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Theories and implications for centering Indigenous and queer embodiment within sociotechnical systems

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Abstract

This paper explores the role of Indigenous and queer embodiment in understanding the current limitations of sociotechnical systems as they relate to cultural heritage institutions. Through the utilization of a critical case study the paper highlights the ways in which the ideologies of colonialism and cisnormativity render Indigenous and queer identities invisible within cultural heritage institutions. In particular, the case studies highlight information organization, archival description, and cataloging as sites of ideological reinforcement for colonialism and gender binaries. In response, the paper identifies methods for not only naming such normative ideologies, but actionable ways to challenge such inequities through community-led, Indigenous, and queer affirming descriptive practices. Additionally, the paper attends to the way findings impact other historically marginalized identities and theorize methods for confronting such inequities within sociotechnical systems more broadly.

1 | INTRODUCTION

Despite a long history of scholarly interest (Merleau-Ponty, 1962), theorizations of embodiment within library and information scholarship remain relatively new (Cifor, 2015; Moretti, 2021; Olsson & Lloyd, 2017; Thomson, 2018; White, 2012). Embodiment, as it relates to theories of information, prioritize affective and personal relationships to one's information world rather than presuming all functions and engagements with information to be strictly cognitive. In particular, feminist archival scholars have argued that archivists have a specific "affective responsibility towards records, users and records subjects" (Lapp, 2022) which necessarily requires their engagement with the body and embodiment (Cifor, 2016; also see Douglas et al., 2019). Embodiment as a concept borrows exhaustively from the long tail of phenomenology with its focus not on how bodies react to the

stimuli of their world but on how persons make sense of and name those stimuli as experiences (Heidegger, 2010; Husserl, 1989). In particular, phenomenology offers insights into how those things that are embodied are often so routine and engrained within one's daily life that they remain ordinary and only emerge as apparent when one experiences something dissonant with those routines (de Certeau, 1988). While concepts like everyday information practices continue to push theory and praxis away from cognitive models of information behavior toward a more affective one (Cifor, 2016; Savolainen, 2007; Savolainen, 2008), truly understanding the implications of such shifts remains necessary for articulating the work still to be done in the field. Building toward an operationalizable concept of embodiment within sociotechnical systems also means centering and critically exploring how many historically marginalized identities exist in opposition to the structures and methods of

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information organization within libraries and cultural heritage institutions. In this paper, we attempt to accomplish that through a close examination of queer and Indigenous embodiments and their misalignments with library and information science theory and practice.

Examining concepts of embodiment by way of phenomenology illuminates how normative orientations of sexuality and gender cause queer bodies to remain against the norm—and therefore the non-routine—in everyday concepts (Ahmed, 2006; Butler, 1990). Phenomenological approaches have also shown essential alignments with Indigenous ontologies and lifeways, particularly in its holistic approach (Struthers & Peden-McAlpine, 2005). Nevertheless, in this paper, we also push these framings further; postcolonial and queer critiques of phenomenology and its essentializing of experience demand a recentering, or as Ahmed argues, a reorientation of how one experiences and embodies their world in relationship to objects and discursive systems. Likewise, Nêhiyaw and Saulteaux scholar Margaret Kovach has noted phenomenology's limitations due to its Western framings, its lack of attention to political and colonial dimensions (Kovach, 2009, p. 39), and its lack of attendance to “holistic epistemologies that emphasize self-knowledge” (p. 111). Kewa scholar Rachell Tenorio (2020) similarly notes the usefulness of phenomenological approaches while noting that they must be imbued with Indigenous standpoint theory (Foley, 2003) in order to “uphold the centrality of Indigenous knowledge” in their framing (Tenorio 152).

In this paper, we, therefore, recenter queered and Indigenized embodied approaches while also asking how marginality exists and persists within sociotechnical systems, including cultural heritage institutions (Alenzuela & Terry, 2020; Floegel et al., 2021). Focusing on libraries and archives specifically, we illuminate the failures of discursive power and highlight how systems perpetuate inequities in specific institutional contexts.

This continued exclusion of marginalized persons often occurs due to a misguided presumption that users of sociotechnical systems and platforms are “normal.” Normal in common parlance stands for a set of privileged identities, historically white, Christian, cisgender male, heterosexual, able-bodied persons (see the discussion of “WEBCHAM” in Oson, 2001 or “WEBCCCHAM” in Caswell, 2021). Dean Spade (2015) extends this argument by observing that normalcy as a concept exists across institutional spaces, highlighting how systems like the American judiciary system only work for and represent *ideal* identities. A common misconception is that systems and spaces can address those whose identities diverge from this ideal, such as queer women of color, additively: to merely add specific identities or qualities to a system.

While the American judiciary system remains a well-chronicled site for failure as a sociotechnical system, how embodied identities become absent from the normative imaginary of other parallel sociotechnical systems remains sorely underexplored. In actuality, such chronic gaps expose the embodied designs of systems that inherently exclude those othered as non-normative (44). Furthermore, though each of the many excluded identities in such systems exists relationally and within intersecting power dynamics, some specificity (here, a focus on cultural heritage spaces and two such identities) allows for deeper and more meaningful analysis (Crenshaw, 1990).

In this paper, we explore the limitations of sociotechnical systems as evidenced by the action of identity-naming across cultural institution spaces, particularly in libraries and archives. Using two case studies of particular lived identities and their communities, we argue that systems designed for and embedded in the workflows of librarians and archivists remain entrenched within colonialist and cisnormative frameworks. As we argue, these two identities represent a co-constitutive, often overlapping, history of how Western imperialism rendered invisible embodied identities in attempts to produce universalizable knowledge. In doing so, this refusal to account for and center Indigeneity and queerness help illuminate how such embodied experiences remain absent from sociotechnical systems at all levels. More specifically, frameworks for naming and accessing marginalized identities challenge and surface how social ideologies interact with systems' design to produce deeply entrenched normativity. This normativity requires those persons outside of such systems to inventively circumvent and rework identity work and description to affirm and uplift their community. We highlight how Indigenous and queer identities produce complex, multiple, and non-normative ways of being, exposing cultural heritage institutions' binarized and essentialized sociotechnical frameworks. We argue that such methods of privileged identity-making will only continue disserving Indigenous and queer populations unless concerted efforts emerge to prioritize embodied knowledge as a starting point for identity description within these spaces.

2 | LITERATURE REVIEW

2.1 | Sociotechnical systems and descriptive platforms within cultural heritage institutions

Sociotechnical systems eponymously reflect how organizational knowledge structures operate through the successful merging of the social with the technical. While

the term has come to mean many different interlocking digital and cultural concepts, its earliest uses emerged in Britain to increase productivity and workflow within coal factories (Fox, 1995). In its most analytical use, sociotechnical systems advance technological optimization by identifying how human agency aligns with productivity. Ideally, a sociotechnical system that earnestly adheres to the social part of its definition understands that no large-scale technological advances occur without considering the needs of individuals operating within a system. In turn, the creation of sociotechnical systems clearly defines where the human element fits within that productivity and their “responsibility” in the success of that process (Fox, 1995, p. 94). While efficiency is an admirable goal, failures to consider the social result in a dangerous quality of work-life conditions (Fox, 1995, p. 100). Thus, sociotechnical systems are not merely the co-constitutive ways that humans and technologies interact with one another but can be understood as how reciprocity between both sides tends to define advancements and, perhaps even, paradigm shifts (Ropohl, 1999). One of the critical interventions of theorizing around sociotechnical systems is the argument that deterministic frameworks for technology fail to account for the material and cultural ways humans alter technology through their adaptive uses (Leonardi, 2012). Bijker's (1997). A study concerning bicycles offers one such account of how human needs shifted the design of bicycles themselves through an increased concern for safety and the function and role of bicycles within the informational landscape of cities. A sociotechnical systems model also affords theorizing into the fragility of human and technological relations, wherein a major cataclysmic shift in one's relationship to a technology (i.e., forced working from home due to a pandemic) can result in drastic shifts in discursive power and perceptions of public trust, misinformation, and the role of information and communication technologies in such changes (Bailey, 2021; Tripodi, 2021). Given the massive scope of utilizing the frameworks of sociotechnical systems, it becomes necessary to synthesize the way such systems function at more insular levels within the library and information sciences.

Library and information science scholarship takes up the sociotechnical model to explore the limitations of current informational models instead of imagining how technologies offer additive ways of expanding various informatics typologies. While our exploration engages in contemporary issues around embodied knowledge and information organization practices, the field of LIS remains indebted to advocacy work and critical scholarship within both librarianship and archival work. In particular, Sanford Berman's (1971) book called attention to and demanded change regarding subject headings, which

reified Western ideologies through “self-serving euphemisms” of racist and colonialist paradigms (x). Berman's tireless advocacy cast light upon not only the normative biases of a cataloging standard but, as he observed in communication with other information organization professionals, a willingness of these standards to blatantly value Western, colonial ways of thinking (and therefore describing) the world around them. More recently, Hope Olson (2002) provided an equally insightful examination of the Dewey Decimal System for its own prioritizing of Western ways of knowledge while further examining the ways Melvil Dewey's own openly racist and misogynist views find their way into the structural elements of his allegedly universalizing knowledge organization system. Additional critical lenses exist concerning knowledge organization practices ranging from observations regarding the implied anti-queer sentiments within metadata schemas to ableist paradigms which imagine the disabled body to be wholly nonexistent (Adler et al., 2017; Billey et al., 2014). Following threads offered by Dean Spade, Jamie Lee (2021) observes how the concept of queer archiving exists as an inherently embodied practice noting how their own queer body exists as subject to larger normative regulations and organizational structures, citing how a trip to the airport caused past injury to be subject to visible surveillance. However, unlike their injury gendered body is not equally knowable unless one incorrectly conflates sex-assigned-at-birth onto that body as an equivalent of gender. In doing so, descriptive practices such as man or woman become how people “know [them]selves” or know how to talk about themselves and others, and those identities that exist outside of that binary become exceptions to the descriptive system rather than crucial focal points of embodied experience (Lee, 2021, p. 4). Further, from a queer archival perspective, the reliance on affirmation and visibility results in queer bodies often remaining absent from the archival record either through historical actions of queer silencing related to a historical record or due to potentially queer bodies not looking or feeling appropriately queer enough under contemporary lenses of description (Cifor, 2020; Cvetkovich, 2003; Wagner, 2021).

Safiya (Noble's 2018) work around racism and algorithmic bias set forth a trend of challenging how oft-imagined neutral technologies reproduce inequity. For example, the inability to confront the sexist histories of technology systems reproduces gendered labor within the information services sector (Singh et al., 2020). Equally, it misidentifies latently sexist practices within information creation by misidentifying information literacy as a standalone method for dismantling sexist ideologies (Wagner & Blewer, 2019).

However, critical examinations of sociotechnical systems also illuminate and understand exclusionary

practices within information spaces that extend beyond cultural ideologies by focusing on the institutions themselves. A discursive analysis of spaces like academic libraries clarifies that even with social shifts for LGBTQIA+ inclusion, such spaces reproduce normativity through spatial signage, bibliographic practices, and even the relational shelving of books (Wagner & Crowley, 2020). For Indigenous communities, this includes limited access to physical collections spaces in archives and libraries (Buchanan et al., 2021). Other sociotechnical systems within libraries, archives, and other cultural heritage institutions, such as content management systems and descriptive standards such as Library of Congress Subject Headings, continue to perpetuate harm to communities (Adler et al., 2017; Biswas, 2018; Olson, 2013; Turner, 2017, 2020; Wagner, 2021). Equally, a critical lens to the sociotechnical of other cultural information spaces lays bare how archives reproduce and center whiteness across representation and descriptive practices, only offering representations of BIPOC individuals through acts of othering (Caswell, 2021; Caswell et al., 2017; Ramirez, 2015; Sutherland, 2017). In the following sections, we consider that context as we highlight the intersections of cultural heritage, information organization, and its sociotechnical relationship to Indigeneity and/or queerness.

2.2 | Sociotechnical systems, cultural heritage institutions, and indigenous embodied knowledges

Indigenous scholars and scholars critiquing Western hegemonic classification systems have brought embodied Native and Indigenous perspectives to sociotechnical understandings of knowledge organization (Duarte & Belarde-Lewis, 2015; Hunt, 2014; Littletree et al., 2020). The development of collecting, organizing, and classifying Indigenous knowledge resulted in a practice of the settler colonial state, mainly through the work of missionaries, anthropologists, and official arms of the government. Therefore, knowledge organization in libraries and archives reinforced the racist and problematic interpretations of these knowledges through creating subject headings and organization schemas that still exist today. Recent work in Indigenous data sovereignty and Indigenous ontologies (Christen, 2011; Duarte & Belarde-Lewis, 2015; Kukutai & Taylor, 2016; Littletree et al., 2020) fueled scholarly and practitioner interest in culturally responsive systems for stewarding Indigenous knowledge. Littletree et al. (2020) posit a conceptual model for Indigenous Systems of Knowledge based on previous Indigenous knowledge organization scholarship. For

instance, Kanaka Maoli scholar Manulani Aluli Meyer argues that Indigenous knowledge is always rooted in “one’s own experience with the world. Knowing was in a relationship with knowledge, a nested idea that deepened information (knowledge) through direct experience (knowing)” (Meyer, 2008, p. 221). In the Littletree et al. model, “concepts of relationality/holism, peoplehood, Indigenous ways of knowing, expressions of Indigenous knowledge, institutions, and values of respect, responsibility, and reciprocity are layered in a cyclical and interlaced structure” (2020, p. 416).

Embodiment is a core part of these discussions, mainly because Indigenous knowledge is deeply rooted in the experiential knowledge of land, place, and community. Indigenous communities have understood embodied knowledge as primary communal knowledge and communal memory since time immemorial. As Abenaki scholar Margaret Bruchac writes:

Indigenous knowledges are conveyed formally and informally among kin groups and communities through social encounters, oral traditions, ritual practices, and other activities. They include oral narratives that recount human histories; cosmological observations and modes of reckoning time; symbolic and decorative modes of communication; techniques for planting and harvesting; hunting and gathering skills; specialized understandings of local ecosystems; and the manufacture of specialized tools and technologies (e.g., flint-knapping, hide tanning, pottery-making, and concocting medicinal remedies). (Bruchac, 2014, p. 3814).

Such knowledges, she continues, are recorded in landscapes, including “geographical, genealogical, biological, and other evidence that maps human relations to flora and fauna, land and water, and supernatural forces.” Knowledge is conveyed and transferred not via written documentation but via performances such as “oral traditions, song, dance, and ceremony” (Bruchac, 2014, pp. 3184–3184). Oral traditions, in particular, have been described as a “corpus” of memory “relating to the whole society,” serving as the collective memories for entire communities, ethnicities, or Nations (Vansina, 1985, p. 19).

Indeed, as Bruchac has written elsewhere, oral traditions, languages, and other Indigenous knowledges survive despite genocide and discourse of “extinction” precisely because they are carried “in living bodies, in lived landscapes” (Bruchac, 2014, p. 2). The preservation of this interconnectivity defines Indigenous survivance and the conscious reification of knowledge via active traditions and discourse with ancestors (Bruchac, 2014;

Vizenor, 2008). Mi'kmaq scholar Stephen Augustine has further noted that Indigenous knowledge cannot be easily compartmentalized: “all things are connected and must be considered within the context of that interrelationship” (Augustine, 1997, p. 1). Furthermore, as Kwakwaka'wakw scholar Hunt notes in her piece about Indigenous ontologies and geographies, Indigenous embodiment may also include elements of “shapeshifting”—an Indigenous way of coping for those who “embody supposedly dichotomous subject positions: colonizer/colonized, native/academic, and community member/scholar” (Hunt, 2014, p. 28). Drawing on Jamaican-English author Zady Smith, she notes that Indigenous people often “conjure contrasting voices and seek a synthesis between disparate things” (Smith, 2009 in Hunt, 2014, p. 28). Indigenous knowledge is therefore neither easily compartmentalized nor easily concretized.

Thus, early information studies scholarship noted inherent complexities within Indigenous ontologies – rooted in embodied understandings of nature (Watson-Verran & Chambers, 1989), land and place, relationships and interconnectedness, genealogy, language, and beyond (Cajete, 1994; Doyle, 2006; Hampton, 1995; Kawagley, 1993), and has grappled with how to represent them in classification systems. More recently, Peters (2016) has defined embodiment within the perspective of Indigenous libraries, noting that Indigenous libraries fall outside of western understandings of the library, including the understanding of intellectual property rights, and hold the knowledge of “the people, their places, environment, and their respective cultures” (p. 28). Additionally, Spears and Thompson (2022) describe altering collections policies and object descriptions by utilizing the term “belongings” to reflect the interconnected nature of the objects to past, present, and future relations (p. 37).

In archival studies, we have seen some moves to incorporate embodied (and predominantly non-Western) knowledge into the archival record by advocating for oral and gestural performance as documents, primarily but not exclusively drawing on Indigenous models. Deborah Turner (2012) argued for oral communication as documents based on legal histories (e.g., Metzger, 2004), emergent definitions in document studies (e.g., Buckland, 1991, 1997), and a social constructivist framing. Sutherland has expanded these arguments toward fully acknowledging performative expressions (2016) and gestures (2019) as legitimate documents in the archival record. For Sutherland, “the inclusion of gestural documents in the archival corpus is a potential means of remediating anti-Blackness in the archives.

Early examples of incorporating Indigenous knowledge within cultural heritage projects include the Aboriginal Kuku Thaypan clan (Traditional Knowledge Revival

Pathways) facilitation of a system designed to remind Indigenous users of relational knowledge. Godbold writes, “the act of navigating through the categories from the front page (all creation) to the animals, to the land animals, was to trace a journey or path that paid proper homage to the wallaby knowledge its place in the database and the world. Navigating the browsing structure reminded me of ceremonies linking place with meaning.” (Godbold, 2009, p. 120). Littletree and Metoyer (2015) describe how the early model of the Mashantucket Pequot Nation thesaurus (launched in the mid-1990s) similarly incorporated intuitive Indigenous navigation of the system.

More recent collaborative projects that intentionally incorporate the Indigenous knowledge framework include the *Xwi7xwa* system, which worked to implement knowledge organization systems “congruent with Indigenous worldviews and to reflect Indigenous intellectual landscapes.” Alongside the utilization of the Brian Deer classification system, *Xwi7xwa* is now formalized as an Application Programming Interface (API), allowing for at-scale incorporation (Doyle, 2006, 2013).

Other projects have taken a holistic approach to these issues, developing entirely new systems for stewarding and representing Indigenous knowledge. Perhaps most well-known among these is Mukurtu—an open-source content management system designed for Indigenous cultural heritage. Mukurtu has allowed many communities to build their digital collections or community archives in a digital repository and to organize them by Indigenous principles (Christen et al., 2017). In combination with Local Contexts, Indigenous communities are stewarding these collections under Traditional Knowledge (TK) labels—alternative, community-based forms of copyright.

Redefining knowledge organization systems within libraries and archives is not unique to North American contexts. In Australia and New Zealand, Indigenous-based knowledge organizations are created at the national level. In Australia, as of 2018, AUSTLANG, a database of Indigenous Australian languages, became MARC-approved, allowing these languages to be identified in cataloging records (Miniter & Vo-Tran, 2021). In New Zealand, the development and widespread use of the Maori subject headings is gaining traction. Ngā ūpoko tukutuku, or Maori Subject headings, utilizes the LCSH but is built to reflect the knowledge systems of the Maori (Lilley, 2015).

There are several challenges to presenting Indigenous knowledges in sociotechnical systems in ways that fully capture their complexity. Mainly, Indigenous knowledges have been cataloged and captured within these systems designed to historicize, minimize and generalize, often done within frameworks of the violence of settler colonialism (Smith, 2009). Most standards and metadata schema

do not acknowledge Indigenous placenames, languages, or autonyms. However, even where Indigenous thesauri, vocabularies, or authorities exist, applied projects and scholarly work in this area have shown the challenge of applying terminologies or hierarchical information schema to Indigenous concepts. There is often a disconnect between the stagnant structure of information and the flexibility needed to represent this complexity. Mainly, Indigenous knowledges are often represented as monolithic knowledge when, by nature, each Indigenous knowledges' context requires unique constructions of embodiment that challenge current sociotechnical structures.

2.3 | Queer identity, sociotechnical binaries, and essentialism within cultural heritage institutions

For LGBTQIA+ populations, hereafter, queer[i] populations, the most pervasive forms of socialized discrimination occur through ideologies of heteronormativity and cisnormativity. Heteronormativity defines a set of social and discursive presumptions that all individuals are heterosexual and, in turn, designs a world in which this normative presumption is treated as neutral or universal (Warner, 1991). In a simultaneously intersecting and parallel manner, cisnormativity demarcates how social structures normalize an assumption that all persons possess a gender identity that matches their sex-assigned-at-birth. From a social standpoint, occurrences of cisnormativity range from limiting gender options in government forms to male and female (Suárez et al., 2020) to biometrics that scan bodies based on gender markers that overtly rely on sex-based characteristics such as genitalia (Shelton et al., 2021). The impact of heteronormativity remains far-reaching and often leads to heightened invisibility on the issues and needs of LGBTQIA+ persons, whether it be an absence of discussions around sexual education outside of heterosexual contexts (McNeill, 2013) or excluding queer populations from immigration opportunities through legal definitions of marriage isolated to heterosexuality (Bushell, 2012).

In addition to the intersecting identitarian impacts of cisnormativity, colonialism also equates to understanding gender-diverse identities. Further, given that queer identities can exist at the intersection of other identities, even cisnormativity and heteronormativity prove limited in understanding inequity within sociotechnical systems. For some, such as gay, cisgender, white men, the advances in marriage equality and visibility have resulted in certain privileges that have led to marked shifts in political activism and accountability. When not acknowledged, such privileges can reproduce exclusionary

behaviors to retain the particular comforts associated with increased rights (Duggan, 2012). The iterative ways that normative discourses produce alienation for various queer identities extend across various social spaces and, while unique to geographic and temporal contexts, tends to reproduce themselves iteratively. Sociotechnical spaces focused on organizational practices also reproduce cisnormativity.

Not unlike the systematic exclusion of Indigenous knowledges within sociotechnical spaces, the impact of identity erasure produced within society a belief that transgender and non-binary persons either never existed or remain a “new fad.” In opposition to this misperception, Indigenous communities tended to have broad concepts of gender identity, including gender identities within and outside Western cisnormative binaries. Though often conflated into the identity of two-spirit, these non-binary gender identities removed from embodiment an insistence on one's sex-assigned-at-birth, offering tangible examples of queerly gendered phenomenological orientations that preceded Westernized forms of queer embodiment (Driskill, 2004). Alongside colonizing attempts to “civilize” Indigenous populations through educational reforms and other social interventions such as religion, the categorizing of Indigenous bodies within a cisgender binary of male and female worked to make their cultural identities and embodied knowledges fit within normative Western thought. As a result of violence associated with Western imperialism, many two-spirit and other gender-diverse Indigenous persons faced persecution and punishment to better fit within emerging Western knowledge organization systems (Driskill, 2010; Matsuda, 2017). As such, discussions of gender diversity within sociotechnical systems as they relate to embodiment are always implicitly about colonialism's histories. With this in mind, exploring cisnormativity at a broad sociotechnical level warrants exploration.

The most prominent and discursively debated of these sociotechnical systems undeniably remains the public bathroom. Not only does it exist as a space of surveillance and regulated bodily autonomy for cisgender women across multiple, intersectional identities, but the reliance upon biological essentialism means that any person presenting a gender perceived as non-normative becomes subject to regulation within those spaces (Lazar et al., 2019; McGuire et al., 2022; Wagner & Crowley, 2020). Similarly, cisnormative sociotechnical systems include medical records (Wagner et al., 2022); sex education (Hobaica et al., 2019); legal policy (Davis, 2018).

Like the categorization and description of Indigenous bodies, queer bodies face particular challenges related to information organizations' limited, fixed, and often binarized nature. Attendant to the broader ways that

information organization exists within sociotechnical systems, this limited categorical scope means that queer bodies often find themselves subject to profoundly problematic descriptive practices. Practices range from oversimplifying one's gender, sex, or sexual orientation (Billey et al., 2014) to mark those identities as dangerous and deviant (Adler, 2017). Further, most discourse around appropriate approaches to describing queer embodiment prioritizes written records, thus eliding the complex ways visual information relies on subjectivity (Wagner, 2018). Despite scholarly accounts of pervading biases, scant research exists regarding how practitioners navigate their positionality during descriptive work. The absent discussion serves as a stark reminder that while information ethics acknowledge the need to address structural and representation inequity, rarely does this acknowledgment actively name those inequities and the discursive ideologies present within such inequities (Fox & Reece, 2012). By keeping the specific identity vague, information ethics become diluted and less likely to be held accountable for how information works, reproduces and references normative ideologies. Cataloging, a professional subset of librarianship, suffers from these potential biases, given that the field predominantly comprises older, white women who seem to identify as cisgender generally (Rosa & Henke, 2017).

Within Indigenous contexts, LGBTQ+ communities and identities exist and are understood within and outside western cultural norms that these systems are built on (Driskill, 2010). While throughout this literature review, we have described challenges to these identities and communities, neither exists within a bubble. Intersections between these identities further complicate the issues addressed within these case studies. Equally, the disconcerting, longtail of colonialism at the intersection of white supremacy produces a history of queerness and race, which renders the potentiality of black, queer embodiment discursively impossible, despite tangible evidence of queer of color identities existing prior to and throughout colonialism (Snorton, 2017). Finally, because embodiment explores what bodies do, the inextricable ways that ableist ideologies further render Indigenous and queer populations outside of sociotechnical discourses remain an important site of exploration (Clare, 2015; Samuels, 2003; Velarde, 2018).

3 | METHODS

3.1 | Case study approach and project tenets

Both projects represent divergent approaches to studying knowledge organization as a subset of sociotechnical

systems. Attendant to how the social informs the technical just as much as the technical informs the social, the projects stand in relation to one another by evidencing these two co-constitutive realities. The first project, a study on how an archival description system falters and adapts to the needs of Indigenous collections and users, reflects the need for social interlocutors within design work. The second project studies the inherent biases of catalogers who work within the confines of knowledge organization practices to understand how their lived experiences inform potential descriptive work. While the two projects diverge rather drastically in methodological approaches, we pair both through a case study to show an immense need for structural. Following Tellis (1997), we deploy a case study not to see either project as a representative sample but to understand Indigenous and queer embodiments as a unit of analysis that impacts and is impacted by knowledge organization structures. As such, both projects receive further methodological description within their respective sections, but we understand both endeavors to inherently explore how systems remained challenged by embodied identities and, conversely, how one's embodied identity might result in limited use of a knowledge organization systems descriptive potentialities. We utilize these two case studies to explore the dual impact of colonialism and cisnormativity on sociotechnical systems and how Indigenous and queer embodiments disrupt this normativity. This critical case study offers a focused way to identify systemic inequities while advocating for organizational change within the context of sociotechnical systems (Pasque et al., 2016). Both case studies also report on broader research studies with unique methodological approaches. While the respective case studies will highlight relevant methodological choices as part of the analysis, the use of both should be understood as a process of theory testing relational to more extensive explorations of embodiment (Løkke & Sørensen, 2014). While the normative ideologies of sociotechnical systems cut across all information landscapes, the examples highlighted in the following discussion intersect with noteworthy types of information practices of Indigenous and queer embodiment. Understanding, as such, that embodiment informs knowledge organization work, we now turn to our own embodied identities concerning this research.

3.2 | Positionality

Given the unique emphasis on embodiment in the design and deployment of not only sociotechnical systems but research on and about these systems, discussing our positionality as research proves vital. Wagner is a white,

genderqueer person with a Ph.D. Though they identify as a member of the LGBTQIA+ community, they also engage in academic research and represent an institution that historically exploits and other queer bodies within research endeavors. Further, their identity as a genderqueer person does not afford them a monolithic scope of queer embodied identity, nor does it inform how intersecting identities like race, ethnicity, and ability might impact embodied experience. Further, while they have worked directly as a cataloging intern and within cultural heritage institutions, their status as an academic researcher detaches them from understanding the day-to-day experiences of information professionals who may experience constraints and challenges regarding radically restructuring knowledge organization systems.

Marsh is a white, cisgender settler scholar and assistant professor who has worked in several large colonial repositories and currently works at a large land-grant university that has historically stolen land from and disenfranchised Indigenous peoples. Their past positions in colonial repositories drove their move to work as a scholar and ally in the areas of Indigenous archival stewardship; they strive to balance their privileged positionality with collaborative and community-driven projects and frame their work with Indigenous scholarship. Marsh is likewise removed from day-to-day workings of archival institutions, although they maintain affiliations with former workplaces.

Curliss is an Indigenous cisgender Ph.D. student. Prior to pursuing their Ph.D., they worked in an academic library. They have worked on several projects engaging and collaborating with Indigenous communities, both related to their community and outside of their community. Their current research focuses on how Archival institutions collaborate with Indigenous communities, particularly the development of and relationship building toward greater access and repatriation of archival materials. [Correction added on Mar 05, 2023, after first online publication: In section 3.2 Positionality, Author X, Author Y, and Author Z has been replaced with Wagner, Marsh, and Curliss]

3.3 | Case study 1: Indigenous knowledge and archival descriptions

The first case study utilizes SNAC (Social Networks and Archival Context) cooperative. By operationalizing standardized subject headings used in catalog records, SNAC records via that shared heading, drawing on the standard of Encoded Archival Context—Corporate bodies, Persons, and Families (EAC-CPF). In doing so, SNAC aggregates archival information and connects materials by a

shared a person, family, or corporate body through what it calls a “social-document network.” Since SNAC operates through a cooperative model; membership is free and requires only that members (usually organizations) participate actively in SNAC’s ongoing work. Two SNAC Liaisons—funded to work full time on the SNAC Cooperative by NARA—offer free monthly “SNACSchool” programs to train editors in SNAC, available to the public. Not unlike the Wiki model, dozens of new editors are therefore added to SNAC’s ranks each month, able to edit records in SNAC based on their knowledge of collections and historical figures. SNAC has a shared governance structure among its membership and several working groups that direct its technical, descriptive, and platform development.

Within SNAC, editors on the platform can create different named authority records, allowing for flexibility or changes from the original archival content management systems in which they are held. Unlike Library of Congress Subject Headings and other standard authority files that require bureaucratic approval processes, and unlike Wikipedia entries which require a certain level of “notoriety” to be approved by the Wiki community, SNAC allows editors to create new authorities essentially at will, and then to link those authorities to relevant historical sources and archival collections around the world.

SNAC fields also allow editors to input a wide range of information from places, dates, languages, and occupations, allowing the editor to describe these entities to reflect the archival record and leave space for different contextual knowledge. The working group and cooperative model of SNAC also leaves open the possibility of creating new kinds of information fields or adapting them to more specific community contexts. These varying models of non-hierarchical collaboration paired with an ability to challenge problematic naming conventions to mean that SNAC holds immense potential to address settler-colonial and imperialist histories of collecting, naming, and representing Indigenous belongings and knowledge. This potential to disrupt exclusionary and colonialist models through SNAC offers affordances that might prioritize and center Indigenous knowledges representation and organization. For further advisory board recruitment and an initial discussion of SNAC edit-a-thon’s, see Curliss et al., 2022.

Origins of investigations of SNAC as a possible system for Indigenous archival access began with an edit-a-thon in the spring of 2020 focused on anthropological archival records, particularly ones connected to Indigenous peoples, families, and corporate bodies. Building on the success of this event and embracing community-centered approaches was a priority throughout this pilot and followed methods from collaborative archival, museum,

and ethnographic work (Guidelines for Collaboration; Hill & Coleman, 2019; Lassiter, 2005) in which community-based input influences the project at each major stage. Monthly Advisory Board meetings were organized and structured iteratively based on previous feedback from Advisory Board members. Our project Graduate Assistant collated feedback from each meeting to shape each planning phase and shape content for the subsequent discussion. This process allowed us to gain external input and build iterative guidelines for the project while respecting a variety of Indigenous and professional perspectives. Each Advisory Board member was compensated an honorarium for their time, and as an acknowledgement of their own expertise. We worked closely with the Advisory Board to recruit Indigenous participants for the event and to identify appropriate honoraria for participants. The call for participants included content cautions, a code of conduct, feedback forms for the SNAC platform, and protocols for reporting culturally sensitive materials. The event recruited 70 participants, including 20 compensated participants from Indigenous communities, who worked on 248 different resource records. During the event, one of our Advisory Board members ran an Indigenous-only Zoom room for participants to connect while also providing feedback on the event. After the event, the project's Graduate Assistant developed a feedback form circulated to participants for further community-based.

In response to 2021's edit-a-thon, the project team and Advisory Board identified issues within the SNAC platform's representation of Indigenous knowledges. One prominent critique of SNAC highlighted how the platform ingested archival finding aids and other external data (e.g., Wikidata). By default the platform imported these information sources, which are rooted in Western-based systems and understandings of knowledge. As a knowledge organization system SNAC replicated harmful knowledge structures, especially ones that have repeatedly delegitimized Indigenous knowledges relative to Western knowledge. An extended issue involved linked archival documentation and records becoming publicly available despite being private communities to which it is related. Finally, SNAC requires some technical archival knowledge, thus producing editorial imbalances which privileges practitioners versed in institutional archival knowledge.

Despite the observed shortcomings, SNAC's descriptive flexibility allows for important Indigenous knowledge and context to surface on the platform. For instance, topical subjects, occupations, and functions/activities fields allow editors to create their subject authority control. This editorial feature allows for the addition of subject headings from Indigenous-focused

knowledge schemas. In furthering the destabilization of hierarchical structures any SNAC trained editor can propose a new relation to the SNAC Editorial Standards Working Group. Finally, and perhaps most importantly, in adherence of the Resource, Descriptoin and Access (RDA) Toolkit rules, SNAC allows individuals to have multiple names, allowing for flexibility in individuals' identities. Repeatability means that SNAC editors can include community-preferred names for individuals, organizations, or families. Such additive description challenges more rigid models such as Library of Congress authority records.

While SNAC progresses the possibilities of Indigenous knowledge representation, issues persist. For example, an editor may find some Indigenous languages represented in this current list hundreds of languages and dialects remain absent. Equal issues emerge around nationality, placenames, and locations here both with regards to histories of colonialism and due to the quite literally imperialist frameworks of geographic place terms.

Currently, within the "gender" field, SNAC only offers male, female, or leaving the field blank, a holdover from a gender exclusionary version of RDA (Billey et al., 2014). Gender exclusion here extends to ignore not only contemporary gender identities but Indigenous identities such as "two-spirit."

The Editorial Guide is a first step in working appropriately in the SNAC platform, vetting cultural content, and avoiding colonial ontologies. It also highlights the many areas that need technical and cultural improvements in the SNAC platform, such as new controlled vocabularies for language, placenames, ethnonym, gender, occupation, and subject headings. We are now working with SNAC leadership to establish an Indigenous Description Group under the umbrella of SNAC's Editorial Standards Working Group and SNAC's Technical Infrastructure Working Group (TIWG) to inform the development of both the SNAC platform and SNACSchool.

3.4 | Case study 2: Gendering practices and cataloging work

This case study highlights a research project focusing on how information organization professionals who work with visual information imagine, name, and engage with gender as an identification practice within their daily work. The project interviewed 13 catalogers about their identification work via semi-structured interviews while also asking the same catalogers to engage in a Think Aloud exercise where they were asked to do on-the-fly cataloging of three moving images. Two of the moving images depicted historical representations of potentially

gender non-normative identities (an “all women’s” wedding and fraternity drag show), while the third depicted a “neutral” piece of wedding footage. The interviews were transcribed and coded for themes relating to the identification of objects, gendering practices, and normative presumptions made around gender identity. Participants are mentioned through self-ascribed pseudonyms within this paper. Please refer to (Wagner, 2022) for additional information on this research project, including recruitment methods, interview protocols, and coding practices. [Correction added on Mar 05, 2023, after first online publication: [REDACTED FOR PEER REVIEW] has been replaced with (Wagner, 2022)] Research findings suggest a tangible link between one’s own embodied identity and relational queerness as impacting the imagined description of gender within catalog records. Though not uniformly about embodied information practices in the traditional sense, engagements with gendering through participants’ language indeed suggest both conscious and subconscious efforts to produce or avoid gender as a salient factor within sociotechnical systems endeavoring in knowledge organization.

Before questioning how particular identities might complicate a fixed binary of gender within their descriptive work, many catalogers offered gender as a straightforward way to describe identity. For example, when asked, “What are (or could be) some of the easiest parts of cataloging visual information?” Multiple participants offered gender as an example. Michelle, a cataloger in a small rural library, noted her utilization of gender as being one tied to provided titles within records. In particular, she gives an example of a Monet painting featuring a woman stating:

If you look at it, in the middle of the screen you can see that there’s like buildings in the background in the distance, but in the foreground there’s a woman and then there’s willow trees.

For Michelle, gender is a fixed category here in so much the title implies gender to be given and, as Michelle (she) goes on to further clarify, the woman in the Monet painting dresses in a traditionally feminine way, thus warranting the emphasis on femininity. Echoing Michelle, Pax (he/they), a metadata librarian for digital projects, denotes that gender is easier to describe when a person is particularly famous, citing celebrities as red carpet events as an example. Reflecting on a larger issue of format and use rather than the content of information, Cecil Black (he/they), a monographs cataloger, noted that describing “a woman in a field” is a lot easier; than “a bookbag with six flashlights.” Other participants like Brant (they), a

cataloger who works at an archives for human sexuality, assert that gender might not be a readily ascertainable point. However, they would have no problem denoting sex-based organs such as penises and vaginas, a task they note being of preeminent importance in their particular work. Across these examples, catalogers understood gender as a potential part of their cataloging work; however, no participant offered up gender as an easily describable feature of cataloging. Nevertheless, when approaching the Think Aloud exercise portion of the interview, multiple participants shifted to utilizing gender as a shorthand in description work.

Many participants fell back on explicitly gendered language when describing the footage viewed during the Think Aloud exercise. For example, multiple participants utilized gendered pronouns to discuss the individuals they viewed within the footage. Critically such use occurred without contextualizing how either set of pronouns was considered. For a handful of participants identified as non-binary, nobody utilized gender-neutral pronouns to describe the individuals within the footage they viewed. This act of utilizing gendered pronouns ran parallel to similar actions in which terms like man and women emerged when describing content without any contextualization for what those terms meant. A lack of contextualization here represents a reliance on cishnormative biases, which precede the descriptive options present within any information organization standard. Indeed, when participants were given a chance to contextualize their own cishnormative biases, they acknowledged the impact it might have on both catalog records and social engagements with diverse gender identities more broadly. Michelle, when outlining how difficult she imagined it might be to alter not only her prejudices but larger cishnormative frameworks of cataloging standards, said the following:

Right and I think as you mentioned our understanding of how messy gender is...is much more nuanced now than it has been for a lot of human history, at least in Western culture...our job as cataloging isn’t necessarily to get to the absolute truth of what a thing is. It’s to provide a surrogate that people can search. And I don’t know that say removing it is our job. I’m just thinking about if we decided to do away with subject headings that specified sort of a binary man/woman male/female kind of thing, if that would sort of hurt the subject access for some of us.

While Michelle bemoans the larger issue of a gender normative social world, she imagines how alternatives could exist that were potentially gender-neutral. Nevertheless,

her point of the presence of subject headings with inherently gendered elements implies a currently inextricable relationship between organizational standards and cis-normativity. Here Michelle illuminates how catalogers, though undoubtedly complicit in normative biases, can only do so much in response to standards and cultural practice, which would short circuit spaces where catalogers might intentionally disrupt such practices in their professional work. Jimothy (he/him), a maps cataloger, extends Michelle's observations by noting his own biases while contextualizing the challenge of gender as being beyond the control of a cataloger record and being something with more significant political implications:

As someone who is about as cis as it gets or whatever the way I was most uncomfortable with all of that is that I know it's very important field and everything and I very much respect other peoples' gender...and especially in times like today when politicians want to make a big deal about who uses what bathrooms and all that. So I really am sensitive to people's feelings when it comes to that kind of material, which is why I would ask someone who is an expert in the field instead of just lumping it as what people my age would usually just call crossdressing.

Jimothy's sentiment is a layered acknowledgment of how any attempt to broach gender work within cataloging comes with more immense social challenges. The first being a bias informed by Jimothy's affirmation of his cis-normative bias and the second being a limitation informed by why he perceived potential for political backlash entrenched in anti-trans sentiment. In response, Jimothy suggested his desire to seek out an expert who could more thoughtfully describe such material. When pressed about what an expert was in his mind, Jimothy suggested the best point of reference to be someone who identified as outside the cisgender binary. Such revelations suggest a keen awareness of how cataloging operates as an exclusionary practice but, more importantly, how shifts in descriptive change mean very little if a large social sentiment does not follow. Indeed, catalogers like Michelle echoed Jimothy's sentiment. Even non-binary catalogers like Pax claimed that even with internal and embodied knowledge, they might still avoid inclusively describing content as it would potentially expose not only cisnormative biases of their colleagues but potential anti-trans sentiments as well. Attendant to all of these intersecting issues, Oslo (she), a part-time cataloger for an academic special collection, reached out following her interview to reflect on her own going work to combat her

own biases. Aside from being more thoughtful in her descriptive practices, which she attended immediately, she further noted her ongoing engagement with training other catalogers within her institution and elsewhere to be more thoughtful in general description and how to implement standards such as the Homosaurus to do so. The earlier examples track how limitations around descriptive standards remain a part of a large set of normative biases within sociotechnical systems. Importantly, Oslo's particular example offers insight into methods of bridging the social with the technical by exploring ways to name gender diversity simultaneously and combat cis-normative bias at a social level, producing an emergent and, at times, embodied method of queer information activism (Cifor & Rawson, 2022; McKinney, 2020). Moreover, these findings expose that any attempt to solidify methods of gender-based description within information organization must first attend to larger societal structures around cisnormative bias, which will, as participants suggested, open up venues for safely and deliberately affirming gender diverse identities.

Not unlike the work of SNAC, concerns for intersectional representation rang true with catalogers regarding human-based description. When discussing how normative gender biases impacted the description of visual information, multiple participants also raised concerns around how describing race, age, ethnicity, and even one's ability proved equally contentious. Such evocations serve as a critical reminder that the findings regarding cisnormativity within cataloging practice reveal one layer of description-based misrepresentation within sociotechnical systems.

4 | DISCUSSION

In both case studies, the concept of best practices proves arbitrary at best. As Duarte and Belarde-Lewis (2015) have argued, the similarities identified in these two case studies are not "unrelated and inconvenient phenomena" but "evidence of systemic colonial marginalization" (p. 678) that have not accounted for knowledge complexity outside of white, heteronormative, cisgender contexts. In particular, both Indigenous and queer identities exist within states of ambiguity. Identity is blurry, yet socio-technical systems tend to circumvent such blurriness, opting instead for clearly defined categories that are easier for technical systems to comprehend. Both the methods and culture of identity-making rely on normative discursive shorthand, which leaves historically othered identities at the margins of discussion. An inability to intentionally and thoughtfully engage with the challenges of both forms of embodiment and the

inevitable ways other lived experiences intersect with these identities will reproduce potentially epistemic violence by rendering such embodiment anomalous. With regards to Indigeneity, a continued placing of these embodiments as outside of the design and scope of sociotechnical systems will produce what Tuck and Yang (2012) demarcate as the placing of an “asterisk” on groups leading them to be “at risk” of extinction (p. 22). Through a queer lens, this raises concerns about treating identity as a variable relative to normative identity (i.e., not straight) rather than treating this identity as part of a person, reproducing heteronormative frameworks of knowledge reproduction rather than disruption (Grzanka, 2016).

Nevertheless, even in this inability to name complex identities, the same sociotechnical systems work to essentialize indigeneity and queerness identities, often through gross confluences (i.e., sexual minorities or Indigenous ethnonyms). These essentialized identities fail to nuance how embodied identity is simultaneously flexible and specific. Additionally, sociotechnical systems tend to over-fixate on getting the record right, often at the expense of accidental and intentional erasure. An ideal system would approach the naming of many Indigenous and/or queer identities as an additive and expansive process, understanding the value of naming without normalizing historical misrepresentation. More crucial, however, is a need for sociotechnical systems to critically reconsider the value placed upon naming identity in the first place. What we mean here is not an avoidance of identity work within sociotechnical systems and information organizations. Instead, we understand this as an approach that decenters normative presumptions made across all aspects of information organization, from the description standards to the act of naming enacted by information organization professionals. Further, we envision this following the tenets of reparative description, which attempts to heal, repair, and remediate the wide-ranging legacies of colonialism and white supremacy that have shaped archives and their representations. As Hughes-Watkins has written in her seminal piece on reparative archival work: “Reparative archival work does not pretend to ignore the imperialist, racist, homophobic, sexist, ableist, and other discriminatory traditions of mainstream archives, but instead acknowledges these failures and engages in conscious actions toward a wholeness” (Hughes-Watkins, 2019, p. 4).

As both case studies so clearly illuminate, the current system fails to represent and elevate Indigenous and queer identities properly, and this failure is due to structural inequities and implicit biases. Since information organization rests on the misperception of being neutral and objective, those identities which require embracing

uncertainty (queerness) or those which prioritize embodied subjectivity (Indigeneity) tend to remain excluded from discussions during the training of information organization professionals. Such a lack of preparation, in turn, results in both the system and the person utilizing that system reproducing exclusionary discourses while ignorantly assuming they are doing potentially inclusive work. The implications of such a disconnect are various and varied.

Perhaps most telling of this understanding of Indigenous and queer embodied identity as a continued challenge to sociotechnical systems is still unaccounted for the need for diversification within all sociotechnical systems, but specifically within the LIS profession. Part of the reason that both Indigeneity and queerness remain so challenging to describe appropriately is due to the simple fact that far too few Indigenous and queer folks occupy spaces within the information profession. For Indigenous populations, this is a literal absence of the members within librarianship, with Indigenous librarians remaining minimally represented across the profession. Alternatively, queer-identified librarians continue to increase with regard to demographic representation within the field; however, they emerge in a space where hiring practices, structurally embedded normative ideologies, and social anti-queer sentiment make that visibility subject to continued regulation and confrontation (Green et al., 2022; Krueger, 2019). To be clear, this is not to say that merely adding these populations to such spaces will upend structural failures overnight. However, it does offer a reminder that by allowing outsiders into historically exclusionary spaces, the exclusive practices will often become incredibly apparent (Cooke & Kitzie, 2021). Equally, the case studies highlight the continued need to increase informational representations of Indigenous and queer persons within cultural heritage institutions. However, this is not simply a matter of adding more materials representing these intersecting identities, as historically, such maneuvers reproduce colonialist and cisnormative logics within materials (Brown, 2020; Lowry, 2019). Part of the representational failures within such sociotechnical systems have more to do with an inability to acknowledge the external social impacts of normativity on the logic of sociotechnical systems. However, combating normative bias must also occur alongside a focused and intentional dismantling of the systems which reproduce racist, colonialist, and anti-queer sentiments. As both case studies show, practitioner bias and the systems used for information organization and description limit the potentiality for histories of Indigeneity and queerness to emerge from cultural heritage institutions. Such failures result in Indigenous and queer communities seeking out and designing their own spaces for communally protective and affirmative sociotechnical systems.

These community responses include the information mentioned above organization standards such as the Brian Deer Classification system or the Homosaurus, which work to adapt the descriptive practice to operate within current systems. However, it also includes intentionally anti-institutional community archives work, such as the Lesbian History Archive, the Plateau People's Web Portal, or Ara Iritijia Keeping Culture KMS. What matters moving forward for sociotechnical systems is no longer a question of adapting outsider identities to fit within normative systems. Instead, it requires looking toward non-institutional spaces to understand better how Indigenous and queer communities use sociotechnical spaces to describe them, organize, and represent their histories. Additionally, the case studies highlight two lived experiences whose representation within cultural heritage institutions remains profoundly limited; however, it is equally important to acknowledge how such analysis extends beyond Indigeneity and queerness. For example, similar experiences occur within archival representations and renderings of identities such as race (Ramirez, 2015) and disability (Brilmyer, 2021).

On a broader sociotechnical level, this expansion affirms the value of communal knowledge organization process for the inclusion of diverse embodied identities. Adam Worrall's (2019) exploration of the communal value of sites like Goodreads reveals how community curation and description translation help nuance book recommendations in ways that increase access to materials otherwise lost behind boilerplate publisher synopses and generalized subject headings. Extending on Worrall's work, our findings offer a suggestion that similar approaches could help surface diverse content lost in generic approaches to plot descriptions. Additionally, sociotechnical lenses affirm the radical potential of crowdsourcing initiatives to facilitate participation in historically exclusionary cultural heritage institutions (Hajibayova, 2018; Van Hyning, 2019).

5 | CONCLUSION

These case studies show that cultural heritage institutions, as part of a broader conversation of sociotechnical systems, require more deliberate engagements with decolonization and queering since each aim to examine where inequity emerges within systems further works to locate and identify ongoing challenges to those practices. Fortunately, both Indigenous and queer scholarship offer insights into how such reparative work might emerge, centering on the imaginary and the hopeful as ways to see potential rather than limits within cultural heritage institutions (Duarte & Belarde-Lewis, 2015; Muñoz, 2009). It

is understood that value and potentiality grow from embodied places in each case. For the archival description of Indigenous collections, centering embodiment reifies the need for knowledge building (to include archival records) to take the lead from Indigenous knowledge sources, even if this means undoing the discursive power latent within cultural heritage institutions and breaking away from fixed and historically exploitative frameworks for representing Indigeneity. For queer embodiment, the question of reparative work aims not only at the catalog records themselves but further at gender as a categorical practice within society writ larger. In such a case, cisnormative biases precede descriptive work.

Nevertheless, because catalogers possess a practice wherein their work resolutely names description as part of its practice, they, perhaps more than other information professionals, possess a chance to set standards for gender-inclusive practice. Critically, each case benefits from the increasing dialog around normative presumptions and what power those discursive presumptions have beyond cultural heritage institutions meaning that archival description and cataloging both benefit from being taught through the lens of what Emily Drabinski (2008) defines as "radical" wherein identity-making practices ought to be sites of questioning the normative rather than naming the universal. While this work highlights emerging research around two subsets of identity, we believe that it offers a way to imagine how such radical inquiry can extend to the often seemingly inextricable linkages between the social and the technical, exploring; as a result, meaningful ways to decolonize and queer both within cultural heritage institutions.

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