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Creating space for climate justice in library and information science

Tami Oliphant, Tyler Youngman, Dan Hackborn, Lisa Nathan, Beth Patin

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Abstract

Introduction. We already live with the consequences of climate change, although such changes are experienced by humans, non-humans and the more-than-human world in vastly different ways, even within the same geographical regions. Climate change underpins, intersects and is the context in which our everyday lives and our work takes place. While libraries and library organisations have been discussing and addressing climate change for years, in this paper, we advocate for the field of library and information science (IS/LIS) to directly acknowledge climate change and create space for climate justice across our teaching, research and practice.

Method. Building from our own experiences in these areas, we offer four entry points to provide examples and inspiration for IS/LIS researchers, educators and practitioners to consider climate justice in their work by: (1) investigating connections between informational and environmental injustices, (2) exploring intersections among heritage, memory and cultural climate justice; (3) disaster planning and pedagogy, and (4) imagining aspirational futures.

Results and Conclusion. Using these four entry points to create space for climate justice in IS/LIS, we offer three propositions: embed climate justice across the IS/LIS curriculum, develop a climate justice research stream, and collaborate across sectors to build community and to imagine just alternative futures.

Introduction

The United Nations Environment Programme's *Emissions gap report* 2024 is stark about what is required for the world to prevent catastrophic planetary warming:

> As *greenhouse gas emissions rose to a new high of 57.1 gigatons of carbon dioxide equivalent in 2023, the cuts required from today are larger; 7.5 per cent must be shaved off emissions every year until 2035 for 1.5°C. Current promises are nowhere near these levels, putting us on track for best-case global warming of 2.6°C this century and necessitating future costly and large-scale removal of carbon dioxide from the atmosphere to bring down the overshoot.* (United Nations Environment Programme, 2024, p. XI)

According to the Climate Action Tracker, an independent research group, 20 countries including China, the United States, India and the European Union were responsible for 83 per cent of global emissions. However, when carbon emissions are measured per capita rather than by total, a different picture emerges. The top five per capita carbon emitters are Saudi Arabia, Australia, the United States, Canada and Russia (Paddison and Choi, 2024). The simple act of focusing on different information – total versus per capita carbon emissions – can shape political discussions about climate. Countries like Canada and the United States promise to commit to lower *total emissions* when '*China and India*' do, even though China's and India's *per capita emissions* are, respectively, half and less than one-eighth of those of Canada and the United States.

Despite the clear goals and objectives laid out in the UN's *Emissions gap report* 2024 to avoid the *best-case scenario* of 2.6°C degrees of warming by the end of this century, and that climate change is already experienced by all communities across the planet (although unevenly), perspectives differ about who is responsible, most affected, to what extent, who is to be trusted, and what constitutes effective action. When insights that a climate justice lens provides are absent from these perspectives, the general public, '*others*,' or *all* of humanity who '*lack the will*' to take action are blamed (Floridi, 2023; Noor and Milman, 2024). In other perspectives, visions of climate mitigation and adaptation are limited by the rhetorics of imminent technological interventions and individual actions such as '*eco*' consumption (Barendregt and Jaffe, 2014). More pernicious are binary perspectives that pit humanity against nature or economic survival against transformational change and ignore the devastating and ongoing experiences of climate change that have, are and will continue to occur, such as Floridi's '*terrible hope*' that '*the catastrophic slap from Mother Nature*' will be '*small, effective, and well-intentioned*' (2023, p. 4). This perspective of climate change erases the concept of justice entirely and ignores the catastrophic climate tragedies that have already occurred in places such as New Orleans (United States) and Karachi (Pakistan), to communities that are devalued by globally dominant political epistemes. Blame for climate change is (and should be) ascribed to economic structures, powerful vested interests and climate obstructionists (e.g., some governments, individuals, policymakers and industry). These entities (1) *fight* to maintain the status quo, (2) place the onus on individuals for collective problems and change, (3) *actively* and *violently* oppose transformative change through disinformation campaigns, and (4) are *protected* by money, power, policy, social systems and the state (Beeson, 2019; Huber, 2022). Too often, dominant perspectives of climate change ignore the interlocking systems of oppression and marginalisation that render some people, non-humans, and the more-than-human world more vulnerable to climate change *and* ignore the intergenerational resilience and leadership of Black, Indigenous, and racialised communities, and women in enacting and imagining just transformational futures (Powless, 2012; Thomas, 2022).

In addition, many frame climate change as a moral issue. They recognise that those who are least responsible for causing it are disproportionately affected, bear the greatest burden and have the least ability to access resources to respond and adapt (e.g., Sultana, 2022). Climate justice scholarship, therefore, positions us to recognise the ways climate change is rooted in extractive

and racial capitalism, settler colonialism and colonialism, imperialism and other interlocking systems of power, discrimination or exacerbated privilege (Crenshaw, 1989; Gonzalez, 2021; Malm, 2016; Reibold, 2023). Climate justice, then, requires:

- 'the recognition and respect of diverse identities, experiences and forms of knowledge;
- the redistribution of resources;
- and the representation and meaningful participation of women and marginalized groups in climate related decision-making' (Turquet et al., 2023, p. 12); alongside
- accountable and collectivist action.

The field of IS/LIS is well-positioned to contribute to climate justice scholarship and action because of the many shared concerns: respect for knowledge, knowledge systems, representation, information practices, appreciation of the power of information, knowledge and representation in people's lives, and an orientation towards social justice and inclusivity. Additionally, IS/LIS is tied to, and can learn from, fields of professional practice and institutions in the galleries, libraries, archives and museums (GLAM) sector that respond to climate change by providing access to and redistributing resources, serving as local, community-based organisations and institutions that respond to unique local conditions, and by connecting to other local, national, and international organisations that are in the same field (e.g., the American Library Association) or engaged in related, broader work serving the public good (e.g., UN Sustainable Development Goals). These shared concerns among IS/LIS, climate justice and the GLAM sector all serve to foster and support resilience as well as collectivist action.

Climate justice in LIS practice and organisations

For decades, practitioners in the GLAM sectors and associated organisations have undertaken extensive and multi-faceted projects to address and prepare for climate change, including climate mitigation, actions to reduce or prevent greenhouse gas emissions, and climate adaptation, actions that can be taken to reduce vulnerability to current and expected climate change. Climate justice in libraries asks a fundamental question: '*How might libraries, whether public, academic, or special, help their unique communities deliberate and navigate the climate crisis in socially just ways*' that accounts for local knowledge, '*coping, resilience, and adaptation processes*' (Sinnamon et al., 2024, p. 2–3)? In LIS organisations such as the International Federation of Library Associations and Institutions (IFLA), climate justice is centred in special interest groups; for IFLA, as a founding member of the Climate Heritage Network, and as a participant in COP29 (International Federation of Libraries and Institutions, 2024). The American Library Association (ALA) passed resolutions on climate change and libraries (2017), sustainability as a core value of librarianship (2019), and in 2023 joined the Sustainable Libraries Initiative to help create a national strategic plan for library professionals to address climate change (American Library Association, 2024). In Canada, the Canadian Federation of Library Associations, Ontario Library Association and British Columbia Library Association (BCLA) each host a Climate Action Committee that advocates for collective action and capacity building, with BCLA explicitly centring justice, equity and rights in their *Climate action statement* (British Columbia Library Association, 2023; Canadian Federation of Library Associations, n.d.; Ontario Library Association, 2022).

In IS/LIS specific associations and organisations, however, the lone research-focused climate group is the iSchools Climate Action Coalition, whose purpose is to '*promote collaborative, intersectional, interdisciplinary, and impactful climate action-oriented information research*' (2024, para. 1). There is no corresponding climate group or statement at the Association for Information Science and Technology (ASIS&T). Similarly, the Association for Library and Information Science Education (ALISE) supports SIGs (Special Interest Groups) for equity and social justice in LIS education and innovative pedagogies, yet there is no specific emphasis on climate justice. There are opportunities for IS/LIS researchers from around the globe to build community and share ideas about climate-related research, teaching and service.

Situating climate justice in the field of IS/LIS

IS/LIS has much to contribute in enacting climate justice in ways that both *build* on work already underway in the field and *create space* for a multiplicity of interventions – from the need for robust and actionable information and data about climate change (Guldi, 2021), resilient communication systems, information infrastructure (Patin, 2021a; Scholl and Patin, 2014), and cultural heritage institutions (Lerski, 2022), to considering the needs of people – their information practices (Choo, 2022), epistemic communities, information and climate literacy including identifying and resisting climate mis- and disinformation (Mann, 2021), to upholding the '*mechanisms for open civic deliberation to support learning, enable informed decisions, build trust, and contribute to social cohesion and equity*' (Sinnamon et al., 2024, pp. 2-3), to name but a few. Climate justice has not been taken up extensively in IS/LIS outside of computing (Becker, 2023; Finn and Rosner, 2019), yet concerns about justice are core to the field such as data justice (D'Ignazio and Klein, 2020), social justice (Cooke et al., 2016; Mehra et al., 2007), knowledge justice (Leung and López-McKnight, 2021), epistemic injustice (Oliphant, 2021b, Patin et al., 2021c) and information ethics/justice (Shultz and Abdi, 2017). Approaches in IS/LIS that '*unsettle*' practices that privilege the researcher over community partners (Nathan et al., 2017), that centres anticolonial and anti-violence feminist methodologies (Allard and Ferris, 2015), Black feminisms (Gray, 2020) and Indigenous knowledges and epistemologies based on cultural values of relationality, consent, trust, accountability, reciprocity, social priorities and relationship to the land also align with climate justice (Littletree et al., 2020; Sakakibara et al., 2020; Whyte, 2020a).

In this paper, we take inspiration from libraries and library organisations to ask how might IS/LIS take up *climate justice* in our research, teaching and practice? We offer four entry points based on our areas of research and teaching expertise to enact climate justice across the field of IS/LIS by: (1) examining the intersections of the informational and environmental injustice in IS/LIS to resist eco-authoritarianism in the field, (2) introducing climate justice to cultural, heritage and memory records, archive and document practices, (3) disaster planning and pedagogy that centres climate justice, and (4) a reflection on creating space for imagining aspirational futures.

Climate justice for IS/LIS research, education and praxis: four entry points

Entry point 1: countering eco-authoritarian informatics

To pursue climate justice, IS/LIS must support and centre work that illuminates the intersecting positionalities that structure informational (Leung and López-McKnight, 2021) and environmental injustices (Nixon, 2013; Parsons, 2023; Pellow and Brulle, 2005; Waldron, 2018) and further elaborates the connections between them. It must also orient itself to prevent further tragedies where possible. Recognising genocide and epistemicide – the deliberate killing of knowledge and knowledge systems (Patin et al., 2021c) – solely in retrospect is of limited value. Drawing on the focus Black Lives Matter gave to anti-Black police violence, David Pellow (2016) placed environmental racism on a continuum with other forms of state-sanctioned violence. This insight challenges us to recognise historical and contemporary precedents indicating how the violence of unequally distributed climate impacts may be leveraged in service of further state-sanctioned violence, like '*sacrifice zones*' (Juskus, 2023), '*economic shock therapy*' (Klein, 2007), policing and incarceration, as resource availability shifts, infrastructure is disrupted and peoples are displaced. IS/LIS must develop capacity and praxes for anticipating and countering methods by which authoritarian entities may use knowledge and information to facilitate these and other forms of violent control over '*Indigenous and racialized bodies, space, and knowledge systems*' (Waldron, 2018) and to justify this violence using a triage logic as climate impacts worsen. Eco-authoritarian triage logic persists in more (Cagle, 2019; Hardin, 1977) or less (Floridi, 2023; Lovelock as cited in Hickman, 2010; Potts, 2017; Logan as cited in Whyte, 2020b) explicit forms, combining narratives of imminence and crisis (Whyte, 2020a) with the historical and contemporary devaluation of specific

bodies, communities, lands and cultures (Pellow, 2016) in order to control the urgency and nature of climate action.

Information collection and management is implicated in both ecological and authoritarian trajectories. Not only has increased monitoring and data collection failed to facilitate better climate governance and prevent fossil fuel extraction; oftentimes the complexity and quantity of accumulated scientific data has been instrumental in organised climate malinformation, these characteristics exploited to promote the perception of scientific uncertainty (Howe, 2014; Oreskes and Conway, 2010). At other times the mere practice of collecting environmental data is used to maintain and legitimise continued harmful industrial activity (Dubé, et al., 2022; Dunbar-Hester, 2023). In sociopolitical systems, information work has empowered the oppression of marginalised and Indigenous communities overseas (Aly and Roth, 2004; Byler, 2022; Loewenstein, 2023; McCoy, 2009), often prior to importing *field-tested* methods into so-called North America to police labour activists and ethnic minorities (McCoy, 2009) as well as migrants and Indigenous communities internally and along colonial borders (Crosby and Monaghan, 2018; Lamdan, 2019; David as cited in Martinez and Schreiber, 2018; Dauvergne, 2020). Meaningful engagement with climate justice demands that IS/LIS identify and articulate the ways these harmful epistemic and informational practices are entangled and normalised, and investigate, design and trial alternatives.

Entry point 2: heritage, memory and cultural climate justice

From monuments and artefacts to landscapes and buildings, expressions of cultural heritage and cultural memory play a central role in processes of collective remembering, identity formation and historical truthmaking shaping past and present knowledge of ourselves. Climate crises threaten future continuations of these processes. Indeed, the epistemicide of ongoing human-driven climate change poses an existential threat for the durability of the cultural record. Consider the preservation of culturally significant documents:

> *Climate change is one of the greatest contemporary threats to archival repositories and the records in their custody. Increasingly severe disasters like hurricanes, floods, and wildfires pose immediate dangers* (Tansey, 2015, p. 1).

More worrisome is the innate potential for the subsequent destruction of cultural heritage resulting from climate catastrophe (Cazenave, 2014; Fatorić and Egberts, 2020; Marzeion and Levermann, 2014; Veltman, 2023). Despite this threat, Tansey (2015) observes how '*there is little professional discussion or guidance that specifically considers the major threats posed by climate change to the continuity of records and repositories*' (p. 2). Further, energy challenges from data centres (Jones, 2018), training large-scale computational models (Strubell et al., 2019), and AI industrialisation (Crawford, 2024) demands us to consider the consequences of technocapitalism, and to what extent emerging modes of digital access actually equitably mediate climate-conscious preservation of the documentary cultural record.

Together, the destruction of tangible, intangible, natural or digital expressions of heritage-memory from climate change is culturally catastrophic: the absence of products for anchoring group narratives can disrupt processes of collective remembering and cultural meaning-making and destabilises identities (Modrow and Youngman, 2023, p. 668). While there is no shortage of dialogue on environmental sustainability related to cultural heritage preservation and library/archival information services (e.g.: Abbey, 2012; Antonelli, 2008; Connell, 2010; EIFL, ICA, OCOM, IFLA, & SAA, 2020; Jones 2014; Mazurczyk et al., 2018; Wolfe, 2012), established memory institutions (galleries, libraries, archives, museums) and emerging information professionals alike must prioritise institutional and interpersonal cultural climate justice efforts. For LIS research and practice, Orr et al. (2021) point to pertinent streams of inquiry:

> *The challenges facing cultural heritage in the face of climate change are real and complex, requiring research to produce knowledge and insight that can be transformed into practical management strategies and tangible recommendations for policy and practice* (p. 451).

Public programming, information resources and community engagement practising and advocating for climate justice – while emphasising attention to local histories and sharing interpersonal narratives of sustainable living contributing to community wellbeing – may catalyse a commitment to responsible stewardship and inspire collectives to advocate for passing on what matters most to future generations.

Entry point 3: evolving disaster planning and pedagogy to consider climate justice

Historically, disaster planning in libraries has been criticised for being too inwardly focused because many plans only considered responding to building-level incidents such as fires, infestations, water damage or even emergency events like active shooters (Patin, 2021a). Over the last twenty years, we have seen disaster planning for libraries evolve into planning for and considering community-wide events such as hurricanes, tornadoes and civil unrest (Rahmi et al., 2019). The *Community resilience framework* (Norris et al., 2008) pushes for disaster planning to consider rapidity, redundancy and robustness around four capacities (economic development, community competence, social capital, and information and communication) to build a more resilient community. This is a useful frame for LIS to consider the roles we can play in wider community support throughout a disaster. There is a need again, for us to continue to evolve how we think about disaster planning in IS/LIS and work to incorporate support for climate justice. As the climate continues to change, our communities will become even more vulnerable, necessitating a comprehensive and collective approach (Pogue, 2021).

Very few IS/LIS programmes are preparing the next generation of information professionals to be ready to respond to disasters and climate change, pointing to a curricular injustice (Patin et al, 2021c). In a review of course offerings at the intersection of ALA-accredited schools and/or departments that are also part of the iSchools consortium, there are only ten courses offered around library disaster management or crisis informatics out of *sixty-five programmes*. With over 85 per cent of the schools offering no courses in this area, this is an area of improvement for IS/LIS. We need to move beyond having one or two lectures or readings about disaster management and climate change to ensure our students have the opportunity to study these issues, and we need to create other learning opportunities for current librarians, directors and managers so that they can be proactive rather than reactive in a crisis situation.

Entry point 4: creating space for imaging otherwise

Despite the vast quantity of research, reports, declarations, manifestos and protests focused on the climate crisis, for many academics it is still difficult to hold on to awareness of this crisis while juggling an overwhelming amount of pressing responsibilities. It too easily slips from the mind as faculty attempt to fulfil the ever-growing expectations of academia within contemporary, WEIRD. (Western, Educated, Industrialised, Rich, Democratic) institutions of '*higher*' learning (Henrich, 2020): developing and managing research programmes, preparing for class, grading student work, supervising theses, evaluating peers for tenure and promotion, reviewing papers, writing papers and travelling to present papers. We rarely stop to consider how our activities are intertwined with the climate crisis. As professionals enmeshed in the information fields and contemporary digital information systems, every day we perpetuate the practices and benefit from the forces that contribute to this crisis. This statement is not to lay blame, certainly not to suggest that anyone is individually responsible for the state of things, but to point to the incredible difficulty of extricating

ourselves from the norms and expectations of our professional lives and contemporary society long enough to imagine different ways forward.

There is also a reluctance to appear alarmist in the face of this crisis. Academics' fears, our fears, of professional and public censure are part of why the issue slips from the mind (Brysse et al., 2013; Hansen, 2007; Marshall, 2015). The privileges and stature of academic life are aligned *against* disruptive change. Yet, avoiding the implications of climate research (that drastic changes are just beginning) should call into question the very purpose of the academic enterprise (Alexander, 2023). How might we face the many uncertainties in more generative ways, looking for opportunities to create information systems (broadly defined) that support healthier communities? For example, in our learning environments, how might we create space to consider and develop the skills, capacities and ways of thinking that will help information professionals navigate uncertain futures together? As IS/LIS educators, how might we acknowledge the ever-present fear and despair of climate change in our classrooms, while resisting solutionist or fatalistic tropes that offer either false hope or none at all? How do we design opportunities to imagine, with our students, futures that are not only liveable, but are less oppressive than current realities for far too many folks? How might our research contribute to efforts to steward information systems while navigating extreme weather systems, unreliable infrastructures and feelings of grief and despair? There are so many generative, pressing questions to explore, if we have the courage to recognise that climate change is a literal *hot topic*, and it isn't going away. This is so much more than an argument for a *new* area of research, teaching and service. It is time to reconsider the future of our field in the face of (ongoing) climate change. It is time to imagine otherwise.

Discussion and conclusion: three propositions for climate justice in IS/LIS

The climate crisis is totalising, overwhelming, unsolvable and '*unthinkable*', in that human minds are unable to grasp its full scope (Morton, 2013). Climate change and its impacts are entangled with both local and global social, political and economic contexts. It is exacerbated and perpetuated by powerful and protected entities such as governments, policymakers, wealthy individuals, industry and colonialist and capitalist social and economic structures. As noted in entry point 4, as individuals and as members of our institutions we are embedded in geopolitical contexts and systems that exacerbate the climate crisis, we are emotionally and materially affected by it, and we are complicit in perpetuating it. Many of our universities and GLAM institutions are directly, indirectly or partially funded by fossil fuel profits or taxes. Our positions may not exist without this support. One could argue in the same vein as some politicians, that even if LIS as a whole discipline worked alongside their communities for climate justice, potentially little impact on climate change and its catastrophic effects would be made.

And yet. These conditions ignore the power that has been ascribed to information and the possibility that we are, in fact, capable of reorienting our current infrastructures to better serve our communities. Even though we are implicated in the climate crisis, that the crisis is unsolvable in the conventional sense, and that individual action is limited, IS/LIS is well-positioned to centre, enhance and contribute to climate justice research and scholarship, tangible and practical strategies to foster community-wide resilience to climate change, and to connect to broader social movements. A climate justice lens foregrounds and provides a framework for understanding the interlocking systems of power, discrimination and privilege that maintain and perpetuate the climate crisis (Crenshaw, 1989; Malm, 2016). A climate justice lens also reveals how these same systems of power can *negatively disrupt* and *discourage* calls for local action and broader social change. We offer three propositions – embed climate justice across the IS/LIS curriculum; create space for an IS/LIS climate justice research stream; and work alongside different communities and across the GLAM sector – to advocate for a shared commitment to climate justice in IS/LIS research, teaching and practice. Our propositions put our four entry points into action alongside

climate mitigation and adaptation practices undertaken by LIS organisations and in professional practice. We further elaborate how our propositions for the IS/LIS field are rooted in the local but can potentially be connected to broader social struggles against powerful forces that perpetuate the climate crisis.

1. Embed climate justice across the IS/LIS curriculum.

Each entry point supports our first proposition that *climate justice be embedded across the IS/LIS curriculum* in our programmes, bespoke courses, course topics, assignments, reading lists and pedagogy. Some ways to begin include: examining the ways that *ecological injustices and inequity are explicitly entangled with unjust information practices and structures* as well as exploring '*epistemic and informational alternatives*' as called for in entry point 1; identifying and discussing curricular injustices in IS/LIS (entry points 2 and 3); advocating for the creation of bespoke courses in IS/LIS that centre climate justice (entry points 3 and 4); and thinking about ways that we can be generous, generative and expansive with ourselves and others while doing this difficult work in our classrooms and in our own lives (entry point 4). IS/LIS can make space for climate justice by building upon long-standing work in the field that has a social, epistemic or informational justice orientation and make explicit connections from this work to *ecological injustices and inequity* (entry point 1). As an example, applying a climate justice lens to information and data literacy helps to identify and resist climate mis- and disinformation *and* enables a deeper understanding of how scientific uncertainty and scholarly communication practices are leveraged to promote doubt about climate change. A climate justice lens applied to information and data literacy surfaces the systems of power, discrimination and privilege that perpetuate climate change such as harmful industrial activities and state-sanctioned violence. It also provides a framework to think about how information structures can obscure what is actually at stake (e.g., money, land and sovereignty, rights, etc.), who profits (literally and figuratively), who is negatively affected (e.g. the most vulnerable) and, conversely, how to move towards informational and data justice.

Teaching and learning about climate justice in IS/LIS is difficult work. Information realities such as epistemicide, multi-faceted forms of violence as it relates to humans (e.g., epistemic, racial, and gender-based violence) (United Nations Human Rights Office of the High Commissioner, 2022), the human violence visited upon non-humans and the more-than-human world, and facing our own complicity and entanglements are just some of the challenges. However as evinced in entry points 2 and 3, the field perpetuates curricular injustice '*when educational resources are not available to help support epistemic growth*' and participatory injustice when people are excluded '*from participation in their own epistemological development*' (Patin et al., 2021d, p. 1308). Entry point 2 focuses on how climate change poses an existential threat to cultural heritage and memory, and how the lack of preparedness to consider climate change in cultural heritage practices and activities is a curricular injustice. Entry point 3 suggests that there is a curricular injustice in the field of IS/LIS when ALA-accredited programmes do not prepare LIS professionals to think about, contend with or plan for the reality of disasters and climate change and their ongoing impacts on their institutions, collections and communities.

To begin addressing this injustice, entry points 3 and 4 advocate for developing bespoke courses on climate justice for different geographical and cultural regions such as the University of British Columbia's Information worlds of climate justice and to expand course offerings across information-related programmes (e.g., crisis informatics and disaster planning). These courses might focus on specific local contexts such as learning about long-standing Indigenous data sovereignty efforts across British Columbia, and how data sovereignty simultaneously supports land stewardship and Land Back efforts and Canada's federal ratification of the *Declaration on the Rights of Indigenous Peoples* (DRIPA). A climate justice lens allows us to identify critical gaps in the IS/LIS curriculum, connect epistemic and informational injustices in the field to ecological injustice and understand who and/or what is being served by our informational structures and

practices. Importantly, making space for climate justice in teaching and learning is a powerful way to connect with different fields and scholars, imagine otherwise and engage in action.

2. Continue to build and enact commitments to climate justice by creating space for an IS/LIS climate research stream.

Underpinning each of our propositions is the recognition that IS/LIS pedagogy, practices, theories, epistemology and ontology are not neutral. They can serve to resist *as well as* uphold climate (in)justice in IS/LIS research and practices in ways that further oppress marginalised groups, Indigenous peoples, labour and environmental activists, immigrants and many others through data and information collection and management, genocide and epistemicide as pointed out in entry point 1. A climate justice research stream in IS/LIS will also '*necessitate inviting complexities and complications back in through empirically-grounded insights, rich theoretical interventions, and inventive methodological approaches*' (Finn and Rosner, 2019, p. 2). Central to making space for climate justice in IS/LIS research is engaging with critical theory to identify, analyse and resist the structures that uphold injustice in IS/LIS and climate – colonialism, racism, heteropatriarchy, capitalism and White supremacy – as well as relevant theory from other disciplines such as critical geography, environmental economics, Indigenous studies, computing and social movements, among others (Tang et al., 2020). Climate justice research in IS/LIS invites a wide range of methodologies and varied methods, including participatory action research and research creation. Local histories, unique geographies and an intergenerational lens can help guide our research.

Varied methodologies and methods are also necessary for IS/LIS research in climate justice if we are going to address '*feelings of grief and despair*,' '*hope*,' and '*fear*' that accompany climate change as pointed out in entry point 4. Climate emotions such as grief, guilt, blame, hope and compassion are often viewed as genuine expressions and reactions to the significance and severity of the crisis *but they are also* weaponised to paint the entire movement as irrational (Neckel and Hasenfratz, 2021). Certain subfields of IS/LIS have a long history of examining information interactions and affect (e.g. information overload, information pathologies). However, a key difference is that rhetorical moves in climate change discourses portray people who care about, fight, contest or resist powerful entities that perpetuate climate change as *irrational* precisely because they express their emotions. These discursive moves are also evident in other contexts such as sexual assault, and serve to dismiss and undermine claims that are being made and maintain the (White, capitalist, heteronormative patriarchal) status quo. A climate justice research stream in IS/LIS presents the opportunity to deeply explore and expand our knowledge and theories about information and affect as well as the opportunity to experiment with methodological approaches.

IS/LIS climate justice research, similar to other research with a social justice orientation, is concerned with making change. Entry point 2 notes that climate justice research in IS/LIS requires actionable outcomes: '*research to produce knowledge and insight that can be transformed into practical management strategies and tangible recommendations for policy and practice*' (Orr et al., 2021, p. 451). In addition, climate justice knowledge mobilisation in IS/LIS might include artwork and exhibits, poetry, policy development and participation in social movements, among other approaches. Practically, a climate justice research stream in IS/LIS could also offer sustainable and innovative options for conference participation, including hybrid participation, connecting regional hubs and meeting in person with virtual platforms to connect with others from around the world. Creating lower-cost, air travel-free conference options would enable a broader range of scholars to participate in IS/LIS knowledge sharing.

3. Centre local knowledges and work across the GLAM sector to build community and imagine just alternative futures.

Individual actions in the climate crisis are important for personal meaning-making and for implementing some of the propositions and entry points we have offered. More importantly, *we advocate for centring local knowledges, working across the GLAM sector to build community and image just alternative futures to enact climate justice in* IS/LIS and to facilitate collective action. Although the concept of community is frequently used in IS/LIS scholarship, it is a difficult concept to define, operationalise and theorise (Buschman and Warner, 2013). Our entry points discuss *community* at multiple levels, referring to different communities such as Indigenous, racialised and marginalised communities and using the term *community-wide* to refer to humans, non-humans and the more-than-human in a geographical location such as a neighbourhood, municipality or (unceded) territory (e.g. Indigenous lands). Community-led research upholds the ideas inherent in the phrase '*No research about us, without us*' in that it prioritises community knowledge, understands community members as co-creators, leaders and partners, views the community from a strengths-based (e.g. community knowledge, cultural practices, and worldviews) rather than a deficit-based (e.g. what is missing) perspective, and prioritises putting findings into practice in ways that benefit participating communities.

In IS/LIS, many of our programmes continue to align with professional practice in GLAM institutions and organisations. For decades, GLAM institutions and practitioners have been addressing and preparing for climate change, mitigation and adaptation – often by taking a community-led approach. The result is that many library organisations across the globe and at the local, provincial/state, national and international level (e.g. IFLA, ALA and BCLA, among others) have developed frameworks and action plans that centre climate justice. Further, libraries continue to be ubiquitous in North America (although under siege in parts of the US), enjoy high levels of trust, are highly valued, cultivate social capital and are locally situated (Aldrich, 2024). They are also networked and therefore well-positioned to contribute to systemic change and community-wide resilience to climate change and disasters as pointed out in entry points 2 and 3. For these reasons, IS/LIS scholars have fantastic opportunities to work alongside libraries and other GLAM institutions and organisations to advocate for climate justice in research, teaching and practice. We can take lessons from the BCLA who explicitly centre justice, equity and rights in their *Climate action statement*, as well as ideas from the OLA and BCLA Climate Action Committees that advocate for collective action and capacity building. We cannot undertake this work without educating current and future LIS professionals about climate justice, working alongside our students, GLAM and IS practitioners, institutions and associations, and alongside racialised, Indigenous, Black and marginalised communities who have been addressing climate mitigation and adaptation and climate justice for generations. The time is now.

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About the authors

Dr. Tami Oliphant is an Associate Professor at the School of Library and Information Studies at the University of Alberta, Canada, located on Treaty 6 land. Recent research examines the information practices of women with heart disease, patron-perpetrated sexual harassment in libraries, and epistemic injustice in LIS. She can be contacted at toliphan@ualberta.ca.

Tyler Youngman is a PhD Candidate at the Syracuse University School of Information Studies. They study how knowledge destruction and cultural erasure occur in relation to memory

institutions and identity formation practices. Tyler's recent research examines epistemicide and epistemic injustice, cultural heritage informatics and philosophy of information. tdyoungm@syr.edu.

Dan Hackborn is a PhD student at the University of British Columbia's School of Information, located within the occupied territory of the xʷməθkʷəy̓əm (Musqueam). His current research focuses on libraries operating and aiding in the long-term recovery process after disaster impacts their communities. Reach him at dan.hackborn@ubc.ca.

Dr. Lisa P. Nathan is an Associate Professor at the University of British Columbia's School of Information, located within the occupied territory of the xʷməθkʷəy̓əm (Musqueam). Her dissertation research investigated information practices within ecovillages, and she continues to research, teach and advocate for climate justice within and beyond information science.

Dr. Beth J. H. Patin is an Assistant Professor at Syracuse University's School of Information Studies. Beth's research focuses on information equity, community resilience and cultural responsiveness. Her current work focuses on epistemicide, libraries and community resilience and reparative storytelling and the Civil Rights Movement. She can be reached at bjpatin@syr.edu.

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