Reparative Description and Metadata Remediation Planning at the University of Michigan Deep Blue Institutional Repositories

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Completed November 5, 2025

Abstract

This report shares ongoing metadata remediation work on The University of Michigan Library's Deep Blue Repositories, or the "Deep Blues," primarily focused on Deep Blue Documents. Deep Blue Documents is a repository that has been accepting research outputs since 2006. Currently, it contains about 160,000 deposits of items from 1863 to the present, with hundreds of thousands of downloads per month. Deep Blue Data launched in 2016, and as of Fall 2025 has approximately 2,000 deposits.

Deep Blue Documents is structured as a series of parallel collections, based in many cases on departmental, institute, center, or school structures (such as the University of Michigan Biological Station collection), and in others on particular ongoing projects (such as the Global Feminisms Project). A small number of collections, including the Dissertations and Theses collection, represent materials spanning the University's entire disciplinary coverage and timeline–in this case, beginning with the early 20th century. The Deep Blues are housed within the University of Michigan Library system, where there are ongoing efforts for metadata repair and remediation. Many similar institutions are undertaking reparative description work as well, and there is a growing body of literature on these topics. However, there is still a need for best practices and applicable general principles to guide this work, especially for self-deposit repositories. We hope this report will add to the growing body of documentation on how to put theory into practice within the constraints of the limited resources that many repositories face.

This report begins with a brief description of how we conceptualize reparative description, sharing the five guiding principles we see as critically important when engaging in this work. These are 1) Embracing intentional, flexible practices that allow for changing course; 2) Building plurality or multiple points of view within metadata; 3) Unlearning the "neutral" voice of traditional description; 4) Prioritizing collaborative relationships with community stakeholders; and 5) Documenting work practices, ultimately contributing to making them visible and reproducible for future practitioners.

We next move into describing work practices commonly seen as integral to reparative description, including contextual statements and metadata repair. This section also speaks to these practices' general applicability to Deep Blue Documents. Next, we share case studies drawn from three collections within Deep Blue Documents that provide unique contexts for metadata remediation: 1) the UM Biological Station collection, 2) the Global Feminisms Project collection, and 3) the Dissertations and Theses collection. These case studies include a summary of each collection, preliminary findings from consulting with collection owners, and recommendations for possible future remediation directions and practices. Finally, since reparative work is a process, not an end product, we conclude with suggestions for how to sustain these considerations in future deposits, and overall remediation considerations for the repository moving forward.

In general, this document recommends a nuanced approach to metadata remediation based on the needs and context of the collections within the institutional repository, not blanket changes of metadata to remove or censor harmful content. We hope this document is useful to other collections or divisions at the University of Michigan who are interested in reparative metadata work, but don't have a clear starting point. Further, we hope this document will engage other institutional repositories who are similarly interested in this work but are also struggling with how to remediate and manage metadata that is depositor-created and thus intentionally not controlled. For any feedback or questions about the work described in this report, please contact deepblue@umich.edu. You can also find this reports' recommendations summarized in its Appendix A: Reparative Description and Metadata Remediation Recommendations Summary.

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Introduction

Contextual Statement

Please note that this report discusses metadata concerns and instances of problematic language specific to content in our repository, including words that are potentially harmful or offensive (i.e., slurs). In these instances, we have spelled words out in the first instance, and partially redacted them in subsequent uses.

Institutional Repositories and U-M's Deep Blue Documents

An institutional repository is a "digital archive which centralizes, preserves, and provides access to an institution's intellectual output."(Canadian Association of Research Libraries, n.d.). Different from libraries and archives, which may have proactive selection policies and instigate the purchase or licensing of material, institutional repositories generally invite authors to submit their work directly (Allard et al., 2005), thus maintaining intellectual control of their own work and assigning appropriate metadata themselves. Many universities, including the University of Michigan (U-M), host their own institutional repositories as a place for research and teaching resources to be preserved and openly available beyond (and sometimes in addition to) traditional publishing methods.

In part because of the semi-informal nature or making work available this way, most repositories choose not to use controlled vocabularies due to the upkeep and expertise such frameworks would require, from both depositors and repository managers. Even organizations such as the University of Michigan, with multiple dedicated catalogers and institutional repositories situated within the library, do not have staffing levels that would allow for professional cataloging of these materials, which may never be traditionally published. Further, because of the wide variety of materials (and often disciplines) represented in institutional repositories, implementing controlled vocabularies would significantly limit possible descriptions by requiring generalization across fields, thus potentially limiting discoverability overall.

Deep Blue Documents is an institutional repository based at the University of Michigan Library. It is structured as a series of parallel collections, based in many cases on departmental, institute, center, or school structures (such as the University of Michigan Biological Station collection), and in others on particular ongoing projects (such as the Global Feminisms Project). A small number of collections, including the Dissertations and Theses collection, represent materials spanning the University's entire disciplinary coverage and timeline–in this case, beginning with the early 20th century. The repository has been accepting research, teaching, and scholarly outputs since its creation in 2006, with many items in the repository having been written before that date. Currently, Deep Blue Documents contains roughly 160,000 works from 1863 to the present, with hundreds of new works added (and hundreds of thousands of downloads) per month[1].

[1] Per internal departmental statistics.

The Deep Blue Repository and Research Data Services (DBRRDS) department, which runs the repositories and will hereafter be referred to as the "Deep Blue staff," is situated within the University of Michigan Library, as part of its Publishing Department. This placement, adjacent to both a more traditional library setting and a publishing unit with a University Press and several other publishing streams, surfaces additional metadata creation and remediation considerations. A library's primary purpose is to select material for its users, and then trained catalogers apply specific structured metadata to the object. For the most part, these catalogers are explicitly tasked with describing work with centrally-established vocabularies. In addition, they would not, for example, make changes to transcribed descriptive metadata (such as title, abstract etc.) even if they contain possibly harmful language. Instead they might work to change official language in controlled vocabularies assigning subject terms, or provide intermediary layers or additional terms to alert users to this language. This method avoids hindering discovery because it prioritizes faithfully representing factual descriptors of the work.

At the other end of the spectrum, the publishing model includes working directly with authors and in a sense co-creating the content and metadata of the book, with much more editorial involvement and room for discussion and influence, but with authors in many cases making decisions about how their work is described and/or framed. Both Deep Blue repositories, being situated between these two models, are in a unique position, sharing some elements with each of these more established approaches, but also needing to strike out and create a middle ground in choosing what model of metadata management will work best with depositors' and staff's needs and capacity. For example, in its Help documentation, Deep Blue Documents states that "The University Library retains the right to [...] amend and/or redistribute descriptive information (metadata) for Works in Deep Blue Documents," (Deep Blue Documents, n.d.) acknowledging that the Library's expertise in assigning metadata generally extends beyond that of depositors. However, in practice, if Deep Blue staff were to consider taking actions larger than adding obvious additional descriptive metadata or correcting obvious typos (or standardizing language), they would normally try to communicate with depositors or collection owners.

In Fall 2024, Deep Blue staff began discussing and seeking out best practices for reparative metadata work within institutional repositories. This was inspired by departmental interest and an understanding of its importance, and motivated by 1) other reparative metadata initiatives occurring within the University of Michigan Library system and other organizations, 2) the use of contextual statements in University of Michigan Publishing and other parts of the library, and 3) a lack of repository documentation on the extent to which remediation is needed. We also proposed a Rackham Doctoral Intern Fellowship[2] to help us begin this work. This report shares findings from a semester-long project, and aims to 1) synthesize and extrapolate current best practices for reparative description in institutional repositories; and 2) pilot the application of this

[2] Rackham Graduate School at the University of Michigan provides occasional funding for divisions within the University who aim to collaborate with doctoral students on specific projects that utilize their research skillset. This program is called the Rackham Doctoral Intern Fellowship Program. https://rackham.umich.edu/professional-development/rackham-doctoral-intern-fellowship-program.

work to content in Deep Blue Documents. See Appendix B: Winter 2025 Intern Project Posting for the original Fellowship posting/project description.

Reparative Description

Reparative description is an increasingly important responsibility for knowledge workers across all memory institutions. Hughes-Watkins (2018) argues that "traditional archives are damaged due to long-standing traditions that foster an imbalance of power," and that we need to approach description in a way that is centered on social justice and repairing these damages. Similarly, the Cooperative Metadata team at the University of South Carolina states that reparative metadata "addresses the impact of oppressive and harmful descriptive norms and practices by implementing inclusive metadata principles in the assessment and remediation of existing and legacy metadata" (Cooperative Metadata Team et al., 2024).

Reparative description is part of a larger movement within the knowledge infrastructures of cultural heritage knowledge-keeping organizations (including galleries, libraries, archives, and museums, also referred to collectively as "GLAM" institutions), through which these organizations are approaching description work with cultural reflexivity, and attempting to repair or minimize harm or bias embedded within collection knowledge (Adler, 2017; Adler & Tennis, 2013; Christen & Anderson, 2019; Patin et al., 2021). Reparative description does not resolve harms perpetrated at the time that knowledge or cultural objects were generated or collected. Instead, it is part of efforts to do better, continuous work in addressing, repairing, and preventing harms moving forward. Especially in digital environments, this is increasingly important as technology (and the data held within digital environments) is both efficient in codifying societal bias (racism, sexism, etc.) under the guise of neutrality (Benjamin, 2019; D'Ignazio & Klein, 2020), and also increasingly used to make decisions about access to resources.

The work of reparative description is also closely aligned with the recently coined "critical cataloging" or CritCat movement (Adler, 2017; Snow & Dunbar, 2022; Watson, 2020) and the older "radical cataloging" practices (Berman, 1971; Roberto, 2008). B.M. Watson argues that critical cataloging means operating from a point of "*catalogic* warrant", meaning that catalogers "read the terms and hierarchies of cataloging and classification systems with a critical eye, reflecting on the potential benefit or harm of each term on marginalized users, groups, or the GLAMs community as a whole" (Watson, 2023). In general, these practices are all centered on being more intentional and conscious of the words we are using to describe the material we are responsible for, and how they may impact readers, especially those whose wellbeing has previously not been considered.

Finally, beyond cultural responsibility, metadata remediation–and specifically reparative description–can enhance the accessibility and discoverability of material (Olson, 2023). As many information scholars have argued, content must first be discoverable and accessible before it can be useful to users (Riley, 2023; Yi et al., 2022). Part of the mission of Deep Blue Documents is to make information accessible and visible (Deep Blue Repositories, n.d.), meaning that optimizing discoverability is a top priority.

However, reparative metadata work is subjective and complex and becomes even more amorphous when working with metadata that is user-generated and not required to follow a controlled vocabulary (The University of North Carolina at Chapel Hill University Libraries, 2022; Wintermute et al., 2024; K. Wright, 2019), as in an institutional repository. As such, there is limited existing research on how an institutional repository might approach reparative description within their collections, a gap in practice this project aims to fill.

Guiding principles for reparative work

Much reparative descriptive work draws from galleries, libraries, archives, and museums (GLAM) literature and best practices. While some of the examples shared in this text cite a specific type of institution, the work of knowledge institutions and the goals of knowledge documentation, preservation, and sharing are relatively consistent across institution types, and therefore provide a solid foundation for reparative work within institutional repositories (Avdikos et al., 2023; Hedstrom & King, 2007). Rarely does existing literature provide step-by-step tutorials, since so much of this work is highly contextual to the collection itself (including its content and audience) and the quality of existing metadata. Instead, there is a focus on general practices to guide reparative work. There are also several other university archives and institutional repositories that have created their own guidelines,[3] which this document frequently draws from. Below we propose five general principles to guide reparative work in the Deep Blues.

1. Embrace intentional, flexible practices that allow for changing course

This practice, drawing primarily from the text *Towards Slow Archiving* (Christen & Anderson, 2019), emphasizes shifting away from the “More Product, Less Process” approach to collection management, especially when managing cultural heritage historically subjected to epistemic erasure and violence. This principle also aligns with recent calls for slow data curation[4] (Thielen et al., 2023). Specifically, this principle calls for us to approach our work in intentional ways, crafting work practices and relationships that take time to build sustainably. It also means being responsive to the needs of our users and communities. When doing reparative work, there is often an urgency felt to “fix” everything at once; in contrast, this principle urges us to produce quality rather than quick work. Given the diverse content within Deep Blue Documents, the application of this principle may also indicate a necessity to consider the specifics of each

[3] Examples include the University of Minnesota Libraries (University of Minnesota Libraries, 2025); Yale Libraries (Yale Library Reparative Archival Description Working Group, n.d.); UNC Libraries Conscious Editing Initiative (The University of North Carolina at Chapel Hill University Libraries, 2022); Iowa State University DEI Metadata Handbook (Wintermute et al., 2024); and South Carolina Libraries (Cooperative Metadata Team et al., 2024).

[4] Here, curation means the process of reviewing datasets to prepare them for sharing and reuse.

collection for remediation, rather than applying uniform practices across the repository as a whole.

Reflexivity is also crucial to this principle, meaning that past norms should not necessarily dictate future actions, but that librarians and archivists must be receptive to the evolving needs and desires of the communities they serve and whose work they steward. As Thielen, Marsolek, and Narlock (2023) note, “Slow Curation is a process, not an end goal,” and practitioners must build flexibility for change into these processes. As linguist David Crystal has stated, “The only languages which do not change are dead ones” (Crystal, 2011). Much of the metadata in Deep Blue Documents that requires remediation involves language once considered appropriate; but practices and society have changed. While it can be important to recognize original context and language may have been originally applied without conscious ill intent, we focus on the current effects of language used, without regard to the original intention. We can expect language to continue evolving, leading to more unintentional harm done by metadata that becomes outdated, and underscoring the necessity of approaching this work as an ongoing practice.

2. Unlearn the “neutral” voice of traditional description

There is historical precedent in archival description for collections custodians to maintain records according to their original order, known as *respect des fonds* (Society of American Archivists, n.d.). Tied to this principle is also the implicit notion that GLAM workers are passive individuals in service of the collection, rather than individuals with power over knowledge production (Jimerson, 2006; Zinn, 1977). As a field, galleries, libraries, archives, and museums have largely moved away from this logic and recognize the influence or “social control” (Zinn, 1977) we have over the collections we manage.

Following best practices by other LAM collections (Archives for Black Lives in Philadelphia’s & Anti-Racist Description Working Group, 2020; Douglas, 2016a; The University of North Carolina at Chapel Hill University Libraries, 2022; Webb, 2023), Deep Blue Documents reparative metadata work will resist past perceptions of “neutral” record-keeping and recognize the power our metadata management and data curation work has. This includes making sure that metadata doesn’t overly represent certain points of view, and examining the ways “neutrality” in the past has been a form of epistemic erasure (Patin et al., 2021) or has enforced white supremacy (Archives for Black Lives in Philadelphia’s & Anti-Racist Description Working Group, 2020). Sharon Webb states that,

> Writing metadata is not a neutral act–it reflects the writer, the politics of the day, and the perceived social and cultural norms of society. It is an interpretative act which depends on the knowledge, experiences and outlook of those writing it. Acknowledging the political nature of this work is crucial to developing metadata that is a fair representation of the objects and collections, or the individuals and communities, being described and which is culturally/socially/politically sensitive to the individuals and communities represented by, or in, these objects and collections. (Webb, 2023, p. 5)

The Archives for Black Lives in Philadelphia research collective has written extensively on this topic, and this call for unlearning neutral description comes from their guidelines. They state,

> Because we have the privilege of choosing what goes into the historical record, we also bear the responsibility to safeguard accurate representations of contemporaneous events. We believe archives exist to hold power to account; to speak truth to power. Because records serve as evidence for factual claims, it is archivists' responsibility, as stewards of records, to stand against their exploitation or abuse. (Archives for Black Lives in Philadelphia's & Anti-Racist Description Working Group, 2020, p. 3)

They call for active language when describing material, as passive descriptions can be a tool for avoiding responsibility in description. They give the following example, demonstrating the difference in responsibility between the two descriptions:

1. (Passive) "Four Kent State University students were killed on May 4, 1970, during a clash between the Ohio National Guard and a crowd gathered to protest the Vietnam War."

2. (Active) "Members of the Ohio National Guard killed four Kent State University students during a mass protest against the Vietnam War." (Archives for Black Lives in Philadelphia's & Anti-Racist Description Working Group, 2020, p. 3).

This call for avoiding passive description is echoed by other archival scholars as well (Douglas, 2016b). And while it may be less directly applicable while assigning descriptive metadata than in writing descriptive captions, nonetheless it is a good reminder to evaluate the unintentional ways in which language choice inevitably impacts framing.

3. Allow for plurality or multiple points of view

In the recent text *Data Feminism*, the authors make a call for data scientists, or those working intimately with data and digital systems, to allow space for pluralism in data descriptions. They state, "Data feminism insists that the most complete knowledge comes from synthesizing multiple perspectives, with priority given to local, Indigenous, and experimental ways of knowing" (D'Ignazio & Klein, 2020, p. 125). This call for plurality in metadata is echoed by others as well (Duarte & Belarde-Lewis, 2015; Patin et al., 2021; Webb, 2023).

This is also one of the main benefits of not implementing a controlled vocabulary--scholars and users of Deep Blue Documents can add their own metadata and build in the ways of knowing they want to prioritize. However, we must acknowledge that this could too often be metadata that centers culturally dominant (white, male, able-bodied, heterosexual, Western, and patriarchal) experiences, at the cost of other viewpoints. We also know that one of the historical problems with how research has been conducted is that it has often been extractive (Herscher, 2025; Pollock, 2023; Wood et al., 2014), especially when conducted on a particular group by a researcher who does not belong to that group. One of the motivations for this project is to better

understand what perspectives are represented in the repository currently, and intercede where necessary to ensure we are allowing or creating space for other ways of knowing, particularly including the perspectives of people or cultural groups who are the subject of research. Further work in this space for Deep Blue Documents could include creating educational documentation for depositors on how to create inclusive metadata for their deposits, further highlighting that assigning metadata is a process, and supporting a thoughtful approach that enhances discoverability.

4. Prioritize collaborative relationships with community stakeholders. Consult community expert resources for best practices

One of the commitments of this project is to center our reparative work on the relationships we currently maintain and hope to build in the future. This includes relationships with current individual depositors, repository collection owners with long-standing relationships (like the U-M Biological Station and the Global Feminisms Project), on-campus units, and communities from outside the institution whose cultural knowledge we maintain, whether they interact directly with the repository or not. Building on the “People First” approach shared by those at the Wilson Special Collections Library who state, “We commit to collaborating with people within and outside of our institution to ensure that their information needs are addressed, recognizing that their needs may not align with our understandings or institutional goals” (The University of North Carolina at Chapel Hill University Libraries, 2022), Deep Blue staff is similarly committed to improving our services so that they better serve marginalized communities inside and outside of the University of Michigan. This is in line with the University of Michigan Library’s Strategic Directions and Objectives, which states that we will “Acknowledge, confront, and interrupt the structural and institutional racism that shapes our interactions with colleagues, patrons, and the larger community” (University of Michigan Library, 2022).

Reparative work takes time and should be rooted in the needs of the community whose cultural material you are stewarding, and in the research discipline itself (Beaulieu et al., 2006; Christen & Anderson, 2019; Rowley, 2013; Wintermute et al., 2024). However, over-reliance on community consultation can also put an unnecessary burden on those individuals or groups, and create a potentially overwhelming volume of work for repositories with large existing collections. Reparative work does not happen in a vacuum, so community experts or information professionals have probably already begun some of this work that you can build on. Prior to reaching out to a community, the first step is often consulting existing resources such as those listed here (and the many others that exist!) that community experts have already spent time creating and sharing. It may also be worth reaching out to local scholars, including faculty who publish on these topics, and discipline-specific librarians who also might be interested in helping with this work (Archives for Black Lives in Philadelphia’s & Anti-Racist Description Working Group, 2020). Reviewing these resources may make it easier to scope remaining questions or requests.

If a specific community cannot be identified as correlating to a particular subset of repository items (as is expected to be the case with many Deep Blue Documents collections), you can also attempt to consult resources specific to the reparative aims you are hoping to address instead.

The following is a non-comprehensive sampling of description resources focused on specific identities or areas of practice (last updated November 2025):

a. Indigenous resources
    i. Australian Institute of Aboriginal and Torres Strait Islander Studies (AIATSIS) Thesauri
    ii. The "Use Our Words" Toolkit[5]
    iii. CARE Primer: CARE Data Principles, Indigenous data, Data related to Indigenous Peoples and Interest
    iv. Protocols for Native American Archival Material
    v. National Native American Healing Boarding School Coalition - Tribal Nation Name Authority Files

b. Gender and queer-inclusive resources
    i. The Homosaurus: An International LGBTQ+ Linked Data Vocabulary
    ii. Metadata Best Practices for Trans and Gender Diverse Resources
    iii. Best Practices for Queer Metadata

c. Anti-racist resources
    i. Archives for Black Lives in Philly
    ii. Global Library for Antiracism & Digital Citizenship Glossary[6]

d. Resources for describing people with disabilities
    i. Guidelines for Writing About People With Disabilities from the ADA National Network
    ii. Disability Language Style Guide, National Center on Disability and Journalism

e. Natural History and geographic name change resources
    i. Federal Actions to Address Offensive or Derogatory Geographic Names
    ii. American Ornithological Society Project to Change Harmful English Common Bird Names

[5] This site/resource is no longer online but as of when this report was completed, could be viewed via the Internet Archive's Wayback Machine (linked).
[6] This site/resource is no longer online but as of when this report was completed, could be viewed via the Internet Archive's Wayback Machine (linked).

f. Disciplinary resources
    i. Inclusive Naming Initiative (Information Technology)

g. General resources
    i. The Marriott Reparative Metadata Assessment Tool (MaRMAT)
    ii. Inclusive Metadata Toolkit from the Digital Library Federation (DLF)'s Cultural Assessment Working Group (CAWG)

Beginning collaborative relationships

The process of beginning collaborative relationships with community members and knowledge experts must be done carefully and intentionally. Often, universities and knowledge institutions have approached community partnerships in extractive ways where the institution, often in a much greater position of power, takes what it needs from a community and then terminates the relationship (Swan & Jordan, 2015). As such, many community groups and communities can be hesitant to partner with individuals from universities and knowledge institutions, and rightfully so.

Ann McMullen, writing on collaborative processes in museums, notes a trend in relationship building that is also true for libraries and institutional repositories: "Accounts of work with Indigenous people in museum settings tend to focus on the products of consultation rather than the process itself, although many acknowledge that because there is no single model for such work, **process is as important as product**." (McMullen, 2008, p. 56, emphasis added). It remains true that there is no one model for community consultation and relationship building in cultural heritage digital projects, since this work is so dependent on the needs and goals of those in the relationship (Prosper et al., 2024)[7], and in this case, the context of the metadata.

Taking a more step-by-step approach, *The Protocols for Native American Archival Materials* (Beaulieu et al., 2006) clearly outline steps to take to begin partnerships with Native communities, although some of their recommendations are directed towards returning physical holdings of archival material. They do share a few recommendations which are directly applicable to Deep Blue Documents:

- "Seek opportunities for Native American community consultation by contacting the chair's office of each tribe that is or may be culturally affiliated with collections held by the archives or library. Consultation may involve more than one person. **As a professional courtesy, also contact the community's cultural center, library, or archives and/or the cultural preservation office** (emphasis added by authors)**.** Appropriate personnel will appreciate being included in external discussions with mainstream archives and libraries.

- Inform Native communities about collections of relevant materials and explain the nature of the materials. Use the model summary or inventory letters required by the Native

[7] For other examples of successful community consultation projects rooted in mutual trust and respect, see project examples described in (Christen, 2006; Hennessy et al., 2018; Shankar & Hooee, 2013), although these tend to focus on projects undertaken with museum collections.

American Graves Protection and Repatriation Act of 1990, with a follow-up telephone call. More than one contact may be necessary. See: National Park Service, NAGPRA http://www.cr.nps.gov/nagpra

- Be cautious in approving access or use requests, if the requests appear to conflict with tribal protocols, until appropriate tribal community representatives can be consulted and have had ample time to consider these issues for culturally affiliated materials[8].

- Appreciate that in most instances it will take years for institutions and staff to develop essential trust relationships with a community. Weeks, months, or longer may be required to gain an understanding of Native perspectives on issues and to work through solutions and approaches to problems, in consultation with communities."

For Deep Blue Documents, it is recommended first to reach out to any collection owners and see if they have existing relationships with any communities represented in the collection. This will be a more efficient process, as they are likely to have community contacts where applicable, and may already be engaged in relationship-building work that can provide valuable context and foundation for outreach. For example, the U-M Biological Station has existing relationships with Anishinaabe communities near the station, including the Little Traverse Bay Band of Odawa Indians, the Burt Lake Band of Ottawa and Chippewa Indians, and the Sault Ste. Marie Tribe of Chippewa Indians. Any metadata remediation efforts for such collections should first begin with existing U-M Biological Station relationships, and should largely be driven by the goals of the community within this developing relationship. However, if collection contacts are unresponsive, or have no existing relationships with the community(ies) in question, Deep Blue staff may need to initiate community consultation themselves. Deep Blue staff plan to consult the above-identified sources as a starting point to help in deciding whether to reach out to a specific community.

It is recommended to start with a clear description of what you are asking for, the anticipated time required, and what the outcome could be. Once again using the U-M Biological Station and items identified for potential remediation as an example, an initial request for community experts could speak to the fact that we are hoping to provide context for records that have outdated language (and offer to share the language identified, if desired). If they have the time and energy to review these, we have drafted potential contextual statements for records. Would they be willing to look over statements and give feedback for areas of improvement? When asking for community expertise, having funds set aside and offering compensation and intellectual recognition (i.e., citing them in the statement for their time and feedback) is recommended (Archives for Black Lives in Philadelphia's & Anti-Racist Description Working Group, 2020)[9]. (What this looks like in individual situations may also depend on contexts including the desires

[8] And, we hope it goes without saying, this step first requires repository staff to educate themselves on potentially applicable tribal protocols where possible.
[9] Speaking on this issue specifically, the Archives for Black Lives in Philadelphia's Anti-Racist Description Working Group (2020, p. 6) states that "If you ask people from marginalized communities to help with description, be respectful of their time/labor and provide compensation. Do your homework first, and don't ask others to provide information you can easily find yourself. Pay them for their work."

of community partners, and the potential institutional requirements and consequent administrative burdens on external groups of setting up direct financial relationships with those groups.)

5. Document work practices, making them visible and reproducible for future practitioners

Finally, the last principle we propose using to guide metadata remediation is committing to document our practices, which ultimately contributes to making reparative description more visible and transparent work, and lowers the barrier for other practitioners to undertake similar projects. We hope that our practices are reproducible and useful for other practitioners, especially within institutional repositories, who are considering their own reparative description projects.

This principle builds on many other sources that call for transparently sharing GLAM work practices (Data Curation Network, 2018; D'Ignazio & Klein, 2020; National Archives, 2022). Specifically, the National Archives and Records Administration (National Archives, 2022) commits to transparency and states that they will:

> Find innovative ways to inform the public about the origin of our archival descriptions, including whether the language is original to the record's creator or was written by NARA staff. Where feasible, we will maintain and make available old/outdated versions of descriptions. We will create simple, accessible ways for users to give feedback and **we will publicly document our efforts on our website so that we can be held accountable.** (emphasis added by authors)

Similarly, the authors of Data Feminism, who discuss work practices closely aligned to record management and data curation, argue that as data workers, we need to do a better job of making our labor visible and sharing our work practices in collective ways (D'Ignazio & Klein, 2020, p. 173). They state that, "Data Feminism makes [the labor of data science] visible, so it can be **recognized** and **valued**" (emphasis added).

In sum, these five principles are intended as a non-prescriptive approach to reparative description that communicates why we are interested in this work, spaces we hope to build on in the future, and the ethics we see as important guides for our work practices.

Work Practices

In reviewing existing literature on reparative descriptive practices and stewarding materials that may cause harm, three practices frequently recur: 1) adding contextual statements or content warnings to existing metadata, 2) making changes to existing metadata (remediation) or providing guidance at the point of assigning metadata, and 3) customizing access policies and practices depending on content. These three overarching practices are often used in

combination with one another, meaning they are usually not distinct but combined in variations for a tailored approach.

Practice 1: Contextual statements and content warnings

The University of Michigan's equitable teaching guidelines define content warnings as “verbal or written notices that precede potentially sensitive content. These notices flag the contents of the material that follows, so readers, listeners, or viewers can prepare themselves to adequately engage or, if necessary, disengage for their own wellbeing” (Abdoo, 2020). Drawing from the University of North Carolina at Chapel Hill's reparative metadata guidelines, content warnings in GLAM collections are not about naming harmful material (and thereby applying normative determinations of harm), but rather embracing a “people first” approach to information. Their guide states, “A content warning removes the element of surprise and/or shock and allows users to make choices about what to engage with and how to prevent unnecessary harm. Content warnings thereby ensure that users’ information needs are addressed” (The University of North Carolina at Chapel Hill University Libraries, 2022, p. 141).

Drawing from a Preservica blog post (*Handling Sensitive Content in Digital Repositories*, 2023), in practice, we can think about content warnings in four variations:

1. A general statement for all content
2. Tailored statements for individual collections/items
3. Action-oriented statements
4. Reporting tools

A combination of these is suggested for Deep Blue Documents. Each section below includes both the current state of this work in Deep Blue Documents, and suggestions for further work or improvement within Deep Blue Documents.

General content statement

This practice includes crafting a public notice that explains that the digital repository may contain sensitive content, such as textual or graphic instances of violence, racism, sexism, and other potentially offensive content; why it contains such information; how such information is flagged; and how to report such information (which is related to the fourth variation of a content warning, as mentioned above). This may also be referred to as a “boilerplate” warning (The University of North Carolina at Chapel Hill University Libraries, 2022) or a harmful content statement (C. Wright & Rogova, 2025).

Content warnings in general are a relatively new tool being used in libraries and archives–Antelman, (2023) argues that we did not start to see this as an incorporated practice until the 2020s, even though a few institutions were doing this work as early as 2018. At this point many university libraries employ such general statements; for example, The Cataloging

Lab (2024) has compiled a list of examples. Kohn & McKinnon (2024) find that 55% of ARL (Association of Research Libraries) and CARL (Canadian Association of Research Libraries) libraries employed some form of content warning. The majority of these statements appeared on the unit's home page, while 38% appeared at the collection level or within a finding aid.

The U-M Library also has a similar statement in place, on both their main webpage and on each catalog item (U-M Libraries, n.d.). This statement also appears on each Deep Blue Documents item and reads as follows:

> **Remediation of Harmful Language**
> The University of Michigan Library aims to describe its collections in a way that respects the people and communities who create, use, and are represented in them. We encourage you to contact us anonymously if you encounter harmful or problematic language in catalog records or finding aids. More information about our policies and practices is available at Remediation of Harmful Language.

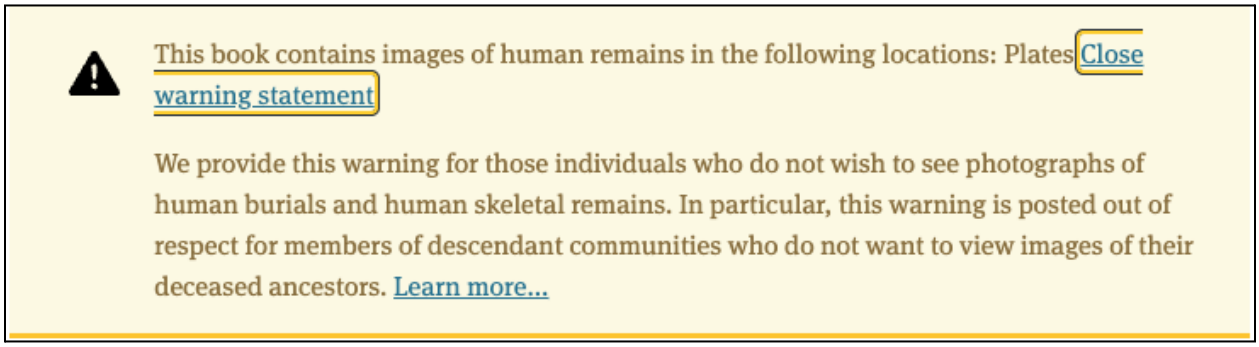
Recommendations:

In terms of this project, the library-wide statement is already well established. However, Deep Blue staff should also **create a Repository-level statement of contex**t. This statement could share that metadata within Deep Blue Documents is user-created and not vetted, but that the institutional repository is committed to inclusive description and improving the discoverability of content. This could be included on the FAQ page and/or on the front page of the website.

Tailored contextual statements for individual collections/items

This approach constitutes a specific statement added to the metadata of potentially sensitive content which alerts the user to the nature of the potentially offensive or sensitive text or images within a particular collection or item. This option requires a more detailed description usually written by a staff member.

The University of Michigan Library's Publishing division (the division where the Deep Blue repositories reside) already uses tailored content statements on one of its publishing platforms, Fulcrum, which hosts multimedia Ebooks published by U-M. For example, the book *The Snyders Mounds and Five Other Mound Groups in Calhoun County, Illinois*, a 1982 text describing archeological research (Braun et al., 1982), has the following contextual statement on its webpage:



Text in image:

This book contains images of human remains in the following locations: Plates

We provide this warning for those individuals who do not wish to see photographs of human burials and human skeletal remains. In particular, this warning is posted out of respect for members of descendant communities who do not want to view images of their deceased ancestors. Learn more… (https://doi.org/10.3998/mpub.11394622)

The warning also links to a resource from the University of Michigan Museum of Anthropological Archaeology (UMMAA) describing its current processes for discussing research that surrounds human remains (University of Michigan Museum of Anthropological Archaeology Press, n.d.).

A second example in Fulcrum is the book *Owning My Masters (Mastered): The Rhetorics of Rhymes & Revolutions*, which is a "digital archive of original rap music and spoken word poetry" (Carson, 2024). The contextual statement for this book reads:

> Some of the videos and audio tracks included in this project contain potentially offensive terminology or images. Readers should bear this in mind when accessing this project. (https://doi.org/10.3998/mpub.12584348)

These two statements demonstrate different layers of granularity that can be applied with item-level statements, and the ability they provide to link to additional resources on why material may be harmful.

In Deep Blue Documents, the application of customized content warnings would require a different statement for each Research Collection or individual item, giving a general description of 1) the sort of material found in the collection, and 2) an assessment of the type of offensive material that may be encountered (i.e., being specific about what the potential harm is). Some collections would be more straightforward to write such a statement for. This approach could also include an item-level description for certain items that relate to complex subject matter or have known instances of derogatory or outdated language present within the document.

For example, the U-M Biological Station (UMBS) collection already has the start of such a statement (Biological Station, 2025) for its collection. The description currently reads,

The University of Michigan Biological Station (UMBS), founded in 1909, is dedicated to education and research in field biology and related environmental sciences.

In a world that is undergoing unprecedented changes in land use, climate, resource extraction and species distributions, a major goal of the UMBS must be to produce biologically knowledgeable graduates who are prepared to understand, deal with and solve environmental problems.

This collection of student papers are a research effort of students enrolled in courses at the Biological Station, either in the spring term or in the summer term. Such research efforts are required for completion of coursework at "Bug Camp." They do not include the editorial comments or the assigned grade by the faculty member of those courses. As such, they have not been vetted in any way. These student papers were written primarily for educational purposes. (https://deepblue.lib.umich.edu/handle/2027.42/49252)

Recommendations:

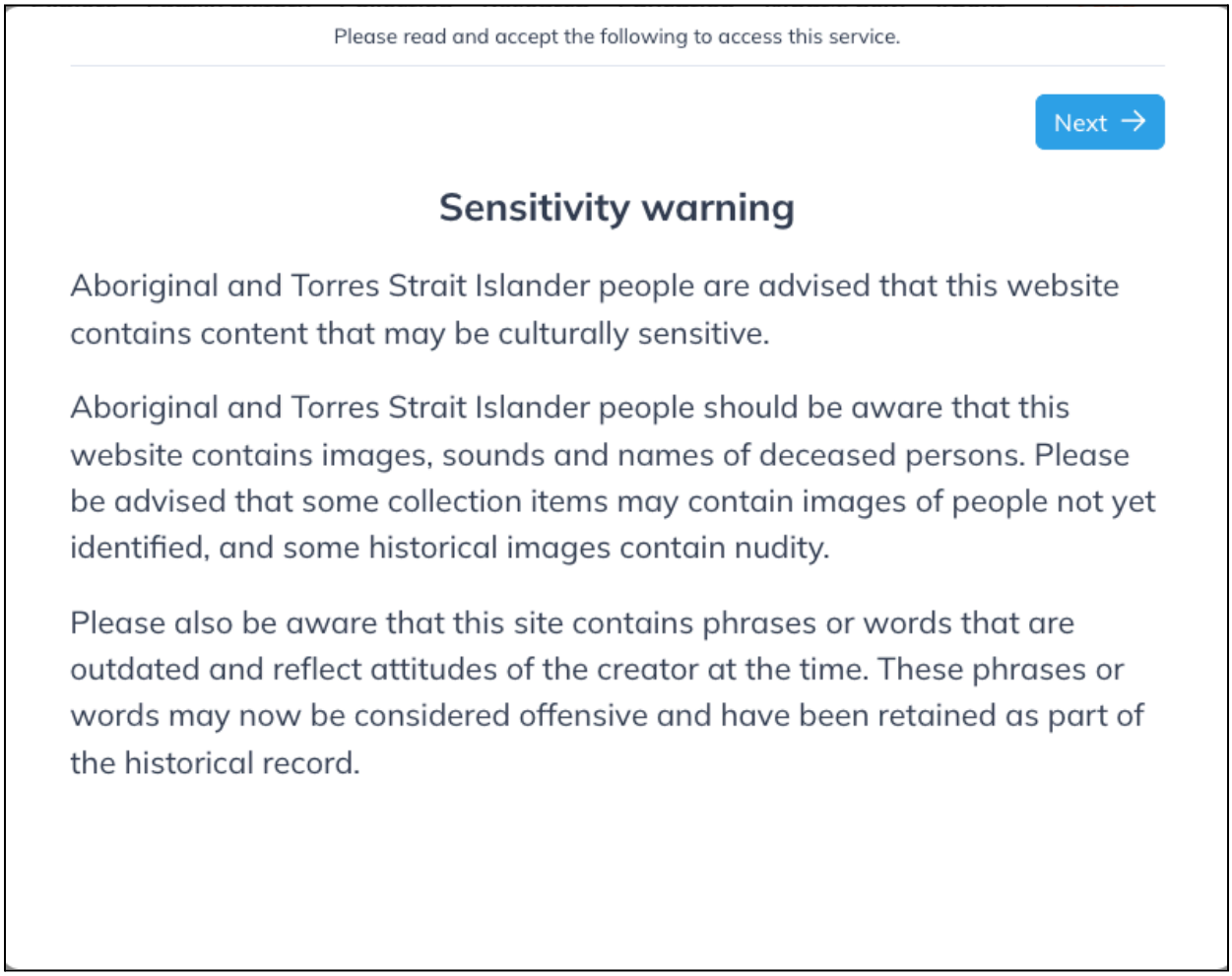
Additional collection- or item-level contextual statements would be appropriate for collections with widespread or prominently featured elements that can be anticipated to be potentially problematic, elaborating on the type(s) of language a user may encounter. For the UMBS collection this could include something like,

“Material from this collection spans 1909 to the present and includes a number of field notes, reports and papers created by students who used language and had opinions that we do not necessarily share today. Because of this, you may encounter offensive, outdated, or incorrect descriptions within this collection, which nevertheless may accurately reflect aspects of the history of the field.”

For some collections (i.e., at the college or school level), it would be challenging to create a scoped warning to accurately address material that users may encounter since the collections vary so greatly in scope. In these cases it is recommended, on an ad-hoc basis and in consultation with the collection administrator where there is one, to evaluate whether the collection would benefit from a statement tailored to certain identified issues, and to identify records that might benefit from this addition.

Action-oriented content warnings

An action-oriented content warning is a visual barrier that alerts a user that the item ahead contains potentially sensitive or offensive content, before they encounter the item itself. The distinction from a general statement is that users must complete an action (i.e., click “I agree”) before proceeding to the content. An example of this type of statement is on the Australian Institute of Aboriginal and Torres Strait Islander Studies (AIATSIS) website:



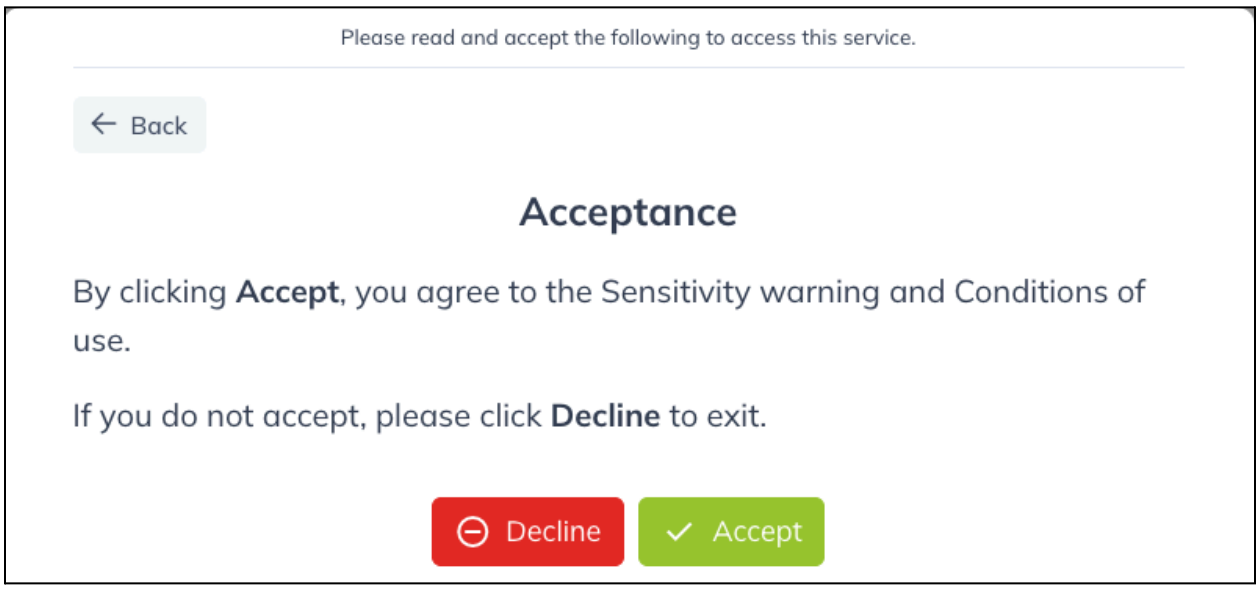
Text in image:

Please read and accept the following to access this service. Sensitivity warning: Aboriginal and Torres Strait Islander people are advised that this website contains content that may be culturally sensitive.

Aboriginal and Torres Strait Islander peoples should be aware that this website contains images, sounds and names of deceased persons. Please be advised that some collection items may contain images of people not yet identified, and some historical images contain nudity.

Please also be aware that this site contains phrases or words that are outdated and reflect attitudes of the creator at the time. These phrases or words may now be considered offensive and have been retained as part of the historical record. (https://aiatsis.gov.au/family-history/you-start)

Once the visitor clicks “next,” they are required to accept the terms of the warning (as well as the item’s conditions of use):



> *“Acceptance: By clicking **Accept**, you agree to the Sensitivity warning and Conditions of use. If you do not accept, please click **Decline** to exit.”*

These sorts of popups are intended for especially harmful or culturally complex content. For example, the AIATSIS website warns that there may be images and descriptions of human remains.

Recommendations:

Given the broad scope of content that may be held in Deep Blue Documents, Deep Blue staff should **assess what the threshold for adding a warning might look like** for their stewarded content, and preliminarily **investigate the technological requirements for adding such a warning**.

Reporting tools

A reporting tool is an embedded form or webpage that offers users a structure and information on how to report offensive, derogatory or harmful content. The purpose of this tool is to alert staff that an object contains such content so that a staff member can review the content or metadata and make any appropriate changes/decide how to alert users before they reach the content. This feedback mechanism follows recommendations from others engaging in reparative

work (Archives for Black Lives in Philadelphia's & Anti-Racist Description Working Group, 2020; C. Wright & Rogova, 2025), and general norms in libraries currently.[10]

This approach is generally a reactive approach to metadata remediation, as it relies on the labor of researchers and users to identify harmful content, rather than the proactive alternative of trained (and paid) information professionals doing this work. Further, its success relies on two assumptions about users of Deep Blue Documents: 1) That they have the expertise to identify harmful content, and 2) That they will take the extra step of reporting this harmful content.

U-M Library and Deep Blue Documents more specifically already have a reporting form in place, found within the above-shared harmful remediation statement and on each deposit's page. Although reporting tools on their own should not be considered sufficient, there are multiple values to having this measure in place alongside more proactive approaches. The first is that we can never count on a proactive approach catching every instance where review for remediation is called for, and this gives users a place to share things we as a repository have missed. Second, calling for communication on this topic demonstrates to users that we care about minimizing offensive material in our collections, and have processes for doing so. Finally, a reporting form provides an explicit mechanism for users to report derogatory or outdated language, lowering the communication barrier and making such communications more likely.

Recommendations:

Within Deep Blue Documents, the integration of a reporting form for harmful content is already established. However, Deep Blue should **extend the reporting form option to collections**, to show up on their collection homepages within Deep Blue Documents. This is in line with a case-by-case remediation plan identified later in the report. It is also suggested that **implementing reporting mechanisms needs to be done in partnership with other proactive reparative work**; on its own, it is insufficient.

Practice 2: Metadata remediation/repair

Metadata remediation is not a process unique to inclusive or reparative projects; in fact, it is a common challenges or need for digital materials repositories of many types to undertake at some point in their metadata journeys (Data Curation Network, 2018; Henninger, 2018; Higgins, 2008; Waldron, 2017). What differentiates metadata remediation in Deep Blue Documents from collections that undergo more curation or expert application of metadata is that the remediation is happening on metadata that is user-generated as part of a self-deposit and -publish process, and thus is ideally done in consultation with those depositors.[11] Consulting with depositors is

[10] Kohn and McKinnon (2024) find in their review that 29% of Association of Research Libraries (ARL) and Canadian Association of Research Libraries (CARL) libraries currently have a contact form linked in their reparative description statement.

[11] It is worth noting that metadata changes do not always have to happen with depositor permission. The Deep Blue Documents FAQ page as of Oct. 13, 2025 states that

> "When the U-M Library finds that we can improve access by enhancing the information about a deposited Work or providing a new context for the Work (such as representing the Work in

recommended for two reasons: the first is that metadata repair is highly situational within the context of the item and its discipline, and in most cases, such consultation will produce better-remediated metadata; secondly, this serves to maintain good relationships with Deep Blue Documents depositors. However, there are multiple collections (and many items) within Deep Blue Documents where the main depositor(s) are no longer affiliated with the university or are not responsive to communication. In these cases, remediation should be undertaken using the best judgment of Deep Blue staff.

As mentioned above, metadata remediation is highly contextual in terms of 1) The context of the content itself (such as its discipline of origin); 2) Legacy data standards; 3) The quality of existing metadata; and 4) Internal documentation and practices, such as the scope and values permissible for each field. In Deep Blue Documents, metadata fields are primarily based on the Dublin Core vocabularies (https://www.dublincore.org/specifications/) (Dublin Core, n.d.). With its many potential terms, Dublin Core gives the flexibility to describe work in detail, but not all metadata fields within Deep Blue Documents are presented to all depositors (and not all possible DC fields are included in the repository), to avoid overwhelm. In fact, the only required metadata fields in the default Deep Blue Documents deposit form are *Author(s), U-M Campus, Title, Date of Issue, and Item Type*. However, there are some variations in requirements for items ingested in specific collections (such as the Dissertations and Theses Collection, which requires *Advisor(s) name(s)*), or through the batch upload process (which does not require a campus), which is distinct a workflow distinct from manual deposit of individual items and thus requires a separate implementation of rules.

When conceptualizing this project, Deep Blue staff initially thought metadata remediation would be the most commonly used approach for reparative description. However, after speaking with the contact points for the identified case study collections (see later in this document) and reviewing the literature, we anticipate utilizing this approach less frequently than originally intended. This is in part because, informed by conversations with the DEIA Catalog Working Group at the U-M Library, we are making a distinction between Library- (or in this case, depositor)-assigned metadata where the choice of language requires judgement (such as keywords), vs. metadata describing an objective fact about the item (such as its abstract or title), where introducing changes would provide inaccurate representation of the item and negatively impact discovery. Additionally, because the text of many of these items is itself searched to facilitate discovery (via hidden extracted text files), metadata remediation on its own is insufficient to address in-text instances of harmful language. Due to these and other factors, including the importance of keeping each record situated within its disciplinary and temporal

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additional Collections beyond the one you deposited it in) or better preserve your Work by changing its format, we may do so," (https://deepblue.lib.umich.edu/assets/static/depositing.html#additional-info), and also that "The University Library retains the right to: amend and/or redistribute descriptive information (metadata) for Works in Deep Blue Documents" (https://deepblue.lib.umich.edu/assets/static/managing.html#University%20Rights%20and%20Responsibilities).

However, in most cases it is recommended that the item owner or collection contact point is reached out to when metadata remediation is required.

context, we are not recommending a blanket “find and replace” method to change metadata, unless this is something that a particular collection contact wants to discuss pursuing. Instead, our recommendation is to supplement metadata remediation with contextual description, to limit erasing past context regarding material (and metadata that was user-generated, which is informative on its own). After consulting with Deep Blue developers about what is possible given the technical limitations of DSpace (the platform on which Deep Blue Documents is built), a version of the following (very high-level) metadata remediation workflow is recommended:

Possible metadata remediation workflow

1. Build out a tiered “derogatory language” lexicon.

   This was started as part of this project, but the work will need to be continued and refined–systematically locating derogatory and outdated language proved more challenging than originally anticipated. This entails identifying, compiling, and then searching for defined set(s) of derogatory language, finding a way to extract a sample of what needs to be remediated from within the repository, and then strategizing how to approach remediation.

   During the initial literature review for this project, the authors looked for general lists or thesauri of derogatory terms. While there are a number of partial lists that can be used as a starting place (British Broadcasting Corporation, 2022; Cataloging Lab, n.d.; Ipsos MORI, 2021; OHSU, n.d.; Wikipedia, n.d.), there was no comprehensive list identified. In one respect this is to be expected–any list created could not be exhaustive, due to the dynamic nature of language as well as differences in usage and approach between fields and communities. This does mean that Deep Blue staff will need to create a list applicable to their own (wide-ranging) context. In compiling such a list, we can also add more context to certain language and identify priorities, such as distinguishing terms that are always or almost always derogatory, or slurs (which may need to be searched for across the repository, and then remediated in discussion with collection owners) from other, grayer language that may take more time and nuance to understand in context, and thus require a lighter touch.[12]

2. Building on the lexicon, for each collection (in consultation with collection owners where possible), add collection-specific terms or information to search and potentially address.

   If collection contacts do not respond to initial outreach, this second iteration of more context-specific terms can be omitted as Deep Blue staff will not have the necessary expertise in every field. Where it can be applied however, is nonetheless important, as inclusive metadata creation and maintenance must be centered in the context of the

[12] In late 2024 and 2025, the The Marriott Reparative Metadata Assessment Tool (MaRMAT, n.d.) released several relevant resources to build into this process as well as other remediation processes/considerations. The tiered approach is also demonstrated by the Inclusive Naming Initiative (Inclusive Naming Initiative, n.d.), which has three levels: Tier 1 (Replace Immediately); Tier 2 (Strongly Consider Replacing); and Tier 3 (Tier 3: Recommendations to Replace).

records themselves, and the creators or collection owners are often closest to that creation point. Therefore, remediation work should be guided where possible by discipline or community experts, who have a much better understanding of why past terminology was used; if change is warranted or necessary; and what terms might be more appropriate to replace older language, where applicable, as disciplinary language also changes over time.

3. Identify the most likely fields in which language in the "derogatory language" lexicon may appear. Currently anticipated fields include:
    a. Dc.subject
    b. Dc.subject.other
        i. Both of these are free-text subject/keyword fields
    c. Dc.title
    d. Dc.coverage.spatial
        i. Not necessary for every collection, but for geographically centered collections (i.e., the U-M Biological Station collection), this field should be searched for outdated geo-locations (i.e., "Colonial Point")
    e. Dc.description
    f. Dc.description.abstract[13]

    In many cases, PDF deposits have an attached file of the OCR'd content of the deposit (as an extracted.txt file). When available, searching these files against the lexicon should also be investigated as a way of potentially identifying such language within the content of items.

4. Export values for the above-determined fields from DSpace. Make sure to confirm the quality of this exported metadata (in terms of both its presence/application, and encoding/display) such that it can be re-imported following editing.

5. Manual review of terminology and/or automated search against the lexicon for identified terminology that always requires review (such as slurs); this may also be combined with (or require first) other metadata standardization such as normalizing capitalization, spellings, etc.

6. Remediate metadata terms as determined fit
    a. Possible remediation approaches include:

        i. **Keep original term, add a specialized contextual statement.** (See Practice 1: Contextual statements and content warnings, above). This would be pursued when derogatory or outdated language is present in, e.g., the title or text of the material. We do not plan to change the title of any work, or redact/change the contents of deposits. However, adding a contextual statement in these cases still provides a warning to readers

[13] The full list of Deep Blue Documents' metadata is currently under review/update.

that they might encounter problematic language, and that we as a repository are aware of its existence.

ii. **Keep original term, add updated term, and add text to the dc.description.provenance field documenting the change.** This path would be pursued in instances where the problematic term is still widely used, and removing it would impact discoverability. For example, within the U-M Biological Station Collection, this report notes further down a recommendation for changing the value “Colonial Point” in the dc.coverage.spatial field to “Indian Point,” which is now the preferred place name for this location. However, some researchers still use the outdated terminology and it is used widely within the text of some of the documents. So some indication is still needed that these terms describe the same place, and that these documents in particular use the older term.

iii. **Replace term, and add text to the dc.description.provenance field documenting the change.** This path would be pursued for the most derogatory language and would be used sparingly, as there are valid reasons a researcher may be looking at topics relevant to almost any language, and removal of language (especially if it was commonly used during certain time period) would impede discovery. In this instance the older language could still potentially be retained in the provenance field, as this field is only visible to repository administrators.

iv. **No change to metadata, no change to record.** This path would be pursued if collection owners, depositors, and/or relevant community members advise against any remediation, or Deep Blue staff are unable (temporarily or permanently) to determine an appropriate approach. These records would still have the repository-wide metadata remediation request form present on their pages, and be subject to the repository-level statement and any applicable collection-level statements. This is not a preferred strategy; however, we note it here in recognition of the realities of a self-deposit repository.

7. Import changes back to DSpace

Data-driven approaches to metadata remediation (such as using automated methods to scan large amounts of data and flag a subset for manual review) are increasingly being employed by GLAM institutions to get a baseline understanding of the scale of remediation necessary (Ceja et al., 2021; Gosselar, 2022; Shams-Rainey, 2021; Suarez, 2020), meaning this suggestion is coming from best practices identified in the literature. However, as Gosselar (2022, p. 2538) notes, “Once legacy metadata has been audited and analyzed, the real work of reparative

description begins. There is no one-size-fits-all approach to reparative description. Remediation of legacy metadata will take time, and a careful case-by-case analysis." This means that any metadata suggested by automated workflows is just the starting point of reparative work--the actual changing of metadata will be a process of collaborating with Deep Blue collection owners and potentially impacted communities before and after the initial audit is conducted. This also means that completely auditing and addressing content at this item or collection level may realistically, depending on capacity, take months to years. Consistent dedicated amounts of time to this work, even if small, should however be prioritized and may enable significant progress; and this process may also be aided by breaking down the repository into smaller sections (in this case, collections), thus allowing a narrower scope of focus at any one time.

Finally, at this point in our own process, we are not recommending blanket metadata replacement or removing derogatory or outdated metadata without providing context. Erasing material does not reduce the potential harm caused by it, it only erases the context and creates larger issues of potential censorship (Archives for Black Lives in Philadelphia's & Anti-Racist Description Working Group, 2020). Indeed, other GLAM scholars have noted the fine line between reparative description and potential censorship (Minadeo, 2024; Olson, 2023), and we encountered this in our own case study interviews as well (further elaborated on below). We have determined that for Deep Blue Documents, the better approach for dealing with instances of harmful language is generally to contextualize it and let users make their own decisions.

Recommendation:

Deep Blue staff should **expand, implement and refine the metadata remediation process and decision factors outlined abov**e.

Practice 3: Tiered access to material

An additional approach encountered within the literature review of a relationship-first view on collection management is intentionally thinking through access to certain materials that have specific cultural warrant. This is especially pertinent to items that might contain traditional or Indigenous knowledge, which in some instances is not intended to be known unless you are a member of the community; or when members of Indigenous communities may have been the subject of or collaborators on research. This issue of Indigenous claims to cultural heritage and intellectual property are well documented (Callison et al., 2016; Christen, 2011; Hansen, 2011); the current expectation is that when a community advises that material should be restricted, the cultural heritage institution respects that decision. Traditional Knowledge (TK) labels are one attempt to operationalize the nuance of traditional knowledge protection (Local Contexts, n.d.).

In terms of restricted access, Deep Blue already employs tiered levels of access to some of their collections. For example, the U-M Biological Station and the Dissertations and Theses collections both have an automatic embargo on deposited material older than 75 years, or for

which there is no explicit permission to make them available. Other embargoes are decided on a case-by-case basis on deposit, in communication with collection owners and/or depositors. This current practice around restricting access is largely intended to deal with ownership and copyright implications, as the issue of tiered access for cultural reasons has not been brought to the IR staff's attention for any specific items.[14] However, as previously noted, because of the nature of self-deposit, this does not mean that there are no instances where access needs to be restricted for cultural reasons, especially when considering the range of dates spanned by materials in the repository. Deep Blue staff is committed to working with communities and listening to recommendations if there is material identified that needs to be restricted for cultural reasons, regardless of whether it falls within our established workflows.

On the other hand, there may also be items that are currently embargoed or restricted but which directly concern specific communities whose members may desire access. If a community member reaches out to Deep Blue for access to items that document their culture, this should be considered on a case-by-case basis. For example, a dissertation published in the early 2000s (meaning it still has restricted access) speaks to the cultural practices of the Melanesian community (Sandler, 2001). A Mabuyag community member reached out to Deep Blue requesting access to this dissertation as it was research conducted on their community, and their community did not have access to the findings. At the time Deep Blue did not have an explicit policy for this, but decided to grant access to the requestor, ultimately prioritizing cultural warrant over copyright concerns. It is recommended that in other instances where community members request access to restricted material that concerns their own community, it is granted.

Within Deep Blue, another instance when further redaction of an item is advisable is if the item includes Personally Identifiable Information (PII) or information that could link an individual to a specific research study. It is an already explicit policy within Deep Blue Data to not accept deposits that contain PII, as it is the end goal of both Deep Blues to make research and scholarship publicly available (Deep Blue Data, n.d.). However, Deep Blue Documents has no current explicit policy on PII (though one is being created). This means that if items are encountered that contain PII, they should be reviewed on a case-by-case basis as a high priority, unless they fall within established research types that allow this type of information (such as oral histories' inclusion of interviewees' names, which are governed by oral history best practices, such as those defined by professional organizations such as the Oral History Association (Oral History Association, 2018).)

[14] According to U-M's Standard Practice Guideline 601.28, "Who Holds Copyright at or in Affiliation with the University of Michigan," while the University asserts ownership of faculty intellectual property, it generally grants access back to the creator/author for purposes of publication and/or dissemination. Student work, on the other hand (which makes up most of the UMBS and Dissertations and Theses collections), unless created in the course of University employment, generally belongs to the student author without transfer.

Recommendations:

Deep Blue staff should **draft a Personally Identifiable Information Policy** for Deep Blue Documents, for transparency purposes and to standardize practices. This could take as a starting point the Library's Takedown Policy for Private Information in U-M Digital Collections (University of Michigan Library, n.d.-b).

Case Studies

Three example subsets of content (collections) in Deep Blue Documents were chosen to test and develop approaches. This follows best practices identified in the literature, where other collections or repositories also scoped their initial reparative description to pilot cases (Geraci, 2019; Seppi & Grob, 2021; Suarez, 2020).

For example, the Princeton Inclusive Description Working Group (Suarez, 2020) advises when embarking on a large-scale metadata remediation project to first identify case studies to test workflows "to address crucial gaps and offensive language". Their initial choices presented a range of description issues, not limited to racist descriptions, descriptions that erased the presence of women, problematic descriptions of queer people and relationships, descriptions that prioritized settler-colonial ideologies, and descriptions outside of the English language. At the University of Houston Libraries, their pilot case focused on a specific topic: any digital library resources often used in classes that study slavery (Seppi & Grob, 2021).

The pilot cases identified for Deep Blue Documents were 1) Student-generated documents affiliated with the *University of Michigan Biological Station (UMBS) collection*, 2) The *Global Feminisms Project collection* materials, and 3) Dissertations published at the University of Michigan from the early 1920s to the present in the Dissertations & Theses collection.

1. Case Study: University of Michigan Biological Station (UMBS)

Background

The UMBS is a 116-year-old field research site whose collection material includes field notes and research outputs. The field station covers approximately 10,000 acres in Northern Michigan, and its documents range from the early 20th century to the present. The U-M Biological Station is situated in close proximity to multiple federally recognized tribal nations, on land that culturally belongs to these groups. As such, many of their documents by extension include local knowledge of geographic places, plants, and animals, and interact with the complex histories of this land and Indigenous struggles for land sovereignty. This pilot gives space to focus on a limited culture (i.e., representations of Anishinaabe people/the Burt Lake Band of Ottawa and Chippewa people, and related concepts or knowledge), a defined geography, and their possible representations within Deep Blue Documents. This collection also allows examination of natural science and place descriptions that change over time. This

collection has designated collection owners or contact points at UMBS. As of March 2025, the collection has 4,135 items; 872 of these items are fully accessible to the public, 5 require U-M affiliation for access, and 3,258 are only accessible to staff and researchers at the Biological Station. Individuals who contact Deep Blue requesting access to one of these restricted items are directed to the contact points for the collection, who make access decisions on a case-by-case basis.

Remediation considerations

Through initial conversation with staff at the Biological Station, we identified four areas that require consideration for remediation:

1. Slurs in-text and within metadata of documents
2. Outdated place names (sometimes also including slurs) both in metadata and in-text
3. Culturally sensitive information in-text
4. Personally identifiable information in-text

Slurs

Through a preliminary review, two main slurs have been identified within the text of documents. This type of derogatory language is not unique to UMBS; in fact others have noted the prevalence of outdated language in records associated with natural history (Briscoe, 2022). As an example, the place now known as “Mullet Creek” was previously referred to as “Nigger Creek”.[15] Biological station staff uncovered this issue during a citizen science project where transcribers encountered the language. After the project, the term “Mullet Creek” was added to the dc.coverage.spatial field in records that the citizen science project identified. This was largely to aid with discoverability, so research on this specific place that used this offensive term but not the more updated description could still be located. (Note that the older place name had never been part of the metadata; the citizen science project was intended to improve coverage and completeness of descriptive metadata). However, no other remediation (i.e., redaction of the older place name in the content or addition of contextual statements to the record) was completed at that time.

The other slur encountered in Biological Station records is “Squaw”. This word (a common slur used to describe Indigenous North American women and activities associated with them) occurs in multiple contexts within UMBS records, including in botanical descriptions of plants (e.g., Sq--w vine)[16] and in place names (i.e., Sq--w Bay or Sq--w Ponds)[17]. Based on our conversations with Biological Station staff, to date there has not been infrastructure or capacity to undertake systematic remediation efforts for specific language/content such as these examples.

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[15] For example, see the following in Deep Blue Documents: (Cagle, 1938; Feigley, 1948; Wienert, 1947).
[16] For example, see the following in Deep Blue Document: (Pinkley, 1961)
[17] For example, see the following in Deep Blue Documents: (Bert, 1949; Taylor, 1976)

While these words are not always represented in the collection or item metadata, the documents are often OCRed, meaning that their full text is searchable. Thus, when searching for these slurs in Deep Blue these documents are returned. This case in particular expanded our understanding of reparative description beyond simply metadata considerations. While this is not directly a metadata issue, documents that contain this language would benefit from a statement addressing why a user might encounter such language.

Recommendations:

For records that contain either of these slurs, it is recommended that the Deep Blues, in collaboration with the Biological Station, **create contextual statements** explaining that users may encounter derogatory language that is no longer considered appropriate, but is still maintained to reflect historical accuracy; and attach the statements to individual records that have this language present within the documents. This follows best practices identified by others engaged in natural history reparative description (Briscoe et al., 2023).

It has been confirmed by staff at Deep Blue that applying contextual statements to individual records could be implemented by adding content to an existing or new metadata field. Since these slurs are unfortunately present throughout much historical documentation, there are many existing resources that can be used as starting points for these contextual statements.[18] Further, it is recommended in collaboration with the Biological Station to **identify, from their contextual knowledge of historical place names, any other slurs that might be common in their material,** including derogatory terms that have historically been used to refer to BIPOC communities in the area. **This area of remediation (identification and remediation of slurs present in records) should be the top priority for Deep Blue.**

Outdated place names

Since the Biological Station is so geographically focused, and papers often discuss ecological research at specific geographic locations on the station's campus, place names are common within the collection's metadata and in documents. For "official" place names, the Biological Station defaults to the United States Geological Survey (USGS) domestic name list for metadata locations (U.S. Board on Geographic Names, 2025). This list is maintained by the federal government and occasionally updated.[19] For example, the previously discussed "Mullet Creek" is an official place name defined by USGS.

[18] For example, The Native Northeast Portal has a contextual statement for the Sq--w term (Native Northeast Portal, n.d.).

[19] In 2022 for example, the U.S. Department of the Interior (which manages the Domestic Names Survey) launched the "Derogatory and (or) Offensive Words, Names, and Phrases in USGS Information Products" initiative to identify derogatory or outdated place names in their name list (Survey Manual, 2024). 32 of the replaced names were for geographic locations in Michigan (Stebbins & Silversmith, 2022).

However, there are also local terms that are not within the USGS Survey that still require remediation. One example is the outdated term “Colonial Point”. Since 2019 (Nadelhoffer, 2019), the Biological Station has referred to it as “Indian Point”. The Burt Lake Band has created public communication on this name change as well (Burt Lake Band, 2023). In sum, this name change is widely accepted. However, the older term is still present in Deep Blue within the metadata field *dc.coverage.spatial*, within the titles of some records,[20] and in-text as well.

Recommendations:

For this name change in particular, since there are a number of records where this term shows up, and because of its more contemporary change, it is recommended that Deep Blue staff collaborate with the Biological station to **create a collection-wide statement** explaining this name change, and why users might still encounter it in Deep Blue Documents. This statement could also benefit from a consultation with the Burt Lake Band since they already have existing communication about this place's name as well. It is also recommended that a search for this term in the *dc.coverage.spatial* field is run. For the identified records, **“Indian Point” should also be added as a dc.coverage.spatial field value**. An item-level description of this name change should also be added to each affected record’s provenance.

Further, it is recommended to **identify**, in collaboration with the Biological Station based on their contextual knowledge of historical place names, **any other examples of similarly outdated geographical names that might be common** in their material.

This demonstrates as well how further communication between Deep Blue and UMBS staff could be beneficial. When name-changes like this occur in the future, communication of these from the Biological Station to Deep Blue would allow proactive metadata remediation. From Deep Blue’s end, this might mean building this relationship so that Biological Station staff feel empowered to provide these updates and understand what the process should look like.

Culturally sensitive information

As previously noted, The Biological Station is situated on Anishinaabe land that has been inhabited for thousands of years by these and other Indigenous groups (Nottawaseppi Huron Band of the Potawatomi, 2022). Because of this, researchers affiliated with the University of Michigan have identified several sites of cultural significance and conducted archeological digs onsite, including projects such as the Cultural Landscapes of Douglas Lake Archaeological Research Program and the 1974 Inland Waterway Project.[21] In conversations with UMBS staff, they have been intentional in making sure specific details around these sites are not shared in

[20] For example, as of October 2025 the following records still have the outdated term “Colonial Point” in both the title and in the metadata field *dc.coverage.spatial*: (Bielaczyc, 2006; Hovani et al., 1994; Lehr et al., 2009; Work, 1970). Note: some of these documents are only viewable when physically at the UMBS.
[21] For example, this record (Albert & Minc, 1987, pp. 39–40) potentially discusses the locations of dig sites.

any public communication, including their deposits with Deep Blue, in order to protect these sites from unauthorized visitors.

However, in initial conversations with UMBS staff, it was suggested that these same principles of hiding sensitive information might also be applied to some plant locations that have cultural significance.[22] For example, they shared that they have agreements with local tribal groups who are able to come onsite and harvest tree bark. However, they would not want these sites to be publicly identified. While we did not identify examples of this that need immediate remediation, it is a point for future consideration and conversations with UMBS staff.

Recommendations:

For **any documents that are identified as containing culturally sensitive material, it is recommended that UMBS staff communicate with Deep Blue staff on a case-by-case basis**. That way, even if they are currently restricted, it is noted internally that these documents have specific considerations, so when this material reaches the point where it could otherwise be made accessible, these specific documents could still be restricted. This does not require a comprehensive search, but can be identified on a case-by-case basis when encountered by UMBS staff and affiliated researchers. However, what is considered culturally sensitive should ultimately be determined by the impacted communities, meaning that in the case of material that needs protecting (i.e., archeological dig sites), this should ultimately be determined by consultations with local Indigenous communities.

Personally Identifying Information (PII)

It is an existing practice within Deep Blue Data to not accept deposits that contain Personally Identifiable Information (PII), as it is the end goal of the Deep Blue repositories to make research and scholarship publicly available (Deep Blue Data, n.d.). However, this does not mean no data or material of the sort exists within the Deep Blue Documents repository, which covers a long timespan and has hundreds of thousands of deposits, which are largely self-deposited and self-published. Within the UMBS collection, one document was identified[23] that contains the names and addresses of local Indigenous community members who were assisting with an ethnobotany project in the 1960s. This is an example of a document that is only accessible when on-site at the station. Its PII context was already identified by UMBS staff, and in fact, they had shared it with current family members of the participants, to whom it was of interest. This example suggests there is a likelihood of other documents that contain PII that should be identified, even if their access is already restricted, and may likewise be relevant and of interest to descendants and/or current community members.

[22] For example, this deposit (Pinkley, 1961), which requires researchers to be onsite to access, potentially contains culturally sensitive information about plants and their traditional uses.
[23] See (Pinkley, 1961), which is restricted to users physically at the UMBS.

Recommendations:

Deep Blue staff should **create a workflow** in collaboration with the Biological Station staff such that, **when personally identifiable information is encountered in Deep Blue documents**, they can easily communicate this with Deep Blue, so **these documents are never made publicly available**. This does not require a comprehensive search but can be identified on a case-by-case basis when encountered by UMBS staff and affiliated researchers. This could utilize the same communication channels that already exist with collection owners.

Case Study 1 Summary Recommendations

It is recommended that Deep Blue and UMBS staff collaborate further to develop a remediation plan, including who will do the remediation work and a realistic timeline for implementation. From current conversations, Biological Station staff have noted that summer is their busiest season, as that is when they host a majority of their researchers. However, they advised that they may have capacity to begin this work in Fall or Winter 2025. Also, from initial conversations, U-M Biological Station staff have noted that a realistic remediation plan might be to 1) **manually review the 872 publicly available records**, starting with the oldest records first, and 2) **manually review any additional items that are considered for release before they are made public**. This initial remediation could be an excellent opportunity to hire a student interested in either biological sciences or broad applications for reparative description to assist. To support this, it is recommended that for the Biological Station collection, UMBS and Deep Blue staff come up with a workflow for deciding under what circumstances additional materials might be made public, and that some sort of **confirmation process be initiated from Deep Blue staff** before such actions are taken.

Finally, since a majority of their records are still only accessible to researchers when they are onsite at the Biological Station, researchers at the UMBS are the most likely users to encounter other examples of outdated or derogatory language, outdated place names, or culturally sensitive or personally identifiable information. It is recommended that (in partnership with Deep Blue staff), **UMBS set up an internal mechanism for collecting information on such records that researchers have encountered**. This has proved successful in the past (i.e., the citizen science project that identified slurs), and it lessens the burden of this work on Deep Blue and UMBS staff if funding for remediation work can't be secured. This could simply be a reporting form unique to the UMBS collection that researchers at UMBS are informed of and asked to use if they encounter such information during their research orientation.

2. Case Study: The Global Feminisms Project[24]

Background

The Global Feminisms Project (GFP) is an ongoing oral history project spanning 2002 to the present, which documents women scholars and activists from Brazil, China, Germany, India, Italy, Japan, Kenya, New Zealand, Nicaragua, Nigeria, Peru, Poland, Russia, Tanzania, and the USA. The project started depositing with Deep Blue in 2007, and was Deep Blue's pilot use case for digitally archiving video, meaning this project has a long history of working with Deep Blue Documents and its staff. Subtitled YouTube videos and transcripts are linked from the project website, and also archived in Deep Blue Documents (Global Feminisms Project, n.d.-b). This collection ranges widely in geographical representation but is scoped in topic, allowing for a close examination of gendered language in metadata, as well as a variety of viewpoints on the same topic. This collection has designated contact points/collection owners on the GFP project team, and currently consists of 151 records. The project website includes content archived in Deep Blue Documents for preservation purposes, as well as additional information and links to YouTube versions of videos; not all links are reciprocal.

Remediation considerations

During an introductory meeting and then an informal interview, our contact on this project expressed reservations about metadata remediation, largely centered around allowing participants to define themselves, and avoiding promulgating judgment or predisposing potential users to certain views.

From her perspective, since there is a minimal amount of metadata applied to each record, no remediation should be necessary. Regarding exploring the use of contextual statements or content warnings for materials, the project representative expressed general concern about applying content warnings to specific interviews, as this would single them out. In our conversation, she highlighted a few reasons why she opposes this approach:

> My concerns are a few. One is that trigger warnings have a chilling effect, and they don't actually censor the person whose speech is considered a trigger, but they mark that speech as somehow problematic, and that seems very troubling to me. Secondly, one person's trigger is another person's "What's the big deal?" We act like in the US, the moment we're in, that all triggers are universal. So if we talk about rape, "Everybody's going to be triggered by that." Well, no, that's not true. Not even everybody who has a personal experience of sexual assault is going to be triggered by that. And some people who don't [have that experience] might be, so triggering is a completely subjective judgment, and therefore to objectify it and turn it into an external reality [...] it's a form of labeling that really troubles me. It's deeply political in its consequences and in its spirit that there is content that's a problem, and there's content that's not a problem. All content could be a problem to somebody.

[24](*Global Feminisms Project*, n.d.-a)

During this conversation, Deep Blue staff shared the link to the *Remediation of Harmful Language* statement from the UM Library and asked her opinion on this statement, which (as mentioned above) already appears on every Deep Blue Documents record, including the Global Feminisms Project's records.

The collection representative, speaking on this statement, shared:

> The word harmful bothers me. I don't find it problematic to call it offensive as long as you [the repository] name it as offensive or harmful in the eyes of a particular person. That's what I find problematic about this kind of labeling, is acting like it is *objectively* harmful or *objectively* offensive. [...] It's harmful or offensive to somebody, and I have no problem saying we want to hear about it if you've got a problem with something. Especially if you [the repository] don't say you're going to do anything. But I do think it makes sense to keep track of what people are finding troubling. That's not unreasonable, but "troubling" would bother me a lot less.
>
> I just think the concept of harm has now grown to mean almost nothing. Nobody has to specify what the harm is. How did this harm you? And is it actually harm? Is it harm in the conventional sense of harm? What we meant that word to mean, it's just expanded to mean, "I don't like it. It bugs me." I don't consider that harm.

From this conversation, we understood that part of the Global Feminisms Project's work (as described by the project representative) includes a strong viewpoint on intellectual autonomy and self-definition, and concerns that the use of contextual statements within Deep Blue could, conversely, flatten or over-define what are nuanced perspectives, or assign labels that the holders of those specific views may disagree with.

However, the representative also shared examples of a limited number of cases when the project itself added contextualization to interviews on their website, demonstrating the potential applicability of collection- or item-level statements in Deep Blue as well.

The first example is that the project has an interview with an individual who self-identifies as a trans-exclusionary radical feminist (TERF)[25]. This information came out during the interview, and the research team had to decide retroactively whether they would add the recording to the project, since this perspective is deeply at odds with other definitions of feminism. The project team ultimately decided to keep the interview and add no context to the interview itself about the appearance of this opinion, though they spent much time debating the correct course of action.

[25] A TERF (or terf) is part of a "cohort of feminists who self-identify as radical and are unwilling to recognize trans women as sisters" (Boston Medical, 2025). Other feminists are uncomfortable with this group of individuals also identifying as and being included in feminist spaces, since this ideology is not gender inclusive and is hostile for transgender individuals. For more information on contemporary opinions about this debate, see (Morgenroth et al., 2024).

Because of this particular interview, the project decided to add a statement to the homepage of its website, “We offer the unedited interviews as primary sources for understanding the history of activism in all its complexity and variation,” to contextualize why users might encounter such opinions within the project. During the project this contextual statement did not appear in the project summary within Deep Blue Documents, most likely because the project website is directly controlled by the project team, while the collection description must be updated by Deep Blue Staff, and not all changes have always been made in both places.[26] This highlights an opportunity to better standardize this communication process across teams.

The second example is an interview that was conducted with Andrea Lee Smith, an academic who has since received public criticism for posing as an Indigenous woman throughout her career. The Global Feminisms Project conducted its interview with her under the premise that she was an Indigenous woman speaking on her experiences as a woman of color. When it came out that Smith was not an Indigenous woman, they re-visited the interview. The project representative noted that at no point in the interview did she directly state that she was Indigenous, which further complicated the matter in terms of self-representation and misrepresentation.

In this case, they decided to once again leave the interview up, but added the following contextualizing statement to the interview:

> In the period since this interview, significant doubt has been cast on Dr. Smith's assertion of a Native American or Woman of Color identity. We have retained her interview in this collection of oral histories because her interview was part of the original archive, and because we believe that scholars can and should study what she said in the interview in the context of subsequent conversations (see the articles below, including an open letter from Indigenous women, for more context).
>
> Russell, S. (2008/2018). When does ethnic fraud matter? Indian Country Today (originally published April 4, 2008; updated Sep. 12, 2018). https://indiancountrytoday.com/archive/russell-when-does-ethnic-fraud-matter
> Barker, J. and others (2015/2018). Open Letter From Indigenous Women Scholars Regarding Discussions of Andrea Smith. Indian Country Today. (originally published July 7, 2015; updated Sept. 12, 2018). https://indiancountrytoday.com/archive/open-letter-from-indigenous-women-scholars-regarding-discussions-of-andrea-smith
> Viren, S. (2021, May 26). The native scholar who wasn’t. New York Times Magazine. https://www.nytimes.com/2021/05/25/magazine/cherokee-native-american-andre

[26] The description of the collection in Deep Blue Documents as of August 21, 2025 reads: “The Global Feminisms Project is a collaborative international project that examines the history of feminist activism, women's movements and academic women's studies in China, Germany, India, Italy, Japan, Kenya, New Zealand, Peru, Poland, and the United States. We are examining the histories of feminism in local contexts by collecting videotaped oral histories of women's movement activists and women's studies scholars in each country. The Project is based in the Institute for Research on Women and Gender (IRWG) at UM, which is also the home for the US site research team.”

a-smith.html

As an outcome of this conversation, the list of countries in the Deep Blue Documents collection description and these two contextual statements were updated to match what is present on the main project site.

Finally, a third point (unrelated to harm but relevant to metadata and thus discoverability) that came out of this conversation is that the project on its own website identifies each interview by theme (Global Feminisms Project, n.d.-b).[27] These themes are particularly useful for students who have an idea on a certain research topic, to give them a starting place for further inquiry. This may also present an opportunity for further alignment in practice between the researchers and the data repository.

The project representative also noted that there are continuing conversations about whether to expand the theme list, but that their main limitation is going back and retroactively applying themes to past interviews, so at this time, the list remains set. The project representative did not necessarily think the theme metadata needed to be added to the deposits in Deep Blue, but it is possible this remediation would be of minimal effort and beneficial enough to warrant its implementation (although the project website is intended to be the main portal of entry for the project, Deep Blue Documents records are also searchable via Google and other internet search engines/indexes, so inevitably some users first encounter the project and interviews through Deep Blue). Another likely pathway of discovery is via the project's YouTube channel (YouTube videos are linked from the project site but not from Deep Blue Documents, and link to the project site but not Deep Blue Documents). Additionally, some interviews (for example, "Siti Abas Ali" at (*Interviews-Global Feminisms Project*, n.d.)) include links to YouTube videos but not Deep Blue videos; and the links to transcripts link to files uploaded on the project site, not in Deep Blue Documents. Overall, an assessment/audit of the project site's content and revision for consistency in approach and linking of content across sites and interviews would be beneficial; while this points to potentially fruitful avenues for future collaboration between Deep Blue staff and the project team, it exceeds the scope of the current analysis.

Case Study 2 Summary Recommendations

The above examples demonstrate current efforts to contextualize the project's material and critically engage with metadata and keyword creation. However, from conversations with the project's representative, it seems that the Global Feminisms Project does not currently include all of the contextual information presented on the project's website with the preservation copies deposited to Deep Blue Documents. It is recommended that the Deep Blue team **reach out to the project to ask about making changes to bring the Deep Blue Documents deposits into**

[27] The themes as of March 21, 2025 are: academia and women studies; activism during the COVID-19 pandemic; art/writing as activism; community activism; disability rights; education; environment; feminist conferences; gender and health; gender-based violence; imprisonment; indigenous issues; international rights; intersectionality; LGBTQ+ rights; media;military work in Nicaraagua; politics and the law; racial identity; reform of domestic/ family roles; reproductive rights; rural women and land reform; sex work; trafficking.

better alignment with the content as it is displayed on the project website/YouTube videos, and to better align further practice:

1. Adding the statement about Andrea Smith's interview to its Deep Blue record (done).
2. Updating the overall contextualizing project description to match what is currently on the website, and asking the team to consistently communicate updates to this description as any further changes are made (done).
3. Potentially collaborating to add the current project theme metadata to the interviews in Deep Blue Documents.

All three of these actions match existing work already done by the project and publicly available on their website.

In general, what is recommended here is having **a stronger invitation extended to the Global Feminisms project to give Deep Blue updated context to apply to records** when changes may arise. Beyond this case study, Global Feminisms researchers and Deep Blue staff might consider extending the consultation on this project to file organization, naming, and inclusion for preservation, in addition to ingestion of video and transcript files.

3. Case Study: Dissertations Published at the University of Michigan

Background

Dissertations and theses are submitted to the University in partial fulfillment of the requirements for master's or doctoral degrees at the University of Michigan. Most Ph.D. dissertations at the University of Michigan in Ann Arbor are awarded by the Rackham School of Graduate Studies. In 2007, the deposit of dissertations to Deep Blue Documents via Rackham was piloted; in 2009, it became a regular practice. Additionally, at the beginning of Deep Blue Documents (2006/2007), there were a number of large purchases of digitized dissertations from ProQuest, with the result that Deep Blue Documents was generally complete in terms of U-M dissertations from 1990 forward. In 2023, the Library purchased an additional 13,000 digitized dissertations from ProQuest, ranging from 1917 to the 1970s. With this purchase, the library completed its acquisition of all U-M dissertations owned by ProQuest. Thus, Deep Blue Documents is now responsible for maintaining a majority of the digital and digitized dissertations produced at the University of Michigan from the 1960s onward, as well as a smaller subset from the 1920s-1960s. As of Fall 2025, there are currently 53,638 items in this collection. 18,284 of these are open to the public, and 35,220 are restricted to U-M users. 286 are currently embargoed. Around 900 recently-defended items are deposited annually. This collection has a broad scope of subjects, timeframes, and geography. Given this variety, it will likely be the most challenging of the three case studies for which to come up with clear remediation and/or contextualization frameworks. However, it is also one of the largest and most-used collections within Deep Blue Documents, so will be a high priority to address.

When dissertations come to Deep Blue Documents, they are already accepted by the Rackham Graduate School, so there is no authority (or desire) from Deep Blue staff to request changes at the point of deposit. Unlike with other collections, Deep Blue staff does not make changes to these records after submission. The policies for these documents are governed by the Rackham Graduate School at U-M and the items are part of the record of degree completion and conferral, so any decisions or changes would need to be coordinated with Rackham.

Metadata is currently assigned by students at the point of submission within Rackham's Electronic Thesis and Dissertation (ETD) system. This is a homegrown system developed by Rackham. The original developer is still employed at Rackham (in a different position); depending on capacity and future conversations, it may be possible to add information about accessibility metadata at the point of submission. From Rackham's end, the review upon submission is not content-based but primarily assesses whether the submitted document matches the formatting requirements laid out by the current dissertation handbook (University of Michigan Library, n.d.-a)).

Finally, there are some suggestions but currently no accessibility requirements for these documents presented as part of the submission process. They are submitted as PDFs but in general, are not currently leveraging digital accessibility possibilities. This process will likely need to be updated to comply with requirements confirmed by the recent Title II ruling (U.S. Department of Justice Civil Rights Division, 2024), and it is possible that accessibility and inclusive metadata additions could be addressed as part of the overall metadata remediation process.

Remediation considerations

After preliminary review, there are a number of dissertations and theses that contain outdated and derogatory language in their titles and in-text.[28] It is likely that there is also outdated information within other metadata, but for the older dissertations, there tends to be less comprehensive metadata. Examples of identified derogatory language include descriptions of people with disabilities using the r-slur, and descriptions of Asian individuals as "oriental". Examples of outdated language include gender descriptions (e.g., uses of "transvestite" or "transsexual" to refer to transgender individuals).

Based on the number of existing records (and the amount being added on an annual basis), individual review of documents by Deep Blue staff is not realistic. This collection in particular, because of its breadth in topic and overall volume, will need to be approached with a more computational method, described in Approach 2 of the work practices section of the report (above).

[28] Current efforts to track harmful language instances, including for the dissertations and theses collection, are documented in an internal spreadsheet (viewable to Deep Blue and U-M Library DEIA Catalog Working Group staff only).

Case Study 3 Summary Recommendations

As detailed above, the first step toward remediation is to gather concrete data about the extent of derogatory language and ideas represented within the collections, to inform future conversations with collection owners (in this case, Rackham staff) on how to collaboratively approach remediation. The following are recommended first steps for this process:

1. **Develop a collection-level statement to propose to Rackham**, and as a placeholder as the steps below are explored and developed. The statement could be implemented relatively quickly, once agreed upon. Steps 2, 3, and 4 below could take significantly longer to develop and implement.

2. **Build out the derogatory and outdated words and phrases list previously discussed** in this report. For each term, determine its general level of priority (i.e., nuanced, moderate, urgent, similar to what (Ipsos MORI, 2021) have done in their guide). This is largely for scoping and prioritization reasons. Remediation for a term might look different from collection to collection, so these 'grades' of derogatory-ness would not necessarily map to a specific remediation action, but could nevertheless be useful across collections, as well as to prioritize identifying and dealing with items containing the highest number or incidence of derogatory terms.

3. **Assess the quality of existing metadata and text** (OCR and/or extracted text files) within Deep Blue Documents for these items. This will require identifying measures and proxies to assess, prioritizing metadata fields, and potentially troubleshooting existing processes (e.g., a file extraction script that theoretically runs on all files of certain types within the system was recently found not to be comprehensively applied).

4. Use the derogatory and outdated words and phrases list to **search against all records in this collection**, building out an example list of the various instances and the contexts in which derogatory words are used.

Since this collection already has a clear position on NOT changing metadata without further consultation, contextual statements might be a more appropriate choice, but again, this needs to be decided in collaboration with Rackham. For new deposits, Deep Blue and Rackham staff could **create a generic contextualization statement for dissertations**. This could potentially be added to the ETD system along with a prompt that reads something like, "If your dissertation pertains to sensitive topics such as (list), do you want to add this contextual statement [link] to your item record when deposited in Deep Blue?" **Student depositors could then choose whether or not they want to add the statement to their record, thus leveraging their more comprehensive knowledge of both their work and the field within which it was conducted**.

For older deposits, it is recommended that **Deep Blue staff make a case to Rackham for adding contextual statements to certain identified records**, if possible. For example, records

that contain slurs about certain groups of people,[29] or contain slurs in the title or text of their documents, could benefit from an item-level statement.

Sustaining Metadata Remediation

As new items continue to be deposited and best practices for language and naming continue to evolve, these reparative principles will need to be continually put into practice and revisited. Below are three recommendations for sustaining metadata remediation and inclusive metadata work as a consistent work practices for the future. It is also important to recognize that the work of remediating existing deposits and putting into place a workflow to address future deposits will likely take years to fully implement. At this time there is no dedicated staff within DBRRDS to do this work, meaning it will need to be integrated with existing priorities and responsibilities that Deep Blue staff are tasked with handling.

Overall recommendation 1: Reaching out to collection owners

The three case studies covered in this report each demonstrate a unique constellation of needs for remediation work. It is expected that other collections will also need remediation of similar types. It is unrealistic to expect that Deep Blue staff will have the capacity to manually go through each collection. However, it could be fruitful to contact collection owners to let them know when the remediation process is beginning for their collection and to ask if they would like to have a conversation about their material, if they have any deposits that they know will need remediation, or contexts (i.e. words, phrases, or research topics) in their material that Deep Blue staff should look for on top of the general derogatory lexicon described above.[30] Since reparative description ideally happens in the context of the specific material, this is a starting point for more sophisticated remediation. However, if there is no response, it should not limit the baseline remediation that is suggested below.

When having these conversations with collection owners, it is also recommended to document any materials or topics for potential remediation that they share, and their willingness or desire to collaborate with Deep Blue staff on this topic. This is in line with the high-quality documentation practices that Deep Blue Documents already maintains.

Overall recommendation 2: Systematic review using derogatory language lexicon

There are two workflows that will need to be developed for the future: first, the existing corpus in Deep Blue Documents; and second, incoming deposits. As extrapolated from examples in the three case studies above, the most derogatory language tends to be in the oldest documents, so it is recommended that review and remediation start there. Each collection should be

[29] Multiple examples of such slurs have been identified throughout this report.
[30] For example, there have been recent efforts toward re-assessing historically used terms in computer engineering/IT as a field, such as the Inclusive Naming Initiative (https://inclusivenaming.org).

searched against the derogatory language lexicon outlined above, starting with the oldest material. For example, a first step could be to identify collections that have material predating a certain point in time--say, 1960. Then, starting with those materials/collections, manual review of an export of the most likely metadata culprits could be conducted, and used to extrapolate the likely incidence of similar situations in later deposits. (This initial list of identified records, if created before outreach to the collection administrator is undertaken, could also be shared with them in the initial communication or conversation around remediation work, to demonstrate why remediation is necessary for their collection.)

To address incoming deposits, or deposits that are about to be made public, it is suggested that a semiannual check is run using the developed derogatory language lexicon to confirm that new materials do not contain high-priority for remediation language. It is anticipated that these new deposits will not yield a high proportion of results, but again this process is about being proactive. It also creates a practice where Deep Blue Documents can say that all records deposited after the policy has been implemented have been baseline vetted for harmful or derogatory content.

In order for both of these workflows to be implemented, the derogatory language lexicon described in the final case study must first be built out. This is thus a top priority for Deep Blue Documents remediation generally.

Overall recommendation 3: Educating depositors about inclusive metadata

An additional tactic to sustain and even extend the incorporation of these reparative metadata principles is to educate current and future depositors on inclusive metadata creation. The Deep Blue Documents Guide to Depositing is an already-existing document intended to guide depositors in initially drafting their deposits. Within the form, **it is recommended to link to the U-M Library's Policy on Remediation of Harmful Language in Descriptions of Collection Material and add a short explanation about how to create inclusive metadata**. A longer description of this could also potentially be added to other Deep Blue Documents Help pages. This approach would help proactively educate users, rather than only reactively remediate works after deposit.

Potential considerations for the FAQ or other Help documentation could include:

- Is your research about a particular community? Have you consulted the community or relevant literature for the terms they would like to be identified as?
- Does the language in your keywords follow well-established norms in your field?
- Does your work touch on potentially sensitive topics?

- Does your work contain or have to do with Indigenous knowledge or data[31]?
- Would you like to apply an item-level statement to your deposit contextualizing its material, or consult with a Deep Blue Librarian about this?

Beyond elaborating on reasons why creating inclusive metadata is a best practice overall, this form could also provide (or refer out to) basic best practices such as accessibility, guidance on how to create keywords that can optimize discoverability, etc.

Other recommendations

1. Deep Blue staff should create a repository-level statement of context for Deep Blue Documents, possibly placing it within the help documentation or on the front page of the website. This statement could share that metadata within Deep Blue Documents is user-created and not vetted, but that the institutional repository is committed to inclusive description and improving the discoverability of content.
2. Before depositors can complete their deposit, they must agree to Deep Blue Documents' Terms of Deposit. It is recommended that this agreement be amended to clearly state that Deep Blue staff reserves the right to revise metadata. This is currently implied within the statement (and Deep Blue staff are well within their rights to change metadata). However, this change is to make that fact more apparent to depositors in an effort at transparency.
3. In line with Principle 5 - Document work practices, it is recommended that Deep Blue staff deposit a copy of this report in Deep Blue Documents, and share information about this project and its findings in any available and appropriate venues they can identify (such as articles, conferences or other presentations). Since reparative description is not widely being implemented in institutional repositories (yet), sharing this preliminary work could be a useful baseline for others wanting to take on similar work.
4. Once the various processes necessary to enact remediation outlined in this document have been set in place, Deep Blue staff should leverage the resources and workflows created to put a similar process in place for review and remediation of deposits in Deep Blue Data.

Conclusion & Next Steps

This report provides a starting point for reparative description in Deep Blue Documents, an institutional repository at the University of Michigan. It elaborates on overarching work principles

[31] The Global Indigenous Data Alliance (GIDA) gives the definition "Indigenous data, in general, comprise data, knowledge, and information that relate to Indigenous Peoples at both the individual and collective level, including data about lands and environment, people, and cultures." (Carroll et al., 2020)

to guide reparative work and gives a baseline summary of the work practices required, often in combination, to accomplish reparative description. Finally, it presents three preliminary case studies of reparative description for specific collections within the repository, unpacking what this work looks like in different contexts and providing customized recommendations for each; and concludes with general recommendations for the repository. In general, this document recommends a nuanced approach to metadata remediation based on the needs and context of individual collections within the institutional repository, not a blanket change of metadata to remove or censor harmful content. Beyond its application to Deep Blue Documents and providing a framework to continue this work and put remediation into practice, this report is also presented in hopes it will prove a useful starting point for other libraries and institutional repositories grappling with the complex landscape that is reparative description work.

Deep Blue staff hope to refine and implement the recommendations from this project into the repositories over the next several years. Due to staffing constraints, it may be necessary to explore working with another graduate student fellow to ensure appropriate progress is made–Deep Blue staff have applied for another Rackham doctoral student intern to move the project from the research to implementation stage, hopefully over the Winter 2026 term (see Appendix C: Winter 2026 Intern Project Posting).

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Appendix A: Reparative Description and Metadata Remediation Recommendations Summary

Our guiding principles for reparative description (see full report for references we draw from)

1. Embrace intentional, flexible practices that allow for changing course
2. Unlearn the “neutral” voice of traditional description
3. Allow for plurality or multiple points of view within metadata
4. Prioritize collaborative relationships with community stakeholders.
5. Document work practices, making them visible and reproducible for future practitioners

General Remediation Recommendations

1. Contextual statements, content warnings, and reporting tools
    a. Deep Blue should create its own repository-level statement of context. This statement should state that metadata within Deep Blue is user-created and not vetted by Deep Blue staff. Regardless of this, however, the institutional repository is committed to inclusive description and improving the discoverability of content. This statement could be shared within the FAQ page and/or on the front page of the website. This statement would exist in addition to the contextual statement that already exists for the general UM library.

    b. Deep Blue should consider adding additional collection- or item-level contextual statements for collections with widespread or prominently featured elements that can be potentially problematic, elaborating on the type(s) of language a user may encounter. This should be approached first in collaboration with the owner of the collection. A collection-level statement could include information about the material within the collection, and a broad disclaimer to the extent of harmful material a user might encounter. An example collection-level statement could look like, “Material from this collection spans 1909 to the present and includes field notes, reports, and papers created by students who used language and had opinions that we do not necessarily share today. Because of this, you may encounter offensive, outdated, or incorrect descriptions within this collection, which nevertheless may accurately reflect aspects of the history of the field.”

    c. A reporting tool for harmful or offensive material already exists for the U-M library system at large. We suggest extending an invitation for individual collections to link the reporting tool on their collection homepage within Deep Blue Documents. This is in line with a case-by-case remediation plan identified within the report. It is also suggested that this practice needs to be done in partnership with other proactive reparative work; as an approach on its own, it is insufficient.

2. Metadata Remediation
    a. Metadata remediation is highly contextual based on (1) the context of the content itself; (2) legacy data standards; (3) the quality of existing metadata; and (4) internal documentation on the scope and values permissible for each field. In Deep Blue Documents, metadata fields are primarily based on the Dublin Core vocabularies (https://www.dublincore.org/specifications/). In the larger report, a few approaches for large-scale metadata remediation are discussed. However, the applicability of these approaches has not been tested yet, and because of the idiosyncratic nature of the material within Deep Blue Documents, we do not have clear repository-wide suggestions for this approach yet.

3. Tiered Access to Material
    a. Deep Blue Documents already uses tiered access as a strategy for reasons other than cultural sensitivity. However, there is room to consider tiered access in regards to harm reduction and metadata remediation. For example, if someone from a specific community requests access to restricted research where their community is the subject of the research, we recommend granting access to the material. It is recommended that Deep Blue create a policy about instances where access to embargoed and restricted materials could be granted, specifically for instances of improving access to communities.

    b. After working with our pilot cases, it was clear that there is some material within Deep Blue Documents that contains Personally Identifiable Information (PII). It is recommended that Deep Blue staff draft a Personally Identifiable Information Policy for Deep Blue Documents, for transparency purposes and to standardize practices. A similar statement already exists for Deep Blue Data. Once this statement is drafted, curators can work with individual collections to retroactively apply it to documents on a case-by-case basis.

Specific Case Recommendations

1. University of Michigan Biological Station (UMBS)
    a. Slurs in-text and within the metadata of documents
        i. From an initial investigation into UMBS records, there are items that contain slurs (see report for further summary of these slurs). It is recommended that the Deep Blues, in collaboration with the Biological Station, create contextual statements to explain that users may encounter derogatory language within the documents (recommendation 1b). This follows re-description best practices to maintain the historical context of the harmful language, while providing current users with context for its lasting harmful impact (Briscoe et al., 2023). It has been confirmed by staff at Deep Blue that applying contextual statements to individual records is not a burdensome request and could be easily implemented by creating a metadata field for contextual statements.

ii. Further, it is recommended in collaboration with the Biological Station to identify, from their contextual knowledge of historical place names, any other slurs that might be common in their material, including derogatory terms that have historically been used to refer to BIPOC communities in the area. Our initial remediation work did not complete a comprehensive review of slurs, so as it stands, this investigation into harmful language is incomplete. This area of remediation (identification and remediation of slurs present in records) should be the top priority for Deep Blue.

b. Outdated place names both in metadata and in-text
    i. This collection contains many documents with informal geographic place names, many of which are now considered outdated and offensive (see full report for further details and examples). In instances where there is an updated place name that is preferred, it is recommended that Deep Blue staff collaborate with UMBS to create a collection-wide statement explaining this name change and why users might still encounter the outdated place name within Deep Blue Documents. These place name statements could also benefit from a consultation with the Burt Lake Band of Ottawa and Chippewa Indians, led by UMBS staff who have an existing relationship with the tribe.

    ii. It is also recommended that a search for the identified outdated place names be run in the dc.coverage.spatial field, and for identified records, replaced with the updated place name. An item-level description of the name change should also be added to each affected record's provenance.

c. Culturally sensitive and Personally Identifiable Information (PII) in-text (meaning not searchable)
    i. It is recommended that Deep Blue staff create a workflow in collaboration with UMBS staff for reporting individual documents that contain culturally sensitive and/ or Personally Identifiable Information within the content of a document. This reporting of culturally sensitive or PII-containing material is necessary because even if items are currently restricted, it will be documented internally that these documents have specific considerations, so when this material reaches the time point where it can be made accessible, these specific documents could still be restricted.

    ii. Deep Blue staff should also create an internal workflow to exempt these identified documents from the yearly release.

    iii. We are not suggesting a comprehensive search for culturally sensitive material. This is because many of the documents within the UMBS case are handwritten or scanned from earlier typing technology, and thus are not able to be OCR'ed or systematically searched. A full content review of the current

4,135 items in the collection is a task neither UMBS nor DBRRDS is staffed to accommodate.

2. The Global Feminisms Project
    a. This project consistently deposits with Deep Blue Documents, and they are conscious of possible remediation efforts. However, a lot of their remediation is done on their personal project website, and not necessarily ported over into Deep Blue Documents (these efforts are explored further in our final report). Our main takeaway from this case is to continue allowing the project to guide their own remediation efforts, but encourage it to update DBBRDS when it makes changes to their content, so that it can also be reflected in the archived version of the oral histories.

3. Dissertations Published at the University of Michigan

    This case already has clear guidelines (and limitations) surrounding restricting material access and metadata changes governed by the Rackham Graduate School, which makes remediation approaches using these methods more complex to implement.

    After preliminary review, there are several dissertations and theses that contain outdated and derogatory language in their titles and in-text (see report for further details). It is likely that outdated information also exists in other metadata; however, for older dissertations, the metadata tends to be less comprehensive. Based on the number of existing records and new items being added annually, individual review of documents by Deep Blue staff is not realistic. This case, in particular, because of its breadth in topic and sheer volume, will need to be approached with a more computational method.

    a. The first step toward remediation is to gather concrete data about the extent of derogatory language and ideas represented within the collections. This will inform future conversations with Rackham on how to collaboratively approach remediation. The following are recommended first steps for this process:
        i. Develop a collection-level contextual statement to propose to Rackham. This statement would be intentionally vague and might resemble the repository-level contextual statement (recommendation 1a). The statement could be implemented relatively quickly, once agreed upon. The remaining recommendations for this case could take significantly longer to develop and implement.

        ii. Build out the Deep Blue Documents derogatory and outdated words and phrases lexicon (see report for further details).

        iii. Assess the quality of existing metadata and text (OCR and/or extracted text files) within Deep Blue Documents for these items. This will require identifying measures and proxies to assess, prioritizing metadata fields, and

potentially troubleshooting existing processes (e.g., a file extraction script that theoretically runs on all files of certain types within the system was recently found not to be comprehensively applied).

iv. Use the derogatory and outdated words and phrases list to search against all records in this collection, building out an example list of the various instances and the contexts in which the derogatory words are used.

Other Recommendations

1. Reach out to collection owners to begin reparative description conversations
    a. The three case studies covered in this report each demonstrate the varied needs for remediation within Deep Blue Documents. However, it is unrealistic to expect that Deep Blue staff will have the capacity to manually go through each collection to identify these needs in a timely manner. However, it could be fruitful to contact collection owners to let them know when the remediation process is beginning for their collection and to ask if they would like to have a conversation about their material, if they have any deposits that they know will need remediation, or contexts (i.e. words, phrases, or research topics) in their material that Deep Blue staff should look for on top of the general derogatory lexicon described above. Since reparative description ideally happens in the context of the specific material, this is a starting point for more sophisticated remediation. However, if there is no response, it should not limit the baseline remediation that is suggested below.

    When having these conversations with collection owners, it is also recommended to document any materials or topics for potential remediation that they share, and their willingness or desire to collaborate with Deep Blue staff on this topic. This is in line with the high-quality documentation practices that Deep Blue Documents already maintains.

2. Educate new depositors about inclusive metadata
    a. It is recommended that Deep Blue Documents add a short explanation about how to create inclusive metadata to their existing *Guide to Depositing*. A longer description of this could also potentially be added to other Deep Blue Documents Help pages. This approach would help proactively educate users, rather than only reactively remediate works after deposit. Potential considerations for the FAQ or other Help documentation could include:

        i. Is your research about a particular community? Have you consulted the community or relevant literature for the terms they would like to be identified as?
        ii. Does the language in your keywords follow well-established norms in your field?
        iii. Does your work touch on potentially sensitive topics?
        iv. Does your work contain or have to do with Indigenous knowledge or data?

v. Would you like to apply an item-level statement to your deposit contextualizing its material, or consult with a Deep Blue Librarian about this?

Beyond elaborating on reasons why creating inclusive metadata is a best practice overall, this form could also provide (or refer out to) basic best practices such as accessibility, guidance on how to create keywords that can optimize discoverability, etc.

Conclusion

These recommendations are largely guided by three approaches (contextual statements and warnings; metadata remediation; and restricting or facilitating access to material). However, the overarching strategy that these three work practices depend on is collaboration with the specific collection contacts, and considering the context of the material within the collection. Reparative description must first and foremost be grounded in the context of the material itself and in the relationships and needs of the impacted communities. From an institutional repository context, we found that this potentially includes not only the communities who might find harm in past description efforts, but also current collection owners and maintainers.

Appendix B: Winter 2025 Intern Project Posting

Specialist for Remediation of Harmful or Problematic Repository Metadata

The goal of this internship is to review metadata within the University of Michigan's Deep Blue Documents and Deep Blue Data institutional repositories to identify potentially harmful or problematic language. By performing a comprehensive evaluation of current metadata records, the project will identify terms and phrases that may perpetuate biases or stereotypes. The project will begin by researching similar remediation efforts at peer institutions and resources for identifying harmful language, then move to developing guidelines for detecting and rectifying harmful language in the Deep Blues. Working under the supervision of the Data Curation Specialists in the Deep Blue Repository and Research Data Services (DBRRDS) unit in the University Library and consulting with subject matter experts and community representatives, the project will gather feedback to inform the remediation process and ensure culturally sensitive and inclusive language is employed.

The remediation strategy will include piloting the process on a subset of the repository's collections, utilizing automated tools for detecting harmful language, and manually reviewing complex cases. The intern will document their processes, ensuring that the approach is sustainable and proposing a longer-term strategy for ingraining these considerations within the repository's management practices. Regular evaluation of the impact of metadata changes, combined with user feedback, will help refine the process. The outcomes of this initiative will include improved metadata accuracy and inclusivity, heightened staff awareness and proficiency, enhanced institutional reputation, and documented procedures that other institutions can adopt for similar metadata remediation efforts.

Appendix C: Winter 2026 Intern Project Posting

Intern for Remediation & Contextualization of Potentially Harmful Repository Content - Implementation phase

The goal of this Winter 2026 internship is to move the Deep Blue Repositories and Research Data Services (DBRRDS) department at the U-M Library forward in their remediation and contextualization work around potentially harmful metadata & content. This will primarily consist of reviewing, refining, and putting into practice recommendations created during the research phase of the project, and outlined in the report “Reparative Description and Metadata Remediation Planning at the University of Michigan Deep Blue Institutional Repositories” (forthcoming). The Intern will work with Deep Blue Repositories staff, collection partners, and (potentially) community partners identified in the research phase of the project to develop foundational tools and workflows, and to begin implementation and evaluation of the proposed remediations.

Working under the supervision of the Data Curation Specialists in the Deep Blue Repository and Research Data Services (DBRRDS) unit in the University Library and consulting with subject matter experts and community representatives, the intern on this project will start by auditing and prioritizing remediation actions based on specific considerations identified in the report. They may work in parallel on developing resources for repository-wide remediation efforts (such as repository- or collection-level context statements, or the compilation of a wordbank of terms to review); and also collaborate with specific collection staff who participated in the pilot phase of the project. The intern will gather feedback to inform the remediation process and ensure culturally sensitive and inclusive language is employed. As part of this work, guidelines proposed in the report will be refined as the work progresses. The intern will document their processes, ensuring that the approach is sustainable and proposing a longer-term strategy for ingraining these considerations within the repository's content management practices and mapping them onto additional collections.

The outcomes of this project will include: 1. improved metadata accuracy and inclusivity; 2. heightened staff awareness and proficiency in incorporating considerations around potentially harmful language and content into their everyday work; 3. strengthened relationships with collection owners and, where applicable, community partners; and 4. documented procedures that other institutions can adopt for similar metadata remediation efforts. The final deliverable will include written documentation of the decisions, reasoning, and workflows of the remediation efforts undertaken, and recommendations for next steps.

The intern will meet weekly with their supervisor and should be motivated, willing to ask questions, and detail-oriented. This position would be a good fit for someone passionate about addressing systemic harm through process and policy adjustments; comfortable learning and troubleshooting new technologies and platforms as a user; and with experience in developing, documenting and implementing workflows. Experience working with library or digital collections and working

collaboratively with community partners (especially Indigenous communities) would also be beneficial.