Master's Paper Abstracts

Summer 2022


This study critically examines metadata infrastructures related to archival materials and Indigenous data sovereignty and data governance frameworks. By analyzing nationally and internationally recognized metadata content standards for archival materials, this study explores how rights, ownership, and access are defined and conceptualized in metadata standards conceived through different theoretical frameworks. Further, this study provides crosswalk maps for standards in relation to Murkutu, a metadata standard used primarily by Indigenous communities and Tribal entities to ensure culturally appropriate and legally sufficient intellectual property considerations, ownership, and access rights. Within the framework of internationally recognized rights for Indigenous peoples and nuanced understandings of ownership and property rights, this study adds to discussions within cultural heritage institutions and archival repositories by moving towards broadening understandings of appropriate stewardship of Indigenous archival materials and consultation with Tribal entities and communities.


Pseudo-historical narratives on the European Middle Ages form the root of many white supremacist’s identities, but the specific language used by these white supremacists when discussing the medieval have yet to be analyzed in peer-reviewed literature. In this study, posts from the white supremacist forum Stormfront referencing medieval history will be collected and analyzed through qualitative content analysis to discover what myths of the Middle Ages white supremacists identify with most, to further document how their rhetoric affects popular conceptions of history. Academic medievalists have been battling the misrepresentations of medieval history for decades and the intervention of other sectors of academia may be necessary to enact change. By adding the LIS perspective on the specific topic of white supremacist medievalisms, this study will hopefully spark deeper conversation between academic fields in combatting misinformation on the Middle Ages.


The ethos of higher education institutions is entrenched in a core of principles, values, and goals that demarcate their contribution to bolster knowledge, inquiry, research, and a broader understanding of the human condition. Furthermore, universities embrace individuals from various socioeconomic backgrounds, ethnicities, geographical regions, gender identities, and language groups who reconfigure the prototypical canonical discourse. The aforementioned framework epitomizes the foundation for the four chapters wherein the focus is on “Critical Pedagogy in Librarianship: Decolonizing the Curriculum,” an “Annotated Bibliography: Themes and Sample Resources,” “Myth and Reality in Librarianship,” and a “Collection on Social Justice and Inclusion Competency in Librarianship.” These intersecting essays link together the significance of the graduate curriculum to enhance critical thinking processes through the lens of feminist pedagogy, cultural competence, and social justice in librarianship. This project endeavors to underpin the importance of increasing venues of dialogue amidst schools of information and library science and librarians.

Generative transformers like GPT-3 are sophisticated question-answering tools with many real-world applications. This study explored a possible use for GPT-3 in a public library setting answering Readers’ Advisory questions. GPT-3 was asked real-world readers’ advisory questions gleaned from social media and asked to explain its answers. These responses were coded using qualitative content analysis to characterize GPT-3’s answers and ability to handle the nuance and complexity inherent to readers’ advisory questions. Though GPT-3 revealed several weaknesses, including inconsistency and a tendency towards repetition, it was able to recommend books in a variety of contexts and speculate about a user’s underlying experience. At times, its nonjudgmental answers were reminiscent of active listening techniques that library professionals practice, hinting at an emerging librarian persona. This study aims to open the door for further research on AI in public libraries and demonstrate GPT-3’s capabilities in a particular context.


The postpartum period represents a formative time when new mothers face waves of physical and mental changes and health and wellness concerns, many of which were exacerbated by the COVID pandemic. Using survey data from mothers who gave birth during COVID, I aim to extract a narrative that highlights some of the potential shortcomings in postpartum care in the context of COVID and examine their demand for telehealth-based postpartum care.

The survey was administered in September 2020 to 254 new and expecting mothers in North Carolina. I employed mixed methods to examine characteristics of new mothers who gave birth during the early portion of the COVID pandemic, find commonalities between them, and examine their perspectives on care. More specifically, (1) describe the sample population (2) examine patient perspectives on their care, and (3) determining correlations between telehealth use and insurance, telehealth use and demographic characteristics, and telehealth use and patient experience. Together, I hope my findings will draw a clear picture from the survey data and inform my advisor’s future work.


This qualitative assessment consists of interviews and surveys with archivist, or related library staff, across North Carolinian academic libraries. The purpose of the study is to identify and gain perspectives from archives in academic libraries in North Carolina that have digitally preserved local broadcast media materials, like radio and television, or have interest in doing so. This study addresses digital preservation actions and drives open conversation on digitizing artifacts for long-term preservation. Discussion of additional digital preservation components like policy development, external and internal resources, various storage, and access with emphasis on discoverability through reference services are also encapsulated. The study also navigates library and community relationships in concurrence with the necessity of local broadcast media collections.


Preservation concerns around dissemination of information face professionals, consumers, and hobbyists performing tasks that are heavily reliant on unsupported legacy equipment. This paper seeks to acquire information that may be used to develop a broadly applicable ontological framework and intentional support community for a structured knowledge base of equipment issues, parts, and details. This will be accomplished by conducting structured interviews that seek to better understand the information-seeking behavior of technicians and consumers in a variety of disciplines reliant on skills, practices, and information surrounding “old gear.”


The Internet has become an integral part of people’s lives. However, any digital activity results in energy con-
sumption and greenhouse gas emissions, which are the prime drivers of global warming and climate change. The environmental cost calls for the practice of sustainable web design or green human-computer interaction. While there is substantial research on ways to reduce the energy consumption of the back-end information systems, such as data centers, few studies focus on the front-end information systems, such as web design. This study aims to analyze the impact of web design on energy consumption by conducting a case study on an institutional website.

A set of major web tracking and performance metrics tools will be adopted to collect data on energy consumption, web performance optimization, web design, and user experience. Descriptive analysis of the data will help generate actionable insights into environmentally friendly user interface design strategies for digital devices.


My project addresses the ways in which youth librarians can engage with young adult literature within a framework that encourages activism, expands what counts as a “text,” and creates an environment for young patrons to tell their stories in their own voices. For this project, I created a website repository for a number of young adult (YA) books to serve as a toolkit for youth librarians. The information provided in this toolkit can be used in the school or public library setting as either one-off sessions or recurring series with patrons, and the format will provide youth librarians with the opportunity to create their own programs.


Within the last ten years (2010 – 2020) there has been a shift within archival studies to make changes in the ways that archives, and collecting institutions present and make the material housed in their organizations accessible, discoverable, and usable to the communities they serve with a focus on social and racial justice. It seems that some archives have considered ways that collection description affect and impact the narrative of a collection and how collections are interpreted and understood by users through the created narrative. Archival description tells a story, and it is essential to examine whose stories are being elevated and whose are not through description and what members within any given archive’s community of users is being left out and/or lacking representation. My intent in this paper is to analyze two reparative description guideline sets which have been created to share widely among archivists and library professionals.


This study investigates where Spanish-language books are used in UNC graduate student research in Humanities and Social Science disciplines in order to assess current Latin American area studies collections policies. Using a citation analysis of UNC dissertations on Latin American topics approved between 2011 and 2020, the study shows which disciplines cited books in Spanish at the highest rates and whether a subsection of those books are available in local holdings at UNC and in the Triangle Research Libraries Network. The data produced in this study is meant to be used in guiding collections policies at UNC and to provide an adaptable case study for other departments or institutions.


This paper is a qualitative analysis of tweets collected from searching the hashtag hydroxychloroquine on Twitter during the summer of 2022. Using the constant comparative method of grounded theory, this paper seeks to identify key narratives surrounding hydroxychloroquine and what public health organizations are doing to control the narrative. While the sample size is limited and cannot be used to generalize about medical misinformation on social media as a whole, this research will hopefully be useful to other students studying medical misinformation in the future.


The effects of COVID-19 have highlighted the tangible aspects of summer reading programs and their importance
to the success of programs in their communities. These tangible aspects are more than the rewards secured for completing allotted time requirements. They are the important physical signifiers of the programs and communal gathering in a specific space. In this study an in-depth look was taken at four public library systems in North Carolina to understand the physicality of their programs, how they relate to marketing and participation not just by youth but by the community at large and how COVID-19 greatly disrupted them. These topics will be highlighted and supported through statistical data from summer reading programs pre and post COVID-19 along with testimonials from the librarian in charge of the programs at their respected libraries.


This study aims to identify and describe creative writer information-seeking behavior and creative writer information-seeking behavior for visual studies materials, using methodology adapted from visual artist information-seeking research. Data were gathered through semi-structured interviews with a purposive sample of six creative writers: three poets and three fiction writers. Conversations were coded for information motivations, sources, formats, access concerns, and applications; search behaviors; and forms of visual studies engagement. This study contributes to our understanding of the information-seeking behavior of creative writers from an information science perspective, a topic that as of 2022 continues to be underexplored within information science.

Additionally, this research supports examination of visual studies’ material audiences, access, discoverability, and organization; opportunities for and approaches to art library outreach; and interdisciplinary subject collaborations in the library.


Resources and supportive services are available at the University of North Carolina at Chapel Hill (UNC) for those who have experienced sexual assault or sexual violence. However, students need to know about the available resources before they can benefit from them. This study investigates the extent to which students are aware of and familiar with the resources currently available. This was achieved through an online survey of the general student body including both undergraduate and graduate/professional students. More specifically, students were asked about their awareness of and knowledge about 13 resources in the Chapel Hill community. Students are most familiar with Campus Health, UNC Police, and Counseling and Psychological Services (CAPS) but there is a wide disparity in the level of familiarity with other resources.

The findings of this research illustrate current student awareness of resources which the university can use to inform future community education strategies regarding sexual violence resources to fill gaps in community knowledge.


The purpose of this study was to examine what tasks users prefer to perform using web-based desktop email versus mobile app email and understand those preferences. Through in-depth questionnaires, a mixed-methods exploratory study asked users about their experiences using web and mobile app email and under what circumstances they might choose to use one over another. User perceptions of task difficulty on different devices were collected using scale questions with these perceptions informed by open-ended free response questions that asked users what device they preferred and why. The findings indicated that users still prefer computers in almost every instance when given a choice, and the responses were used to generate insight into why this is the case.


This study describes the collection and preservation efforts of six different individuals associated with academic archives and special collections libraries across the United States regarding abortion related materials. Interviews were conducted with professionals who have worked closely with abortion related materials at the following institutions: Harvard University, Duke University, Rutgers University,
Georgia State University, the University of Iowa, and Tulane University. The interviews provide answers left by the gap in scholarship about collecting abortion related materials as well as give insight into why and how these materials are collected and preserved.


This study investigates how users perceive United States government climate change websites (i.e., Environmental Protection Agency and National Aeronautics and Space Administration). Twelve subjects participated in a usability evaluation remotely.

Results inform specific opportunities to improve perceived credibility and usability of United States government websites designed for combating climate change. Websites that are more transparent with their budget and projects are perceived to be more credible. The existence of a relationship between perceived usability and credibility was also further substantiated by the results.


In this content analysis of picture books from the A. B. Combs Magnet Elementary School library about technology, I analyzed and coded 20 books. The goal was to analyze the amount of authentic diverse characters in these picture books that would influence students positively in their use of technology for fun or learning. Results showed a gap in publishing “Mirrors,” as Rudine Sims Bishop defined them, in picture books about technology for students of color.

Fall 2022


This paper explores the development of an open-source web application called the WXYC DJ Hub, intended to succeed the current playlist logging system at WXYC – 89.3FM, using all open-source technologies. The software is meant to be community supported by WXYC members and serve as an educational experience for students within WXYC who wish to work on real web applications. The software repository is being hosted on GitHub under an MIT license. This paper describes the user needs and development process of the hub, from considerations in choosing software packages to walkthroughs of the frontend and backend of the hub.


From the late 1960s to the 1990s, Northern Ireland experienced turbulence and violence, as Unionist Protestants and Nationalist Catholics disagreed regarding the destiny of Northern Ireland and its ties to the United Kingdom. During this 30-year period, known as the “troubles,” Northern Ireland and its people found refuge in the written word, expressing their emotions and thoughts in diaries, and communicating with each other to build communities. This paper examines the role of reading and writing during this conflict, specifically from the women’s perspective. Diaries, personal narratives, memoirs, and fictionalized novels were analyzed, as well as information from two semi-structured interviews. These documents and interviews were used to determine the value of reading and writing for women during this time frame, who were trying to go about their daily lives in Northern Ireland. The documentary analysis revealed four themes for why women chose to read and write during this 30-year period: one, breaking the silence; two, as therapeutic and/or coping strategies; three, creating normalcy or control of the situation; and four, as a descriptive method to help compare their situation or emotions they were feeling, or “filling the void.”


Over the last decade mobile interfaces have gone from being a new space to a mature technology, and this has seen a number of changes in the way that interfaces designed. One example of this is a shift in icon design from highly representative detailed icons to simplified and symbolic icons. My study looks at what effect this design shift towards less complex iconography has had on the ability of users to find them in a 2D visual layout. The findings
of this study reinforce the current trend of simplified icon designs and provides potential avenues for more in-depth studies to look for ways to improve the functionality of modern icon design.


Gazetteers (dictionaries of place names, their classifications, and locations) are fundamental to GIS systems. Historical gazetteers especially are an important resource for aggregating knowledge about places across time, and allow for types of data analysis possible only at scale. With the renewed interest in gazetteers as tools for the digital humanities, there has been a rise in domain-specific gazetteers. One sphere that has yet to develop a historical gazetteer is the organized camping industry. Organized camping, termed thus to distinguish it from the less structured and formalized forms of family camping or backpacking, originated in the late 19th century in the United States and has since spread across the globe. The available primary source material (annual directories and guidebooks dating back to the 1920s) particularly lends itself to the creation of a gazetteer of summer camps in the US. To make the creation of such a gazetteer possible, this project developed a text mining program to turn early editions of the Porter Sargent Handbook of Summer Camps (the most comprehensive camp directories) into the foundations of a gazetteer. Once expanded and enriched, this geodatabase will serve as a resource for the American Camp Association (ACA), the industry’s primary professional organization.


As a core library service, study room reservation (SRR) promotes a collaborative learning environment. Since the COVID-19 pandemic, user demand and needs for SRRs have unprecedentedly been soaring due to social distancing and health protection. However, the usability and user experience of an SRR system has rarely been investigated. This study aims to fill in this gap by taking a mixed-method approach to assess the usability of an SRR system at the library website of the University of North Carolina at Chapel Hill, prototype a new design based on user feedback, and conduct an A/B testing to compare user experiences. Findings will help the academic library system improve the SRR service, better meet users’ needs during and after the COVID-19 pandemic and provide empirical evidence to the design and development of SRR systems.


The purpose of this study was to understand how archivists perceive the value and ethics of acquiring and preserving psychiatric records despite cases where providing access to records is impossible due to privacy reasons. A study similar to this has not been located in the existing literature and therefore this study would have informed the archives field to how psychiatric hospital records are viewed. Member archivists and librarians of the Society of American Archivists would have been surveyed and four would have been interviewed as well to gain both breadth and depth on the research question. IRB approval was not received and therefore the study was not conducted.


This study is a content analysis of children’s picture books. Fifteen books were evaluated to determine how the Black experience is presented in children’s picture books. The books were selected from The Brown Bookshelf. This site was chosen due to its mission. The Brown Bookshelf was designed to push awareness of the myriad of Black voices writing for young readers. The books were selected from the curated 2020 and 2021 lists. The results of the content analysis revealed that the overall depiction of the Black experience from both the 2020 and 2021 lists was accurate, uplifting, and non-stereotypical. The illustrations allowed for the full beauty of Black features, skin tones, and hair to shine through, while storylines and characterizations were nuanced and holistic. There were no differences in language between non-Black and Black characters. Results found that although these books and stories were not universal, they accurately portrayed the Black experience and could be used as a “window.” The books were “culturally conscious” and an accurate depiction of the Black experience.

This study investigates the digital accessibility awareness of graduate and undergraduate students from a major public research university who are preparing to graduate from information workforce generating degree programs. Students from four major degree programs (information science, computer science, communications, and media and journalism) completed in-depth semi-structured interview sessions to discuss the concept and answer detailed questions about digital accessibility fundamentals and applications within the student’s respective field of work or study. The vast majority of students interviewed were very familiar with digital accessibility and showed that they were prepared to implement its fundamental principles in their future professional roles in the workforce after graduation.


To begin to address an international gap in scholarship around the sister marches of the 2017 Women’s March, this master’s paper performed content analysis on a corpus of protest posters from three countries: the United States, England and Poland.

Concerns, characters, symbols and text from each march were compared to one other and to previous Women’s March research. This study revealed that all three sister marches framed at least half of their posters toward an American context but also negotiated their content with a local identity. Warning: This paper contains uncensored language and images of protest.


This project tracked the transition of a small community library from being privately directed to becoming municipally managed in the aim to provide a transferable process for future establishments that hope to attempt the same transition. The details of this phenomenon are documented through community survey analysis, a content analysis of the acquisitions contract, and a review of the gray literature with context provided by first-hand observation. This project also documented the Village of Pinehurst’s (VOP) acquisition of Given Memorial Library & Tufts Archives (GMLTA) for Pinehurst’s historical records.


This paper presents a qualitative, historical study of the characterization and doctrinal basis of the activities of the North Carolina Library Commission and its Traveling Libraries. It examines service to rural libraries and the delineation and contest between state responsibility and municipal or county responsibility for instituting public libraries.


This project explores the utilization of digital humanities techniques and tools for the purposes of transcription, data analysis, visualization and presentation of archival data pertaining to asylums in the 19th and 20th centuries.

Since 2017, the Community Histories Workshop’s Asylum in the Archive initiative has been digitizing and transcribing records relating to the admission and the assessment of people in the Dorothea Dix asylum from 1856 through 1922. My project builds off this work by developing machine learning models to increase transcription efficiency for future records as they become available, and working with the dataset to analyze, visualize and present the data to tell the history of the asylum and psychiatry. The result demonstrates the value of the work already done, leaves examples and models for future scholarship utilizing this dataset and contributes to broader understanding of the emergence of psychiatry and the asylum in the South.


Academic libraries are evolving to house their physical collections in storage centers that do not facilitate traditional ‘stack’ browsing. This project attempts to recover browsing the physical library stacks by implementing a
'spine-view' online library catalog. Data for the items represented were taken from UNC Library items housed in the Library Service Center using the Sierra ILS. Item records were processed using Python and the web visualization was attained using JavaScript. A pannable, ‘spine-view’ online catalog was achieved with filtering by ‘Title’, ‘Author’, and ‘Keyword’, as well as a ‘Start At:’ feature in which users can move to a location in the stacks based on a Call Number or an Author’s name.


This study is designed to better understand how users interact with search engines to convey, or not convey, preferences in information retrieval processes.

Instances of information retrieval can have widely varied motivations and I will attempt to target several of them through my questioning and observe how they differ. Extra-topical dimensions, orthogonal to topical dimensions, will be used as a measure of how users communicate these preferences. Search tasks were manipulated along three topical dimensions related to the types of information being sought: (1) biased versus unbiased information, (2) recent versus historical information, (3) specific versus comprehensive information.


This bibliometric study aims to investigate how eye tracking has been used in User Interface and User Experience design within the biomedical field. Through systematic literature search, over 4000 publications were screened for their relevancy for inclusion. The study results have found an increase in eye-tracking-assisted User Experience and User Interface Design studies within the field. Particularly with insights from academic research institutions concerning technology focused on aiding individuals with specific diseases and medical devices within the past 15 years.


Snakes have played a major role in folklore and myth for as long as humans have been telling stories. This study examines depictions of snakes in folktales and myths from three different geographical areas that have been home to numerous cultures and peoples throughout history. This research codifies snake depictions in folk literature from Aboriginal Australian Cultures, Southwest North American Indigenous Cultures, and Northern European Cultures. This research uses qualitative content analysis to code differing depictions of snakes in written myth and folklore. In doing so, this work aims to expand the deficient body of work on the place of snakes in folklore and storytelling. Throughout all three storytelling traditions, readers find duality among snake depictions; snakes are creators, destroyers, healers, murderers, male, female, and many things in between. Water and religion wend their way through serpent folklore, showing snakes as both in and out of balance with nature depending on their social status within a storytelling culture. This serpentine study examines a mere ten tales out of the millions that have been told. It is one study of many that can begin to create a language for snake depictions in folklore. As storytellers find the vocabulary to describe the place of snakes in storytelling, they begin to understand the historically fraught relationship between humans and their serpentine muses.


This study uses a content analysis of adult fiction books from realistic genres set in current times to explore how library patron diversity is portrayed in textual descriptions in order to better understand the messages that patrons from marginalized groups receive from books that feature libraries and library patrons and whether they are finding themselves depicted or excluded. This study analyzes eight books which have been coded for key terms that convey character traits pertaining to diversity, especially visible traits, and analyzed to determine how many books include diverse library patron characters. This study could shed light on what messages libraries, authors, and publishers are unknowingly sending to the patrons about who belongs in the library.

Recommender systems enable users to navigate in the sea of mass information. TikTok, one of the fastest-growing short-video social platforms, offers countless videos that are curated according to users’ interests by the recommendation engine of a For You page. However, the bias in recommendation brought on by the nature of the algorithm impacts user experience in a number of aspects. In order to identify the mechanism and bias in the TikTok recommendation system, this study conducts two user-centric methods of data collection: semi-structured interview and walkthrough evaluation. This study aims to analyze the algorithm and bias of recommendation while exploring the user experience of using TikTok and how different types of bias affect their experience. Upon the analysis of data, the findings indicate that popularity bias and exposure bias exist in the system, and the user experience is influenced due to the bias.


Current research has determined how additional factors like race, class, socioeconomic status, etc., all intersect to determine a woman’s experience in the world but what is lacking is how search engines and social media have perpetuated racist and sexist tropes against Asian women. The purpose of this research was to analyze the biases of platform algorithms in conjunction to keywords associated with Asian stereotypes. Both biased and unbiased searches will be conducted on platforms over a two-week period to explore these social concerns. This paper will analyze the results of the study and discuss the relations among the interdependencies of culture, society, and algorithms.

Spring 2023


From 1904-1960, over 3,500 Alaskans were deemed insane by a jury and sent to the privately-owned Morningside Hospital in Portland, Oregon. The Morningside Hospital History Project (MHHP) aims to find these “Lost Alaskans” by digitizing archival documentation scattered across the country, reconnecting families with information about their lost relatives, and bringing the history of Morningside back into public memory. As a volunteer-run organization with no ties to a larger institution and a unique modus operandi of guerilla virtual reunification, the MHHP is a fascinating case that challenges both halves of the term “community archives.” This study uses semi-structured interviews with MHHP volunteers and Morningside researchers to explore themes of volunteer motivation, competing values of privacy and access, sustainability and independence, and repatriation.


Outreach is one of the main ways archives encourage access to their communities, for what is the point of keeping that history if no one can use it or benefit from it. Archival outreach deserves more scholarly attention because while many have described its current weaknesses, the field is still seeking solutions. Some institutions try to be innovative in their outreach, going above and beyond to make themselves available to the public. Unfortunately, these types of institutions seem to be the exception rather than the norm.

This begs the question, why is there such disparity between institutions when we know that access and outreach are core functions of archives? Looking at three US southern universities, this comparative case study attempts to find the differences between these institutions and their methods of outreach.


Occupational safety is a major concern in digital sex work, but workers’ strategies to maintain the right to be safe from physical and psychological harm in the wake of impactful Internet law have yet to be analyzed in peer-reviewed literature. In this study, publications from various digital sex work virtual communities referencing the impact of SESTA-FOSTA will be collected and analyzed through qualitative content analysis to discover how digital sex workers adapt their work safely within legal systems out of their control. Sociologists studying both gender and labor have discussed the emotional labor intrinsic to sex work but occupational safety is equally important to the work. By adding the Information Science perspective on the legal
landscape of the Internet, this study will consider a more holistic understanding of the work of digital sex work.


The purpose of this study is twofold: to recover and add to existing research concerning books printed, published, and sold by widows performed by former Wilson Library catalogers and to uncover potential reasons why this research was eliminated or effaced in the OPAC system.

Through enumerative bibliography and comparative analysis this master’s paper seeks to document and demonstrate the ways in which prioritization of information effects scholarship related to Print Culture, Labor History, Women’s Studies, and Book History. In addition to advocating for the critical examination of contemporary cataloging practices with regards to women’s labor, this bibliography will seek to make plain the kinship of Library History and Book History.


Characterized by their structure, standards, and unique collections of records, archival repositories have maintained their distinct identities in the field of information science as their practices has evolved and adapted over time. The concept of context has distinct roles in repositories, in theory and practice, but it is also flexible in how it may be precisely described and understood. This study examines the inner workings of five rare archival repositories as they consider and understand this concept of context and the impact it has within each organization. All archives hold unique records, but this study addresses those with more highly specialized materials. Comparisons are made amongst the interviewed repositories, as well as with archival and information science practices overall. The results display a range of impact in how context influences the archivists and repositories overall, but the rare nature of the records is a driving force in curating and interacting with the repositories’ internal environment and external community.


Readers’ advisory services have long been a foundational part of public libraries. This paper seeks to investigate how libraries offer these services online and whether or not their prevalence correlates with various other library characteristics. The study employs manifest content analysis and statistics to illuminate the associations between online readers’ advisory services being offered through public library websites and additional library data scraped from national surveys. Because the scope of the study is limited to North Carolina systems, its findings are not exhaustive enough to be applied to public library trends as a whole. However, the data explored holds the significance needed to begin a wider conversation about the evolving relationship between public libraries and online readers’ advisory.


Data journals incorporate elements of traditional scholarly communications practices—reviewing for quality and rigor through editorial and peer-review—and the data sharing/open data movement—prioritizing broad dissemination through repositories, sometimes with curation or technical checks. Their goals for dataset review and sharing are recorded in journal-based data policies and operationalized through workflows. In this qualitative, small cohort semistructured interview study of eight different journals that review and publish research data, we explored (1) journal data policy requirements, (2) data review standards, and (3) implementation of standardized data evaluation workflows.

Differences among the journals can be understood by considering editors’ approaches to balancing the interests of varied stakeholders. Assessing data quality for reusability is primarily conditional on fitness for use which points to an important distinction between disciplinary and discipline-agnostic data journals.

Institutional collection of zines is a relatively new endeavor, with the ramifications of doing so still being considered. This analysis of the zine collection at the UNC-Chapel Hill Sloane Art Library will look at the composition of the roughly 350-item collection through a number of lenses. First, what are the subjects and themes of zines in the collection, and what are the thematic strengths of the collection? Second, with what frequency are the zines used, and what are the commonalities across those most frequently used? Third, what are the ethical ramifications of institutions collecting zines in terms of whether these collections promote or restrict access?


This paper discusses the function of academic archives and the challenges presented to these spaces as a part of larger institutions. It discusses the opportunities that academic archives are given to reach their patrons, undergraduate students, with the usage of digital collections. Finally, this paper serves to understand how Gen Z university undergraduates obtain information, and how academic archives can tailor their outreach efforts to ensure that these archival spaces provide a more welcoming environment for students to use and benefit from.


An important distinction of the Black American lineage is that it consists of those descended from people enslaved under US chattel slavery. This lineage is distinct from other African diasporic peoples whose histories do not include enslavement within the United States. Black Americans have a distinct culture, experience and worldview that is unique to them. They experience racism and white supremacy that is linked to government policies from slavery to modern day. Several presidential administrations have directly addressed the plight of Black Americans through published literature. However, the policies put forth in these documents do not delineate the Black American lineage from other disadvantaged groups, ultimately limiting their efficiency of their stated goals to positively impact Black Americans.


Opioid addiction represents a serious public health challenge for health systems, as well as an enormous tragedy for communities affected by substance abuse. In recent years, the North Carolina Department of Health and Human Services (NC DHHS) has spearheaded efforts to save lives and improve opioid-related outcomes in the state through new prescribing regulations, attributing the present-day opioid epidemic to decades-long patterns of excessive prescribing. This paper provides a quantitative, regional analysis of opioid prescribing and poisoning rates in North Carolina between 2013-2021, evaluating how these rates fluctuated as synthetic opioids became more common in the state and as NC DHHS – led prescribing initiatives were deployed. In addition to considering longitudinal trends in prescribing and poisoning, we used regional and county-level data to test whether correlations exist (1) between opioid prescribing rates and (2) nonfatal-fatal overdose rates from methadone, heroin, fentanyl, and prescription opioids. Though we found limited evidence for significant associa-
tions between opioid prescribing and poisoning using regional data, we determined that opioid prescribing rates and overall fatal/nonfatal poisoning rates were weakly positively correlated based on county-level data.

This suggests that counties where more opioids are prescribed see higher rates of fatal and nonfatal poisoning overall and for certain types of opioids. Such a finding has important implications for assessing North Carolina’s response to the ongoing opioid epidemic as NC DHHS works to drive down excessive opioid prescribing statewide.


K-12 teachers are facing an extraordinarily challenging time as our schools recover from the Covid-19 pandemic. To lend support to teachers in this difficult professional environment, this study aims to discover how archives and special collections can make online materials maximally accessible and useful for K-12 teachers. Using semi-structured interviews with ten K-12 teachers and website usage data from the On The Books library guide, this study will gather data about how teachers find, interact with, and teach with the online resources for primary source instruction. The findings will be considered to make recommendations for some ways that special collections librarians can better serve this group of patrons with online teaching resources.


Dracula Daily is a literary newsletter that sends out portions of Bram Stoker’s novel Dracula, scheduled to line up with the chronological events of the novel.

Subscribers to the newsletter receive and read the journal entries, letters, news clippings, and work logs of the characters in Dracula ‘in real time.’ This simple concept quickly picked up popularity in the spring of 2022. Readers began to connect with each other via social media, resulting in a community thriving off of their communal experiences—including readers who usually didn’t read for pleasure, or hadn’t done so in years. Via content analysis of social media posts, I identified emerging phenomena from this community, and how those could have contributed to Dracula Daily’s appeal. This study also considers what libraries and librarians could garner from these interactions and phenomena, especially as they concern engagement and outreach.


This paper discusses the challenges of implementing the Open Archival Information System (OAIS) reference model for born-digital materials in digital preservation. Although the OAIS model has been globally recognized for its universal terminologies and conceptual standards, it offers little guidance in terms of tangible implementation. Consequently, archivists have created various methods and tools for OAIS-compliant digital archival preservation workflows. This paper presents a project at Duke University Medical Center Archives, which aims to enhance the repository’s current Electronic Records Processing Guide using the digital materials from two recent accessions. The revised guide will be tested and developed, utilizing open-source digital forensic tools to process electronic records for ingest into the repository’s OAIS-compliant integrated archives management system. The outcomes of this project will provide increased stability and efficiency in processing a larger volume of digital materials.


This study is a content analysis of climate change in children’s books. Prior research has found that certain depictions may make the issue feel far away from children’s daily lives. Others have been criticized for assigning the weight of responsibility of the problem to children. This study elaborated by analyzing how climate communication via children’s books compares to scientific knowledge, ecocritical frameworks, and research on effective communication with children. Using a rubric based on these standards, 20 children’s books from recommended reading lists were assessed. Overall, common themes showed a lack of comprehensive explanations of the causes, mechanisms, and solutions and underrepresentation for the most im-
pacted groups. Publishers, authors, librarians, and teachers can address these issues through selecting and advocating for high quality books on climate science and by designing programming to fill the gaps until there is more impactful, informative, and inclusive climate literature.


This case study examines collection development practices for young adult collections in public and school libraries. It examines the following research questions: 1. To what extent do personal beliefs impact the collection development practices for young adult collections in public and school libraries? 2. What are young adult librarians’ perceptions of best practices for inclusive and ethical collection development? This study utilizes a survey from public and school librarians in North Carolina to examine the extent that librarian bias impacts their collection development curations.


This paper starts from two observations about archival description. First, creating finding aids requires significant judgement and interpretation, and is therefore inevitably influenced by the positionalities—the perspectives, personal histories, and social identities—of the archivists. Second, finding aids sometimes call for revision, sometimes to fit a new data standard or reflect an evolving collection, but also to correct errors, reduce bias, and remove harmful language. In light of these observations and related theoretical work, this paper offers a rationale for recording metadata about finding aids, including revision history and authorship. Then it presents the results of a survey of state archivists in the US, who were asked about their descriptive practices and opinions regarding their authorship of finding aids. Results reveal diverse practices, as well as hesitation to embrace expressions of positionality in the context of description. Finally, the paper concludes with two general recommendations regarding metadata about finding aids.


This study is a content analysis of print materials about fatness classed in Medicine according to the Library of Congress Subject Headings and Classification. Research about the marginalizing power of information systems has centered around gender identity, sexuality, race, non-dominant cultures, and disability, while fat bodies have been largely overlooked. Previous literature on information organization principles, critical cataloging, and fat stigma are reviewed. A qualitative content analysis of fatness in print materials across four class numbers shelved in Davis Library at the University of North Carolina follows. Titles, tables of contents, introductory material, and cover images and summaries will be coded for problem and blame frames, attitude, and class. This study brings awareness to the stigmatization of fat bodies by information organization standards and shows the need for new subject headings and class numbers for fat materials.


This study assesses university student usage and non-usage of local public libraries. A survey asked University of North Carolina at Chapel Hill undergraduate and graduate students questions about their public library usage and accompanying demographic data. Despite the broad scope of the question, surprisingly little research has been performed on this subject. Of the 203 responses, most answered that they did have local library cards but had never used many features of their local public library. The largest barrier to usage was finding the time to visit the public library.


The apple (Malus domestica Borkh.) has maintained a position of significant historical and cultural importance across several eras in the United States. Because apples only maintain their genetics through human cultivation, their fruit is generally categorized and organized as cultivars which have differentiated themselves from the rest of the
species over generations of selective breeding. Experts and amateurs alike have written and systematized descriptions of apple cultivars for various purposes but attempts to standardize organization of the resulting metadata have been infrequent and lack utility across multiple contexts.

This paper will assess the descriptive schemas of six pomological description resources ranging from the late 19th century to the present day through qualitative content analysis and metadata crosswalking. The resulting attribute set will then be compared with an existing descriptive schema for plant breeders, the UPOV Convention, with an eye towards exploring the viability of a more universal system for organizing descriptive metadata for physical descriptions of apples.


The purpose of this study seeks to re-examine and resurface the inter-indexing consistency concerns which have been mainly cast aside in recent decades—particularly in the context of library cataloging. Some primary research questions for this study include: how do catalogers understand and utilize concepts such as subject and aboutness when making cataloging determinations in their professional capacity? Furthermore, what considerations are paid to consistency, system cohesion, or standardization methods among catalogers within the same working environment?

This study samples professional catalogers in their primary working environment and observes their practices and behaviors. This observation was conducted through think-alouds and with the researcher’s material intervention of catalogable documents given to participants. This approach attempts to conceive a more systematic mapping of the possible pathways inside the plexus of interdependent relationships persistent among indexers and the documents indexed at the point of contact with the information system. In addition, this study seeks dialogue with those who share similar interests in the topology of these relationships.


Beginning during the dawn of Reconstruction, racially segregated land-grant colleges and normal schools took on an important role in perpetuating racial segregation throughout the United States. This content analysis employed Critical Race Theory (CRT) tenets and primary document research to assess the representations of the Negro problem and the new Negro within Penn Normal Industrial and Agricultural School (PNIAS) fund-raising booklets, part of the Penn School Papers archival collection within Wilson Special Collections Library. The research yielded harmful representations of PNIAS students and larger populations of Gullah and Geechee citizens of St. Helena Island. Emergent themes of white self-interest, paternalist racism, trivialization, and deflection emerged.

Alanna K. Natanson. After Desperate Times, Still a Desperate Measure?: Pandemic and Post-Pandemic Engagement with Preprints in the Biology and Health Science Fields. A Master’s Paper for the M.S. in L.S. degree. April, 2023. 120 pages. Advisor: Dr. Bradley M. Hemminger

Although studies documented surging interest in preprints as the novel SARS-CoV-2 coronavirus spread in 2020, it is unclear how these non-peer-reviewed documents affected scientific communication after peer-reviewed research could address virus-related questions. This study examined how frequently biological and health science researchers contributed to preprint servers in 2021 and 2022, and how scholars and journalists monitored preprints, valued them in social media, and trusted them for formal publications. The study evaluated bibliometric and altmetric indicators for preprints posted during July 2018-December 2019, January 2020-June 2021, and July 2021-December 2022 and for coronavirus-related preprints versus non-coronavirus-related preprints. Indicators of participation, attention, and trust dropped significantly between January 2020-June 2021 and July 2021-December 2022, with sharper declines for coronavirus-related preprints. However, participation, attention, and journalist trust remained above July 2018-December 2019 rates. Preprints can still indicate attitude and behavioral shifts within a knowledge community for librarians supporting scientists and domain analysis researchers.

This research study investigates 1) how mental illness(es) are represented and depicted within youths’ picture books and 2) the overall implications of said representations and depictions. Which mental illnesses are most/least depicted? Are the depictions accurate? Who is the character with the condition? How is the character represented? Are the mental illnesses personified? If yes, how so? Which symptoms are acknowledged? Are treatments acknowledged? How are the characters’ experiences concluded? Using both quantitative and qualitative analysis, a sample of 20 picture books were read and coded against criteria involving the research questions. This study provides insight into how, and to what extent, individuals with mental illness(es) are represented within youths’ literature; accurate depictions can spread awareness regarding and further normalize mental illness(es) for youth readers.


Museum archival repatriation is an ethical obligatory process in which museums return cultural materials housed within their collections to the community of origin. This case study will focus on the Denver Museum of Nature and Science and how museums motivations behind engaging in repatriation and the impact of repatriations between the museum and community are affected. The experiences and perspectives of Denver Museum staff directly involved with repatriation efforts are analyzed through the content analysis of data collected from semi-structured interviews. The anticipated impact will hopefully lead to further research on the effects of repatriation from the community’s perspective and encourage more museums to re-visit their collections and engage in reparative work to benefit themselves but most importantly cultural communities.


Previous research has explored how Wikipedia contains instances of gender bias and exclusionary practices in their policies. This content analysis of 39 transgender scientists’ biographies and revision histories extends the notion of gender bias beyond the traditional binary approach to gender.

Transgender scientists’ biographies and revision histories often include their deadnames, wrong pronouns, and acts of vandalism. In concurrence with previous research, transgender scientists’ pages are monitored and produced by groups of editing communities experiencing emotional and unseen labor. This research argues that Wikipedia must update their policies on deadnaming transgender scholars despite current notability concerns.


Digital labor platforms use algorithmic management to simultaneously manage their internal marketplaces and act as the direct supervisors to their workers. This coexistence of market and hierarchy functions begs the question, “How does algorithmic management in the digital labor platform economy inherit hierarchical management and market management structures?” I utilized qualitative methods to analyze data covering both the workers’ and platforms’ perspectives for 23 separate platforms to establish an expanded framework within the dichotomy of market vs hierarchy management. This expanded framework yielded 14 lower order and 5 higher order themes to better understand specific manifestations of market and hierarchy management across a range of platforms. In my discussion, I consider how this framework fits into the existing literature for algorithmic management, describe the lack of mutual exclusivity between new themes, and discuss variations in monitoring and control mechanisms depending on the nature of the task.


r/place 2022 was a monumental event in Internet history, gathering millions of Reddit users to collaborate and create their own art pixel by pixel. Factions were made, battles were fought, and alliances were formed. It sits between social movement studies, art history, and social media by itself, only joined by its previous incarnation in
2017. Exhibiting the work with its digital history intact is a challenge, one that demands a view into the space between the physical and digital worlds we inhabit each day, as well as a sense of interactivity and visitor participation.


This study attempts to shed light on the lack of semantic web infrastructure for documenting digital humanities projects by creating a proof-of-concept workflow for manual and semi-automatic semantic web data creation. First, utilizing a set of five ontologies, triple data is created for a set of four projects from the University of North Carolina at Chapel Hill. The utility of these data is then determined via task-based assessment alongside a set of metrics for the data retrieved for the tasks. Ultimately, this study aims to detail the benefits of improving linked open data support for describing, and ultimately preserving, digital humanities projects in hopes of paving a path for the creation of a LOD database for digital humanities projects.


This study examined library instructional materials for evidence of critical information literacy in American four-year institutions and two-year junior and community colleges as defined by the Carnegie Classification system. By conducting a content analysis and using simple random sampling of 10 instructional offerings on library websites, I performed counts of mentions of race, class, and gender in information literacy instruction and performed a close reading of samples to code for relevant themes. Results indicate that while there is no core way critical information literacy is implemented into online content, two-year institutions are doing so at levels previously undiscovered in the literature. However, discussion of biased and harmful information, as well as representation, were popular forms of incorporating critical information literacy. This study fills a gap in the literature by exploring critical information literacy in a digital setting and functions as a basis for future research avenues for critical librarians.


I focused on determining whether librarians felt they were prepared to meet accessibility needs of their potential user bases. Through my research, I have determined the answer to be a resounding no.

By interviewing nine librarians from both public and academic library backgrounds, all with varying levels of positions and accessibility experience, I produced qualitative evidence in support of my findings. The evidence is discussed here in my paper and is used as a basis for a call to action within the library and information sciences field.


To bridge the gap in the literature regarding the emotional experience of African Americans researching their genealogy, the researcher conducted two to three semi-structured interviews utilizing a co-design methodology. After the interviews, the participants analyzed the collected data with the researcher to create a collaborative and more accurate conclusion, empowering the participants to tell their own stories. This study finds that the participants interviewed had negative experiences with formal record-keeping practices regarding enslaved people and felt positive emotions by reclaiming their family tree through their research. In the future, the researcher suggests dedicating more time to each participant to ensure their unique stories are more accurately conveyed, but found immense value in the partnership and trust cultivated through this research process.


The ethical and legal issues surrounding privacy, and specifically third-party privacy in an archival setting, is a topic that scholars and archivists have considered for decades. Competing interests are involved: a hope for fully open access archives; for researchers to be able to use a
repository to its fullest extent and for a repository to build a sense of trust within a community. However, maintaining the privacy of third parties in a document who did not or could not necessarily consent to their private affairs being donated, maintaining the privacy as requested by a donor or the family of a donor or whomever is associated or has the rights to the donated materials, is crucial to the integrity of a repository. This content analysis aims to explore third party privacy and overall privacy policies at archival institutions in three categories: state archives, private academic archives, and museums, in addition to an open archive. Here, there will be an analysis of how the laws surrounding privacy come into play, the ethical issues surrounding privacy vs open access, and an observation for best recommendations moving forward.


This exploratory study examines a current “snapshot” of current labeling and cataloging practices within specific North Carolinian art museums to explore the possible incorporation of critical cataloging practices. The study assessed current trends of cataloging practices in use within North Carolina art museums through a content analysis of displayed art museum object labels and a non-generalizable survey of museum professionals. Descriptive statistics and a qualitative analysis found trends in label and catalog attribute standards, interpretive curatorial texts, and engaging labeling practices. The study is a starting point for other research regarding critical cataloging in the art museum space, as no published research yet examines applying these frameworks within art museum cataloging and labeling practices.


This qualitative study was conducted to determine the impact of the COVID-19 pandemic on digital projects led by special collections libraries at the University of North Carolina at Chapel Hill and Duke University. Specifically, this research utilized case studies to analyze the shift to digital resources following the closure of universities in the spring of 2020 and compared this data to the current operations of special collections libraries at both a public and private university.

María A. Tudela. The Burdens We Bear: An Examination of Inclusive Excellence and Sustainable Practices in R1 Academic Libraries. A Master’s Paper for the M.S. in L.S. degree. April, 2023. 75 pages. Advisors: Kristan Shawgo and Monica Figueroa

This project explores different aspects of inclusive excellence discourse and practices in academic libraries. Designed as a case study and content analysis, this project examines academic libraries at four R1 institutions located in the eastern United States. Three main characteristics are explored: one looks at what these conversations or initiatives look like and how they manifest in these spaces; the second investigates the sustainability of these practices. The third evaluates how inclusive practices impact job satisfaction and staff well-being. Semi-structured interviews were conducted utilizing convenience sampling, along with a content analysis of existing publicly available information. Results gathered from this study corroborate what the literature suggests and demonstrate that extensive work needs to be done to transform librarianship, but existing conversations and initiatives happening indicate that progress is being made. The information produced in this case study encourages further exploration of the current work being done to embody a transformed and more inclusive profession.


Privacy matters to hundreds of millions of people in the United States, and it is central to freedom and individual and societal well-being. Because we live in the age of “big data,” data breaches are a constant risk. A data breach is when data is stolen by a hacker from a computer system maintained by an entity such as an online retailer. At some point, virtually everyone will be the victim of a data breach; some may not know it until years later. Consequently, our personal data is at constant risk. Data breaches threaten to expose the intimate details of our sex lives, our medical information, financial information, employment records,
online searches, movies we watch, books we check out at the library, and places we shop. When it comes to protecting our personal data, American law lags compared to the rest of the world, and legal remedies are limited. Federal judges play a large role in perpetuating this lag, which threatens the privacy of all Americans. To maintain a case in federal court in the United States, a plaintiff must have “standing to sue.” In federal court, this means a plaintiff must have suffered harm that is “concrete” and “particularized,” causally linked to the injury complained of, and likely to result in a favorable outcome. This is a high bar for injured plaintiffs. When it comes to data breach lawsuits, they are usually dismissed by federal judges for a lack of standing because the federal courts generally consider financial or physical harm to be the only harms that are considered “concrete” and sufficient injury to maintain a data breach case.

Consequently, most federal judges will dismiss cases where the harm asserted consists of stress, anxiety, worry, and time spent remedying the situation. Regardless of how probable future identity theft is, judges rarely consider evidence of future harm. This paper examines federal data breach cases where judges dismissed the cases for a lack of standing and determines whether there are consistent patterns in these decisions.


The purpose of this master’s paper is to get a clearer picture of student success philosophies and programming at UNC-Chapel Hill and the role of the library in undergraduate student success. This pilot project case study addresses the primary research question “How does a library community and a university community define student success?” Qualitative data was collected through interviews with university employees in various positions relating to student success initiatives on campus and library community feedback on an anonymous whiteboard at the Undergraduate Library. The data was coded to allow for themes to emerge. This study highlights potential opportunities for library employees to better support the needs of undergraduate students, in relation to the ways in which students report their own needs and the ways that other campus units are addressing student success.


Early English Books Online or EEBO is a database of more than 140,000 images of rare and early books used by scholars of history and literature for decades. EEBO is a longstanding microfilm product-turned-image database with established use patterns. EEBO-TCP, a set of 60,000 manually transcribed documents from EEBO, has enabled unprecedented opportunities for large-scale analysis of surviving English print. In this exploratory study, I examine the practices of teaching and research with EEBO and EEBO-TCP in American universities through findings derived from the qualitative coded insights of a focus group of professors and librarians. The focus group discussed teaching methodologies, alternative digital archives, and organizational techniques scholars and librarians have utilized in working with a EEBO and EEBO-TCP. This study is intended to provoke further research into the complex technical mediations underpinning digitization of early printed books and identify areas where academic libraries can facilitate the research process.


This research is a study of disaster plans of public libraries in North Carolina and the importance of creating an effective disaster plan. One library plan representing eight libraries was located online. Libraries were contacted to collect information on whether they had a disaster plan in place.

Out of the ninety library systems representing one hundred and four out of the four hundred and five public libraries, four systems representing twenty libraries gave responses that a plan existed but was not available to the public. The plan available was analyzed by examining quantitative and qualitative data. Qualitative data included the presence of a table of contents, number of pages, and the creation date and revision date. Qualitative data also included the presence of the four phases of disaster planning (preliminary planning, preparation/prevention, response, and recovery), type of disasters: man-made and natural, and additional information.

The purpose of this study is to explore the concept of archival silence, defined as the intentional and unintentional gaps and biases that challenge the integrity and sustainability of archival collections, through the prism of corporate archives. Through in-depth, semistructured interviews with corporate archivists, this research involves an exploratory study of the obstacles these archivists face in identifying, preserving, and fostering access to assets of enduring value to their parent organizations. By analyzing their insights on appraisal, accession, custody, and access, this research seeks to shed light on the common ground corporate archives share with other archives, and forge a path toward a new understanding of how corporate archives professionals might break the silence of the archive.


Policies and processes for library material reconsideration are essential to collection criteria, especially given the current climate in the US around book challenges and bans. Yet few studies to date look at the prevalence of policies and if there are consistencies among existing reconsideration processes or if they are publicly accessible. To fill this gap, this project explores whether library reconsideration policies are readily accessible in public libraries throughout North Carolina, the consequences of a process absence, and the possibilities of what an updated (and transparent) policy would mean for intellectual freedom. Relying on data collected from a random cluster sample of 20 North Carolina public county libraries, this study analyzes the availability (or absence) of a policy and if similar themes existed among available policies.


Maps are a very useful tool in both academic study and daily life. It is especially useful in medical study, since many diseases are related to not only patients themselves, but also the environment in which they live. By plotting the maps about the patients’ information, researchers would be able to explore the spatial patterns about the diseases. However, traditional maps are very convenient for them to use. They need to interact with the map so that they would be able to combine the impact from many aspects. This project built a platform for them to visually analyze the medical data map. Although some functions designed have not been achieved, it can still help a lot.

Dissertation Paper Abstracts

2022


Mental health services and support can serve as foundational resource for survivors of rape. However, taking advantage of these resources requires knowledge of and access to what is available. The existence of such resources is not enough to ensure access for this population. There is more required to assist Black young adults (18-39) in supporting their mental health concerns in connection to experiences of rape. This dissertation uses focus groups with an Interpretive Phenomenological Analysis to investigate where and why Black young adults (18-39), within the United States, with concerns for their mental wellbeing in connection to experiences of rape, conduct information exchanges. Information exchanges are inclusive of seeking information, sharing information, and building a space of support. Twenty-four Black young adults completed an online, self-administered, survey that gathered sociodemographic information which assisted the researcher in assigning each respondent to a focus group cohort, which lasted for four weeks. Overall, study participants
prefer the ease of online spaces or mobile applications over information exchanges in in-person spaces; based on qualities such as access to more therapists or medical professionals when not tied to location, the ability to be anonymous in some spaces, and having the chance to build a community of individuals with this shared experience.

The main qualities wanted to build “safe spaces” included people (ensuring that participants within the space belong in the space and that they remain respectful of one another); privacy and choice (being able to choose what is private and public, choose who has access to you); moderation and access to professionals (someone to guide the conversation, prompts, keeping the space positive and supportive); flexibility (a variety of ways to share, such as memes, diary, forums; also ability to participate when they have the time - not scheduled participation). This study provides a look into the information exchange experiences of Black young adults (18-39) who have mental wellbeing concerns in connection to experienced rape; where they go to look for information and support and what helps them to feel comfortable when choosing to disclose in a space. From this study, we have foundational insights into what designers/developers can do to improve and/or create online spaces and mobile applications to serve the needs of this population.


In the first paper, I define the QualMix model, a mixture modeling approach to derive estimates of survey data quality in situations in which two sets of responses exist for all or certain subsets of respondents. I apply this model to the context of survey backchecks. Through simulation based on real-world data, I demonstrate that the model successfully identifies incorrect observations and recovers latent enumerator and survey quality. I further demonstrate the model’s utility by applying it to data from a large survey in Malawi, using it to identify significant variation in data quality across observations generated by different enumerators.

In the second paper, I investigate how a match in values impacts individual decisions to engage with organizations. I develop a new way to use conjoint survey experiments to study such questions. The proposed model has two parts: a component that helps estimate where organizations and individuals are in the same values space, and an outcome model that uses latent distances from the first part as inputs. I argue that individuals will be more likely to want to engage with organizations to which they are closer in a latent values space, and that they look at organizational traits for cues about an organization’s values. I find that individuals are more likely to want to engage with organizations that are more descriptively representative of them. In addition, I find that congruence more consistently impacts considerations of benefits rather than costs.

In the third paper, my co-authors and I discuss the impact that enumerators can have in survey and lab experiments. We conceptualize enumerators as treatment versions and clarify the implications of treatment versions for inference and for external validity. Researchers need to pay much more attention to the enumerators used in their studies and should assess the impact of enumerators on their results. We propose a hierarchical model that researchers can use to estimate enumerator treatment effects, which also allows them to incorporate information on enumerator characteristics. We present several recommendations for researchers doing experimental work with enumerators and illustrate them on a survey experiment carried out in Uganda.


Since most worldly phenomena can be expressed via language, language is a crucial medium for transferring information and integrating multiple information sources. For example, humans can describe what they see, hear and feel, and also explain how they move with words. Conversely, humans can imagine scenes, sounds, and feelings, and move their body from language descriptions. Therefore, language plays an important role in solving machine learning
(ML) and artificial intelligence (AI) problems with multimodal input sources. This thesis studies how different modalities can be integrated with language in multimodal learning settings as follows.

First, we explore the possibility to integrate external information from the textual description about an image into a visual question answering system which integrates the key words/phrases in paragraph captions in semi-symbolic form, to make the alignment between features easier. We expand the direction to a video question answering task. We employ dense captions, which generate object-level descriptions of an image, to help localize the key frames in a video clip for answering a question.

Next, we build benchmarks to evaluate embodied agents to perform tasks according to natural language instruction from humans. We introduce a new instruction-following navigation and object assembly system, called ArraMon in which agents follow the natural language instructions to collect an object and put it in a target location, requiring agents to deeply understand referring expressions and the concept of direction from the egocentric perspective. We also suggest a new task setup for the useful Cooperative Vision-and-Dialog Navigation (CVDN) dataset. We analyze scoring behaviors of models and find issues from the existing Navigation from Dialog History (NDH) task and propose a more realistic and challenging task setup, called NDH-Full, which better appreciates the purpose of the CVDN dataset.

Finally, we explore AI assistant systems which help humans with different tasks. We introduce a new correctional captioning dataset on human body pose, called FixMyPose, to encourage the ML/AI community to build such guidance systems that require models to learn to distinguish different levels of pose difference to describe desirable pose change. Also, we introduce a new conversational image search and editing assistant system, called CAISE, in which an agent helps a user to search images and edit them by holding a conversation.


This dissertation is a study of how privacy as an ethical concept exists in two languages: Mandarin Chinese and American English. The assumption for this dissertation is that different languages will have their own distinctive expressions and understandings when it comes to privacy. Specifically, I have proposed a cross-genre and cross-language study to include two genres of language corpora for each of the languages: social media posts and news articles. In addition, the language corpora span from 2010 to 2019, which supported an observation of how privacy-related languages may have changed and evolved over the years. I took a mixed-methods approach, by using two computational methods: semantic network analysis (SNA) and structural topic modeling (STM) for processing the natural language corpora. When it comes to labeling and interpreting the results of topic modeling, I relied on external coders for labeling and my own in-depth reading of the topic words as well as original documents to make sense of the meaning of these topics. Last but not least, based on the interpretations of topics, I proposed four semantic dimensions and used these four dimensions to come back to code all the topics to have an overall depiction of the topics across these two languages and two genres. The four semantic dimensions, though were found present in both languages, have revealed unequal presence in the two languages. Specifically, the institution dimension has much more presence in the English language; and in the Chinese language, it is the individual dimension that is frequently seen across topics in both genres. Apart from topics, this different emphasis on these two semantic dimensions (institution and individual) is also reflected through the semantic network analysis of nodes where the nodes with leading centrality scores over the years in these two languages differ. After considering the limitation of the data in this study, I conclude by arguing that overall, it is more cautious and appropriate to understand the incompatibilities by saying the two languages differ by their emphasis on different dimensions. This study is one of the first empirically-grounded intercultural explorations of the concept of privacy. It not only provides an examination of the concept as it is understood at the current time
of writing but also reveals that natural language is promising to operationalize intercultural privacy research and comparative privacy research.


Social media managers may not be the first people that come to mind during a pandemic—their work is trivialized, undervalued, and denigrated as tasks any young person could perform. However, they are one of few, if not the only, information professionals at cultural institutions able to nurture scholarship, creativity, and imagination digitally during worldwide shutdowns. While library and museum staff believe social media is important (and will become even more so in the future) many organizations have no strategy for its use nor measure their efforts (Oosman et al., 2014; Aerni & Schegg, 2017; OCLC, 2018). In response to this absence of guidance, this study takes a practitioner-centered approach to learn how these communicators define, perform, and evaluate their work. This research uses longitudinal interpretative phenomenological analysis (LIPA) and dramaturgical metaphors to uncover and document social media managers’ lived experiences and the evolution of their role during the initial stages of the COVID-19 pandemic. Results are then used to inform a descriptive framework of social media work at cultural institutions and map participant descriptions of virtual content and programming to a continuum of institutional practices. These applications offer guidance for cultural institutions looking to better support their social media communicators and ultimately foster more meaningful engagement with broader audiences.


Bias in medical research poses a serious threat to public health. Conflicts of Interest create the risk of conscious or subconscious bias in research article authors. Financial Conflicts of Interest (FCOI) are widely recognized as relatively objective, quantifiable, and fairly regulated form of COI. Many medical journals have adopted FCOI disclosure as a means of communicating the potential for bias in research to readers. Research on the impact of FCOI disclosure on the attitudes readers develop toward an article has thus far focused on text-based FCOI disclosure without details on the nature of dollar value of payments received.

In this work, I developed an algorithm to match authors to a federal database of payments they received from industry during the FCOI disclosure windows for an article. I have four goals: first, I establish that algorithmic matching of authors to federal payments profile is feasible. Second, I evaluate the impact of detailed graphical FCOI disclosure on the attitudes that readers develop toward a publication. Third, I evaluate the perspectives and opinions or medical journal article authors when presented with graphical FCOI disclosure of their own payments and those of their author teams. Fourth, I gather the perspectives, possible objections, requirements, and desires of key opinion leaders among academia and medical publishing regarding the potential adoption of graphical FCOI disclosures as a standard in academic medical publishing. My findings suggest that the adoption of semi-automated systems for graphical FCOI disclosure may enhance the ability of many stakeholders to detect the potential for bias in medical research without undue harm to authors or corporations.


Registration is the process of establishing spatial correspondences between two objects. Many downstream tasks, e.g., in image analysis, shape animation, can make use of these spatial correspondences. A variety of registration approaches have been developed over the last decades, but only recently registration approaches have been developed that make use of and can easily process the large data samples of
the big data era. On the one hand, traditional optimization-based approaches are too slow and cannot take advantage of very large data sets. On the other hand, registration users expect more controllable and accurate solutions since most downstream tasks, e.g., facial animation and 3D reconstruction, increasingly rely on highly precise spatial correspondences. In recent years, deep network registration approaches have become popular as learning-based approaches are fast and can benefit from large-scale data during network training. However, how to make such deep-learning-based approached accurate and controllable is still a challenging problem that is far from being completely solved.

This thesis explores fast, accurate and controllable solutions for image and point cloud registration. Specifically, for image registration, we first improve the accuracy of deep-learning-based approaches by introducing a general framework that consists of affine and non-parametric registration for both global and local deformation. We then design a more controllable image registration approach that image regions could be regularized differently according to their local attributes. For point cloud registration, existing works either are limited to small-scale problems, hardly handle complicated transformations or are slow to solve. We thus develop fast, accurate and controllable solutions for large-scale real-world registration problems via integrating optimal transport with deep geometric learning.


The exponential growth of textual information in biomedical and healthcare causes information overload. Electronic Health Records (EHRs) are an important part of biomedical texts. However, in recent years, it has been impossible for a clinician or a physician to read hundreds of clinical notes during a regular medical visit without any technological assistance, which is usually the case for patients with the chronological disease. The cognitive burden of healthcare practitioners has increased significantly. This study aims to build a summarization system that can decrease the mental burden of breast cancer oncologists.

Due to the complexity of pathology reports and the lack of data, studies on pathology reports have been limited. This work serves as a starting point and a baseline for pathology report summarization. It proposes and evaluates a hybrid system that combines machine learning and a rule-based system using a small amount of data.

This study addressed the problem of data deficiency. High-quality pathology reports in a textual format with annotations have been hard to find because of privacy concerns. The main investigator of this study recruited and trained a group of researchers to collect, clean, and annotate a public dataset of breast cancer pathology reports.

According to the primary findings based on ROUGE, BLEU, and readability score testing, this study presents a breast cancer pathology report summarization system that is able to generate succinct and informative summaries, which is potentially beneficial in reducing oncologists’ cognitive burden. Some promising future directions are discussed.

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According to several studies, researchers are not sharing the data underpinning their published scientific results, despite their general consensus that sharing data is critical to the research enterprise. Among other benefits, data sharing allows for verification of claims, which is essential to scientific integrity. Research funders, journal editors, and professional associations have insisted on the importance of data sharing by issuing policies and codes of ethics that mandate the practice. However, these mandates have not always been proven to compel researchers to share their data as evidenced by failed attempts to locate data underlying published results or sharing data that do not meet quality standards to allow for
verification or reuse. This dissertation seeks to understand the incongruity between researchers’ belief that data sharing is essential to science and their failure to produce and share data underlying their reported findings—even when policy requires them to do so.

To address this phenomenon, the dissertation investigates the implementation and outcomes of the rigorous *American Journal of Political Science* (AJPS) verification policy that makes publication in the journal contingent on submission of data, code, and supporting documentation (i.e., the research compendium). Prior to publication, research compendia undergo a third-party verification process to confirm the computational reproducibility of findings presented in the manuscript. In most cases, authors fail initially to produce a compendium that meets policy requirements for completeness, understandability, and computational reproducibility. Using the theory of planned behavior (TPB) as a framework, the study investigates the specific behavioral factors that affect authors’ success or failure in producing reproducible research compendia. Employing a mixed-methods/grounded theory approach, the study analyzes records of verification results and interviews with AJPS authors who were subject to the verification policy to learn about their specific reproducible research practices (or lack thereof) and their outcomes. Based on the results of the study, I identify the most common and impactful issues that appear in submitted research compendia that render them non-reproducible, and suggest reasons that authors encounter these issues. Finally, I propose an extension of TPB that suggests how the policy compels and supports behaviors that promote research reproducibility.


The topic of this dissertation is corpus analysis: the use of computational techniques to search through large collections of real-world texts (called corpora) to discover facts about language use which hold throughout the collection. I examine how corpus analysis can be used as an empirical methodology within philosophy of language to confirm semantic analyses of philosophically important expressions. I begin by discussing the philosophical importance of analyzing the ordinary meaning of people’s language use, as through that we can come to understand how they categorize the world around them. Specifically, I am concerned with philosophical semantics: the study of the meaning of expressions for which different theories of their meaning will have different philosophical upshots. After discussing the kind of meaning relevant to this subject area (namely operative concepts: the concepts that actually determine how we apply expressions to cases), I rationally reconstruct and analyze existing methods of confirmation in philosophical semantics, including intuitive methods and questionnaire methods from experimental philosophy. I then critique these methods in terms of the strength of evidence they can offer.

Next, I introduce corpus analysis, and explain how it can be used as a method of confirmation in philosophical semantics. I pay special attention to the question of how corpus analysis can be used to discover the ‘deep’, semantic, representational features of text relevant for confirming semantic analyses, and offer several techniques to perform this task. I argue that corpus analysis has many benefits over existing methods of confirmation in philosophical semantics, given that it studies (i) actual, rather than imagined, instances of language use, and (ii) the language use of the actual communities whose meanings we are interested in, rather than just that of philosophers. The dissertation concludes with a case study of the use of corpus analysis to confirm a theory of the reference conditions of definite descriptions over a rival theory with different philosophical upshots. This is the first corpus study in philosophical semantics to make use of an annotated corpus, which is a technique with lot of promise within this field.


Advances in immersive technologies (e.g., virtual reality head-mounted displays) have brought a new
dimension into user interfaces to increasingly more people in the recent years. However, little prior work has explored how people could use the extra dimension afforded by VR HMDs to aid in the information retrieval process. My dissertation research investigated how different task types and layouts of search engine result pages (displays) in immersive virtual environments impact the information retrieval process.

In this dissertation, I present results from a within-subjects user study to investigate users’ search behaviors, system interactions, perceptions, and eye-tracking behaviors for four different spatial arrangements of search results (“list” - a 2D list; “curve3” - a 3x3 grid; “curve4” - a 4x4 grid; and “sphere” - a 4x4 sphere) in a VR HMD across two different task types (Find All relevant, Pick 3 best). Thirty-two (32) participants completed 5 search trials in 8 experimental conditions (4 displays x 2 task types). Results show that: (1) participants were accepting of and performed well in the spatial displays (curve3, curve4, and sphere); (2) participants had a positional bias for the top or top left of SERPs; (3) the angle of search results and layouts influenced the navigation patterns used; (4) participants had a preference for physical navigation (e.g., head movement) over virtual navigation (e.g., scrolling) to view and compare search results; and (5) participants were less likely to perceive a rank order in the spatial displays where a clear scan path was not obvious to them.