

## SSHRC Knowledge Synthesis Research Report

“How can Aboriginal knowledge systems in Canada contribute to interdisciplinary research on the global extinction crisis?”



Photo credit: Zoe Todd (taken at the Museum of Nature, Ottawa, November 2016)

Report compiled by Dr. Audra Mitchell (Associate Professor, Wilfrid Laurier University)

Dr. Zoe Todd (Assistant Professor, Carleton University)

Pitseolak Pfeifer, BA (MA Candidate, Northern Studies, Carleton University)

September 2017

## Table of Contents

Key Messages.....	1
Executive Summary .....	4
Context.....	6
Implications.....	7
Approach .....	11
Results	
<i>Audra</i> .....	13
<i>Zoe</i> .....	19
<i>Pitseolak</i> .....	23
State of Knowledge.....	25
Knowledge Mobilization.....	26
Conclusion.....	27
References and Bibliography.....	29

## Key messages

- Mainstream conservation and TEK discourses do not reflect the full range of understandings of 'extinction' held by Indigenous communities.
- In order to gain a deeper understanding of the nature, causes, and possible responses to extinction, it is necessary to centre the knowledge of Indigenous thinkers, Elders and knowledge-keepers.
- Indigenous knowledges of extinction are sidelined by the colonial disciplinary practices of Western academia.
- Within Indigenous knowledge systems, what Western science calls 'extinction', and indeed, the broader category of 'ecology' cannot be understood in isolation from the social, political, legal, economic, and spiritual context of a community.
- There is a need to treat Indigenous knowledge systems as complex wholes, replete with their own socio-ethical frameworks for mediating human-environmental and human/nonhuman relations. From a legal-governance perspective, the Canadian government must consider the nation-to-nation relationship (RCAP 1996) and, building on the Truth and Reconciliation Commission's Call to Action 45 (TRC 2015), must acknowledge Indigenous legal orders in its responses to extinction crises. Approaching extinction, co-management, and/or TEK issues from this perspective requires that the government and policymakers can no longer assume that euro-western legal frameworks supercede Indigenous legal orders.
- As extinction is a category that is applied by the state and its institutions upon Indigenous nations themselves, it is crucial to unsettle and challenge the universalist euro-western laws and ideologies through which Indigenous peoples were (and sometimes still are) deemed to be 'vanishing' or 'extinct'.
- We must therefore pluralize our narratives and understandings of extinction in Canada, and work from a reciprocal and diplomatic place that acknowledges that Indigenous people's legal-ethical traditions and philosophies offer meaningful perspectives for responding to the Global Extinction Crisis.
- We propose that an ongoing commitment to decolonizing western academic praxis is necessary when scholars engage plural Indigenous knowledge systems in Canadian research on extinction. Implementing the recommendations of RCAP (1996) and the TRC (2015) regarding fulsome and ethical nation-to-nation relations between Indigenous peoples and Canadian legal-government and academic bodies will ensure that the work being done by Indigenous peoples on Indigenous knowledge will be robustly and meaningfully engaged in broader conversations in Canada, with a view to dismantling legacies of settler colonial erasure and dispossession of Indigenous laws, languages, land, and livelihoods.
- It is crucial not to collapse plural Indigenous knowledge systems into one 'TEK' or "IK" framework in studying the Global Extinction Crisis, but rather to work from paradigms which are attentive to place- and time- specific Indigenous praxis and law.

## Executive Summary



(photo credit: Zoe Todd, Museum of Nature, Ottawa, November 2016)

This research examines the current state of knowledge of Indigenous perspectives on extinction in Canada, with a view to pluralizing contemporary understandings of, and responses to, the Global Extinction Crisis. We worked collaboratively to conduct a systematic review of existing materials, specifically reading and analyzing materials for perspectives from plural Indigenous knowledge systems regarding the relationships between humans and non-humans in the context of extinction, loss, and withdrawal. This knowledge synthesis project reveals a number of key issues to address in decolonizing understandings of extinction in Canada, which will be crucial to address in developing meaningful and robust responses to the contemporary Global Extinction Crisis.

In this executive summary, we elucidate several key findings in this report, listed above in point form in the key messages section of this report. First, mainstream Traditional Ecological Knowledge (TEK) discourses do not reflect the dynamic and nuanced range of understandings of, and engagements with, the concept of extinction held by Indigenous communities. Second, responses to the Global Extinction Crisis in Canada must centre Indigenous thinkers (and, indeed, must centre those marginalized or oppressed voices silenced or erased in mainstream discourses on contemporary struggles in the Global Extinction Crisis). Third, Indigenous knowledges of extinction, and indeed other urgent matters, are decidedly sidelined by the colonial praxis of Western academe. Fourth, the concept of extinction (and related concepts, such as ecology) cannot be isolated from interdependent social, political, legal, economic, and spiritual relations that shape a community. Fifth, plural Indigenous knowledge systems are complex wholes replete with legal-ethical traditions which must also be considered in the context of implementation of nation-to-

nation relations (RCAP 1996) and Indigenous legal orders (TRC 2015) in Canada today. Sixth, any study of extinction in Canada must also acknowledge and disrupt the fact that scholars and the state have asserted, and in some cases continue to assert, Indigenous nations and societies themselves as ‘extinct’, or rapidly ‘going extinct’. This requires careful engagement with the legacies of the colonial imposition of vanishing or extinction narratives upon Indigenous nations, societies, laws, language, and livelihoods. Seventh, we propose that any academic or policy-oriented engagement with Indigenous perspectives on extinction must be coupled with an anti-colonial or decolonial ethos. Eighth, we urge scholars not to collapse plural Indigenous knowledge systems into a singular TEK narrative or framework, but rather to remain attentive to time- and place-rooted Indigenous thinking, praxis, and law.

### **An ethic of engaged reciprocity**

Building on these key findings, we propose an ethic of engaged reciprocity for non-Indigenous scholars studying concepts of extinction in Canada. By this, we mean an attention to the ongoing and outstanding legal-ethical and governance questions between Indigenous nations and the Canadian nation-state (and its concomitant research and scholarly institutions). We must acknowledge that western scientific discourses of extinction possess a fraught legacy, one which was knowingly and deliberately used to dispossess Indigenous nations in Canada of their rightful claims to lands, laws, language, and livelihoods (Nieoczym 2017). Indigenous responses to the Global Extinction Crisis are therefore entangled with efforts to decolonize and transform a category that not only applies to ecological notions of extinction but also those applied to Indigenous peoples and their laws, languages, philosophies, and cosmologies as well. As we point out:

***“To read and think about extinction alongside plural Indigenous knowledge systems is therefore a radical act: it is to re-story these deliberate erasures and vanishings of Indigenous language, laws, and livelihoods from the euro-western academic canon and insistently re-centre fleshy and visceral Indigenous narratives contra those socio-scientific academic framings which once positioned, and in some cases still position, Indigenous peoples as disappearing.” (p. 10)***

We situate this Knowledge Synthesis report in the ongoing discourses of decolonizing academia, and therefore we read and engaged with the materials for this report with a view to elucidating the ways in which academic institutions in Canada are succeeding or failing at the goal of incorporating plural Indigenous knowledge systems into contemporary work on extinction in an ethical and fulsome way. One serious issue is the ongoing fact that western knowledges still fail to engage with the relationality of many Indigenous knowledge systems:

***“Western knowledges - particularly in the sciences and social sciences - tend to separate ‘data’ or ‘information’ into silos, whereas many Indigenous knowledge systems affirm their interlinked and holistic nature.” (p. 11)***

This work was limited to a focused study of three very broad regions: a) the Great Lakes (Anishinaabeg, Haudenosaunee and some material from Mi'kmaq thinkers), b) the Prairies (Métis, Cree, and Blackfoot), and c) Nunavut (Inuit). We caution that its findings cannot be extrapolated beyond the context in which they were studied for this report. However, the preliminary findings of this Knowledge Synthesis project suggest that there is a need for ethically engaged, reciprocal research which centres Indigenous stories, languages, laws, relationships, labour, and livelihoods in understanding the multi-faceted impacts of the notion of extinction on both human and nonhuman beings.

## **Conclusion**

Our final argument is that there is a great need for non-Indigenous scholars and researchers studying extinction to move beyond the ‘politics of recognition’ (see critiques of recognition by Coulthard 2014; Simpson 2016), and into a much more reciprocal, discomfitting, and transformative engagement with plural Indigenous Knowledge systems in such a way as to unsettle and dismantle those colonial structures and ideologies which sideline or silo Indigenous ontologies, epistemologies, cosmologies, laws, and philosophies. In our research for this report, each of us employed relationally-focused, reciprocal, and place- and time-rooted approaches appropriate to the communities we belong to and tend to. In this way, each one of us (Mitchell, Todd, and Pfeifer) mobilized ethical processes deeply informed by our co-constitutive responsibilities to where we work and with whom we work alongside and answer to. Ultimately, the methodology and approach employed in this Knowledge Synthesis project establishes, we argue, a multi-vocal and plural collaborative ethic, one which is deeply informed by our commitments to tending to plural Indigenous knowledge systems, legal-ethical orders, and nations/societies in Canada today. We finish this executive summary with the following reflection from our report:

***“One of the important outcomes of this Knowledge Synthesis report is the opportunity to unsettle the supposed universality of human-environmental, legal-ethical, and scientific/academic understandings of extinction in Canada in the 21st century. This report demonstrates that plural Indigenous knowledge systems approach questions of relationality, reciprocity, and narrative between human and nonhuman agents in the past, present, and future in ways that subvert or challenge western conceptions of ‘extinction’ and ‘existence’. It is vital, in order to rectify the ongoing legacy of efforts to render Indigenous knowledges and peoples ‘extinct’, to turn to and tend to reciprocal processes which re-centre Indigenous legal-ethical and philosophical approaches to the scientific and legal paradigms of ‘extinction’.” (p. 11)***

## Context

The Earth is in the midst of a rapid, planetary-scale acceleration of extinctions that may eliminate three quarters of existing species within a few centuries (see Barnosky et al 2011; Regnier et al 2015; Kolbert 2014). Widespread extinction, its drivers - including climate change, the destruction of ecosystems and resource extraction - and conservation techniques all undermine the self-determination and well-being of Aboriginal people in Canada and worldwide. Specifically, the global extinction crisis destroys life forms that are central to the continuity of plural Aboriginal kinship relations, medicine, laws and protocols, food and knowledge systems (Whyte 2016), while its global drivers cause enormous harm to Aboriginal land and extend colonial and capitalist modes of expropriation. In addition, techniques of conservation often involve the seizure of Indigenous lands, the outlawing of hunting, gathering and growing practices and the devaluation of Indigenous ways of life (Blaser 2008; Howitt and Suchet-Pearson-2008; Sandlos 2007). As such, it is crucial that Aboriginal understandings of, and responses to, global extinction phenomena are centred within research on governing the global extinction crisis.

However, mainstream approaches to the global extinction crisis are based almost exclusively on Western secular scientific logics, which entrench sharp divisions between humans and 'nature'; living and non-living beings; frame nonhumans as resources for the instrumental use of humans; and present techno-scientific and economic management (in particular, conservation) as the only feasible means for governing extinction (Mitchell 2015, 2016). In contrast, Aboriginal knowledge systems, epistemologies and ontologies focus on the relations between humans and nonhumans and plural modes of governing and sustaining these relations (including protocols and Aboriginal legal orders) (Fienup-Riordan 1990; Kuokannen 2007; Donald 2009; De la Cadena 2010; Rose 2011; Deloria 2012; Tuhiwai Smith 2012; Kohn 2013; Watts 2013; Todd 2014; Bawaka Country 2015; Tallbear 2015; Little Bear 2016). These differences in ontology, epistemology and ethics make mainstream conservation-based approaches deeply problematic for Aboriginal peoples.

In the existing literature, Aboriginal knowledge systems are almost exclusively engaged through 'Traditional ecological knowledge' and "Indigenous Knowledge" (TEK and IK) approaches. TEK/IK refers to the use of knowledge derived from Indigenous sources to inform and shape conservation practices (Berkes 2008; McGregor 2005). It draws on selected elements of Indigenous knowledge, including certain hunting and gathering processes, to help achieve conservation goals. TEK/IK has is used not only by researchers, but has also been leveraged by commercial bioprospectors. This has prompted several Indigenous-led declarations (Kari-Oca 1992; Santa Cruz 2014) and international policies (International Labour Organization 1989; World Intellectual Property Organization 2014), including the CBD's Nagoya Protocol (2010), intended to ensure the fair and equitable use of Indigenous knowledge. It is crucial to note that TEK/IK approaches emerge from Western scientific and policy frameworks (McGregor 2005), instrumentalizing aspects of Indigenous knowledge systems to achieve predetermined goals such as 'sustainability', 'conservation' and 'management' (see Cajete 2000; Cruikshank 2004; Howitt and Suchet-Pearson 2006; Nadasdy 2007; Blaser 2009;). As a result, they tend to reduce Aboriginal knowledge systems to sources of empirical data for use in Western conservation frameworks, ignoring their distinct ontologies, epistemologies and methods. Moreover, TEK/IK discourses tend to fragment Indigenous knowledge systems to focus on those aspects that most closely resemble with Western scientific categories (Geniusz 2009). For instance, TEK/IK practitioners seek out Aboriginal knowledge that seems to correspond to Western

concepts of 'ecology'. However, due to the integrated nature of most Aboriginal knowledge systems, 'ecology' can only be understood in the broader context of philosophy, cosmology, ontology, social, legal, historical, political and economic thought. Furthermore, TEK/IK's focus on 'traditional' knowledge may marginalize the contributions of living Aboriginal thinkers (including urban Indigenous scholarship) and the global (rather than localized) significance of their knowledge systems (Stewart-Harawira 2007; Beier 2005). In addition, since TEK/IK is oriented towards Western scientific conservation programs, it fails to recognize many other modes of response to extinction that are embedded within Aboriginal knowledge systems - for instance, in protocols surrounding hunting (Nadasdy 2007; Watson and Huntington 2008).

This Knowledge Synthesis project investigates how the concept of 'extinction' is understood and addressed within plural Indigenous knowledge systems across Canada, with a particular focus on Cree, Metis, Haudenosaunee, Anishinaabe, Inuit and Mi'kmaq knowledge systems, but also drawing from other knowledge systems. It seeks to identify (a) how Indigenous knowledges of what Western science calls 'extinction' are represented within the dominant TEK/IK literature; (b) other theories and frameworks for understanding these phenomena rooted in plural Indigenous knowledge systems; (c), to analyze and address the gaps created by the dominance of TEK/IK approaches; and (d) to contribute to the decolonization of Indigenous knowledges of 'extinction' through centring and (re)contextualization of knowledges, and through the practice and/or development of decolonizing methodologies.

## **Implications**

Mainstream conservation and TEK discourses do not reflect the full range of understandings of 'extinction' held by Indigenous communities; in fact, they may obscure these understandings by imposing Western scientific definitions. One of the major implications arising from this finding is that, in order to gain a deeper understanding of the nature, causes and possible responses to extinction, it is necessary to centre the knowledge of Indigenous thinkers, Elders and knowledge-keepers. It is also important to acknowledge concepts other than 'extinction' that are mobilized in Indigenous philosophical and legal-ethical discourses (for instance, the withdrawal of plants and animals in relation to the breaking of treaties). In particular, since knowledge of plants, animals and other beings is deeply specific to place, it is important to engage with knowledge that has co-evolved with the more-than-human communities that co-shape each particular landscape.

Another implication of this project is that Indigenous knowledges of extinction are sidelined by the colonial disciplinary practices of Western academia. This project, which relied entirely on published academic literature by Indigenous authors, shows that there is a wealth of existing literature in this area that has not been brought into dialogue with mainstream discourses on extinction. This includes materials such as film, poetry, art, oral histories, language pedagogy materials, and other forms of knowledge transfer which are not necessarily consulted in mainstream scientific extinction research. Instead of supporting research that involves more 'primary research' carried out 'on' (or even 'with') Indigenous communities, it is important for SSHRC and extinction researchers to engage with existing work by Indigenous thinkers, and to acknowledge that this work may take a plurality of forms that are currently not incorporated into euro-western extinction scholarship.

Another key implication of the research is that within Indigenous knowledge systems, what Western science calls 'extinction', and indeed, the broader category of 'ecology' cannot be understood in isolation from the social, political, legal, economic and spiritual context of a community. This includes a community's history, intergenerational relations and specific relations between humans and other beings.

Our work also reveals that there is a need to treat Indigenous knowledge systems as complex wholes, replete with their own socio-ethical frameworks for mediating human-environmental and human/nonhuman relations. From a legal-governance perspective, the Canadian government must consider the nation-to-nation relationship (RCAP 1996) and, building on the Truth and Reconciliation Commission's Call to Action 45 (TRC 2015), must acknowledge Indigenous legal orders. Approaching extinction, co-management, and/or TEK issues from this perspective requires that the government and policymakers can no longer assume that euro-western legal frameworks supercede Indigenous legal orders. Euro-western property, resource, and wildlife law cannot be the overarching framework applied to governance of Indigenous environmental and co-management concerns (including questions around resource extraction on Indigenous lands). Instead, our work reveals that a robust nation-to-nation relationship, one which acknowledges and interlocutes thoughtfully and respectfully with Indigenous legal-ethical, ontological, philosophical, and cosmological praxis, is necessary in order to unsettle ongoing colonial dispossession and erasure of plural Indigenous knowledge systems in Canada. In other words, we must pluralize our narratives of extinction in Canada, and work from a reciprocal and diplomatic place that acknowledges that Indigenous people's legal-ethical traditions and philosophies are as worthy and necessary as those taught through euro-western paradigms.

Here, we turn to the scholarship of Cameroonian philosopher Achille Mbembe for guidance. Mbembe (2015) argues for a 'pluriversity' in lieu of the conventional western 'university' model through which most of us teach, research, think, and labour. Mbembe articulates a powerful need for oppressed and marginalized communities -- particularly those nations and societies colonized by European nations -- to manifest and mobilize forms of pedagogy and scholarship which provincialize the supposedly 'universal' western knowledge canon. Specifically, Mbembe (2015: 19) articulates:

"A pluriversity is not merely the extension throughout the world of a Eurocentric model presumed to be universal and now being reproduced almost everywhere thanks to commercial internationalism.

By pluriversity, many understand a process of knowledge production that is open to epistemic diversity. It is a process that does not necessarily abandon the notion of universal knowledge for humanity, but which embraces it via a horizontal strategy of openness to dialogue among different epistemic traditions.

To decolonize the university is therefore to reform it with the aim of creating a less provincial and more open critical cosmopolitan pluriversalism – a task that involves the radical re-founding of our ways of thinking and a transcendence of our disciplinary divisions."

In thinking through Mbembe's notion of the pluriversity, we must also attend to how and where knowledge of 'extinction' is produced in Canada, and to what ends. A study of Indigenous

knowledge, ontologies, epistemologies of extinction cannot be disentangled from the euro-american imposition of the notion of extinction upon Indigenous peoples themselves. The logics of dispossession and erasure (Wolfe 1999) that drive settler-colonization were normalized through the logics of ‘vanishing’ or ‘extinction’ in euro-american political discourse of the 19th and 20th centuries. As we argue in this report, these naturalized, euphemistic forms of ‘vanishing’ are still enacted upon both human and more-than-human kin in the context of the Canadian nation-state and its imaginaries.

An implicit facet of the contemporary discourse on extinction therefore is that, at one time, euro-american actors believed that Indigenous peoples were at risk of ‘extinction’. This notion of the extinction of peoples/cultures drove a great deal of 19th century and early 20th century ‘salvage ethnography’, a anthropological theoretical approach often associated with ethnographer Franz Boas (Calhoun 2002: 46). This ethnographic approach sought to capture the stories, language, art, and praxis of so-called ‘vanishing’ tribes around the globe (Calhoun 2002: 46). This notion of supposedly vanishing Indigenous people persists in contemporary understandings of ‘extinct’ Indigenous nations such as the Beothuk (Newfoundland and Labrador Heritage Web Site 2017) in Newfoundland and in still-celebrated popular imaginaries such as ‘The Last of the Mohicans’, an 1826 novel by James Fennimore Cooper. These imaginaries of the vanishing/extinct Indigenous person/tribe are deeply imbricated in the settler-colonial project of dispossession and erasure of Indigenous peoples and plural Indigenous knowledge systems. An extinct people no longer have claims to lands, nor do they have laws which must be respected by the Canadian nation-state and its institutions.

The inevitability of Indigenous ‘extinction’ was and is mobilized in ways that obscure the colonial causes for massive disruption and displacement of Indigenous nations, societies, laws, and cosmologies. The salvage ethnography of Franz Boas focused on the efforts of salvaging the ‘mythology’, language, tools, and art of nations of Indigenous peoples feared to be disappearing due to the encroachment of ‘modern’ civilization (Calhoun 2002: 46):

“Much of Boas’ agenda was driven by the urgency of documenting Indian cultures that were being rapidly driven to extinction. This became known as “salvage ethnography” -- the attempt to reconstruct the traditions and practices of cultures that had already suffered radical losses of integrity.”

There is much to unpack here regarding prior euro-american academic beliefs about Indigenous nations and societies as ‘vanishing’ entities. What is pertinent for the purposes of this report is that, perhaps owing in part to these 19th and 20th century anthropological queries of Indigenous nations and societies that were believed to be going extinct, the Canadian government can and does declare certain Indigenous nations extinct. This lends the social-scientific notion of extinction highly problematic legal-governance weight. In British Columbia, the Sinixt Nation, whose territory encompasses large mountain lakes and valleys throughout the Kootenays and down towards the US-Canadian border, were officially declared ‘extinct’ for the purposes of the Indian Act in 1956 (Nieoczym 2017). The declaration of extinction has long-reaching ramifications for Sinixt peoples living in Canada, including the fact that their hunting rights are not recognized in their traditional territories in the Arrow Lakes and Slocan Valley regions of British Columbia (Nieoczym 2017). In fact, a 2017 BC provincial court ruling asserts that the Sinixt are not extinct, paving the way for the Sinixt

nation to re-assert formal Aboriginal rights in British Columbia, sixty years after the nation was stripped of these rights through the rubric of 'extinction' (Nieoczym 2017). To read and think about extinction alongside plural Indigenous knowledge systems is therefore a radical act: it is to re-story these deliberate erasures and vanishings of Indigenous language, laws, and livelihoods from the euro-western academic canon and insistently re-centre fleshy and visceral Indigenous narratives contra those socio-scientific academic framings which once positioned, and in some cases still position, Indigenous peoples as *disappearing*.

It is not only Indigenous nations which are declared extinct. One of the most pervasive ways that extinction is still levied against Indigenous peoples in Canada and the USA today is through notions of Indigenous *language* extinction. What our study of the perspectives of plural Indigenous knowledge systems on the notion of extinction teaches us is that euro-western concepts of extinction which frame extinction as a permanent, terminal condition are deeply challenged by Indigenous refusals (Simpson 2014) to accept extinction. Miami language scholar Wesley Leonard (2011)<sup>1</sup> demonstrates this refusal in relation to his own community's language praxis, a language which is largely considered 'extinct' (2011: 135) by linguists. However, as Leonard (2011: 137) explains:

"in addition to its recent use in specific "unexpected" places—such as in contemporary songs, games, and computer-mediated communication—the "extinction" of Miami makes its use anomalous even in contexts that the dominant discourse otherwise recognizes as legitimately Indian, such as traditional ceremonies. Its active reclamation from historical documentation after a thirty-year period of dormancy reflects a scenario that most would acknowledge is technically possible, but that is anomalous because extinct means forever. Many people, experts and nonexperts alike, have not caught up to the reality that Miamis speak myaamia today, and moreover, that the ways in which we do so are, upon commonsense consideration, arguably expected in that they reflect the contemporary circumstances of being Miami."

In other words, extinction can be subverted and refracted by Indigenous peoples in order to transcend the categorization of a people, language, collective, or beings as 'vanished'. Through this disruption, Indigenous peoples and their nonhuman kin can assert instead a relational and visceral commitment to reviving proper relationships, protocols, and responsibilities required to bring languages into contemporary community action.

As is explained in this Knowledge Synthesis report, there is a link between colonial state efforts to 'clear the Plains' (Daschuk 2013) in the 19th century and declines in more-than-human-kin that Plains Indigenous nations relied upon, such as bison. Scholars argue that starvation policies were employed by the Canadian government, policies which effectively aimed to dispossess Indigenous nations on the prairies (see: Innes (2013), cited in McCallum 2017). Efforts to eradicate more-than-human life were, arguably, efforts to erase and dispossess Indigenous peoples in order to assert euro-western laws and ontologies. The inter-relation of deliberate or complicit state disappearance (extinction) of more-than-human kin and the dispossession of Indigenous nations must therefore be addressed in research on extinction in Canada.

---

<sup>1</sup> A special thank you to Chickasaw linguistic anthropologist Jenny L. Davis for sharing this resource with us.

One of the important outcomes of this Knowledge Synthesis report is the opportunity to unsettle the supposed universality of human-environmental, legal-ethical, and scientific/academic understandings of extinction in Canada in the 21st century. This report demonstrates that plural Indigenous knowledge systems approach questions of relationality, reciprocity, and narrative between human and nonhuman agents in the past, present, and future in ways that subvert or challenge western conceptions of 'extinction' and 'existence'. In order to rectify the ongoing legacy of efforts to render Indigenous knowledges and peoples 'extinct', it is vital to turn to and tend to reciprocal processes which re-centre Indigenous legal-ethical and philosophical approaches to the scientific and legal paradigms of 'extinction'.

## **Approach**

### Audra<sup>2</sup>

According to Anishinaabe scholar Kathy Absolon (2007), reflective self-location is integral to 'wholistic' research that engages respectfully with Indigenous peoples and knowledges. For Mitchell, as the only non-Indigenous member of the research team, the methodological approach was driven by a process of engaging with stolen land that she occupies as a white settler and learning to live according to the knowledges of the peoples who have traditionally cared for this land. Having recently moved to Haudenosaunee, Anishinaabe and Wendat lands (Toronto), and working on Haudenosaunee, Anishinaabe and Neutral territories (Waterloo) Mitchell's methodology focused on learning the appropriate laws that governed these lands and that would allow her to live well within them. For instance, Toronto and the area surrounding it is subject to the Dish With One Spoon Wampum Belt Covenant, a peace treaty made between the league of five nations (the Haudenosaunee or Iroquois Confederacy) and the Anishinaabeg confederacy before the arrival of European colonizers. The Wampum affirms a commitment between these nations to care for the Great Lakes and the hunting territories surrounding them, in particular to ensure that no one took more animals than the land could replenish. Importantly, learning about the basic laws of these lands involved not only researching them in written form, or attending talks, lectures and Indigenous-led actions oriented towards them, but also engaging with the land. This involved spending time on the shores of Nigaani-Gichigami/Lake Ontario; water walking around Lake Waawaasaegaming; gathering medicinal plants; participating in ceremony when invited; and helping Indigenous friends to hold space for youth in midtown Tkaronto. This time spent on the land enables not only experiential learning but also the maintenance of good relations.

Western knowledges - particularly in the sciences and social sciences - tend to separate 'data' or 'information' into silos, whereas many Indigenous knowledge systems affirm their interlinked and holistic nature. To address this problem, Mitchell attended to a number of themes in her research, including: stories about the relationships between humans, other animals, Ancestors, land, water,

---

<sup>2</sup> In the spirit of multi-vocality, we clearly indicate who authored specific sections of the report. This enables the public to clearly evaluate the intellectual labour of each contributor to the report, and also keeps with practices of accountability and transparency regarding where and with whom knowledge for this work is generated. As collaborators and co-thinkers on this project, we work both in multi-vocal and co-thinking modes. Some efforts are collaborative and some efforts are clearly denoted as produced by specific contributors.

and other beings; colonial histories of the great Lakes area; and practical works on animal and plant knowledge in relation to food and medicine. Although there is a great deal of formally-published work on these themes by Haudenosaunee and Anishinaabeg authors, the sources Mitchell drew upon also included narratives or descriptions of stories, songs, poems, dreams, and text and images oriented towards teaching children. Moreover, although the scope of this grant is limited to Indigenous knowledges within Canada, Anishinaabeg and Haudenosaunee knowledges are not limited by political borders. For this reason, Mitchell engaged with thinkers from these traditions located in both Canada and the United States, and with other Indigenous traditions that influenced the thinkers whose work she engaged. Overall, Mitchell's research approach was inspired by strategies that resist (re)colonization, in particular biskibiyaang approaches (Geniusz 2009; Simpson 2011), which involve reclaiming knowledges that have been extracted through colonial research processes and returning them to the broader, living, communal structures in which they are rooted. As a settler scholar, Mitchell is not able to engage in the aspects of biskibiyaang that involve personal and community-based Indigenous resurgence. However, she aimed to respect the goal of biskibiyaang by identifying knowledge that has been extracted or fragmented, and re-locating these knowledges as much as possible within their broader community contexts, but also within the histories of settler colonialism that contributed to their fragmentation.

It is also important to recognize that although the stories that Mitchell worked with were published in written form, and therefore in the public domain - and circulating within the sphere of Western knowledge production - they are alive, and command respect, including the execution of appropriate protocols and/or ceremonies. It is interesting to note that the Knowledge Synthesis Grant scheme is restricted to the collection of 'secondary sources' (that is, work published in academic format) and therefore, in accordance with most Western research protocols, ethics approval is not required. However, this approach reinstates colonial modes of knowledge-collection in which written (or otherwise-gathered) knowledge is treated as dead, or as lacking ethical status. To honour and respect these stories, it may be necessary to generate systems of ethics approval that account for the necessary protocols and ceremonies that attend engaging with stories and other aspects of Indigenous knowledge systems.

### Zoe

For my work examining the relationships between Indigenous ontologies, epistemologies, knowledge systems, and discourses of extinction on the the prairies, I focused on narratives centred on human-animal relations in the province I grew up in, Alberta. I narrowed my area of inquiry to this region, and its immediately adjacent regions, because I am intimately familiar with wildlife conservation, environmental, and policy discourses in the province. The material I consulted is largely Métis-centric. I made this decision because I am able to speak ethically and accountably to the relationships between Métis land-based knowledge, history, and relationships in ways that I cannot speak to other Indigenous epistemologies and ontologies. However, I also made an effort to thoughtfully engage published materials from Cree and Blackfoot knowledge-keepers, in order to speak to the plurality of knowledge systems, and the inter-linked labour and relationality, which animate prairie landscapes, waterscapes, geographies, and territories.

An important aspect of my work on this project was an ongoing, iterative writing process through which I posted reflections on Indigenous knowledge, academe, Indigenous legal-traditions, and

decolonizing academia on my blog (<https://zoestodd.com>) and also presented public talks on my thinking on these themes at various public fora. This was a way to produce and share my philosophical work with the public so as to maintain an ethic of reciprocity throughout my ongoing engagement with these issues as a Métis scholar. This also was a generative space to work through difficult ideas and to strengthen my contributions to this project while also ensuring that I was working reciprocally in a public intellection fashion.

## Results

### Audra

#### ***Treaties, protocols and laws***

*A long time ago, all the roses died. Many animals depended on the roses for food, and they tried to find out whose fault it was. The waawaashkeshiwag (deer) said it was the bineshiinyag (little birds), while the bineshiinyag said that although they ate a few flowers, it was really the aamoog, the bees, who were responsible, because they ate the pollen. The aamoog said they tasted some pollen, but the butterflies left their eggs on the roses, where their caterpillars hatched and ate all the leaves. The memenwag (butterflies) said it was the waawaashkeshiwag who ate the stems, who then replied that was Waaboz (rabbit) who ate and dug the roots, so they all grabbed his tail and broke it off, and pulled on his ears and back legs, lengthening them and threatening to kill them until Mukwa (the bear) stopped them. Then, the Manidoo appeared and asked what the problem was, and when the animals told him, he said "killing the Waaboz will not bring back the roses. You all noticed that the roses were in trouble and you all decided to take your own shares even if it meant killing the roses forever. There is no honour in this. This is not keeping creation in balance as you were told to do in the Beginning Time". The Manidoo brought the roses back, but gave them protection (thorns) to stop the animals from eating them up entirely; he left the Waaboz as he was to remind them of the danger of forgetting the balance (Paraphrased from Geniusz 2015, 14)*

Stories like ‘the year the roses died’ (Anishinaabeg) offer clear theories about why and how extinction happens: it occurs when humans and other beings fail to uphold their responsibilities to ensure the balance and ongoing co-existence of all other beings. In some cases, this involves the direct breaking of laws. For example, the Anishinaabe thinkers John Borrow (2010) and Leanne Betasamosake Simpson (2014), both share a story in which the deer choose to withdraw from their relationships with humans. They do so because the humans in question have failed to treat them respectfully and have wasted their bodies by hunting more than what they need, renegeing on a treaty.

Indeed, within many Indigenous knowledge systems, the distinctly societal relationship between humans and other beings is based on specific legal orders, treaties and formal agreements (Watts 2016). The purpose of these treaties is not primarily to demarcate possessions or rights (which is the case in most colonial treaties), but rather to ensure the co-nourishment of beings and mino bimaadiziwin – an Anishinaabemowin word for ‘good life’. As Seneca scholar John Mohawk (2010, 9-10) explains, ‘real people’ who are respectful of nature know that if the power to sustain life is destroyed, then “ the processes of life on this planet must be weakened, and if the spirits of enough things that produce Life are destroyed, all Life as we know it must cease" (Mohawk 2010, 9-10).

Importantly, these treaties must not only be honoured but also upheld and renewed. For instance, Simpson (2011, 109-10) describes the annual meetings of her Michi Saagig Nishnaabeg people with the fish clans at Mnjikkanning. Here, they gathered to talk, renew life and to tend treaty relationships – including restrictions on when and where people could fish. Treaties and agreements can also be broken indirectly. As Anishinaabe writer Renée Elizabeth Mzinegiizhigo-kwe Bédard (2008, 98) contends, the destruction of relationships or the consumption of sources of sustenance can “break...relationships to other parts of Creation”.

From this perspective, what Western science calls ‘extinction’ occurs when treaties, protocols and other negotiated agreements between groups of humans and other beings are broken. This explanatory theory jibes with some elements of Western scientific accounts – for instance, the ecological idea of balance and interaction amongst different life forms and other elements of ecosystems. However, it is distinct from Western scientific approaches in that it understands these relationships in explicitly moral, ethical, legal and political terms. This suggests that scientific approaches that focus only on scientific management of ecosystems by humans, and that ignore these other dimensions, are unlikely to be effective.

Practices of adherence to and renewal of treaties or other agreements can take place in ceremonial forms and activities related to everyday subsistence (for instance, eating, growing food, gathering plants or hunting), and the two should not be treated as separate. Crucially, these means of addressing extinction are preventative and continuous, rather than reactionary or post hoc (i.e. following an ecological ‘catastrophy’).

Amongst the most important of these practices is that of thanksgiving, or expressions of gratitude to other beings. This is exemplified by the Haudenosaunee Thanksgiving Address, a collective acknowledgement and recognition of gratitude offered to all beings for creating the conditions that support ongoing life (Kimmerer 2012; Alfred 2009; Mohawk 2010; Leduc 2016). Taiaiake Alfred (2009)’s version of this address reflect its importance in creating collective intentions to uphold treaties and protocols with other beings, and to ensure the continuity of life:

“ we gather together and see that the cycle of life continues...with our minds gathered together, we give thanks and look forward to seeing Plant Life continue with all its diversity for generations to come. Now our minds are one...since the beginning of time, the grains, vegetables, beans and berries have helped the people survive. We honour all o f the Food Plants together as one and send them greetings and thanks. Now our minds are one...we gather our minds together to send greetings and thanks to all the animal life in the world. We honour their wisdom and their strength. Animals have many lessons to teach us human beings, and they offer themselves to us as sustenance. We coexist with them where we live and in the forests and mountains. We are so glad that the Animals are still here, and we hope that it will always be so. Now our minds are one...” (Alfred 2009, 14-16)

Performing this daily ceremony not only affirms and upholds the social, legal and ethical structures that Haudenosaunee people share with other beings; it is also spiritually necessary in order to ensure the durability of these structures. Brian Rice (2013, 309-10) relays the warning of the Haudenosaunee prophet Skanyiatar:io:

"if we stop giving thanks to the Creator for the things he has given us, the clouds will be still. The spirit of the waters of the springs and brooks will no longer look after them for our benefit. The sun will go dim and then darkness will cover the earth. A great smoke will arise in the air and cover all the earth. Then the poisonous monsters created by Sawiskera will appear".

Potawatomi scholar Robin Wall Kimmerer (2013), reflecting on the Haudenosaunee Thanksgiving address, also notes that performing the Thanksgiving Address makes it possible to 'check in' with other beings:

"thanksgiving also reminds us of how the world was meant to be in its original condition. We can compare the roll call of gifts bestowed on us with their current status. Are all the pieces in the ecosystem still here and doing their duty? Is the water still supporting life? Are all those birds still healthy? When we can no longer see the stars because of light pollution, the words of Thanksgiving should awaken us to our loss and spur us to restorative action. Like the stars themselves, the words can guide us back home" (Kimmerer 2013, 114)

Kimmerer also focuses on the 'Honourable Harvest', a usually unspoken set of rules that structure her community's approach to gathering food. The Honourable Harvest is based on a number of principles:

"Know the ways of the ones who take care of you, so that you may take care of them; introduce yourself. Be accountable as the one who comes asking for life. Ask permission before taking. Abide by the answer. Never take the first. Never take the last. Take only what you need. Take only that which is given. Never take more than half. Leave some for others. Harvest in a way that minimizes harm. Use it respectfully. Never waste what you have taken. Share. Give thanks for what you have been given. Give a gift, in reciprocity for what you have taken. Sustain the ones who sustain you and the earth will last forever" (Kimmerer 2013, 183).

Each of these principles ensures that the practice of harvesting and eating is woven into a process of reciprocal gift-giving that ensures the co-existence of each being. Importantly, the ethos of the Honourable Harvest is not simply a set of prohibitions; it also offers positive prescriptions: "*Do* eat food that is honourably harvested, and celebrate every mouthful. *Do* use technologies that minimize harm; *do* take what is given" (Kimmerer 2013, 187). Indeed, upholding protocols and agreements involves eating plants and animals as well as restraining consumption: "healers know that plants will disappear if one takes too much, and also if one does not use them at all" (Simpson 2011, 105).

Another important example of everyday ceremonial practice is the offering of *asemaa* (tobacco) when making a request – for instance, before asking an Elder for a story, a healer for medicine, or a plant permission to harvest it. The late Anishinaabe Elder Keewaydinoquay (quoted in Geniusz 2009 58-61) states that

"whenever it seems to humankind that it is necessary to change a balance for some desirable end, which the human believes is a good one, then we need to speak to these other beings... [we should] never take a plant for healing without first talking to the species

and then to the particular plants, asking for their permission, and asking that they please give healing... then you promise that you won't take so much of it that its grandchildren won't live after it."

The practice of offering asemaa (and sometimes songs or even communal feasts), makes it possible to achieve a consensual relationship with the plant, mindful of its continual co-flourishing. Crucially, this practice does not give a person license to take from the plant: the plant can always refuse permission. This may occur in subtle ways (for instance, the plant may physically resist collection), or its healing qualities may fail if the agreement with the plant is not honoured. By maintaining this practice, people can uphold their responsibilities to the ongoing survival of plants and other beings. According to a story shared by her grandmother, Elder Lena (quoted in Kimmerer 2013, 157) states that "if we use a plant respectfully it will stay with us and flourish. If we ignore it, it will go away. If you don't give it respect it will leave us" (Kimmerer 2013, 157). So, the upholding of protocols is not a mere act of politeness – it directly affects the survival of both parties.

Daily practices of subsistence on specific lands also help to uphold agreements between humans and other beings. Potawatomi scholar Kyle Powys Whyte points out that Western conservationists' gazes are often trained on 'exotic' species distributed across wide spaces (for instance, elephants and polar bears) without little attention to their relationships with specific human communities and lands. In contrast, he argues, Indigenous conservationists tend to focus on "sustaining particular plants and animals whose lives are entangled locally – and often over many generations – in ecological, cultural and economic relationships with human societies and other nonhuman species" (Whyte 2016, 2). This also involves growing, hunting and harvesting foods that contribute to the co-flourishing of that place. For instance, within Haudenosaunee knowledge, the 'three sisters' – squash, beans and corn – form the basis of the traditional diet. They offer an ethic for coexistence, expressed in a particular mode of farming: when these three plants are grown together, each aids the others' growth and flourishing by sharing nutrients, providing shade, or offering a stalk on which vines can climb. Importantly, it is also through everyday processes of hunting, fishing and gathering that the withdrawal of plants or animals is often detected. For instance, Anishinaabeg writer Lianne Leddy (2013, 127-8) quotes an Elder named Junior in her community of Serpent River First Nation:

"All our fish are gone. Our rivers are never ever going to come back to what they was. Never. I mean, I used to be able to go fishing down the Serpent River down by the highway over there and catch all kinds of fish. Every time you'd put the line in the water. It's nothing now".

Anishinaabe and Haudenosaunee responses to quickening patterns of extinction often include ceremony and the use of traditional technologies to continue subsistence practices. For instance, Whyte (2016) describes the restoration of Nmé (lake sturgeon) in the Great Lakes by the Little River Band of Ottawa Indians,<sup>3</sup> which involved a pipe ceremony, feast, education about Ottawa traditions and the ceremonial release of young Nmé reared in streamside facilities, all focused on the sovereignty of the band (Whyte 2016, 5). In this mode of response to the threat of extinction caused by overfishing and industrial pollution, there is a clear effort to restore and uphold everyday, ceremonial relations with sturgeon in the context of Indigenous sovereignty.

---

<sup>3</sup> Please note that the term 'Indians' is the legal and formal term used to describe Indigenous peoples in the United States.

## Cycles, return and resurgence

Whereas Western science frames 'extinction' as a unique, irreversible event within a linear model of time, for many Indigenous thinkers it is part of a cycle of cleansing through which the Earth self-renews. For instance, Sheridan and Longboat (2006) compare the recovery of the plants surrounding the Sudbury nickel smelters in the 1970s to the defoliation of the region during the period of the Wisconsin Glacier. According to these authors, lichen first emerged on the pre-Cambrian rocks, followed by blueberries which 'mothered' white pines back into existence. In this way, life forms 'shape-shift' in order to restore one another. Stories like this one demonstrate deep-seated experience of periods of widespread extirpations and ecological collapse embodied in the land and orally-transmitted memory.

Many stories of destruction and renewal take place within a cosmological register. For instance, Mohawk's (2010) work is deeply influenced by a story shared by Hopi Elder Thomas Banyacya. This story speaks of previous worlds that were destroyed because the people wanted more and more material goods and, in seeking them, gave up their relationships with nature and the sacred. This caused the spirits of nature, disgusted by this behaviour, to bring about a great purification involving widespread fires and flooding. This same pattern repeated three times, producing today's world, the fourth. For Mohawk, this story encapsulates the idea that current ecological collapse – potentially including not only climate change but also extinction – are part of the cycles of earth's purification. Similarly, Anishinaabe scholar and activist Winona Laduke (1994) draws on an Eastern Cree and Innu story about a great flood that was sent by Creator when the people, animals and all of Creation were misbehaving. After this flood, there was nothing left except for a few animals and the First Person Wesakejack, who remade the earth with some mud collected by the muskrat.<sup>4</sup> From this perspective, global patterns of extinction, along with climate change, large-scale toxification and other ecological are not the irreversible end to life itself (although perhaps for some life forms), but rather the prelude to planetary renewal. This does not relieve Western society of its culpability in driving patterns of extinction, or the responsibility to address it; on the contrary, these stories suggest earth repels the forms of social, political and economic order that underpin it.

A similar theory is central to Haudenosaunee cosmology, and is reflected in particular in stories about the brothers Sapling and Flint, the grandsons of Sky Woman (the first human). Sky Woman's daughter, Budding Flowers, married a Great Turtle and became pregnant with Sapling and Flint, who killed her by emerging into the world through her armpit. According to Tim Leduc (2016, 193), "Flint was born with a dark power that his grandmother recognized when he showed her an arrow and said, 'I can stop anything from growing or living and bring darkness with this weapon'". However, Sapling was born with immense creative potential, capable of converting his brother's acts of destruction into bursts of renewal. Within Haudenosaunee cosmology, planetary ruptures such as extinction are the work of Flint and his grandmother, Sky Woman, who constantly attempt to undo the creative impulse of Sapling. From this perspective, extinction is not linear but rather decidedly cyclical and, provided that cosmological order is restored, may be followed by periods of renewal. For Sheridan and Longboat (2006), this dialectic is explained by the idea that the beginning, or origin,

---

<sup>4</sup> This story has resonances with Haudenosaunee creation stories, in which, after the fall of Sky Woman from Sky world, Muskrat dives to the bottom of the primordial water to gather mud from which Turtle Island is created

is always there and never leaves, making it possible for earth to 'return forever' in the alternating powers of Sapling and Flint.

Renewal and restoration play important roles in Haudenosaunee and Anishinaabeg stories of extinction and other forms of large-scale ecological destruction "put dystopia in perspective as just a brief, yet highly disruptive, historical moment for us" (Whyte 2016, 3). In contrast to popular Western narratives that frame extinction in apocalyptic terms and seek to control it, this approach emphasizes practices that support resurgence – of Indigenous peoples and all of their relations. For Kimmerer (2013, 328), this means more than simply grieving for lost relations or halting destructive behaviours – there needs to be an effort to "once again enter into positive, creative relationship with the more-than-human world, meeting responsibilities that are simultaneously material and spiritual". Echoing this idea, Simpson promotes an ethos oriented towards the production of more life – both Indigenous and more-than-human. She contends that:

"Colonialism has only created a loss of life in terms of extinct and endangered species of animals and plants, and a drastic and traumatic decline in the quality of life for the fraction of Nishnaabeg that survived the original conquest...Resurgence movements then, must be movements to create more life, propel life, nurture life, motion, presence and emergence" (Simpson 2011, 143)

Indeed, much of Anishinaabe and Haudenosaunee thought related to extinction is deeply future-oriented. For instance, the upholding of protocols discussed above is closely related to care for future generations not only of humans, but also of the plants or animals that one is gathering. As Haudenosaunee author Susan M. Hill avers,

"the Original Instructions outline that our primary responsibility is not for the survival of the people currently alive but for the continuation of all life so that the future generations will be adequately provided with all they need to survive...the responsibility to the future is the source of the land and environmental ethics " (Hill 2008, 29)

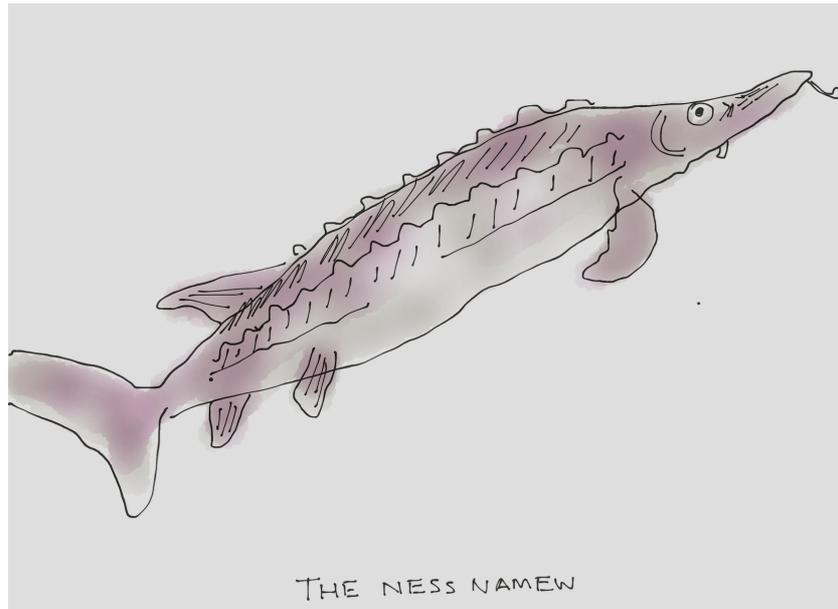
The First Person Sky Woman models this ethic: when she fell to what would become the earth, she was pregnant, and her work to establish Turtle Island was undertaken not only to ensure flourishing in her time, but also for many further generations (Kimmerer 2013). For Mohawk (2010), the relationship with future generations solidifies one's ties to land and place; he points out that human bodies were once unborn, and are composed of matter that was once part of soil, rocks, ocean, plants and other animals. From this perspective, care or concern for one's flourishing must extend to include these more-than-human and not-yet-born beings. For this reason, Whyte (2016) counts the ability to plan for sovereign futures as one of the most important aspects of Indigenous self-governance in the face of large-scale ecological change. These stories, and the ethics they embody, offer a powerful mode of response to extinction: resurgence, the visioning of multiple futures, deriving wisdom from stories of previous destruction, and attention to the cycles and alternations of creativity and destruction.

## Results

### Zoe

I present my findings below, organized around several key species through which I generated my understandings of Métis and Métis-Cree relationships to extinction and the disappearance and absencing of more-than-human beings from prairie life and worlds. These key species/beings around whom I generate thinking for this report are *namewak* (sturgeon), *paskwa mostos* (bison), and dinosaurs.

#### **namêw (sturgeon)**



**(photo credit: Zoe Todd, digital illustration, 2017)**

Lake sturgeon (Plains Cree name: *namêw*) (Latin name: *Acipenser fulvescens*) is considered a threatened species in Alberta (Government of Alberta 2014: 1). Sturgeon, however, is deeply present in the toponymy of Alberta and Saskatchewan, which is evident through place-names that acknowledge the prior abundance and importance of this fish species to prairie Indigenous lives and livelihoods. For example, in the Edmonton region, numerous place-names reference this fish, both in English and *nehiyawewin* (Plains Cree, Y dialect) derived terms. Northwest of Edmonton, the town of Namao references lake sturgeon. The adjacent Canadian Forces Base Namao also incorporates this once-abundant fish into its nomenclature. Sturgeon County is the name for the region that incorporates the city of St. Albert, which was an important Métis settlement in the region in the 19th century (Iseke-Barnes 2009). In northern Alberta the town of Sturgeon Lake and nearby Sturgeon Lake Indian Reserve 154 acknowledge lake sturgeon.

*Namêw* (sturgeon) are deeply tied to *wîsahkîcâck*, Elder Brother, who is an important figure in *nehiyaw* (Cree) cosmology, law, and philosophy. *Wîsahkîcâck* and his stories are integral to Plains Cree law, as Plains Cree scholar Robert Alexander Innes (2013: 8) explains in his work on kinship relations and law in his home community of Cowessess First Nation in Saskatchewan:

“For Cowessess people, these values are embedded in the stories of Elder Brother. *Wîsahêcâhk* and Nanubush, in Cree and Ojibwe/Saulteaux oral stories respectively, are also

known by the kinship term Elder Brother. The Elder Brother stories as well as others are told in the wintertime by skilled storytellers. Storytellers were valued by the way they delivered a story and how they were able to adapt or provide a twist and still maintain the story's integrity. Elder Brother stories contain spiritual beings, and though there is some debate among some scholars about whether Elder Brother is a spirit being...this is not of great concern to Cree or Ojibwe people. These stories fall within two main categories -- *âtayôhkêwina* and *âcimowina* --which contain many stories of different spirit beings...The Elder Brother stories along with other stories, form the basis of the Law of the People that guided people's social interaction with all of creation, including kinship practices."

Cree language scholar Solomon Ratt shares a telling of the first story of *wîsahkîcâck* story cycle: the 'Rolling Head' story (Ratt 2016).<sup>5</sup> In this story, we are introduced to how the sturgeon came to be. Sturgeon is, in fact, the transformed entity that results when *wîsahkîcâck*'s mother, who has turned into a Rolling Head who pursues *wîsahkîcâck* and his brother across, is stopped through the efforts of *wîsahkîcâck*, his brother, and the teachings and materials imparted by their father:

"As soon as *wîsahkîcâck* saw Rolling Head in the water he shot it with an arrow and pronounced:

"From this day forth you shall be a 'namêw,' sturgeon, providing food for the people to come.'" (Ratt 2016)

When sturgeon/namew is related so deeply to the work and actions of *wîsahkîcâck* himself, who imparted upon sturgeon the responsibility of feeding people, the question of the loss of sturgeon in prairie watersheds through over-fishing and environmental impacts accruing from the fur trade and other colonial machinations takes on a legal-ethical and philosophical/metaphysical weight.

According to fisheries biologist Owen Watkins, lake sturgeon were considered largely extirpated in the North Saskatchewan watershed in Edmonton in the mid-twentieth century:

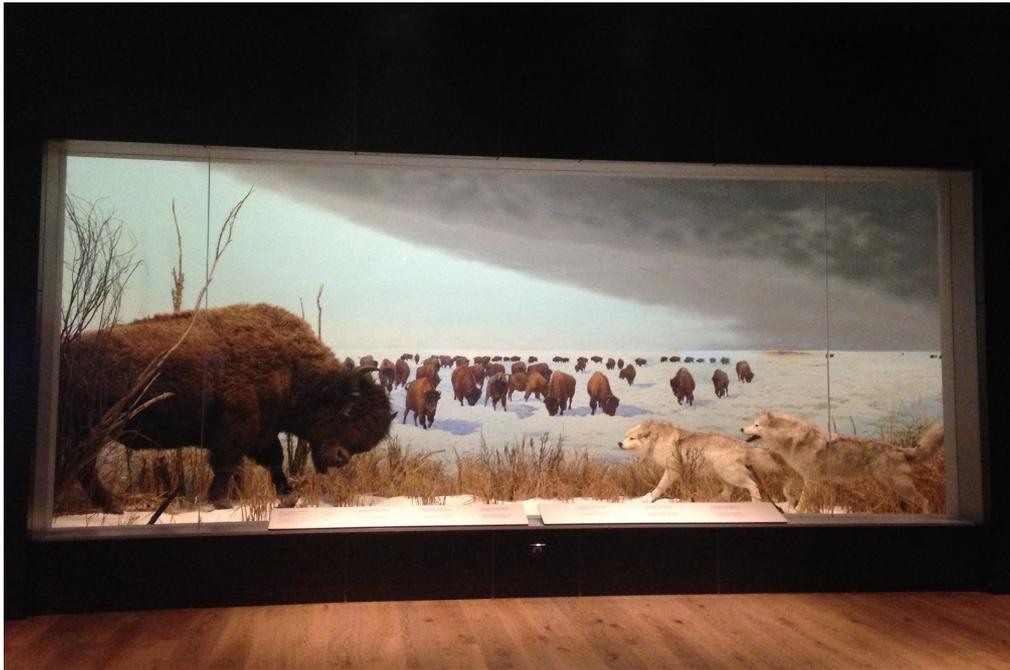
"In the 1940s, the population was over harvested and in the 1950s the city of Edmonton was a major contributor of wastewater to the North Saskatchewan River and nutrient levels reached pretty much the highest records back then," Watkins said in an interview with CBC Radio's Edmonton AM." (Snowdon 2016)

This regional loss of sturgeon, and indeed other prairie more-than-human beings, must be understood beyond the euro-western extinction and wildlife conservation paradigms which accord to species solely ecological-scientific (and occasionally, economic) weight. To lose sturgeon in the prairies is to also lose an agent whose responsibilities were not only afforded by *wîsahkîcâck* but which are also deeply interwoven with Cree legal traditions. Extinction, extirpation, and species loss matter therefore from not only an ecological standpoint but also from the perspective of Indigenous legal traditions which incorporate more-than-human beings in their conceptualizations of human and more-than-human ethics, kinship, responsibility, and obligations.

---

<sup>5</sup> Gratitude to Chelsea Vowel for directing me to this story cycle.

**paskwâmostos (bison)**



**(photo credit: Zoe Todd. Taken at the Museum of Nature, Ottawa, November 2016)**

There is extensive research on the deliberate erasure of plains bison (*Bison bison bison*), or buffalo, as a means through which to dispossess Indigenous peoples on the Plains in the USA and Canada (Daschuk 2013; Dumont 2015; Hubbard 2013). In her short film 'Buffalo Calling', Indigenous filmmaker and scholar Tasha Hubbard explores the narrative of the last buffalo herd in Canada -- telling a story that spans from the 1850s to today (Cines las Americas 2014). In the piece, she explicitly chooses to allow the bison to narrate the story through their own vocalizations (ibid), a move which Hubbard articulates is necessary in order to centre the voice of the bison themselves.

Métis poet Marilyn Dumont explores the intrinsic relationship between Métis life and livelihoods and the bison they shared time and space with in the 18th and 19th centuries on the Canadian Plains. In *Les Animaux*, a poem in her collection *The Pemmican Eaters*, Dumont (2015: 14-15) offers the following:

“gone, uncle they’re gone  
and something in us goes too following after  
les animaux, those who you “called” as if they were your brother  
les animaux, those who you called mon frère and herded with their great beards  
les animaux, the brothers that have left us the have moved to another plain,  
uncle, on the last hunt instead of seeing a moving sea of brown backs, a rippling  
ground  
now, you see only a few stumps feeding on grasses  
now, their great size is swallowed by the bigger prairie  
prairie that once teemed like it couldn’t hold all les animaux, their sound like distant thunder  
will never reach your ears again  
uncle, how sad that day when no one spoke of them  
as if speaking their name

could slice an arm from one's own body  
because they were you"

In Métis legal-ethical praxis we draw upon a nehiyaw Cree legal principle: wahkohtowin. Wahkohtowin is defined by Métis scholar Brenda MacDougall (2011: xxx) as:

"a worldview that privileged relatedness to land, people (living, ancestral and those to come), the spirit world, and creatures inhabiting the space. In short, this worldview, wahkootowin, is predicated upon a specific Aboriginal notion and definition of family as a broadly conceived sense of relatedness of all beings, human and non-human, living and dead, physical and spiritual"

As Dumont's work demonstrates, the bison of the Red River Métis homeland (and homeland of many other Indigenous nations on the Plains, including Anishinaabeg, neyihawak, Nakota, Dakota, Lakota, Saulteaux, Blackfoot, Dene and others) were more than mere sustenance to Métis hunters. Bison, known by their neyiyawewin (Plains Cree, y-dialect) name, paskwâmostos, were kin. Bison were brothers/freres who nourished Métis bodies and legal-ethical responsibilities to land, time, space, and other human/nonhuman kin. Despite facing complex colonial pressures in the 19th century, Hubbard's (2013) work so poignantly demonstrates that neither the bison nor their human kin were entirely removed or dispossessed from prairie worlds. Instead, Métis and other Indigenous nations who co-constitute life with bison continue to re-assert plural knowledge systems across the plains, insistently centring notions like wahkohtowin in subverting colonial paradigms which sought to vanish Indigenous prairie human and non-human kin alike.

### **Dinosaurs**

In a talk delivered at Congress of the Humanities in Calgary in 2016, Blackfoot philosopher Leroy Little Bear contextualizes Blackfoot cosmological perspectives on human-environmental relations, relationality, and extinction. In this talk, he shared the following story:

"We as humans live in a very narrow spectrum of ideal conditions. Those ideal conditions have to be there for us to exist. That's why it's very important to talk about ecology, the relationship. If those ideal conditions are not there, you and I are not going to last for very long. Just text Neanderthal. Ask the dinosaurs. What happened to them? We asked one of our elders 'why did those dinosaurs disappear?'. He thought about it for awhile and he said 'maybe they didn't do their ceremonies.'" – Leroy Little Bear, 2016

This talk, and specifically this story, is the entry-point which brought me into studies of extinction in relation to Métis philosophies and cosmology. In articulating his perspectives on Blackfoot cosmology and its insights on proper relations between humans and nonhumans through the great sweep of earthly existence, Little Bear taught me that I can and should return to Red River Métis narratives that underpin our very existence in the prairies. Specifically, his work encouraged me to turn to the Métis principle of wahkohtowin as a theoretical guide in thinking through Métis entanglements in the global extinction crisis. As one of several Indigenous nations deeply impacted by settler colonial efforts to eradicate bison on the Plains, we saw our legal-ethical structures challenged by the loss of bison-as-kin (Dumont 2015), as articulated above. However, in addition to keen and visceral experiences of recent losses of bison-kin, Red River Métis peoples also owe



worldview of my people through our stories, myths and legends that deal in one way or another with the interconnection between animals, land, language, and culture.

It seems that our relationships to animals first begins by simply recognizing them as alive. Inuit views on extinction can be gleaned from our connection to the land and animals. ᐃᓄᓄᓄᓄ (uumajuq) is the word for "animal" in Inuktun, which means "it is alive." Understanding animals as living beings offers us a glimpse into the Inuit worldview of their relationship with the Earth's natural elements: land (Nuna), water (Tagiu), and sky (Sila).

My Western scholarly training initially had me disappointed at the lack of Inuit literature on extinction. But entering my position as an Inuk in my home community allowed me to immerse myself into our oral history and to go beyond the strict focus on extinction, to discover a larger, holistic context in which Inuit respond to and build knowledge around the idea of extinction. That meant reconnecting with a spiritual world that had taken a back seat to the world of 'reason' and 'common sense' I was taught in formal education, whether up North or down South. I have had the opportunity to recollect, discover, and build upon what Elders have been trying to tell us — we, as the next generation of Inuit, are decision makers, but we carry the responsibility not to forget about our societal values and to be proud of who we are. We have responsibilities to take care of each other and we must care for our land and animals. Otherwise, all is gone ("nungu").

#### **From present to past: connection between economic development – extinction – colonization**

Forgetting about the value of who we are — animals, land, water, and sky included — would translate into a real threat to our Inuit existence (our lands, language, culture and way of life). As such, Inuit Elders would describe the worry and concern about mining development and the threat on the ability for Inuit to continue to hunt the animals that feed and sustain our culture. Whether through expressions like wildlife management or mining and development public hearings and consultations, Inuit consistently worry about their way of life.

Inuit Elders have lived through the experience of colonization that left them without a voice, powerless to its effects. In a way, colonization almost meant the extinction of their voices, and, through them, of our way of life. In that need, they would describe their way of life before colonization, about living on the land and caring for each other, about how we treat our animals. Inuit societal values or natural laws require us to incorporate traditional knowledge into our present decision-making. The fundamental message in traditional knowledge, which anchors the idea of "extinction," is that we are forgetting about the relationships with our land, water, and sky, and that we are losing control over our affairs and ability to make decisions that are consistent with our values.

#### **International engagement in support of preventing extinction**

Inuit are vocal, insistent and committed to having our voice heard. Recognizing the often neocolonial interests of Canadian state and corporations, which also benefit from the support of select territorial decision-makers, Inuit have engaged with international audiences and regulatory bodies. The strategy revolves around framing traditional knowledge as scientific knowledge. For the purposes of this investigation, this means legitimizing traditional knowledge as the medium through which Inuit

can voice extinction matters. Sheila Watt Cloutier, renowned Inuit climate activist, has asked the world to listen to us, since we, the Inuit, are the experts. Our "right to be cold," as Cloutier puts it, is a message to the world that we have a right to life and that we must pay attention to where knowledge comes from. In other words, we have the right not to disappear.

## Reflections

The Inuit tradition of working with others to bridge knowledges and to make good decisions, that work for us, has resulted in our reputation for being welcoming and willing to be pragmatic.<sup>6</sup> But are we, as a people, too welcoming? How principled is this pragmatism? Will our traditional knowledge find an active voice in decision-making? Western decision-making requires 'rigorous' scientific evidence. How does Inuit pragmatism in decision-making reconcile scientific knowledge with traditional knowledge? Similarly, and more importantly (given governance structures and the federal-territorial relation), is the scientific and academic community yet to respect enough and to understand how our holistic knowledge related to extinction is legitimate in decision-making that affects us, and, by extension, the rest of the world?

All indications appear to the scientific community a failing grade. Inuit traditional knowledge presently is used to merely support scientific research. There is little, if any, trace that others perceive Inuit traditional knowledge as legitimate. As evidenced through the oral history of Inuit describing where the 'lost' Franklin ships were, it took Western science 200 years of technological development to realize that what Inuit have said is true. But do we have 200 more years on this planet?

## State of Knowledge

Our research shows that there is a substantial gap in literature on the concept of 'extinction' specifically, in both TEK and Indigenous sources, although there are important differences in the reasons for these gaps. In the first case, the lack of focus on extinction is due to the prevalence of mainstream, policy-friendly terms such as 'conservation', 'biodiversity loss' and 'biodiversity management'. Although these terms are related to the issue of extinction, they elide it with specific understandings what the concept means and how it should be responded to, which can crowd out alternative ideas rooted in plural Indigenous knowledge systems (Mitchell 2016). In the case of Indigenous knowledge systems, the concept of extinction appears not to be referenced often because it may correspond with the ways that these knowledge systems understand the relations between specific human communities and other beings. This does *not* suggest that Indigenous knowledge systems lack concepts and frameworks for responding to the phenomenon that Western science calls 'extinction'. Instead, it reflects the fact that there are multiple ways of understanding this phenomenon that need to be honoured and understood in their own right, rather than in comparison to Western scientific understandings.

---

<sup>6</sup> Kuptana calls it "principled pragmatism" — Kuptana, R. (2014). *Indigenous Peoples in Canada: Politics, Policy and Human Rightsbased Approaches to Development and Relationship-Building*. Text from a lecture given at Trent University's 50th Anniversary, August 08. <https://www.facebook.com/notes/10152653528630909/>

Another significant gap in the literature on TEK is that there is a great deal of research in which non-Indigenous primary investigators/corresponding authors collaborate with Indigenous co-researchers and/or communities to answer questions related to Western scientific strategies for biodiversity management. However, there is far less work oriented towards projects that center modes of responsiveness to extinction rooted in Indigenous knowledge systems or needs arising from specific communities. This further confirms Deborah McGregor's (2005) critique of TEK, which suggests that it generates a colonizing loop: it starts in Western paradigms, gathers knowledge from Indigenous communities, then translates that knowledge back into Western frameworks in order to enhance Western forms of management.

There is also a significant difference between how Western and plural Indigenous knowledge systems engage with knowledge related to what Western science calls 'extinction'. Western scientific approaches focus significantly on quantitative or empirical analyses - that is, they value Indigenous knowledge as a source of 'data' related to, for instance, changes in populations, that could be used to test Western theories. In contrast, the Indigenous sources on which we drew offered significant *theorizations* of what 'extinction' is, how it comes about and how to respond to it. These theorizations often take the form of stories (Million 2004) that embody processes of learning, experimentation within (not separate from) one's lived world and the generation of collective wisdom over tens of thousands of years (Johnston 2010; Atleo 2012).

We note that there is a strong (if small) body of work by Indigenous authors that critiques TEK (e.g. McGregor, Whyte). This work is crucial to disrupting scientific frameworks that erase or obscure Indigenous perspectives on extinction. One of the strengths we discovered through this research, however, is that there is a very rich body of material that centres Indigenous knowledge of human-environmental and human/nonhuman relations in dynamic ways. This work is being incorporated into Indigenous legal studies scholarship (see: Borrows 2010; Napoleon 2007), art and film (Hubbard 2013), oral history and language work (Ratt 2016), among other endeavours. We propose that an ongoing commitment to decolonizing western academic praxis is necessary when scholars engage plural Indigenous knowledge systems in Canadian research on extinction. Implementing the recommendations of RCAP (1996) and the TRC (2015) regarding fulsome and ethical nation-to-nation relations between Indigenous peoples and Canadian legal-government and academic bodies will ensure that the work being done by Indigenous peoples on Indigenous knowledge will be robustly and meaningfully engaged in broader conversations in Canada, with a view to dismantling legacies of settler colonial erasure and dispossession of Indigenous laws, languages, land, and livelihoods.

### **Knowledge mobilization**

We are planning a Knowledge mobilization workshop to be held at Carleton University in January, 2018. Through this workshop, we aim to disseminate the findings from our 2017 research on existing materials regarding Indigenous ontologies, epistemologies, and plural knowledges of extinction in an inter-generational and community-oriented way. This meeting will engage Indigenous elders -- First Nations, Inuit, and Métis -- and Indigenous youth artists to discuss the preliminary findings of our Knowledge Synthesis report research. This workshop is also an opportunity to consult on and engage our proposed Knowledge Mobilization output, which is a children's book on Indigenous perspectives on extinction.

Our proposed children's book on Indigenous perspectives on extinction is an effort to address the fact that knowledge mobilization can and should be inter-generational, and that working with artists and storytellers to communicate Indigenous cosmologies and philosophies is a powerful way to move beyond the confines of the typical research output framework.

## Conclusion

### Zoe

Here, in the conclusion to this report, we draw on and incorporate a piece Todd wrote in April 2017 regarding the notion of 'Indigenous stories, knowledge, legal traditions, ontologies, epistemologies as unceded territory' (Todd 2017b). In evaluating how Aboriginal/Indigenous knowledge systems in Canada can contribute to interdisciplinary research on the global extinction crisis, we quickly realized that we had to also attend to structures of knowledge production in Canada. In her seminal text *Mohawk Interruptus*, Dr. Audra Simpson (2014) talks about the 'scenes of apprehension' through which anthropology (through its technologies and tools of ethnography) yearns for, captures, and taxonomizes Indigenous bodies and stories. Through the course of our research for this report, we began to query and trouble the current power relations of mobilization of Indigenous knowledge in academe in Canada, specifically in relation to Indigenous perspectives on extinction. As Simpson's work teaches us, the apprehension of Indigenous knowledges by non-Indigenous scholars in North American academe is fraught with, and driven by, the power dynamics of settler colonialism and white supremacy — a relationship and problematic which Australian Indigenous scholar Dr. Aileen Moreton-Robinson (2015) elegantly illustrates in her theory of 'white possessiveness'. Through the colonial encounter in Australia, the inter-related forces of settler colonial legal frameworks of 'property' and 'possession' not only worked to dispossess Indigenous *land* but also, as Moreton-Robinson points out (2015: 475), operated and continue to operate to construct Indigenous ontologies and epistemologies as white possessions:

"The "Aborigine" is invented as a white possession being accorded the necessary prescribed racialized attributes within racialized discourse. When racialized discourse constitutes and defines the "Aborigine," it is producing through knowledge a subject of its own making, one that it interprets for itself. This process violates the subjectivity of Goories and Koories by disavowing any trace of our ontological and epistemological existence. In this way "Abrogines" are constituted in and deployed by racialized discourse as white social constructs and epistemological possessions. This Aborigine has functioned discursively in the print media for two centuries with new racialized attributes added as the disciplinary knowledges of Law, Science, and Anthropology grew within the new nation."

Moreton-Robinson's argument is an apt guide for evaluating relationships of plural Indigenous knowledge systems to the Canadian academy today. In addition to evaluating available materials to assess the current state of research on extinction in Canada, we also had to reckon with the political and structural aspects of where, when, why, and how specific knowledges are brought (or not brought) to bear on the question of the global extinction crisis. Moreover, as we analyzed current available materials on Indigenous perspectives on extinction with a view to bringing this work into

conversation with broader Canadian ecological, academic, and political discourses, we realized that it becomes difficult to 'Indigenize' the academy in Canada. In current 'Indigenization' and reconciliation frameworks in Canadian academe, we contend that Indigenous thinkers and knowledge systems are being, effectively, 'ceded' space by institutions which operate as what anthropologists Karen Brodtkin, Sandra Morgen, and Janis Hutchinson term 'white public space' (Brodtkin et al. 2011). However, when plural Indigenous knowledge systems, as they are understood in colonial disciplines and academic institutions, *are* a white possession as Moreton-Robinson points out, then so-called 'Indigenization' of academe *through* Indigenous knowledge (but without any commitment to hire and support Indigenous bodies and communities both within and beyond academe) is simply a re-calibration of ongoing white possessive logics. In other words, in order to bring the insight of plural Indigenous knowledge systems into scholarly conversations in Canada about the global extinction crisis, we must *also* attend to the specific legal-ethical positions between Indigenous nations vis-a-vis the University and concomitant scholarly and research agencies in the context of colonization.

So a further question in our efforts to engage our research on Indigenous perspectives on extinction becomes: within whose legal frameworks are Universities 'Indigenizing' and/or incorporating Indigenous knowledge into their praxis? If we are talking solely about Euro-Western common law and civil law — modeled on British and French jurisprudence — then we are limited to very narrow understandings of what 'Indigenizing' or even 'academy' mean. But, if we take seriously the calls from the Truth and Reconciliation Commission to robustly engage legal plurality, then we have to ask: what would Indigenization of academe mean if it were firmly operating as a nation-to-nation relationship, one informed by Indigenous legal traditions and one which is attentive to the specific laws and traditions of the territories that each Canadian university occupies? In Call to Action 45 of the TRC Executive Summary, the TRC calls upon Canada to implement a Royal Proclamation of Reconciliation, which must adhere to specific commitments, including the following commitment:

“iv. Reconcile Aboriginal and Crown constitutional and legal orders to ensure that Aboriginal peoples are full partners in Confederation, including the recognition and integration of Indigenous laws and legal traditions in negotiation and implementation processes involving Treaties, land claims, and other constructive agreements.”

It is therefore necessary to rethink how we understand this idea of cession within academe. Non-Indigenous scholars are not *sharing* or *ceding* space with/to Indigenous intellectuals. Indigenous knowledge is unceded. It is unceded because there was never a reciprocal and accountable framework to negotiate its entry into, and reification within, these spaces to begin with. And as Moreton-Robinson (2015) points out, much of this knowledge was in fact stolen within the rubrics of white possessiveness and British-derived property-obsessed common law.

Though we have policies on how to Indigenize the academy and to incorporate some aspects of Indigenous knowledge systems in academic paradigms, and though we have some direction from scholarly bodies regarding how to correct past wrongs committed by researchers in extracting knowledge (and tissues and stories and laws and images and songs) from sovereign Indigenous Nations and Peoples, we must remember that these corrective policies are not Treaties. They are not adequate or even appropriate proxies for the bigger conversations that must take place regarding the role of Universities and academic/research agencies in honouring their reciprocal responsibilities

to those peoples whose territories they occupy and whose resources heat and light their buildings. We must engage with the admittedly difficult question of what relationships and obligations make up the academy that is built on often unacknowledged Indigenous lands and labour.

So, Canada's Tri-Council Policy Statement (TCPS2 2014), various university frameworks on Indigenization, and myriad workplace equity policies and protocols are not Treaties or the grounding upon which to build nation-to-nation academic relationships. These policies, developed *within* the euro-western laws of the Canadian nation-state, are important. However, they are not stand-ins for the much broader discussions and negotiations that need to take place in order to situate scholarship within the context of *legal pluralities* that shape this country. Just as Achille Mbembe (2015) urges oppressed scholars to turn their backs on the universalizing sweep of the Euro-western *university*, we argue here that Indigenous legal pluralities and plural Indigenous knowledge systems are an absolute necessary point of interrogation and re-negotiation of Mbembe's model of the decolonizing *pluriversity*. So, not only do many universities across the country occupy unceded territory, they also currently mobilize the white possession of *unceded knowledge*.

What is clear from our research into current academic discourses of Indigenous knowledges of the concept of extinction -- a concept that has been applied by colonial agents to describe and categorize Indigenous peoples and languages in efforts to disappear them from contemporary Canadian socio-political structures -- is that it will require much more than some aspirational promises to 'honour Indigenous knowledge' to dismantle colonial structures and urges that drive the ongoing violation of unceded Indigenous knowledges. In other words, in order to meaningfully address issues such as the global extinction crisis and the dynamic perspectives that Indigenous knowledge systems bring to bear on such global questions, academic institutions in Canada must work to negotiate reciprocal research relationships on a nation-to-nation basis, across dynamic and meaningful Indigenous legal pluralities. And these relationships must hold weight.

## References and bibliography

Alfred, Taiaiake, 2008. "Opening Words" in Leanne Simpson, ed. *Lighting the Eighth Fire: the Liberation, Resurgence and Protection of Indigenous Nations*. Winnipeg: Arbeiter Ring, pp. 9-13.

Barnosky, Anthony D., Nicholas Matzke, Susumu Tomiya, Guinevere O. U. Wogan, Brian Swartz, Tiago B. Quental, Charles Marshall, Jenny L. McGuire, Emily L. Lindsey, Kaitlin C. Maguire, Ben Mersey and Elizabeth A. Ferrer, 2011. "Has the Earth's Sixth Mass Extinction Already Arrived?" *Nature*, Vol. 471: 51-70.

Beier, J. Marshall, 2005. *International Relations in Uncommon Places*. Basingstoke: Palgrave.

Berkes, Fikret. 2008. *Sacred ecology: Traditional ecological knowledge and resource management*. New York: Routledge.

Blaser, Mario, 2009. "The Threat of the Yrno: The Political Ontology of a Sustainable Hunting Program" *American Anthropologist*, Vol. 11, No. 1: 10-20.

Borrows, John (Kegeedonce), 2010. *Drawing Out Law: A Spirit's Guide*. Toronto: University of Toronto Press.

Brodkin, Karen, Morgen, Sandra and Janis Hutchinson. (2011). Anthropology as White Public Space?, *American Anthropologist* 113(4): 545–556.

Cajete, Gregory. 2000. *Native Science: Natural Laws of Interdependence*. Santa Fe: Clear Light Publishers.

Cines las Americas. 2014. 'Buffalo Calling a film by Tasha Hubbard'. Accessed September 8, 2017

<https://www.youtube.com/watch?v=no1MYbYkTgY>

Calhoun, J, 2002. 'Salvage ethnography'. P. 46 in *Dictionary of Social Sciences*. New York: Oxford University Press.

Cooper, James Fenimore, 1993 [1826]. *The Last of the Mohicans*. Ware: Wordsworth Classics.

Coulthard, Glen. 2014. *Red Skin, White Masks: Rejecting the Colonial Politics of Recognition*, Minneapolis, University of Minnesota Press.

Cruikshank, Julie, 2004. "Uses and Abuses of 'Traditional Knowledge': Perspectives from the Yukon Territory" in David G. Anderson and Mark Nuttall (eds.) *Cultivating Arctic Landscapes: Knowing and Managing Animals in the Circumpolar North*. London: Berghahn Books: 17-32.

Daschuk, James. 2013. *Clearing the Plains: Disease, Politics of Starvation, and the Loss of Aboriginal Life*. Regina: University of Regina Press.

De la Cadena, Marisol, 2010. "Indigenous Cosmopolitics in the Andes: Conceptual Reflections Beyond 'Politics'" *Cultural Anthropology*, Vol. 25, No. 2: 334-70.

Deloria Jr., Vine, 2012. *The Metaphysics of Modern Existence*. Golden, CO: Fulcrum Publishing.

Donald, Dwayne. 2009. "Forts, Curriculum, and Indigenous Metissage: Imagining Decolonization of Aboriginal-Canadian Relations in Educational Contexts." *First Nations Perspectives* 2 1: 1-24.

Dumont, Marilyn. 2015. *The Pemmican Eaters: Poems*. Toronto: ECW Press.

Geniusz, Mary Siisip, 2015. *Plants Have so Much to Give Us, All We Have to Do is Ask*. Minneapolis: University of Minnesota Press.

Fienup-Riordan, Ann. 1990. "Original Ecologists? The Relationship between Yup'ik Eskimos and Animals." Pp. 167-191 in *Eskimo Essays*. New Brunswick: Rutgers University Press.

Geniusz, Wendy Makoons, 2009. *Our Knowledge is Not Primitive: Decolonizing Botanical Anishinaabe Teachings*. Syracuse: Syracuse University Press.

Government of Alberta, 2014. "Species at Risk". Alberta Environment and Parks. Accessed September 9, 2017 <http://aep.alberta.ca/fish-wildlife/species-at-risk/documents/SpeciesAssessedConservation-2014a.pdf>

Hill, Susan M., 2008. "Chapter 1" in Leanne Simpson, ed. *Lighting the Eighth Fire: the Liberation, Resurgence and Protection of Indigenous Nations*. Winnipeg: Arbeiter Ring, pp. 23-45.

Howitt, Richard and Sandra Suchet-Pearson, 2006. "Rethinking the Building Blocks: Ontological Pluralism and the Idea of 'Management'" *Geografiska Annaler, Series B*, Vol. 88: 323-35.

Hubbard, Tasha, 2013. *Buffalo Calling*, animated short. Tasha Hubbard, Director.  
[http://femfilm.ca/film\\_search.php?film=hubbard-buffalo&lang=e](http://femfilm.ca/film_search.php?film=hubbard-buffalo&lang=e)

Innes, Robert Alexander, 2013. *Elder Brother and the Law of the People*. Winnipeg: University of Manitoba Press.

International Labour Organisation (1989). Convention 169: Indigenous and Tribal Peoples Convention. Available. Online:  
[http://www.ilo.org/dyn/normlex/en/f?p=NORMLEXPUB:12100:0::NO::P12100\\_ILO\\_CODE:C169](http://www.ilo.org/dyn/normlex/en/f?p=NORMLEXPUB:12100:0::NO::P12100_ILO_CODE:C169). Accessed 08 September 2016.

Iseke-Barnes, Judy, 2009. "Grandmothers of the Métis Nation", *Native Studies Review* 18(2): 25-60.

Kari-Oca, 1992. Indigenous Peoples Earth Charter Kari-Oca Conference. Available. Online. Available:  
<http://www.dialoguebetweennations.com/IR/english/KariOcaKimberley/KOCharter.html> Accessed 08 September 2016.

Kimmerer, Robin Wall, 2013. *Braiding Sweetgrass: Indigenous Wisdom, Scientific Knowledge and the Teachings of Plants*. Minneapolis: Milkweed Editions

Kohn, Eduardo, 2013. *How Forests Think*. Berkeley, CA: University of California Press.

Kolbert, Elizabeth. *The Sixth Extinction: an Unnatural History*. New York: Henry Holt and Company.

Kuokannen, Rauna, 2007. *Reshaping the University: Responsibility, Indigenous Epistemes, and the Logic of the Gift*. Vancouver, BC: UBC Press.

Laduke, Winona, 1999. *All Our Relations*. Cambridge, MA: South End Press.

Leduc, Timothy B., 2016. *A Canadian Climate of Mind*. Montreal: McGill-Queen's University Press.

Leonard, Wesley L., 2011. "Challenging "Extinction" through Modern Miami Language Practices". *American Indian Culture and Research Journal* 35(2): 135-160.

Little Bear, Leroy. 2016. "Big Thinking - Leroy Little Bear: Blackfoot metaphysics 'waiting in the wings'". Congress of the Humanities and Social Sciences, Calgary. [https://www.youtube.com/watch?v=o\\_txPA8CiA4](https://www.youtube.com/watch?v=o_txPA8CiA4)

MacDougall, Brenda. 2011. *One of the Family: Metis culture in Nineteenth Century Northwestern Saskatchewan*. Vancouver: UBC Press.

Mbembe, Achille. 2015. "Decolonizing Knowledge and the Question of the Archive." Lecture. May 2, 2015 at the Wits Institute for Social and Economic Research. Retrieved October 05, 2016.  
(<http://wiser.wits.ac.za/system/files/Achille%20Mbembe%20-%20Decolonizing%20Knowledge%20and%20the%20Question%20of%20the%20Archive.pdf>).

McCallum, Mary Jane Logan, 2017. "Starvation, Experimentation, Segregation, and Trauma: Words for Reading Indigenous Health History." *The Canadian Historical Review* 98(1): 96-113.

McGregor, Deborah, 2005. "Traditional Ecological Knowledge: An Anishinabe Woman's Perspective" *Atlantis*, Vol. 29, No. 2, pp. 103-09.

Metallic, Fred (Gopit), 2008. "Strengthening our Relations in Gespe'gawa'gi, the Seventh District of Mi'gma'gi" in Leanne Simpson, ed. *Lighting the Eighth Fire: the Liberation, Resurgence and Protection of Indigenous Nations*. Winnipeg: Arbeiter Ring pp. 59-71.

Million, Dian, 2014. "There is a River in Me: Theory from Life" in Audra Simpson and Andrea Smith, eds, *Theorizing Native Studies*. Durham, NC: Duke University Press, pp. 31-42.

Mitchell, Audra, 2015. "Beyond Species and Diversity: Problematizing Extinction Theory, Culture and Society." OnlineFirst: <http://tcs.sagepub.com/content/early/2015/12/01/0263276415619219.abstract>

Mitchell, Audra, 2016. "Is IR Going Extinct?" *European Journal of International Relations*. OnlineFirst: <http://ejt.sagepub.com/content/early/2016/02/26/1354066116632853.abstract>

Mohawk, John, 2010 (ed. Jose Barreiro). *Thinking in Indian: A John Mohawk Reader*. Golden, Co.: Fulcrum Publishing.

Moreton-Robinson, Aileen. 2015. "Race Matters: the 'Aborigine' as White Possession". Pp. 467-486 in *The World of Indigenous North America*, Robert Warrior, ed. New York: Routledge.

Nadasdy, Paul, 2007. *Hunters and Bureaucrats: Power, Knowledge and Aboriginal-State Relations in the Southwest Yukon*. Vancouver, BC: UBC Press.

Nagoya Protocol, 2011. Access to Genetic Resources and the Fair and Equitable Sharing of Benefits Arising from their Utilization to the Convention On Biological Diversity. Available. Online: <https://www.cbd.int/abs/doc/protocol/nagoya-protocol-en.pdf>. Accessed 22 December 2015.

Napoleon, Val. 2007. "Thinking About Indigenous Legal Orders." Research Paper for the National Centre for First Nations Governance. Retrieved June 05, 2014 ([http://fngovernance.org/ncfng\\_research/val\\_napoleon.pdf](http://fngovernance.org/ncfng_research/val_napoleon.pdf)).

Newfoundland and Labrador Heritage Web Site, 2017. "Disappearance of the Beothuk". Accessed September 9, 2017: <http://www.heritage.nf.ca/articles/aboriginal/beothuk-disappearance.php>

Nieoczym, Adrian, 2017. "Sinixt First Nation not extinct after all, court rules", *CBC News*. Accessed September 9, 2017: <http://www.cbc.ca/news/canada/british-columbia/sinixt-first-nation-not-extinct-after-all-court-rules-1.4043184>

Ratt, Solomon. 2016. "Solomon Ratt: cihcipiscikwân / Rolling Head (th-dialect)". Cree Literacy Network. Accessed September 9, 2017: <http://creeliteracy.org/2016/03/09/solomon-ratt-rolling-head-th-dialect/>

Régnier, Claire, Guillaume Achas, Amaury Lambert, Robert H. Cowei, Philippe Couchet and Benoit Fontaine, 2015. "Mass Extinction in Poorly Known Taxa" *PNAS*, Vol. 112, No. 25: 7761- 7766.

Rice, Brian, *The Rotinoshonni: A traditional Iroquoian History through the Eyes of Teharonhia:wako and Sawiskera*, New York: Syracuse University Press, 2013)

Rose, Deborah Bird, 2011. *Wild Dog Dreaming: Love and Extinction*. Charlottesville and London:University of Virginia Press.

Royal Commission on Aboriginal Peoples (RCAP). 1996. "Volume 1: Looking Forward, Looking Back." Ottawa: Royal Commission on Aboriginal Peoples. Retrieved November 05, 2016 (<http://data2.archives.ca/e/e448/e011188230-01.pdf>).

Sandlos, George. 2007. *Hunters at the Margin: Native People and Wildlife Conservation in the Northwest Territories*. Vancouver: UBC Press.

Santa Cruz, 2014. Declaration of Santa Cruz: For a New World for Living Well. Available. Online: [http://wphna.org/wp-content/uploads/2014/10/2014\\_06\\_G77\\_Declaration\\_of\\_Santa\\_Cruz.pdf](http://wphna.org/wp-content/uploads/2014/10/2014_06_G77_Declaration_of_Santa_Cruz.pdf). Accessed 08 September 2016.

Smith, Linda Tuhiwai, 2012. *Decolonizing Methodologies: Research and Indigenous Peoples* (Second Edition). London: Zed.

Simpson, Audra, 2014. *Mohawk Interruptus: Political Life Across the Borders of Settler States*. Durham: Duke University Press, 2014.

Simpson, Audra. 2016. "Consent's Revenge." *Cultural Anthropology* 31, no. 3 (2016): 326–333.

Simpson, Leanne, 2011. *Dancing on our Turtle's Back: Stories of Anishinaabeg Re-creation, Resurgence and a New Emergence*. Winnipeg: ARP Books.

Snowdon, Wallis, 2016. "Sturgeon make a comeback in the North Saskatchewan river". *CBC News*, Accessed September 9, 2017: <http://www.cbc.ca/news/canada/edmonton/sturgeon-north-saskatchewan-river-comeback-1.3649674>

Stewart-Harawira, Makere, 2012. "Returning the Sacred: Indigenous Ontologies in Perilous Times" in Lewis Williams, Rose Roberts and Alastair McIntosh (eds.) *Radical Human Ecology: Intercultural and Indigenous Approaches*. London: Ashgate: 73-88.

TallBear, Kim, 2015. "Disrupting Life/Not-life: a Feminist-Indigenous take on New Materialism and Inter-species thinking" Dimensions of Political Ecology Keynote Address, University of Kentucky, 27-28 February 2015. Online. Available: <https://wordpress.com/read/post/feed/4230630/755254531>. Accessed 15 January 2016.

TCPS2 (2014). Tri-Council Policy Statement: Ethical Conduct for Research Involving Humans. Panel on Research Ethics (PRE). Accessed September 10, 2017: <http://www.pre.ethics.gc.ca/eng/policy-politique/initiatives/tcps2-eptc2/Default/>

Todd, Zoe, 2014. "An Indigenous Feminist's Take on the Ontological Turn: 'Ontology' is Just Another Word for Colonization". Online. Available: <https://zoeandthecity.wordpress.com/2014/10/24/an-indigenous-feminists-take-on-the-ontological-turn-ontology-is-just-another-word-for-colonialism/>. Accessed 15 January 2016.

Todd, Zoe, 2017a. "Fish, Kin and Hope: Tending to Water Violations in amiskwaciwâskahikan and Treaty Six Territory". *Afterall: a Journal of Contemporary Art, Context, and Enquiry* 43: 95-99.

Todd, Zoe, 2017b. "Indigenous stories, knowledge, legal traditions, ontologies, epistemologies as unceded territory (or: Hands Off of Our Teachings)". Blog post. Accessed September 9, 2017.

<https://zoestodd.com/2017/04/27/indigenous-stories-knowledge-legal-traditions-ontologies-epistemologies-as-unceded-territory-or-hands-off-of-our-teachings/>

Truth and Reconciliation Commission of Canada. 2015. "Honouring the Truth, Reconciling for the Future: Summary of the Final Report of the Truth and Reconciliation Commission of Canada." Truth and Reconciliation Commission of Canada. Retrieved August 07, 2015 ([http://www.trc.ca/websites/trcinstitution/File/2015/Findings/Exec\\_Summary\\_2015\\_05\\_31\\_web\\_o.pdf](http://www.trc.ca/websites/trcinstitution/File/2015/Findings/Exec_Summary_2015_05_31_web_o.pdf)).

Umek E. Richard Atleo, 2011. *Principles of Tsawalk: An Indigenous Approach to Global Crisis*. Vancouver and Toronto: University of British Columbia Press.

Watson, Annette and Orville H. Huntington, 2008. "They're here - I can feel them: the Epistemic Space of Indigenous and Western Knowledges" *Social and Cultural Geography*, Vol. 9, No. 3: 257-81.

Watts, Vanessa, 2013. "Indigenous Place-Thought and Agency Amongst Humans and Nonhumans (First Woman and Sky Woman go on a European World Tour!)" *Decolonization: Indigeneity, Education and Society*, Vol. 2, No. 1, pp. 20-34.

Watts, Vanessa, 2016. "Smudge This: Assimilation, State-favoured Communities and the Denial of Indigenous Spiritual Lives" *Journal of Child, Youth and Family Studies*, Vol. 7, No. 1, pp 148-70.

Wolfe, Patrick. 1999. *Settler Colonialism and the Transformation of Anthropology: the Politics and Poetics of an Ethnographic Event*. London: Cassell.

World Intellectual Property Organization (WIPO), 2014. Intergovernmental Property and Genetic Resources, Traditional Knowledge and Folklore: The Protection of Traditional Knowledge: Draft Articles. Available. Online: [http://www.wipo.int/edocs/mdocs/tk/en/wipo\\_grtkf\\_ic\\_27/wipo\\_grtkf\\_ic\\_27\\_4.pdf](http://www.wipo.int/edocs/mdocs/tk/en/wipo_grtkf_ic_27/wipo_grtkf_ic_27_4.pdf). Accessed 08 September 2015.

Whyte, Kyle Powys, 2016. "Our Ancestors' Dystopia Now: Indigenous Conservation and the Anthropocene" in Ursula Heise, Jon Christensen and Michelle Nieman, *The Routledge Companion to the Environmental Humanities*. New York: Routledge, pp. 1-10.