding: the (UVVIS) Lunar Full Resolution data, and the dataset cl_4008.

Ask: Why did you choose x over y?

Why did you think to navigate to this area?

4. Find an image from this dataset.

Ask: Why did you choose x over y?

Why did you think to navigate to this area?

5. Use the Data Volumes Index to find Lunar Reconnaissance Orbiter (LRO) data

Ask: Why did you choose x over y?

Why did you think to navigate to this area?

6. Use All Data Holdings to find LRO data

Ask: Why did you choose x over y?

Why did you think to navigate to this area?

7. Use The Data Portal to find LRO Data

Ask: Why did you choose x over y?

Why did you think to navigate to this a

II. Interview questions and script (cont'd)

User interviews

8. Use Atlas to find LRO Data

Ask: Why did you choose x over y?

Why did you think to navigate to this area?

[Transition into reflection]

How confident are you that you completed all the tasks correctly?

What parts of the tasks were easy?

What parts of the tasks did you struggle with?

Did this experience make you want to use this site more or less again in the future? Why?

What tools would be helpful/what changes to the site would make your experience better?

What do you think among those things you mentioned is the most important to you?

[Recap/wrap-up]

And that concludes all of our questions for the interview today. Is there anything you would like to add onto your previous answers or ask us about the project before the interview ends?

If no: alright, thank you so much for participating in our interview. It is a pleasure talking with you today. Have a great day!

Internship Work

Digitizing the Many Voices of the June L. Mazer Lesbian Archives

June L. Mazer Lesbian Archives: Community Archives Lab Internship

The June L. Mazer Lesbian Archives is one of the largest archives in the world dedicated to collecting, protecting, preserving, and making accessible, lesbian and feminist history and culture. It was a grass roots archive started in Oakland in 1981 and originally called the West Coast Lesbian Collections. The archive was moved to Southern California in 1985 into the home of June Mazer and Bunny Mac Culloch, then into its current location on the second floor of the Werle Building in West Hollywood in 1989. The building sits between endlessly energetic bars, and the West Hollywood Library. It has remained a constant and endured many changes to the neighborhood over the years.

After rising to the second floor and moving through the door to the Mazer, you enter a space packed with archival boxes, books, posters, paper, and people working or chatting, bringing the space to life—despite the limitations that still persist during the COVID pandemic. Due to the sheer volume of materials in such a small space, care, collaboration, and urgency are fundamental to the archive's daily function, especially when you consider there is even more knowledge held only within the people who make up the Mazer's community. These are central values which have guided the work I've done alongside two other archivists, their teams, Mazer staff and volunteers, in order to continue the Mazer's mission of providing multigenerational links between lesbians, queer people, and feminists, and to collect, preserve, and provide access to their history.

Within the Mazer's extensive archive, I have the opportunity to take an active part working with their oral history collections: digitizing cassette tapes from the Lillian Faderman Audio Cassette Collection, and managing born-digital oral histories taken by students in Dr. Marie Cartier's Queer Studies course at California State University, Northridge. In addition to digitization and file management, I am working on creating a zine for the students, informing them about oral history preservation and best practices which hopefully can lessen the amount of file renaming and converting that the Mazer has to do when accessioning the projects. My

other work involves the Mazer's online presence, and includes creating newsletters, maintaining the website blog, as well as an ongoing effort to expand the video archive that is on the site.

I sometimes equate digital work with solitary work, but at the Mazer, that idea was immediately proved to be false. Not only did I get to work collaboratively to problem solve and research for these projects, but I had the opportunity to be part of the knowledge sharing that is essential at the Mazer. Completing these digital projects involves listening to and learning from the LGBTQ+ narrators that make up these collections; therefore, I'm never really alone when digitizing or checking files. It also involves listening to staff at the Mazer talk about their own relationship to these materials, and their own personal stories, letting us get to know each other along the way. These conversations are an essential part of preserving the collections, by noting personal context that can be lost or left out when project archivists, like myself, come into the process.

The work I am completing is done to help honor all of these points of information in an accessible and safe way, making them available to a wider audience now that they are in a digital form. At the Mazer, I get to explore methods for sharing digital archival resources securely, understand tiers of access, all while getting to reckon with alternative ways to represent materials online outside of a finding aid. These practices are things I'm passionate about in my MLIS program, and experiencing the reality of this work has been both challenging and rewarding.

Further collaborative work has come through physical processing. I recently started processing the Christy Amschler Collection, which is only one collection out of 293 other boxes that will be processed by the end of the year with two other archivists. The collection is mostly photos, sketchbooks, and 35mm slides, which have been wonderful to go through—allowing me to see the everyday joy of lesbian life, and to hear the stories of community care that brought the collection to Mazer. I am excited to continue my archival work and build relationships that will continue beyond this internship. I am grateful for this experience and the way it has shaped my own goals for future archival work.

Accessibility Statement

I believe information on the Web should be accessible to people using assistive devices and settings, as well as those facing other physical or technological barriers to internet use. My website <http://dintzis.github.io> was designed with accessibility features in mind. This accessibility statement is generated to show how this site complies and falls short of the Web Content Accessibility Guidelines 2.1. It was generated using [the Web Accessibility Initiative's free accessibility statement generator](#) and with [the Bureau of Internet Accessibility's free website analysis tool](#).

Conformance Status

The Web Content Accessibility Guidelines (WCAG) defines requirements for designers and developers to improve accessibility for people with disabilities. It defines three levels of conformance: Level A, Level AA, and Level AAA. My personal website is partially conformant with WCAG 2.1 level AA. Partially conformant means that some parts of the content do not fully conform to the accessibility standard criteria. According to the accessibility assessment, 24 out of 29 checkpoints were successful, with only 5 failures. These failures were checkpoints under the perceivable and operable principles and are as follows: 1.1.1 Non-text Content, 1.3.1 Info and Relationships, 1.4.1 Use of Color, 2.4.1 Bypass Blocks, and 2.4.4 Link Purpose (in context). I am continuing to improve my web design skills that will remedy these non-compliant elements.

Technical Specifications

Accessibility of my website relies on HTML and CSS to work with the particular combination of web browser and any assistive technologies or plugins installed on a computer. I used Bulma.io CSS stylesheets to design this site. While features of the site are compatible with most browsers, without JavaScript the website is not recommended for mobile viewing as the site menus can be visually overwhelming.

Limitations

No users with disabilities were consulted when designing this webpage. There are issues with ease of use with assistive technology like screen readers, as well as issues with conveying meaning only with visual means. The zine I created for IS212 Communities and Values is made of images with text, and therefore cannot be read by screen readers. My project for digital humanities contains charts that use color to distinguish between different categories and while those with colorblindness or low-vision were kept in mind when choosing colors, this still excludes those who use screen readers to a certain extent. I encourage feedback addressing any of these issues to be submitted through my GitHub page, or by emailing me directly.

Courses Taken

Fall 2021

- IS 211 - Artifacts and Cultures
- IS 212 - Communities and Values
- IS 431 - Archives Records and Memory

Winter 2022

- IS 241 - Digital Preservation
- IS 270 - Systems and Infrastructure
- IS 438B - Archival Description and Access

Spring 2022

- IS 260 - Description and Access
- IS 433 - Community-Based Archiving
- IS 439 - Special Collections

Fall 2022

- IS 262A - Data Management and Practice
- IS 279 - User Experience Design
- IS 280 - Social Science Research Methods

Winter 2023

- DH 201 - Introduction to Digital Humanities
- IS 461 - Descriptive Cataloging
- IS 596 - Directed Individual Study

Spring 2023

- IS 289 - Special Issues in Information Studies: Digital Asset Management
- IS 464 - Metadata
- IS 497 - Fieldwork in Libraries or Information Organizations
- IS 289 - Audio Archiving (audited course)*