



Decolonizing transformations through ‘right relations’

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Abstract

Climate change has been conceptualized as a form and a product of colonization. In this perspective, it becomes important to base climate change adaptation and transformation efforts on decolonizing practices and imaginaries. A central aspect of decolonization is contained in the Indigenous conceptualization of relationality. Exploring how decolonization and relationality might form the foundation for transformations research, we engage with the concept of ‘right relations’. In the context of this inquiry, we take ‘right relations’ to mean an obligation to live up to the responsibilities involved when taking part in a relationship—be it to other humans, other species, the land or the climate. We begin the paper by bringing together the literature on climate change adaptation, transformation and decolonization to show their interconnections and emphasize the need to engage with all three when talking about sustainability. Second, we invoke the idea of ‘right relations’ to address how non-Indigenous transformation researchers can further the process of decolonization as part of their research. Third, we offer insights from our own research experience with narrative practices to help exemplify how transformation researchers in all disciplines might embody ‘right relations’ centered around four characteristics: listening deeply, self-reflexivity, creating space and being in action. Embodying ‘right relations’ is a continuous process of becoming with no end point, and we do not wish to suggest that we hold the answers. Instead, we reflect on our role in this process and hope for these words to open a dialogue about how we might move towards a ‘decolonized humanity’. We suggest that willingness to be affected and altered by the process of reciprocal collaborations is key to imagining decolonial ways of being and that this in turn can be a powerful manner of generating equitable and sustainable transformations.

Keywords Transformation · Decolonization · Right relations · Climate change · Relationality · Reflexivity · Indigenous · Narrative practices

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Introduction

Climate change is a relationship problem (O’Brien 2020). It is the result of a certain kind of relationship between humans and Earth characterized by exploitation and a shortsighted focus on growth. Seeking to uncover the nature of this relationship, a growing number of scholars argue that climate change can be seen as a form and product of colonialism. They argue that the mindset that gave way for the exploitation of ‘distant Others’ during colonization is the same mindset responsible for wreaking havoc on ecosystems and the global climate (Baldwin and Erickson 2020; Davis and Todd 2017; Dhillon 2018; Porter et al. 2020; Whyte 2017). This is especially so due to the strong link between colonialism and capitalism, with colonialism paving the way for capitalism to emerge through the exploitation of natural resources and cheap or forced labor. Together, these two

systems enabled the extractivist and carbon-intensive economies that we know now to be the drivers of human-caused climate change (Whyte 2017).

Climate change has negative implications for the cultural integrity and self-determination of Indigenous peoples due to changes in the ecological conditions that support and evolve with Indigenous lifeways. This includes the necessity for some Indigenous communities to relocate due to climate change impacts, such as coastal erosion. Yet, climate change is not the first such disruption. Rather, from the perspective of Indigenous peoples across the world, climate change is the most recent chapter in a long history of environmental changes inflicted upon the world, and Indigenous peoples in particular, through colonialism. Speaking from the context of Turtle Island¹ (North America), Muscogee scholar Wildcat (2009) argues that current relocations can be seen as part of the third removal of Indigenous peoples by colonialism; the first being the geographical displacement onto reservations accompanied by the destruction of ecosystems on which Indigenous peoples relied, and the second being the social and ‘psycho-cultural’ removal of children from their families and into boarding schools. Similarly, reflecting on the dystopian climate change conversation occurring in Australia after the 2019 and 2020 bush fires, Gamilaroi educator and founder of the Australian Indigenous media organization, IndigenousX, Pearson (2020) finds that “it is not a different conversation than the one that Indigenous people have been having in various forms since the earliest days of invasion and colonisation.” The ecological and cultural footprint of colonialism is seismic (Davis and Todd 2017). Potawatomi scholar, Whyte (2017, p. 154) therefore suggests that human-caused climate change can be understood as an “intensification of colonially-induced environmental change” rather than as a separate issue. Furthermore, he argues that underlying the ecological tipping points of biodiversity loss and climate change is a relational tipping point, which has already been reached (Whyte 2020). Tending to these relations is a prerequisite for tending to climate change itself.

Holding this perspective necessarily challenges the common framing of climate change as an environmental issue that can be solved by reducing greenhouse gas emissions. If climate change is a form and product of colonialism, then addressing climate change implies addressing continuing colonial relations. The increasing amount of research on climate change, much of which informs the debate about climate change solutions at the political level, generally

has little engagement with the struggles of Indigenous peoples, Black people or people of color (BIPOC). As a result, researchers who are unaware of the ties between climate change and colonization risk overlooking important entry points for solutions, or possibly perpetuating colonial and oppressive structures (Cameron 2012). This is not only problematic due to the harm it inflicts on Indigenous communities but also because it keeps us scratching the surface rather than getting to the root of the problem (Davis and Todd 2017).

Transformation has emerged as a concept partially in response to the lack of action on climate change when only perceived through the lens of mitigation and adaptation. As the idea of transformation is gaining traction in climate change and sustainability research, it is worth asking how this concept may enable an active engagement with decolonization efforts alongside efforts to halt and adapt to climate change. As with decolonization, the concept of transformation implies deep-rooted changes to unsustainable societal systems and structures as well as the underlying logics and values that help maintain them (Feola 2015; O’Brien 2012). Yet, as a relatively recent concept in the context of environmental change, the lack of a clear theoretical foundation makes the concept slippery and puts it at risk of being co-opted by other less emancipatory agendas (Blythe et al. 2018). We are called to ‘act now!’ on climate change. Yet, how we embody and work with transformations matters for what outcomes we create. Thus, in the context of this paper, we are reminded that while decolonization implies transformation, transformation, as it is widely conceived, does not necessarily imply decolonization.

As non-Indigenous climate change and sustainability researchers with European and settler backgrounds (from Denmark, Canada, and Germany) who work in Indigenous contexts and from a feminist standpoint, we recognize the acute need for critical reflexivity of ourselves as researchers. A concurrent task is to be aware of how productions of reflexivity of non-Indigenous researchers can unintentionally overemphasize white voices in dialogues about decolonization. We wish to engage the role of non-Indigenous researchers reflexively and productively; our aim is to open dialogue about what transformation as decolonization may look like in a research context as a way to generate change in our own communities. While we believe it is necessary to embrace equity and care in all of our interactions, we especially recognize the importance of decolonial efforts from non-Indigenous people for society to successfully adapt to climate change in a way that centers equitable relationships between Indigenous and non-Indigenous people. We recognize that decolonizing ourselves and our research practices is a journey without a final destination. Rather than a conclusive academic document, we wish for these words to express our commitment to embarking on this journey,

¹ Turtle Island is an Indigenous name for North America, originated in the origin stories of Anishinaabe peoples. We use this name as a sign of respect for the first inhabitants of these lands and as another step towards decolonizing our research.

hoping for comments and reflections from Indigenous and non-Indigenous folks alike.

We begin the paper with a brief overview of the concept of transformation and its emergence as a response to the growing critique of climate change adaptation. We outline the challenges that exist when working with the transformation concept, emphasizing the added complexity gained by looking through a decolonial lens. Our main inquiry is how non-Indigenous researchers can work with transformation in a way that furthers decolonization by dismantling oppressive systems in the communities in which we live and work. As a way of providing partial answers to this question, we turn to writings by Indigenous scholars, knowledge holders and allies who speak to the notion of what collectively we refer to as ‘right relations,’ a mode of being that is grounded in Indigenous ontologies characterized by relationality and reciprocity among both human and non-human relatives. In the context of doing research with Indigenous people and communities, we take ‘right relations’ to mean practicing deep listening, self-reflexivity, creating space and being in action. Unfolding what this mode of being can look like in climate change and sustainability research, we explore the methodologies of narrative practices drawing on our own research and activist experiences with Indigenous communities on Turtle Island (Canada and the US), exemplifying with personal vignettes from these endeavours. We aim to respond and contribute to the emerging work on the manner of how to enact transformations that are equitable, just and sustainable in our communities and in settings of knowledge exchange, hoping to contribute towards a deeper understanding of the ‘how’ of transformation and how it links to other struggles for emancipation and freedom. We argue that the notion of ‘right relations’ can help us imagine what a decolonial reality could be as well as the manner of how we may begin to create this collectively.

From adaptation to transformation

Recent years have seen a growing critique of the theorizing and implementation of climate change adaptation (Nightingale et al. 2019; Scoville-Simonds et al. 2020), including the tendency to frame adaptation as something both apolitical and inevitable (Pelling et al. 2015). This framing risks reinforcing existing vulnerabilities or creating new ones (Eriksen et al. 2021), while also preventing engagement with the root causes of climate change (Stirling 2015). With its emphasis on radically changing societal systems, structures and relationships, the transformation concept carries with it a promise of responding to the critiques of adaptation: addressing climate change all the while moving the world towards equity, justice and sustainability (Kates et al. 2012; O’Brien 2012; Pelling et al. 2015). The concept is

increasingly moving into high policy forums and is becoming a key feature of research and theorizing on sustainability (IPCC 2014). However, while transformation is generally seen to involve a fundamental change to a system, there is no consensus as to what characterizes transformational processes and outcomes (Feola 2015). Thus, the challenges outlined above are not evaded by exchanging adaptation for transformation (Eriksen et al. 2021). Many of these challenges are mirrored in how the concept of transformation is being applied in practice. Blythe et al. (2018) find that without a coherent theoretical anchoring and without addressing issues of power, the transformation concept is at risk of getting co-opted by actors that favor or stand to benefit from maintaining the status quo. The authors also warn against framing transformation as inherently good as this misses the many nuances in how such processes are experienced, including differentiations in terms of access to resources and decision-making that create distinct ‘winners’ and ‘losers’. In order for the transformation concept to avoid these risks, Blythe et al. (2018) suggest that transformation research needs to engage more directly with issues of power and resistance and with the pluralization of the transformation discourse, making room for different ways of knowing and being in the world.

These risks and potential remedies gain additional dimensions when viewed in the context of decolonization. Especially the question of what or whom is being transformed becomes increasingly pressing due to the long history of transformational processes forced upon Indigenous peoples by outsiders, most of which did not leave the people and societies stronger and more capable of creating a sustainable future (Reo and Parker 2013). Many acts of colonization that are now recognized as cultural genocide were part of the perceived moral imperative to ‘Kill the Indian to Save the Man’ (Kimmerer 2013), justified “under the banners of science, civilization, progress, and protection” (Parsons and Nalau 2016, p. 93). Knowing about this past should make us cautious about the ease with which dominant society introduces new ideas about (climate) change and transformation into Indigenous communities, no matter how ethically sound it appears to our current mindset, and even prompt us to question introducing these ideas at all. Yet the top-down transformations of Indigenous communities continue, also in the context of climate change. For instance, despite growing attention to Indigenous knowledge of environmental change, Indigenous knowledge systems are often “transformed to fit within the epistemological and ontological premises of western science” (Klenk et al. 2017, p. 2), informed by what Quandamooka scholar Moreton-Robinson (2004) calls ‘the possessive logic of patriarchal white sovereignty’. This “colonial ‘system of cognition’” (Cameron 2012, p. 104), influences efforts to govern climate change in Indigenous communities, including the tendency to define Indigenous

peoples as inherently vulnerable to climate change and in need of non-Indigenous intervention to save them (Parsons 2014).

While climate change presents us with the urgent need to act, including to adapt and transform, the process of identifying challenges and possibilities for such transformations is inherently political and related to questions of power and sovereignty (Golden et al. 2015). Thus, while “colonial history is replete with examples of sweeping interventions that were justified precisely through their urgency” (Cameron 2012, p. 112), our challenge is to balance climate change adaptation with transformations grounded in critical reflection and liberatory action. Parsons and Nalau (2016, p. 92) suggest that “The task of transformational change, therefore, lies in the intersections of histories, values, governance structures, and practices, all of which are bound up with particular expressions of knowledge and power.” And, we might add, all of which are further bound up in particular relations. Next, we turn to such relations in the context of decolonization.

Decolonization, relationality and ‘right relations’

The challenges discussed above suggest that the concept of transformation is in need of some critical refinement, ensuring that its theorization and application furthers ongoing struggles for just and equitable change and avoids perpetuating past wrongdoings. That is, a decolonial approach is needed to the theory and practice of transformation (Zanotti et al. 2020). For this purpose, we engage the decolonization literature more explicitly,² focusing on the notion of relationality and the idea of ‘right relations’. While decolonization can refer to a wide range of peoples, places and situations, we focus here on the Indigenous context of Turtle Island, while also noting similarities to other Indigenous peoples.

Decolonization

In its most narrow sense, decolonization refers to “the process in which a country that was previously a colony (= controlled by another country) becomes politically independent” (Cambridge English Dictionary, n.d.). Decades after the first ‘colonies’ gained independence, of course, the term is used much more broadly. For the purpose of this paper, we take decolonization to indicate the continuous process

of recognizing and dismantling oppressive and exploitative relations between colonizing and colonized societies in ways that enhance the latter’s capacity to enact political and socio-economic self-determination and support cultural integrity. In the context of Indigenous peoples and societies on Turtle Island, the term ‘settler colonialism’ is used to describe “a distinct method of colonising involving the creation and consumption of a whole array of spaces by settler collectives that claim and transform places through the exercise of their sovereign capacity” (Barker 2012). Speaking to the characteristics of the settler-colonial relationship in Canada, Dene scholar Coulthard (2014, pp. 6–7) finds it to be one of domination: “it is a relationship where power—in this case, interrelated discursive and non-discursive facets of economic, gendered, racial, and state power—has been structured into a relatively secure sedimented set of hierarchical social relations that continue to facilitate the dispossession of Indigenous peoples of their lands and self-determining authority.” Seen in this light, colonialism is not a thing, but rather “the sum effect of the diversity of interlocking oppressive social relations that constitute it” (Coulthard 2014, p. 15). Thus, colonization of Turtle Island and its inhabitants is not only a historical process of cultural, and in some cases literal genocide against Indigenous peoples but a continuous and contentious unfolding of oppressive and exploitative policies and sentiments from the side of the respective settler governments and some parts of settler society.

As the rejection of or antithesis to colonialism, decolonization has at least as many facets as does colonialism. Sium et al. (2012, p. 2) write that attempting to define decolonization is “a messy, dynamic, and a contradictory process” and that “despite our certainty that decolonization centers Indigenous methods, peoples, and lands, the future is a ‘tangible unknown’, a constant (re)negotiating of power, place, identity and sovereignty”. This focus on a ‘tangible unknown’ embraces creativity and uncertainty and “leaves room for dialogue and for dissent, as well as for coming together to each contribute to one another’s shared visions and goals” (Sium et al. 2012, p. 13). Decolonization then becomes a continuous process undertaken by people with intersectional identities rather than an end-point at which people and places have become decolonized. Taking the concept of decolonization a step deeper, it also refers to the unsettling of colonial mindsets and assumptions among both colonizing and colonized peoples and institutions. Such an unsettling requires that Indigenous worldviews, knowledge systems and paradigms are recognized and legitimized. Informed by Mississauga Nishnaabeg scholar Simpson (2014), Collard et al. (2015, p. 326) assert that extractive colonialism “implies attempts to erase distinct ways of bringing worlds into being,” and that “transforming these conditions requires political struggle grounded in decolonizing”. Decolonization then requires a recognition of the many

² There are numerous articulations of the struggle for freedom among Indigenous peoples, including anti-colonization and the more regenerative Indigenization. In what follows we have chosen to make use of the term decolonization due to its familiarity to a broad range of audiences, recognizing that there is no ‘undoing’ colonialism.

processes of worlding that simultaneously exist: “Worlding practices bring worlds into being; different stories enact different worlds that may be co-emergent, partially connected or in conflict” (Collard et al. 2015, p. 328). Acknowledging the depth and breadth of Indigenous paradigms and worlding-practices is crucial in disrupting the dominant colonial narratives.

Relationality

Bearing this diversity in mind, a central aspect of many Indigenous worldviews and paradigms is relationality and the inherent connections between humans, other species and the land. In many Indigenous cosmologies, land takes an active part in bringing worlds into being and is the originator of life and the source of language, stories, history and knowledge (Bawaka Country et al. 2013; Watts 2013). Anishinaabe scholar Watts (2013, p. 27) writes, “Our truth, not only Anishnaabe and Haudenosaunee people but in a majority of Indigenous societies, conceives that we (humans) are made from the land; our flesh is literally an extension of soil.” This deep relationality has implications for how we relate to one another and how we view our place in the world. The Southern African notion of ‘Ubuntu’ (I am because we are), presents reality as comprised of relations between everything both living and non-living, including those deceased and those not yet born, and the importance of engaging in practices that honor those relations (Chilisa 2017). Thus, humans are not detached from and somehow above the rest of creation. Rather, some Indigenous scholars represent humans as “respectful partners or younger siblings in relationships of reciprocal responsibilities within interconnected communities of relatives inclusive of humans, non-humans (i.e., plants, animals etc.), entities (i.e., sacred and spiritual places etc.) and collectives (i.e., prairies, watersheds, etc.)” (Johnson et al. 2016, p. 26).

Relationality also matters for doing research. Reflecting on the underlying assumptions of an Indigenous research paradigm, Opaskwayak Cree scholar Wilson (2001) emphasizes that knowledge too is relational, and that research implies relating to not only the research participants but to all of creation. Methodology, then, is not aimed at answering questions of validity and reliability but instead at helping the researcher ensure relational accountability. According to Gerlach (2018, p. 2), “relationality provides the necessary epistemological scaffolding to actualize the underlying motives, concerns, and principles that characterize decolonizing methodologies”. This is akin to Kennebec scholar Todd’s (2020, p. 385) suggestion of rethinking the case study as a ‘kin study,’ in which “more embedded, expansive, material, and respectful relations to people and lands” can be enacted. There is a substantial body of work on how a relational paradigm could and should translate into

practice in the context of doing research. Here too there are commonalities across cultural contexts, although the specific concepts vary slightly between sources. Exploring commonalities between a Canadian and Australian setting, Wilson (2008) offers the concepts of respect, reciprocity and relationality as foundational for doing Indigenous research. Similarly, in an African context, Bantu scholar Chilisa (2020) finds that an Ubuntu-based ethical framework is informed by the coupled concepts of relational accountability, respectful representation, reciprocal appropriation, and rights and regulations.

Embodying Ubuntu and/or relationality can be a way to step out of old allegiances and decolonize relations. Papatseh Cree scholar Donald (2012) argues in this context for an ethical relationality, one that “does not deny difference, but rather seeks to more deeply understand how our different histories and experiences position us in relation to each other.” Rather than erasing particular historical and cultural contexts, an ethical relationality “puts these considerations at the forefront of engagements across frontiers of difference” (Donald 2012, p. 45). Seen in this light, decolonization becomes a matter of relating differently, and from a foundation of respect and reciprocity.

‘Right relations’

Speaking to the above insights, some writers and activists have problematized the term ‘decolonization’ as part of the erasure of colonizer actions (Adebisi 2019; Landry 2018). Others argue that Indigenous communities need to focus less on what they do not want to be and instead create visions for what an Indigenous future could be (Coulthard 2014; Wilson 2016). Through our experience in research and activism, we have heard the emerging term ‘right relations’ used orally and colloquially to describe the antithesis to colonialism. This conceptualization acknowledges that colonial relations must first be exposed and uprooted in order for ‘right relations’ to take root (Collard et al. 2015; Regan 2010). Thus, if colonization implies extraction and oppression, decolonization implies ‘right relations’ with an emphasis on respect, reciprocity and just actions. The term ‘right relations’ may be related to the central concept of ‘all my relations,’ which Cherokee scholar King (1990, p. ix) describes as a reminder of all the human and nonhuman relationships as well as “an encouragement for us to accept the responsibilities we have within the universal family by living our lives in a harmonious and moral manner.” Similarly, writing on healing from colonial trauma, Haig-Brown and Lac Seul scholar Dannemann (2002, p. 463) identify respectful relations as “the basic value of indigenous knowledge.” Reflecting on how ‘right relations’ is anchored within Indigenous worldviews and traditions, Ross (2014, chap. 3) argues that “traditional life centered on striving at all times to create

‘right relations,’ not only with people but also with everything else that surrounded you, not only in the present but also in the past and future, and not only within the physical realm but within the spiritual realm as well.” Yet, “It is not a religious activity, not something separated from your every moment; rather, every moment is an opportunity to deepen engagement in right relationships.” ‘Right relations,’ then, can be seen as an obligation to live up to the responsibilities involved when taking part in a relationship—be it to other humans, other species, the land or the climate.

‘Right relations’ shares some similarities with the more commonly used term ‘ally,’ used to describe the role of white people in supporting the struggles of freedom of BIPOC people. As the dialogue on allyship evolves, some contest the term because of its tendency to place responsibility on the colonized (Pugh 2020). Colonization is not a mutual problem and colonial violence does not and has never originated from the colonized; it is the sole action of the colonizer. This criticism could also be directed at the idea of ‘right relations’ if practiced from a mindset of equal responsibility. However, in our use of the term, ‘right relations’ alludes to the assertion that uneven power relations can be changed, as in to *right* relations. It opens up and invites for non-BIPOC people to take an active role in this work.

Embodying ‘right relations’ in research: examples from narrative practices

The concept of ‘right relations’ is not only relevant when talking about efforts to decolonize certain societal structures and systems, but also when talking about global wicked problems, such as climate change. As argued in the introduction, climate change can be seen as a relationship problem (O’Brien 2020) and as part and parcel of colonialism (Whyte 2017, 2020). In the second half of this paper, we explore how the idea of ‘right relations’ can form the basis for researching transformations in a way that honors and supports the need for decolonization. Much excellent scholarship already exists on Indigenous methodologies and research practices (Chilisa 2020; Denzin et al. 2008; Kovach 2010; Ritenburg et al. 2014; Smith 2013; Wilson 2008). Rather than expanding on this work, we draw on some of its insights to explore how ‘right relations’ might be embodied in processes of researching transformations.

Based on the literature and our own experiences from research, we have structured this section along four complementary themes that we take to be important for embodying ‘right relations’: listening deeply, practicing self-reflexivity, creating space, and being in action. As a way of grounding our inquiry in the context of doing research, we reflect on how these themes can be expressed through narrative practices, exemplifying this with vignettes from our own

experiences engaging in research and activism alongside Indigenous people on Turtle Island (coastal and northern British Columbia, Canada and southwest Alaska, US) at various points during 2011–2019. As we do not report on the research itself but rather take a meta-perspective on our research practices, we do not include a methods section. Some of the methods have been reported elsewhere, see for instance Gram-Hanssen (2019). Importantly, we do not intend to present narrative practices as the only approach for researchers to practice ‘right relations’. Rather, we offer them as examples, sharing our own experiences with such practices.

Listening deeply

At the heart of ‘right relations’ lies the capacity and willingness to relate respectfully. In a research context, we take this to mean the capacity and willingness to first and foremost listen: Listen to the perspectives, concerns and needs of the community in question and work to ensure that these are at the center of the research endeavour. In her seminal book on decolonizing methodologies, Ngāti Awa and Ngāti Porou scholar Smith (2013, p. 1) reminds us that the long history of extractive and exploitative relations between researchers and Indigenous communities has turned the word ‘research’ into “one of the dirtiest words in the indigenous world’s vocabulary.” Embodying ‘right relations’ means repairing this relationship. Deep listening and present, felt, engagement are being called for as practices to build capacity for ‘right relations’. Aspiring allies are being called to ‘sit with’ the thoughts, emotions and experiences communicated by people whose voices have been marginalized (Ariel 2017).

In this context, deep listening is different from active listening in that it goes beyond listening to the words spoken; it enters into an engagement with Indigenous paradigms, ontologies and epistemologies in a meaningful effort to think, feel, and act differently. Importantly, however, many Indigenous feminist scholars write about the imperative for non-Indigenous scholars to stay mindful of the issues of power and material relations in place when engaging with Indigenous and other non-dominant cosmologies and paradigms (Chilisa 2017; Todd 2016). Rather than attempting to evaluate and translate such paradigms based on Western understandings of knowledge, an alternative is to truly relate to and learn from them. Deep listening can provide a means of doing so. For instance, Cruikshank (1990) writes about her experience of recognizing the incongruity in using Western notions of autobiography in a collaborative effort to capture the life stories of Yukon First Nations women. She writes, “From the beginning several of the eldest women responded to my questions about secular events by telling traditional stories. The more I persisted with my agenda, the more insistent each was about the direction our work should take. Each explained

that these narratives were important to record *as a part* of her life story” (Cruikshank 1990, p. 2). Critically reflecting on her own notion of autobiography, Cruikshank (1990, p. 3) locates connection as central to the form of these women’s stories: “Connections with people are explored through ties of kinship; connections with land emphasize sense of place. But kinship and land provide more than just a setting for an account, for they actually frame and shape the story”. Thus, through deep listening a different understanding of narrative emerged and altered the shape of the research created.

Narrative approaches can provide a way of expressing an Indigenous perspective through the resonance of words and their ability to evoke somatic and tacit knowledge. This in turn can contribute to imagining a decolonial reality (Regan 2010). Regan (2010) examines the profound potential for Canadians to engage with reflexive change following the Truth and Reconciliation Commission (TRC) and the stories shared by residential school survivors. In response to the Indigenous peoples testimonies within the TRC, Regan (2010, p. 15) calls for settlers to “bear ethical witness and learn to listen differently.” These ‘non-actions’ of bearing witness and deep listening make space for Indigenous voices to be centered and for the weight of their experiences to truly be felt by the listener. Storytelling is an inherently relational form, and thus can assist in opening space to be affected as listeners and for new realities to emerge. This is also the case in the context of research, where narrative practices can open up for community-driven and collaborative inquiries that are grounded in the lived experiences of those engaging in the research process.

Box 1 Storytelling as active remembering, Julia

During a visit in Sechelt I met Barbara Higgins, an Elder of the Shíshálh Nation. She is the rememberer of the Salish Nation, responsible for passing on the stories of her community. “I carry on the things that residential schools and the government were trying to numb down. I have written 250 stories. I have been an activator. I still have work to do, stories to write. I am needed here.” In our interview at her house she remembers when she was given this task: “I was seven years old when my Sechelt elders activated me as Sechelt rememberer. They took my trembling young body, hugged me and peered so deeply into my eyes, I felt the result of their scan on the soles of my feet, from the inside. They blew softly in each of my ears and said: ‘The Shíshálh have been guarding and holding this land from long before the white man learned to count time. Now it is up to you to stand up for this land and our people.’” The visit at her house and the stories had a deep impact on me. My previously outlined interview-guide had become obsolete as Barbara started sharing with me her stories. Sunken in an old leather chair I listened to her words that seemed to come from

a different place and time, carrying messages of timeless wisdom. The encounter with Barbara radically changed my research practice with Indigenous artists, which from then on focused more on creating space and listening deeply. Instead of the researcher I became the learner.

Self-reflexivity

The second quality of ‘right relations’ we wish to bring forth is self-reflexivity as a practice. The aim of such a practice is to uncover blind spots, question assumptions and allow oneself to be affected, even transformed, in the process of engaging with the world. Engaging the reflexivity that story offers is one potent way of moving towards a deeper and more embodied understanding of what a decolonial reality may look and feel like. Being reflexive about which stories we tell individually and as a culture can also be a response to the call for accountability. For instance, Sylix Okanagan scholar Armstrong (1990, pp. 234–235) encourages non-Indigenous researchers to “Imagine... courageously questioning and examining the values that allow for the de-humanizing of peoples through domination” and “interpreting for us your own people’s thinking towards us, instead of interpreting for us, our thinking, our lives, our stories”. Likewise, Regan (2010) asserts that before engaging Indigenous communities in any process of building towards the future, it is necessary to confront and disrupt mythologies of colonial benevolence and to meaningfully engage as listeners willing to be affected by the truth-telling of Indigenous peoples. This involves critically reflecting on Euro-Western hierarchical belief systems, including the emphasis on individualism, which has come into focus as a key concept to dismantle in creating a decolonial reality (brown 2017). It also includes examining the assumptions of a binary relationship between “the superior European/Western knowledge and the irrelevant and superstitious knowledge of the ‘other’” (Chilisa 2017, p. 814), while avoiding the temptation to integrate knowledges by subsuming non-dominant paradigms under Western ones (Romm 2015). Reflecting on the possibilities for bridging knowledges in transformative education research, Romm (2015, p. 425) contends that the process of learning across well-defined boundaries can “enrich all our pathways into the variety of ways of responsibly practicing social research.”

When coupling deep listening with self-reflexivity, stories can inspire action. Regan (2010) suggests that a response to the generous sharing of stories from residential school survivors in Canada is to both witness them and use the momentum they generate to propel settler-Canadians towards accountable action. Regan draws on scholarship from Boler

(1999) that emphasizes the potentials contained within affect and emotion; our ability to enact change stems in part from our ability to feel. Receiving stories may connect us to a sense of purpose in carrying out the complex work of helping to create a decolonial reality. Stories may also act as containers to bring disparate ideas together and envision new ways forward. Cruikshank (2000, pp. 3–4) highlights storytellers as using stories to “build connections where rifts might otherwise appear” and the power of storytelling to “construct meaningful bridges in disruptive situations”.

The act of telling or receiving a story can extend itself into fostering new enactments and ways of being. Engaging in story in a research process offers the opportunity to go beyond relating analytically and to understand story as an animate force that shapes our reality and to allow it to affect us in the places we inhabit as well as in our research.

Box 2 The unfolding of a living story, Irmelin

During a visit to the Yup'ik community of Igiugig, Alaska, community Elders Mike and Dalia Andrew shared the story of starvation with me. The story came up in relation to Yup'ik values and how the younger community members engaged with these values. The story depicts a grim scenario of a ‘double winter’ in which all the common food sources vanish and people are forced to give up the values of sharing since everyone only has barely enough to sustain themselves. An important component of the story is detailed descriptions of where to find certain fish and plants that can sustain humans through this time. While at the time I could sense that this story carried a lot of significance, it was unclear to me how and why. Different variations of this same story have come up in later conversations, and each time I gain more insight into its meaning and importance. As a living story, the story of starvation sheds light on the importance of reciprocity, environmental stewardship, deep ecological knowledge, resilience and adaptability among the Yup'ik. It emphasizes the importance of always being ready for what may come, assuring that community members will be able to survive as long as they stay connected to their cultural roots. A good story is one that sheds light on whatever question is asked, giving important nuance and linking past, present and future in ways that a straightforward answer cannot. While I have never attempted to analyze the starvation story, it continues to ‘work on me’ as it helps dismantle my preconceived notions of vulnerability and nuance my understanding of what resiliency and adaptive capacity really means in this community.

Creating space

Embodying ‘right relations’ means not stopping at deep listening and self-reflexivity but taking steps to ensure that voices of oppressed people are heard by the world. Many calls for solidarity point to the importance of centering voices that have been marginalized (Spivak 1988). Recent academic works by Indigenous authors make clear the vast contributions of Indigenous thought in contemporary understanding of worldviews or cosmologies of interconnection (Rosiek et al. 2020; Todd 2016; Watts 2013). Crediting the knowledge of Indigenous scholars and thinkers is one way of creating space and centering Indigenous voices in transformations research. For example, many post-constructivist concepts being used to describe the natural world, such as ‘more than human’, ‘multi-species sentience’ and the climate as a ‘common organizing force’ implicitly draw insight from Indigenous thinkers and knowledge holders. The lack of appropriate acknowledgement is yet another act of colonialism (Todd 2016), and part of the erasure of the colonized through the persistent devaluation of Indigenous knowledge within as well as outside of academia (Akena 2012).

Acknowledging and crediting Indigenous thought and language in academia centers the contributions of Indigenous thought systems in the work of transformation, moving towards a decolonized way of carrying out research. While still existing largely on the margins, decolonial scholars are increasingly showcasing ways to make room for non-dominant thought systems and paradigms within academic research. Bawaka Country et al. (2013), for instance, gave co-authorship to ‘Country’ in recognition of land as a co-creator of meaning. In an African context, scholars are increasingly making use of African philosophical traditions, such as philosophic sagacity, which legitimizes the wisdom of people without formal education (Chilisa 2017).

Creating space is not only about making room for Indigenous voices in one’s own work, but rather using one’s position to create space for the people behind the stories and voices to step forward. Often the labor of raising awareness about marginalization and oppression falls on those who are experiencing it. Therefore, amplifying the voices and stories of marginalized peoples, as well as the particular knowledge systems underpinning them, can be one way of creating space and engaging in right relations—recognizing that making space for others implies giving up some of the space we as non-Indigenous researchers currently enjoy (Porter et al. 2020).

In a more collaborative vein, space can also be created through transcultural learning via art, story and activism where Indigenous and non-Indigenous peoples can share knowledge and imaginaries of a decolonized reality. Related to this, the act of sharing a story itself is a means of creating space. As explored in the above sections, story creates space to engage different paradigms. Sámi scholar Kuokkanen (2007, pp.

425–426) writes about how the resonance contained in language and the power of words has the capacity to shape reality and how writers “rely heavily on the power of words and symbolic language just as *noadiddit*, shamans used to do. (...) We know that language is power through its means of creating realities”. Story has the power to open new emotional and relational capacities and ways of comprehending the world within the listener. In sharing a story, a space is created in which the listener (and the speaker) may come to new realizations or be affected by a transformative moment. In other words, sharing stories may act as a container from which change can emerge. By centering and amplifying Indigenous voices and acknowledging Indigenous language and metaphors in academia and beyond we open ourselves to deeper knowledge of our world and contribute toward dismantling the current colonial relations.

Box 3 Storytelling across generations, Nicole

While facilitating an intergenerational digital storytelling project, I had the opportunity to witness the ripples such a project can create. Nak’azdli Elders were invited to share traditional stories with students in grades five and six. The students then interpreted these stories through short digital videos with a recording of the Elder’s narration, some in English and some in the traditional language of Dakelh. Hearing stories about the traditional territory of the Nak’azdli Whu’ten First Nation (in what is now known as northern British Columbia) created space for students, Indigenous and non-Indigenous alike, to understand this place differently and to make their own connections to it through digital images. For instance, one student filmed her footsteps crunching through the snow on her way home to illustrate a journey an Elder had spoken about. In watching her film, the weight of how rapidly this land has been transformed by industrial projects became clearer to me. At the same time, the student’s ability to make links to the Elder’s narrative using her own day to day experiences- her boots making prints in the snow in the evening, the woods by the schoolyard - was moving to witness. I was struck by the resilience in the creative and imaginative ways these students made connections between past and present. Through storytelling, new understandings, and therefore new possibilities for relating to and with this territory, were created.

Being in action

The fourth quality to embodying ‘right relations’ we wish to bring forth is that of continuously being in action. While

listening, reflecting and creating space are important, it is the ‘backstage’ work of ensuring ‘right relations’. It is crucial that researchers step to the front of the stage to go from theorizing and sympathizing to taking action. Gibson-Graham and Roelvink (2010, p. 342) argue that, “to understand the world is to change it. As a performative practice, academic research is activism; it participates in bringing new realities into being”. This alludes to the fact that through our research we either contribute to change or towards retaining the status quo. While this can feel like a heavy responsibility, it also presents a potential for decolonizing our practice at every turn.

One obvious way for researchers to embody ‘right relations’ on the ‘frontstage’ of research is through writing. Potawatomi scholar Kimmerer (2013, p. 152) says that, “writing is an act of reciprocity with the world; it is what I can give back in return for everything that has been given to me”. By being explicit about our commitment to decolonizing our own research and furthering the struggles of Indigenous peoples, we have the potential to generate change in our communities of practice. However, decolonization is about more than the written word, as it has material consequences. Unangax̄ scholar Tuck and Yang (2012) remind us that decolonization is not just a perspective or a metaphor that informs theory, but is deeply unsettling and requires an active dismantling of colonial power and material relations. As researchers situated within Western academic institutions, we have a variety of avenues for engaging in dismantling academic imperialism (Chilisa 2020), including through partnering with Indigenous researchers and practitioners in our research proposals and ensuring that research funds go towards community research needs and supports ongoing emancipatory efforts. Importantly, this work must also translate into material terms such as making communities collaborating in research the holders of project funds.

Another way in which we can be in action is by way of where we move and with whom we engage. In conversation with one of the authors, activist and educator Libby Roderick emphasized that the work of non-Indigenous people within decolonization may sometimes be different from how we imagine it. She offered that an action that is equally important as creating meaningful relationships with Indigenous persons and communities is to foster relationships in our own non-Indigenous groups or communities that allow for productive conversation, connection and healing, while furthering frank and deep assessments of actions needed to restore right relations with Indigenous peoples. She emphasized that without reclaiming our full humanity as and within settler groups, we will never be able to be ‘fully human’ with others. Fish River Cree scholar Hart et al. (2017, p. 334) share similar thoughts when they write, “Settlers can work in anti-colonial ways by educating members of their own group, challenging overt and covert colonial oppression,

and supporting Indigenous peoples in acts of self-determination”. In ‘flipping the script’ and calling for members of the dominant group to educate ourselves on structural injustice produced by colonization we open space for personal agency in helping to enact decolonial change. Non-Indigenous people may work to embody ‘right relations’ by fostering relationships within our communities that allow for healthier connections, generative dialogue and teaching/learning practices on inequity and systematic oppressions so that we may collectively work towards a decolonized humanity. Again, in the context of Western research institutions there are literally ‘100 ways’ to engage in this work (Pete 2016). This can include integrating decolonial perspectives in our curricula and organizing teaching and research activities on our campuses that involve Indigenous researchers and practitioners; thus making visible and audible non-dominant voices and bodies within dominant places of knowledge production (Appleton 2019; Pidgeon 2016).

Finally, practices such as land stewardship and the experiential learning of frontline activism are ways of being in action. Many traditional territories across Turtle Island have become sites of decolonial activism in the face of extractive industry. The act of bearing witness to a struggle or more directly, placing one’s body within sites of struggle in solidarity, may enact change on a material level. In 2016, Wet’suwet’en matriarch and activist Huson spoke about how the presence of non-Indigenous people impacted the use of police force in the struggle against Coastal GasLink: “If it was just Indigenous people here the police would have come full force, guns and all, and taken us out. But since we had non-Indigenous support they were reluctant to use overt violence because, truthfully, our people are not treated as human” (Gray-Donald 2016, para. 20). The occupation of traditional territories and resistance to extractive industry have also created learning sites where Indigenous peoples can reconnect to their territories and pass on traditional teachings. In the calls for solidarity from allies/supporters these sites have the potential to become spaces where ‘right relations’ are formed and decolonial ways of creating community can begin to be enacted, however imperfectly. In short, presence matters in affecting transformative change.

Box 4 Knowing land through action, Nicole

Visiting Lelu Island in support of the Lax Kw’alaams Nation’s peaceful occupation of their traditional territory opened space for me to gain a deeper understanding of the role of the salmon in Indigenous coastal cultures and land rights activism. A Blackfoot supporter equated the importance of the salmon to Indigenous coastal peoples with that of buffalo for Indigenous

peoples from the plains. On the plains, buffalo were purposely killed off as a genocidal tactic. “Think about how different things would be if plains people still had the buffalo,” he said. Where he and I had grown up, the relationship between First Nations peoples to the buffalo was taught in school in the manner of a history lesson; something that only exists in museums and provincial parks dedicated to this memory. I began to understand then how culturally vital it is that these salmon are protected. Later that week when the tide was out, I and another supporter walked to the eelgrass beds on “Flora Bank,” a habitat for juvenile salmon migrating down the Skeena river to acclimatize from freshwater to saltwater before entering the ocean. Bearing witness to this habitat under threat made it so that the struggle for cultural and environmental preservation no longer existed in only the abstract for me. Participating in peaceful occupation of this habitat became a necessary act in embodying my values as a researcher.

Conclusion: informing the ‘how’ of transformation

Relationality is not just an issue to take into account analytically as we engage climate change transformations. Rather, taking seriously the implications of relationality imply that we strive to embody these qualities as we research and support transformations. Power, resistance and the imagining of alternative futures and ways of being, highlighted by Blythe et al. (2018) as central to transformation, are all at the heart of decolonization efforts. One central aspect of decolonization, however, which these authors have not taken into consideration, is the importance of relationality and how relations are perceived of and engaged with. According to Johnson et al. (2016, p. 3), taking relationality seriously as non-Indigenous researchers means that we need to “learn to see our privilege, our own context, our own deep colonizing. We have to learn to think anew—to think in ways that take seriously and actually respond to information, understanding and knowledges as if difference confronts us with the possibility of thinking differently”. Yet ‘right relations’ does not end with thinking differently but must result in also acting and relating differently.

Thus, embodying ‘right relations’ is a highly personal endeavor. By invoking this term and exploring how it might be embodied in research, we point to the possibility for and the necessity of researchers to engage with the deeper human dimensions when researching transformations. This includes looking at the intangible, unseen domains of life, such as beliefs, motivations, values, and worldviews (O’Brien and Hochachka 2010). Not only those of ‘the researched’ but,

importantly, also those of ourselves as researchers. The individual and shared understandings and assumptions about the world influence how we perceive, interpret and construct reality and define what is individually and collectively imaginable, desirable and achievable (O'Brien 2018). This has obvious implications for how we conceptualize and address transformation and its relation to decolonization.

Committing to decolonization requires a process-oriented approach, involving deep listening, self-reflexivity, creating space and being in action, as well as a willingness to engage in discomfort and uncertainty. We argue that these same characteristics apply when working with and researching transformations; that in order for our engagement with the concept and its implementations to be furthering equitable and sustainable results we need to work from a place of 'right relations' and be willing to be transformed in the process. This does not mean that transformation and decolonization are the same, since transformation goes beyond the specific relations between the colonizers and the colonized. Yet, the theorizing and deep reflections from decolonization can provide guiding principles for how to work with transformations. Based on these reflections, we therefore assert that just, equitable and sustainable transformations must include decolonization, and suggest that the concept of 'right relations' can aid in this process.

The work of decolonization and decolonial thinking and being has wide-reaching implications for our current moment, beyond how settler societies relate to Indigenous people. With a global pandemic, a lingering economic crisis, climate change-related disasters, intensified social unrest and profound responses from social movements, the power contained in our relationships to one another and the necessity of dismantling systemic oppression has come clearly into focus. If anything, our current moment shows that transformations are possible. Yet, it also becomes clear that there are numerous pitfalls inherent in transformations, and that the values and visions guiding these processes matter greatly for what outcomes are created. Embodying 'right relations' may offer a productive and generative way forward in all of these contexts. We recognize the importance of staying true to the purpose of decolonization: dismantling the systems of oppression and dispossession of Indigenous peoples. Decolonization is not a metaphor for systems change more broadly but is tied to specific peoples and histories (Tuck and Yang 2012). Yet the concept and practice of 'right relations' not only holds insights for how to generate respectful relations between Indigenous and non-Indigenous peoples, but can help inform a broader notion of how we might relate to all living beings, to the Earth and to ourselves.

The aim of this paper has been to inform the 'how' of transformation by looking through the lens of decolonization and 'right relations' in particular. While these

words present our thinking and feeling on the matter, we envision this article as a living document that expresses our commitment to embarking on a journey towards 'right relations'. We hope the article will spark reflection in the reader and we invite comments, critiques and encouragements from Indigenous and non-Indigenous folks alike.

In closing, we would like to echo the call for action made by Mississauga Nishnaabeg scholar Leanne Betasamosake Simpson (2017, p. 9), who encourages us to "join together in a rebellion of love, persistence, commitment, and profound caring and create constellations of co-resistance, working together toward a radical alternative present based on deep reciprocity and the gorgeous generative refusal of colonial recognition." Through such joint work, transformations based on 'right relations' might be possible.

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References

- Adebisi FI (2019) Why I Say 'Decolonisation is impossible'. *Folukes Afr. Ski*. URL <https://folukeafrica.com/why-i-say-decolonisation-is-impossible/>. Accessed 24 Nov 2020
- Akena FA (2012) Critical analysis of the production of western knowledge and its implications for indigenous knowledge and decolonization. *J Black Stud* 43:599–619. <https://doi.org/10.1177/0021934712440448>
- Appleton NS (2019) Do not 'Decolonize'... If you are not decolonizing: progressive language and planning beyond a hollow academic rebranding. *Crit. Ethn. Stud*. URL <http://www.criticaethnicsudiesjournal.org/blog/2019/1/21/do-not-decolonize-if-you-are-not-decolonizing-alternate-language-to-navigate-desires-for-progressive-academia-6y5sg>. Accessed 24 Nov 20
- Ariel C (2017) For our white friends desiring to be allies. *Sojourners*. <https://sojo.net/articles/our-white-friends-desiring-be-allies>. Accessed 7 Jan 2020
- Armstrong J (1990) The disempowerment of First North American Native Peoples and empowerment through their writing in gatherings. *En'owkin J First N Am Peoples* 1:141–147
- Baldwin A, Erickson B (2020) Introduction: whiteness, coloniality, and the anthropocene. *Environ Plan Soc Space* 38:3–11. <https://doi.org/10.1177/0263775820904485>
- Barker AJ (2012) Locating settler colonialism. *J Colon Colon Hist*. <https://doi.org/10.1353/cch.2012.0035>
- Bawaka Country (including Suchet-Pearson S, Wright S, Lloyd K, Burarrwanga L) (2013) Caring as Country: Towards an ontology of co-becoming in natural resource management. *Asia Pac Viewp* 54:185–197
- Blythe J, Silver J, Evans L, Armitage D, Bennett NJ, Moore M-L, Morrison TH, Brown K (2018) The dark side of transformation: latent risks in contemporary sustainability discourse. *Antipode* 50:1206–1223. <https://doi.org/10.1111/anti.12405>
- Boler M (1999) *Feeling power: emotions and education*. Psychology Press
- brown am (2017) *Emergent strategy: shaping change, changing worlds*. AK Press, Chico
- Cambridge English Dictionary (2020) Decolonization. *Camb Engl Dict*
- Cameron ES (2012) Securing Indigenous politics: a critique of the vulnerability and adaptation approach to the human dimensions of climate change in the Canadian Arctic. *Glob Environ Chang* 22:103–114. <https://doi.org/10.1016/j.gloenvcha.2011.11.004>
- Chilisa B (2017) Decolonising transdisciplinary research approaches: an African perspective for enhancing knowledge integration in sustainability science. *Sustain Sci* 12:813–827. <https://doi.org/10.1007/s11625-017-0461-1>
- Chilisa B (2020) *Indigenous research methodologies*, 2nd edn. SAGE, London
- Collard R-C, Dempsey J, Sundberg J (2015) A manifesto for abundant futures. *Ann Assoc Am Geogr* 105:322–330. <https://doi.org/10.1080/00045608.2014.973007>
- Coulthard GS (2014) *Red skin, white masks: rejecting the colonial politics of recognition*. University of Minnesota Press, Minneapolis
- Cruikshank J (1990) *Life lived like a story: life stories of three Yukon Native elders*. University of Nebraska Press, Lincoln
- Cruikshank J (2000) *Social life of stories: narrative and knowledge in the Yukon territory*. UBC Press, Vancouver
- Davis H, Todd Z (2017) On the importance of a date, or, decolonizing the anthropocene. *ACME Int J Crit Geogr* 16:761–780
- Denzin NK, Lincoln YS, Smith LT (2008) *Handbook of critical and indigenous methodologies*. SAGE, New York
- Dhillon J (2018) Introduction: indigenous resurgence, decolonization, and movements for environmental justice. *Environ Soc* 9:1–5. <https://doi.org/10.3167/ares.2018.090101>
- Donald D (2012) Forts, Curriculum, and Ethical Relationality. In: Ngafook N, Rottmann J (eds) *Reconsidering Canadian curriculum studies: provoking historical, present, and future perspectives, curriculum studies worldwide*. Palgrave Macmillan, US, New York, pp 39–46. https://doi.org/10.1057/9781137008978_3
- Eriksen S, Schipper ELF, Scoville-Simonds M, Vincent K, Adam HN, Brooks N, Harding B, Khatri D, Lenaerts L, Liverman D, Mills-Novoa M, Mosberg M, Movik S, Muok B, Nightingale A, Ojha H, Sygna L, Taylor M, Vogel C, West JJ (2021) Adaptation interventions and their effect on vulnerability in developing countries: help, hindrance or irrelevance. *World Dev* 141:105383. <https://doi.org/10.1016/j.worlddev.2020.105383>
- Feola G (2015) Societal transformation in response to global environmental change: a review of emerging concepts. *Ambio* 44:376–390. <https://doi.org/10.1007/s13280-014-0582-z>
- Gerlach A (2018) Thinking and researching relationally: enacting decolonizing methodologies with an indigenous early childhood program in Canada. *Int J Qual Methods* 17:1609406918776075. <https://doi.org/10.1177/1609406918776075>
- Gibson-Graham JK, Roelvink G (2010) An economic ethics for the anthropocene. *Antipode* 41:320–346. <https://doi.org/10.1111/j.1467-8330.2009.00728.x>
- Golden DM, Audet C, Smith MA (2015) "Blue-ice": framing climate change and reframing climate change adaptation from the indigenous peoples' perspective in the northern boreal forest of Ontario, Canada. *Clim Dev* 7:401–413. <https://doi.org/10.1080/17565529.2014.966048>
- Gram-Hanssen I (2019) The role of flexibility in enabling transformational social change: perspectives from an Indigenous community using Q-methodology. *Geoforum* 100:10–20. <https://doi.org/10.1016/j.geoforum.2019.02.001>
- Gray-Donald D (2016) No consent, no pipelines: resistance at Unist'ot'en. *The Dominion*. <http://dominion.mediacoop.ca/story/no-consent-no-pipelines-resistance-unistot/en/36179>. Accessed 21 Jun 2020
- Haig-Brown C, Dannemann K (2002) A pedagogy of the land: dreams of respectful relations. *McGill J Educ* 37
- Hart MA, Straka S, Rowe G (2017) Working across contexts: practical considerations of doing indigenist/anti-colonial research. *Qual Inq* 23:332–342. <https://doi.org/10.1177/1077800416659084>
- IPCC (2014) *Climate Change 2014: synthesis report of the fifth assessment report of the intergovernmental panel on climate change*. Cambridge
- Johnson JT, Howitt R, Cajete G, Berkes F, Louis RP, Kliskey A (2016) Weaving indigenous and sustainability sciences to diversify our methods. *Sustain Sci* 11:1–11. <https://doi.org/10.1007/s11625-015-0349-x>
- Kanngieser A, Todd Z (2020) From environmental case study to environmental kin study. *Hist Theory* 59:385–393
- Kates RW, Travis WR, Wilbanks TJ (2012) Transformational adaptation when incremental adaptations to climate change are insufficient. *Proc Natl Acad Sci* 109:7156–7161. <https://doi.org/10.1073/pnas.1115521109>
- Kimmerer RW (2013) *Braiding Sweetgrass—Indigenous wisdom, scientific knowledge and the teachings of plants*. Milkweed eds
- King T (1990) *All my relations: an anthology of contemporary canadian native fiction*. McClelland & Stewart

- Klenk N, Fiume A, Meehan K, Gibbes C (2017) Local knowledge in climate adaptation research: moving knowledge frameworks from extraction to co-production: Local knowledge in climate adaptation research. *Wiley Interdiscip Rev Clim Change* 8:e475. <https://doi.org/10.1002/wcc.475>
- Kovach M (2010) *Indigenous methodologies: characteristics, conversations, and contexts*. University of Toronto Press
- Kuokkanen R (2007) *Reshaping the university: Responsibility, Indigenous epistemes and the logic of the gift*. UBC Press, Vancouver
- Landry, A., 2018. *Decolonization And Indigenization Will Not Create The Change We Need*. Indig. Mother. URL <https://indigenousmotherhood.wordpress.com/2018/01/11/decolonization-and-indigenization-will-not-create-the-change-we-need/>. Accessed 14 Dec 2020
- Moreton-Robinson A (2004) The possessive logic of patriarchal white sovereignty: the High Court and the Yorta Yorta decision. *Borderline J* 3:1–9
- Nightingale AJ, Eriksen S, Taylor M, Forsyth T, Pelling M, Newsham A, Boyd E, Brown K, Harvey B, Jones L, Kerr RB, Mehta L, Naess LO, Ockwell D, Scoones I, Tanner T, Whitfield S (2019) Beyond technical fixes: climate solutions and the great derangement. *Clim Dev*. <https://doi.org/10.1080/17565529.2019.1624495>
- O'Brien K (2012) Global environmental change II: From adaptation to deliberate transformation. *Prog Hum Geogr* 36:667–676. <https://doi.org/10.1177/0309132511425767>
- O'Brien K (2018) Is the 1.5 °C target possible? Exploring the three spheres of transformation. *Curr Opin Environ Sustain Gov Transform* 31:153–160. <https://doi.org/10.1016/j.cosust.2018.04.010>
- O'Brien K (2020) You matter more than you think: quantum social change in response to a world in crisis, unpublished manuscript. ed. *AdaptationCONNECTS*, University of Oslo
- O'Brien K, Hochachka G (2010) Integral adaptation to climate change. *J Integral Theory Pract* 5:89–102
- Parsons M (2014) Continuity and change. In: Palutikof JP, Boulter SL, Barnett J, Rissik D (eds) *Applied studies in climate adaptation*. John Wiley & Sons Ltd, Hoboken, pp 281–288
- Parsons M, Nalau J (2016) Historical analogies as tools in understanding transformation. *Glob Environ Chang* 38:82–96. <https://doi.org/10.1016/j.gloenvcha.2016.01.010>
- Pearson L (2020) Australia is built on lies, so why would we be surprised about lies about climate change? Luke Pearson for *IndigenousX*. *The Guardian*
- Pelling M, O'Brien K, Matyas D (2015) Adaptation and transformation. *Clim Change* 133:113–127. <https://doi.org/10.1007/s10584-014-1303-0>
- Pete S (2016) 100 Ways: indigenizing & decolonizing academic programs. *Aborig Policy Stud*. <https://doi.org/10.5663/aps.v6i1.27455>
- Pidgeon M (2016) More than a checklist: meaningful indigenous inclusion in higher education. *Soc Incl* 4:77–91. <https://doi.org/10.17645/si.v4i1.436>
- Porter L, Rickards L, Verlie B, Bosomworth S, Moloney S, Lay B, Latham B, Anguelovski I, Pellow D (2020) Climate justice in a climate changed world. *Plan Theory Pract* 21:313–321. <https://doi.org/10.1080/14649357.2020.1748959>
- Pugh C (2020) There is no such thing as a 'white ally'. *Hum. Parts*. <https://humanparts.medium.com/there-is-no-such-thing-as-a-white-ally-469bb82799f2>. Accessed 1 Aug 2020
- Regan P (2010) *Unsettling the settler within: Indian residential schools, truth telling, and reconciliation in Canada*. UBC Press, Vancouver
- Reo NJ, Parker AK (2013) Re-thinking colonialism to prepare for the impacts of rapid environmental change. *Clim Change* 120:671–682. <https://doi.org/10.1007/s10584-013-0783-7>
- Ritenburg H, Leon AEY, Linds W, Nadeau DM, Goulet LM, Kovach M, Marshall M (2014) Embodying decolonization: methodologies and indigenization. *Altern Int J Indig Peoples* 10:67–80. <https://doi.org/10.1177/117718011401000107>
- Romm NRA (2015) Reviewing the transformative paradigm: a critical systemic and relational (Indigenous) lens. *Syst Pract Action Res* 28:411–427. <https://doi.org/10.1007/s11213-015-9344-5>
- Rosiek JL, Snyder J, Pratt SL (2020) The new materialisms and indigenous theories of non-human agency: making the case for respectful anti-colonial engagement. *Qual Inq* 26:331–346. <https://doi.org/10.1177/1077800419830135>
- Ross R (2014) *Indigenous healing: exploring traditional paths*. Penguin, Canada
- Scoville-Simonds M, Jamali H, Hufty M (2020) The hazards of mainstreaming: climate change adaptation politics in three dimensions. *World Dev* 125:104683. <https://doi.org/10.1016/j.worlddev.2019.104683>
- Simpson LB (2014) Land as pedagogy: Nishnaabeg intelligence and rebellious transformation 25
- Simpson LB (2017) *As we have always done: indigenous freedom through radical resistance*. University of Minnesota Press, Minneapolis
- Sium A, Desai C, Ritskes E (2012) Towards the 'tangible unknown': decolonization and the indigenous future. *Decolonization Indig Educ Soc* 1
- Smith LT (2013) *Decolonizing methodologies: research and indigenous peoples*. Zed Books Ltd., London
- Spivak GC (1988) Can the subaltern speak? In: Nelson G, Grossberg L (eds) *Marxism and the interpretation of culture*. Macmillan, London, pp 271–313
- Stirling A (2015) Emancipating transformations: from controlling 'the transition' to culturing plural radical progress. In: Scoones I, Leach M, Newell P (eds) *The politics of green transformations*. Earthscan, London, pp 54–67
- Todd Z (2016) An indigenous feminist's take on the ontological turn: 'ontology' is just another word for colonialism. *J Hist Sociol* 29:4–22. <https://doi.org/10.1111/johs.12124>
- Tuck E, Yang KW (2012) Decolonization is not a metaphor. *Decolonization Indig Educ Soc* 1:1–40
- Watts V (2013) Indigenous place-thought and agency amongst humans and non humans (First woman and sky woman go on a european world tour!). *Decolonization Indig Educ Soc* 2:20–34
- Whyte K (2017) Indigenous climate change studies: indigenizing futures, decolonizing the anthropocene. *Engl Lang Notes* 55:153–162. <https://doi.org/10.1215/00138282-55.1-2.153>
- Whyte K (2020) Too late for indigenous climate justice: ecological and relational tipping points. *WIREs Clim Change* 11:e603. <https://doi.org/10.1002/wcc.603>
- Wildcat DR (2009) *Red alert! saving the planet with indigenous knowledge*. Fulcrum, Golde
- Wilson S (2001) What is indigenous research methodology? *Can J Native Educ Edmont* 25:175–179
- Wilson S (2008) *Research is ceremony: indigenous research methods*. Fernwood Publishing, Nova Scotia
- Wilson S (2016) Using indigenist research to shape our future. In: Gray M, Coates J, Yellow Bird M, Hetherington T (eds) *Decolonizing social work*. Routledge, New York, pp 311–322
- Zanotti L, Ma Z, Johnson J, Johnson D, Yu DJ, Burnham M, Carothers C (2020) Sustainability, resilience, adaptation, and transformation: tensions and plural approaches. *Ecol Soc*. <https://doi.org/10.5751/ES-11642-250304>

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