The Governance of Waste in Iqaluit, Nunavut

By

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A thesis submitted to the Graduate Program in Environmental Studies
in conformity of the requirements for the
Degree of Master of Environmental Studies

Queen’s University
Kingston, Ontario, Canada
August 2015

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Abstract

Through ethnographic fieldwork and archival research, this thesis examines the historical and contemporary governing practices that inform waste management in Iqaluit, Nunavut. I draw on governance theory to critically examine the diffuse network of power that influences waste management practices and outcomes, and that have contributed to the city’s waste issues. Like other communities in Canada’s Nunavut territory, Iqaluit lacks sophisticated technologies to manage waste and abandoned dump sites are littered throughout the city’s landscape. Across the territory communities are concerned about their waste future.

This case study of waste governance is divided into three parts. In part one, waste is examined within the wider context of colonialism and contemporary neoliberal governance practices that have contributed to what scholars are referring to as the Anthropocene. It is argued that waste itself is part of a colonial context within which Inuit and other northerners continue to live. In part two, two of Iqaluit’s ‘trash animals’-- ravens and dogs-- are examined to highlight the role of nonhumans in waste governance. It is argued that waste materially reconfigures relationships between human and nonhuman animals, and that these relationships are bequeathed to future generations. In part three, I examine the 2014 Iqaluit ‘dumpcano’ controversy, which coincided with my field season in Iqaluit. The dump fire brought to the fore a history of contaminant exposure and federal government underfunding that was differently framed and responded to by community members and government officials; while government risk management practices privileged neoliberal epistemologies and governance, active participation by Iqaluit residents placed community understandings of health, wellbeing, and sovereignty at the forefront of the ‘dumpcano’ debate. Within the context of myriad social and environmental issues, increased community growth and development, and Inuit efforts to self-determine, I
suggest that improvements to Iqaluit’s waste management infrastructure should integrate supports to Inuit culture and knowledge systems. Doing so involves replacing a technical configuration of waste with one of knowing, being, and relating to others and the environment; and would help meet community goals and definitions for sustainable community development.
Co-Authorship Statement

Chapters 2 and 3: This study was initiated by Dr. Myra J. Hird as part of the Canada’s Waste Flow research project. Preliminary consultations and fieldwork were conducted by Dr. Hird in October 2013, who returned in August 2014. Alex Zahara conducted fieldwork in Iqaluit from June 2nd- September 6th, 2014 and archival research throughout the duration of his degree. Data analysis and interpretation were conducted by Alex Zahara under the supervision of Dr. Hird. Chapters 2 and 3 were co-written with Dr. Hird. Both Alex Zahara and Dr. Hird were responsible for revising and editing these papers, which includes addressing reviewer feedback. Chapter 2 has been accepted in the edited collection Anthropocene Feminism (Hird and Zahara, forthcoming). Chapter 3 has been accepted in the journal Environmental Humanities (Zahara and Hird, forthcoming).

Works Cited


Acknowledgements

I would like to thank the community of Iqaluit for allowing me to conduct this research project and for always being patient with me. This thesis is dedicated to you.

A tremendous thanks goes to Dr. Myra J. Hird who has been instrumental in making this thesis possible. Thanks to Dr. Hird for suggesting this project, for giving it so much attention, and for the many critical and helpful discussions that have made this thesis possible. Thank you for inspiring me with your ideas and for allowing me to be creative (and always material!).

Thanks to my committee members, Dr. R. Kerry Rowe and Dr. Allison Rutter, and also to Dr. Alice Hovorka and Kevin West for providing feedback and advice throughout this project.

I also thank Jessica Peters, Elyse Skura, Bruce Morgan, Larissa Pizzolato, Electra Skaarup, Laura Oingonn, Andrew Binet, and Emma Micalizzi for help with fieldwork and for being such great company throughout my time in Iqaluit. My memories of Iqaluit are entangled with your friendships. I also thank the Nunavut Research Institute for research guidance, logistical support, access to the NRI library, housing and Internet, barbeques at lunch, and the many other ways in which you helped me out.

Thanks especially to Robyn Campbell of Sustainable Iqaluit and Jamesee Moulton from the GN’s Department of Environment for help with archival research and assistance in finding key documents that would have otherwise been impossible to access.
Cassandra Kuyvenhoven has been a constant source of friendship and support throughout this degree. I thank her and Tara Cater for many helpful discussions about Nunavut, academia, and more. Thanks also to the Canada’s Waste Flow research team and the genera Research Group at Queen’s University for sharing ideas. I thank Karen Topping and Karen Depew for administrative help and other crucial supports. Thanks also to Scott Dudiak, Kyle McKenna, Patrick LeGrand, Leanne Ejack, Makoa Rosa, Brennan Moore, Justine Zahara, the Hackl-Harpers and all my friends in the Morrissey Lab, Saskatoon, and Hilo for being far better than I at keeping in touch. Leanne Flahr, you’ve taught me perseverance-- and thank you for your constant advocacy.

My parents, Terry and Rick: Dad, you are radical. Mom, you are unshakeable. Thanks for being great examples and for making this thesis seem easy.

Mara, you are my number one source of support and inspiration and you always give me something to aspire to. Your diamond bones are hardier than any dump fire.

I want to thank the Alianait Arts Festival for making me feel so welcome in Iqaluit. I thank Ikali and the numerous kids from the Qayaq Youth Art Group for always keeping me on my toes-- I’ve never been happier to be referred to as ‘The Garbage Man.’

This project was funded through a SSHRC Insight Grant (#435-2013-0560), SSHRC Graduate Scholarship, Ontario Graduate Scholarship, and the School of Environmental Studies at Queen’s University.
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List of Acronyms

AANDC: Aboriginal Affairs and Northern Development Canada

CBC: Canadian Broadcasting Corporation

CCME: Canadian Council for Ministers of the Environment

DEW Line: Distant Early Warning Line

DIAND: Department of Indian Affairs and Northern Development

DND: Department of National Defence

EPA: Environmental Protection Agency

GN: Government of Nunavut

GNWT: Government of Northwest Territories

GREB: General Research Ethics Board

IFA: Iqalummiut for Action - Stop the Dump Fires

INAC: Indian and Northern Affairs Canada

ITK: Inuit Tapariit Kanatami

IQ: Inuit Qaujimajatuqangit

MP: Member of Parliament

NIRB: Nunavut Impact Review Board

NLCA: Nunavut Land Claims Agreement

NWB: Nunavut Water Board

NRI: Nunavut Research Institute

NTI: Nunavut Tunngavik Incorporated.

PCB: Polychlorinated biphenyl

PETA: People for the Ethical Treatment of Animals
POPs: Persistent Organic Pollutants
PSAs: Public Service Announcements
QIA: Qikiqtani Inuit Association
QTC: Qikiqtani Truth Commission
RCMP: Royal Canadian Mounted Police
SSCP: Short-chained chlorinated parafins
STS: Science and Technology Studies
TEK: Traditional Ecological Knowledge
TRC: Truth and Reconciliation Commission of Canada
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Chapter 1

Introduction, Theory, and Methods

1.1 Context

Nunavut’s waste landscape has developed from a history of colonial and neocolonial governance. Traditionally, Inuit societies were semi-nomadic and relied solely on the Arctic landscape for sustenance and survival (Cassady 2007). In the mid 20th century, the establishment of military bases, mining ventures, and fur trade posts throughout the Arctic caused Inuit to move, voluntarily or otherwise, into settlement areas (Eno 2003; QIA 2010). This shift to a more sedentary lifestyle resulted in deep social and cultural changes that impacted the relationship between Inuit, land, family and community practices, food, waste, and the environment (GN 2007; Nungak 2006). As explained by Nungak, “Inuit society was garbage-less. All our stuff was either edible by dogs, or naturally degradable…. With garbage now a central part of life, it’s amazing to observe how tiny people’s consciousness is about garbage” (2004: 18). Colonization forced a rapid shift to a Southern (i.e. Western) mode of wasting whereby waste is governed to be ubiquitous yet out-of-sight and out-of-mind for most people (Hird 2013a). Despite Territorial efforts to incorporate Inuit epistemologies¹ and perspectives into territorial and municipal government decision-making processes (Timpson 2009), both the act of wasting and the

¹ Throughout this thesis, I use the term epistemologies (plural) to denote the multiplicity of Inuit understandings, values, beliefs, and so on. These differences in epistemology are influenced by Inuit cosmology, personal experience, class, gender, family practices, home town, community and family history, and so on. See thesis Glossary for further discussion of terms (such as governance, Inuit governance, Inuit knowledge, epistemology, ontology, and so on), and how they are used in this thesis.
management of wastes are increasingly being governed to resemble Southern practices.² Nunavut communities are now the largest producers of waste in Canada’s territories (Van Gulck 2012).

In the early 1990s, waste in Nunavut emerged as a significant and controversial issue. The Nunavut Land Claims Agreement (NLCA) prioritized the clean-up of “hazardous waste sites, inactive mining sites, abandoned Distant Early Warning Line sites, and non-hazardous waste sites near communities” (NLCA 1993: 110), though many of these wastes remain present on the land, unremediated and unmanaged. In Iqaluit, at least 7 abandoned military and municipal solid waste sites are littered throughout the community and “pose a threat to that [Inuit] way of life” (Dobbin 2013: 1; see Chapter 4).³ Due to the financial costs of managing waste in remote Nunavut communities, recycling and other waste management practices have been proposed by communities but deemed infeasible (e.g. GN 2011). As a consequence, practices such as open dumping and waste burning are common throughout the territory (Arktis Solutions 2010) despite being detrimental to human health and the environment (Amegah et al. 2012; Zagozewski et al. 2011). In many communities, voluntary guidelines that prevent the disposal of hazardous waste materials are rarely implemented or enforced (Arktis Solutions 2010; GN 2010).

Unlike other Nunavut communities where waste is under the jurisdiction of the Territory, the City of Iqaluit manages its own waste. Iqaluit’s active municipal dump was sited as a temporary dumpsite in 1995 (Thompson 2006) and although it has reached capacity, is currently still in use (exp Services Inc. 2013). The City’s waste management practices are influenced by

² This claim, which is explored throughout this thesis, refers to how Nunavut communities increasingly come to know, manage, or experience waste in ways that reflect neoliberal and capitalist values and norms. While this might involve the implementation of technology, this statement is not meant to refer to waste management infrastructure specifically, or to Southern Canadian standards of living, contaminant monitoring, and so on; Nunavut communities fall far below these standards and lack adequate waste technology, which may readily impact human and environmental health.

³ Dobbin suggests that contaminants might leach into aquatic wildlife and berries, which are consumed by city residents. More recently, researchers have suggested that these waste sites are contaminating the water sources used by local dog teams (Zerehi 2015).
local politics, territorial initiatives, and - perhaps most importantly- financial constraints.

According to municipal and territorial government officials, Nunavut communities are subject to “chronic underfunding”, which readily influences waste management practices (LeTourneau 2014: 1; Varga 2014). With issues related to open dumping and waste burning, many Nunavut landfills\(^4\) - what are actually “above-ground dumps” (Giroux Environmental Consulting et al. 2014: 91) - are over-filled and close to reaching capacity. As a result, communities throughout the territory, including Iqaluit, are concerned about their waste future (Dawson 2011).\(^5\)

In recent years, the Canadian Arctic has become a priority for research and resource extraction; as stated by the Canadian Prime Minister, Stephen Harper, in his 2013 Speech from the Throne, “[the Canadian] government recognizes that the future prosperity of the North requires responsible development of its abundant natural resources” (2013: 1). Renewed interest in Canada’s North has led to an increased number of southern researchers, government, and industry representatives that live in Nunavut on a part-time or non-permanent basis—many of whom disproportionately influence policy and management decisions (Amagoalik 2015; Price 2007). Moreover, the socioeconomic status of Iqaluit’s transient population contrasts with that of its permanent residents; Inuit communities have amongst the lowest household incomes, highest suicide rates, and highest incidences of malnutrition in the country (Chachamovich et al. 2012; GN 2007; Statistics Canada 2012). In Iqaluit, waste is situated amongst myriad social issues, each of which require funding and attention.

\(^4\) In newspaper articles and technical reports, the words ‘dump’ and ‘landfill’ are used interchangeably to describe Nunavut’s waste disposal sites. Arktis Solutions (2011), for example, refers to Nunavut waste sites as ‘landfills’ due to the presence of certain environmental controls, such as leachate containment systems and hazardous waste separation. Conversely, the Canadian Council for Ministers of Environment (CCME) classifies Nunavut waste disposal sites as ‘dumps’ because the majority of them were not designed by engineers and few have ‘operations or closure plans’ (Giroux Environmental Consulting et al. 2014). In 2014, a hired landfill engineer, Dr. Tony Sperling from Sperling Hansen Associates, assessed Iqaluit’s West 40 ‘landfill’ and concluded that it was a dump. In this thesis, I use the term ‘dump’ to coincide with CCME and Dr. Sperling.

\(^5\) For further enquiries into Canada’s waste future, see wasteflow.ca
1.2 Research Aim, Questions, and Objectives:

The aim of this thesis is to explore the unique set of state and non-state, human and nonhuman actors that govern and are governed by Iqaluit’s waste landscape, including: recent (and ongoing) colonial histories; past and present government policies and initiatives; physical geographies; corporate interests; climate change; socioeconomics; globalization; Inuit cosmologies and governing practices; and lastly, the material characteristics of waste itself. To do so, I respond to the following research questions and objectives.

Research Questions:

● How has Iqaluit’s waste landscape changed over the last century? How have (neo)colonial activities impacted relationships with waste and governing practices?

● What are the roles of nonhumans (e.g. animals, contaminants, waste, and so on) in Iqaluit’s waste governance?

● What systems of knowledge and governing practices are privileged in Iqaluit’s waste management? How does this relate to other challenges faced by Arctic communities (e.g. Inuit self-determination, climate change, or disputes over arctic sovereignty)?

Objectives:

● Examine the history of waste governance in Iqaluit from pre-colonialism to the present including how an influx of (neo)colonial activity has impacted relationships with waste over the last half-century;

● Examine how nonhumans including waste, govern – and are governed by – waste management practices.

● Explore current and future opportunities and challenges to waste management in Iqaluit.

1.3 Theory
Governance theory focuses on the diffuse network of power that influences decision-making processes and outcomes. Power, in its Foucauldian sense, is “dispersed, ubiquitous and dynamic” (Henri 2012: 38) and involves a variety of actors employing tactics (laws, beliefs, technologies, etc.) so that “such and such ends may be achieved” (Foucault et al. 1991: 95). Foucault primarily considered governance in terms of governmentality, or what has been referred to as ‘the conduct of conduct’, whereby states impose policies aimed at directing behaviour by encouraging individuals to act as ‘good citizens’ (Foucault et al. 1991). As Lemke discusses, governmentality figures centrally in neoliberal governance, as “it endeavors to achieve [a congruence] between a responsible and moral individual and an economic-rational individual” (2002: 12). To do so, ‘techniques of domination’ (forms of encouragement or punishment) are applied to encourage ‘techniques of the self’, whereby publics ‘freely’ abide by culturally specific social norms. Governmentality thus encourages individuals to act in ways that acquiesce to the social and economic frameworks through which governments operate, and is thus readily applicable to Canada’s (ongoing) history of colonialism (Scott 1995). A relevant example where techniques of domination were applied to encourage techniques of the self includes Canada’s Indian Residential School System that was in operation until as recently as 1996 (see Smith 2001). The schools, which are now recognized as genocide (TRC 2015), were predicated upon “policies of assimilation, enculturation or annihilation of indigenous people” (De Leeuw 2008: 339), wherein Inuit and other aboriginal children were (at best) intended to become economically contributing members of ‘modern’ Canadian societies. Through techniques of domination, the schools intended to assimilate Inuit youth by encouraging techniques of the self. In terms of

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6 When discussing community practices or responses to the dump fire, I use the term publics (plural) as is standard in Science and Technology Studies to recognize that there is variability in opinions, culture, and beliefs within the Iqaluit community. Accordingly, ‘the public’ contains multiple publics. However, when I discuss government interactions with the community, I use ‘the public’ to note that messages were conveyed to the community (or ‘the public’) as a whole. In this way, certain publics respond to messages aimed at the public.
waste management, this involved enforcing particular understandings of body and nature, cleanliness, human/animal relations, individual employment, and so on (Chapters 2 and 3).

More recently, researchers within the discipline of Science and Technology Studies (STS) have examined the role of governmentality within the context of public controversies (Hird et al. 2014). Bruno Latour (2007), for example, has examined how governmentality functions to make otherwise political, affective, and material aspects of society “appear on the surface to be absolutely apolitical” (2007: 7, original emphasis). This includes waste management and other aspects of society that are readily ‘out of sight and out of mind’ for many Canadians. Moreover, that issues become apolitical allows social and environmental justice issues to go overlooked (Nixon 2011). When environmental justice issues become political is the subject of Chapter 4.

Neo-Foucauldian analyses have expanded on the concept of governance to recognize the power and influence of multinational and non-state actors in the governing of populations and issues (Bulkeley and Watson 2007; Davoudi 2009). Since the early 1990s, governance analyses have focused on public partnerships, local and international corporations, geopolitical histories, and technologies (e.g. Bulkeley 2012; Davies 2008). A governance approach allows researchers to identify the “arrangements [of actors] which take shape around particular objects of governance” (Bulkeley et al. 2005: 17) and thus examine changing power dynamics that have been constituted through neoliberal governance. Publics play an active role in issue governance through practices of contestation, ambivalence, and advocacy (Latour 2007)-- though the ability to do so is mediated through issues of “agency, identity, and dependency [on government institutions]” (Wynne 1996: 50), access to knowledge, technology, and so on (Henri 2012; Jasanoff 2004; Latour 1987). In this way, power is not monolithic, but is “distributed throughout the complex social networks in which it circulates” (Henri 2012: 48). In Nunavut, various issues associated with waste are governed by publics, state, and non-state actors; including community
and resource development, wildlife and resource co-management, the development of climate change strategies, and so on (see Southcott 2015; Cameron et al. 2014; Cater 2013; Henri 2012; Stewart et al. 2011; Tester 2010).

Governance theory has become widely used in the social sciences to analyze social and environmental problems, such as climate change, urban growth patterns, and municipal waste management (e.g. Biermann et al. 2012; Leffers and Ballamingie 2013; Davies 2008). This thesis employs governance theory because it allows for the consideration of “the social, cultural, political and economic contexts and networks that shape waste landscapes” (Davies 2008:15). Governance theory is suitable to analyses of waste issues because “the range of actors involved in the policies and practices of municipal waste is diverse, encompassing commercial and voluntary, as well as state institutions, on scales from neighbourhood to international” (Bulkeley et al. 2005:15). In this way, waste is recognized as part of a larger network of stakeholders and their practices. Additionally, recognizing power dynamics through governmentality lends itself to critical evaluation by allowing the researcher to “question the rationalities, power dynamics and strategies” of governing practices (Henri 2012: 31). This is particularly appropriate for studies in Nunavut territory, where Inuit efforts to self-determine often contrast with competing stakeholder and government interests (Price 2007).

Whereas most studies on waste governance have restricted their analyses to human actors, this thesis recognizes the vitality of waste materials. Vitality, as defined by Jane Bennet, is “the capacity of things...to act as quasi agents of force, with trajectories, propensities and tendencies of their own” (2010: vii). In this thesis, the agency of waste materials is readily apparent: Nunavut’s geophysical characteristics combine with technologies to dictate waste management and consumption practices (Chapter 2); mounds of waste transform historically constituted relationships between Inuit and nonhuman animals (Chapter 3); and spontaneous dump fires
contaminate the bodies of Northerners and assemble groups of concerned citizens (Chapter 4). In situating waste within the complex network that governs Iqaluit’s waste issues, this thesis explores how waste is itself both political and affective. Doing so, as Bennett suggests, refocuses the issue of waste from one of environmentalism (of protection or management) -- one that risks enforcing neoliberal ideologies onto Nunavut publics (see section 3.3) -- to one that “engage[es] more strategically with a trenchant materiality” (2010: 111) that both surrounds and includes us. This particular approach is more in line with Inuit cosmologies (see Qitsualik 2013; Price 2007), which recognize the human/nonhuman lifeworld as socially and materially constituted (see Chapters 3.3 and 4.3). To this end, materialist approaches to ethnography are amenable to questioning and thus critiquing the values, morals and understandings that are embedded in institutionalized Western governing practices, which are themselves predicated upon a human/nature, social/non-social, and living/non-living binary (Bennett 2010; see also Tallbear 2013). Accordingly, Bennett suggests that how governments and publics conceptualize (or even dismiss) nonhuman vitality impacts management decisions and governing practices. Discussing waste, she asks “how would political responses to public problems change were we to take seriously the vitality of (nonhuman) bodies?... How, for example, would patterns of consumption change if we faced not litter, rubbish, trash, or ‘the recycling,’ but an accumulating pile of lively and potentially dangerous matter?” (Bennett 2010: vii). As I discuss later in this thesis, understandings of, and relationships with, nonhumans readily inform Euro-Canadian and Inuit governing practices (see Chapters 3.5 and 4.7).

1.4 Methods: Case Study Approach

Yin defines case study analysis as a “form of empirical enquiry that investigates a contemporary phenomenon in its real life context when the boundaries between phenomenon and
context are not clearly evident and in which multiple sources of evidence are used” (1994: 23). As described above, the governance of waste in Iqaluit is unique; in many ways, the case study lends itself to what Stake would refer to as an *intrinsic* case study, whereby in “all its particularity and ordinariness, the case itself is of interest” (2003: 136). Iqaluit’s waste, in its relation to the community’s socioeconomic status and colonial history, also serves as an *instrumental* case study in that it is used “to explain deeper issues” within the community (McGloin 2008: 46). As studies considering Arctic waste often merge data from across the territories (e.g. Statistics Canada 2012)—and in doing so, contribute to the southern Canadian misconception of a singular homogenous “North”—in applying a case study approach, my thesis aims to elucidate details specific to Nunavut’s (and Iqaluit’s) waste context.

In order to ensure research reliability, fieldwork involved methodological triangulation, meaning that it was comprised of multiple research methods (see Denzin 1978). As Jiff remarks, the use of multiple methods serves as a “vehicle for cross-validation” (1979: 602), to account for the strengths and weaknesses of individual methods of enquiry. Doing so encourages multiple points of encounter between a researcher and a given community (Cater 2013), and is beneficial as it allows the researcher to uncover – and therefore explore and synthesize– key themes or contradictions within data and between methods (Johnson et al. 2007). The methods used in this thesis will now be discussed.

### 1.4.1 Archival Research

Archival research is necessary to understand the historical context of waste governance in Iqaluit and other Nunavut communities. Through archival research, my thesis provides historical context to Iqaluit’s ongoing waste issues. Several sources of archives were accessed prior to, and during, fieldwork in Iqaluit. As much as possible, archival research was conducted prior to
fieldwork so as to develop what Meyer (2001) refers to as a ‘pre-understanding’ of the case’s particular issues. In October 2013, Robyn Campbell from Sustainable Iqaluit provided Dr. Myra Hird and Dr. Allison Rutter with numerous documents pertaining to the City’s Sustainable Community Plan. Preliminary consultation with Arktis Solutions, a northern environmental consulting group, provided multiple reports on Arctic waste that were prepared for local, territorial, and federal governments. Additionally, 76 Iqaluit City Council meeting minutes (January 2011- June 2013) were available online, and analyzed using various search terms including, ‘waste’, ‘dump’, ‘landfill’, ‘trash’, ‘garbage’, and ‘litter’. Other documents, such as the City’s Solid Waste Management Plan (City of Iqaluit 2014), were available online and accessed prior to fieldwork. A pre-understanding is helpful in maintaining the focus of a given research project and allows the researcher to develop relevant interview and participant observation strategies (ibid; Rubin and Rubin 2005). The preliminary research also allowed me to create a list of potential study participants and interview topics prior to arriving in Iqaluit.

Both Nunatsiaq News and CBC North websites were consulted regularly– before, during, and after fieldwork– so as to keep up-to-date on waste-related issues in Iqaluit and in Nunavut more generally. Nunatsiaq News has an online archival database including every newspaper article written since October 1995, and thus was a key archival source for this study. Using the website’s search bar, I searched the same key terms noted above: ‘waste’, ‘dump’, ‘landfill’, ‘trash’, ‘garbage’, and ‘litter’. A total of 180 newspaper articles pertaining to Nunavut’s waste management (ending May 2015) were analyzed. Additionally, I examined each of the Nunatsiaq News’ ‘Year in Reviews’– articles that cover the major news stories in Nunavut for a given year. This helped provide context to articles written about waste management.

While in Iqaluit, I was able to access additional documents that were only available in-person. This included hard copies of Iqaluit City Council meeting minutes (available through the
City of Iqaluit), hansards from the Territorial government legislative assembly (available through Nunavut Territory legislative library), and technical reports on waste management conducted for the Government of Nunavut (GN) (available through Nunavut’s Department of Environment). When possible, and where permission was granted, I obtained digital versions of waste management reports and other documents. Because Council meeting minutes were not digitized prior to 2011, and these records included tens of thousands of pages, I referred to council meeting minutes primarily as a way of understanding the rationale behind particular waste management decisions for which a date was already known (e.g. the decision to expand the Iqaluit dump in 2002). Photos were taken of all relevant council meeting minutes.

Another key archival source that was consulted—particularly for information pertaining to Iqaluit’s abandoned dump sites—including the Nunavut Water Board (NWB) website and public registry. The public registry includes water license applications (required for dump siting and remediation), feedback from the Nunavut Impact Review Board (NIRB)\(^7\), e-mail correspondence regarding applications, and so on. This source of archives was accessed as-needed to fill in gaps of information that were not available through newspaper articles, council meeting minutes, or waste management studies.

As numerous City, GN, and federal government employees pointed out to me, (and something I later experienced first hand) accessing archival materials in Nunavut is challenging. While visiting the Library and Archives Canada, I was told by archivists that many of the Territorial archives are lost or difficult to track down, primarily due to changes in the jurisdiction of documents and department changes associated with the formation of Nunavut Territory. Prior to 1999, Iqaluit was part of the Northwest Territories, and therefore any waste management studies.

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\(^7\) NIRB oversees the water license and is responsible for its screening; however, NWB issues the license. Once a water license is issued, AANDC is responsible for ensuring its compliance.
reports, environmental impact assessments, etc. would have been stored at the Territorial Government offices in Yellowknife, NWT. Depending on who was responsible for managing a given department, record keeping protocols, and so on, materials may or may not have been transferred to the Government of Nunavut. As a result, many technical reports are known to exist but have (perhaps temporarily) been misplaced. When Iqaluit was a part of the Northwest Territories, most waste management studies and environmental impact assessments were contracted though companies out of Edmonton, Alberta– and this is where some documents are assumed to be. I attempted to contact a few of these companies (e.g. UMA Engineering, which is now AECOM) though was unsuccessful in receiving a reply.

The library at the Nunavut Research Institute, the Iqaluit Centennial Library, and a small bookshelf at the Unikkaarvik Visitor Centre contained many relevant academic and non-academic materials pertaining to Nunavut’s colonization and Inuit cosmology. These sources included journal articles, short story collections, biographies, video documentaries, technical reports, theses, textbooks, and more. Reports from the Qikiqtani Truth Commission (QTC), including the Final Report (QIA 2010), Thematic Report and Special Studies 1950-1975 (QIA 2013a), and Community Histories 1950-1975 (QIA 2013b), were key sources used for this research. The QTC began in the early 2000s, and was an Inuit led investigation into the experiences of Inuit during the colonial period in the mid-20th century. The aim of the QTC was for Canadian and Nunavut publics to “better understand how government policies, programs and decisions affected them [Inuit] and their families, and profoundly and irreversibly altered their way of life” (QIA 2013: 2); the report is meant to acknowledge past wrongdoings and trauma, with the hopes of inspiring healing between Inuit and Qallunaat (ibid). The QTC addresses issues

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8 I write ‘temporarily’ because at least two reports that were thought to be missing at the beginning of the summer (GN 1972 and PWC 1992) were later found.
related to social policy, languages, Inuit relocations, qimmiit killings (see Chapter 3) and more (QIA 2013), through interviews with nearly 400 Inuit and Qallunaat living in Nunavut during this time period. The reports were an invaluable contextual resource for the present study.

During my time in Iqaluit (see section 1.5), officials from both municipal and territorial governments actively helped me to find waste management reports. This occurred, at least in part, due to very logistical concerns of government officials, which included, for example, knowing what materials might be buried in Iqaluit’s burning dump, or finding out who is responsible for Iqaluit’s abandoned dump sites. A list of waste management reports and where they were accessed is included in Appendix 1A.

1.4.2 Semi-structured interviews

Semi-structured interviews are widely used in qualitative research, particularly in Canada’s North (e.g. Ferguson and Messier 1997; Henri 2012; Mead et al. 2010). The approach allows for an openness and flow in conversation that, if conducted properly, can yield more fruitful responses than structured interviews (Wengraf 2001); it allows respondents to freely express information that, in their own experiences, may be considered important though may not directly relate to a pre-determined interview question (Henri 2012; Wengraf 2001). Interviews were critical in helping to develop an understanding of how various publics and government officials understand, and engage with, waste and waste governance. To ensure accuracy of responses, all interviews were recorded (with each respondent’s written permission) and transcribed after fieldwork was completed. A copy of the semi-structured interview guide is included in Appendix 2B.

Prior to arriving in Iqaluit, a list of potential research participants was created. Prospective interviewees included municipal and territorial government employees responsible for waste
management (City engineers, environmental officers, landfill workers, and so on), journalists, and community members involved with grassroots waste management initiatives (members of activist groups, or those involved with composting, recycling, cleanups, etc.). Potential participants were contacted by e-mail or in-person and, in accordance with Queen’s General Research Ethics Board guidelines, provided a Letter of Information and a Letter of Consent (see section 1.5). If a response was not heard, potential participants were contacted through a follow-up email or by phone. Other participants were recruited through public notices placed in locations throughout the community (e.g. Nunavut Arctic College, Nunavut Research Institute, the Nunatta Sunakkutaangit Museum, Unikkaarvik Visitor Centre, two local grocery stores, and the Facebook group ‘Iqaluit Public Service Announcements’). All interviews were conducted one-on-one. As building trust is a critical component of effective and ethical interviewing (Meyer 2001; Rubin and Rubin 2005), efforts were made to build relationships with community members prior to the interviewing process. This was also done to ensure that questions asked were relevant and so that it was possible for me to situate particular locations, events, and individuals referenced by participants. As such, I waited at least three weeks before conducting any interviews, with most interviews (n= 18) taking place in August or September. All interviewees were made aware of potential risks and asked to sign a letter of consent.

A total of 27 interviews were conducted as part of this research project. Interview respondents included Government of Nunavut (n= 6) and City of Iqaluit officials (n= 6), journalists (n= 3), those involved with grassroots waste management (n= 13), and those not actively engaged with waste management (n= 6). Of these interview respondents, 21 were
Qallunaat\(^9\), while 6 were Inuit. To this end, I recognize that the low number of Inuit research participants is a limitation of the present research. There are a number of reasons for the lack of Inuit participation in this study, not least of which include my own inexperience as a researcher and newcomer to Nunavut (see also section 1.5). Significantly, this small proportion of Inuit participants may also be reflective of the low number of Inuit government officials involved with waste (or risk) management in Iqaluit.\(^{10}\) Moreover, of the 8 participants who responded to my public notices, all were Qallunaat—perhaps suggesting cultural differences between Inuit and Qallunaat in the willingness to participate in an academic research project, or other limitations involved in my study recruitment method. Accordingly, I attempted to compensate for the lack of Inuit participation by including the concerns of Inuit expressed at public meetings, by extensively privileging the work of Inuit writers and academics, and by incorporating Inuit perspectives through the use of archival research (e.g. newspapers, reports, and so on). In doing so, it is my hope that this thesis provides an accurate representation of the views held by Inuit and other Northerners.

On average, interviews lasted 55 minutes, with a range in time from 21 to 94 minutes. Each interview was audio recorded and transcribed in its entirety as soon as possible after interviewing. Due to the length of interviews and the fact that over two thirds of the interviews were conducted within the last month of fieldwork, many interviews were transcribed in Fall 2014. All interviewees were given the option to limit potentially identifiable information from being presented (e.g. hometown, years living in Iqaluit, occupation, affiliations, and so on). A detailed breakdown of research participants is included in Appendix 1B.

\(^9\) Qallunaat is an Inuit term that, in a general brushstroke, refers to non-Inuit and non-indigenous people. It also represents a set of values and characteristics that are often associated with non-indigenous ‘Southerners’. For a detailed discussion of the term Qallunaat, see Cameron (2015: 22-24).

\(^{10}\) Only 1 of the 12 government representatives that I interviewed was Inuit.
1.4.3 Participant Observation

Participant observation is widely used in the social sciences to study the interactions, behaviours, and beliefs associated with a particular object of study (Naidoo 2012). The method is a common component of case study analysis (McGloin 2008), and is typically combined with other forms of data collection to help attribute meaning and context to particular actors and settings (Naidoo 2012). More than simply highlighting discrepancies between what people say in interviews and how people behave (Pettigrew 1990), participant observation allowed me to actively engage with community members at various sites of waste governance. During my field season in Iqaluit, participant observation was a daily activity that took place in a variety of locations throughout the community, including: each of Iqaluit’s abandoned dump sites; Iqaluit City Council meetings; academic workshops held at the Nunavut Research Institute; community restaurants, bars, and coffee shops; in town or hiking out on the land; at festivals, events, and celebrations; community cleanups; and so on. During participant observation, I would make notes to myself that would be typed out in detail later in the evening.

From June-September 2014, I attended a total of eight City Council meetings and one public meeting. Because City Council meetings were only announced a few days in advance, I kept up-to-date with the City’s council meeting schedule by following the City of Iqaluit and other related groups on social media.11 Throughout the field season, I became acquainted with many community members, including concerned citizens, local journalists, and government officials who kept me informed of new meetings as they were announced. Unlike other sites of participant observation, City Council Meetings and Public Meetings are considered part of the ‘public record’, and therefore these meetings were audio recorded and transcribed (and indeed

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11 These include Iqaluit Public Service Announcements and Iqalummiut for Action.
records of each meeting are also kept by the City). I made note of the number of citizens in attendance at each council meeting, though I did not record names of community members. Names were not attributed to comments made by citizens at public meetings unless those making the comments explicitly stated their name as part of their comment (this was true even if I knew the person’s name). In this way, the information obtained from the public meetings does not contain more identifiable information than is already publicly available through the City and in the media.

Another type of participant observation that was included as part of this fieldwork is what Margarethe Kusenbach (2003: 456) refers to as ‘go-alongs.’ Go-alongs are an ethnographic method of participant observation, where the researcher accompanies an individual (community member, researcher, etc.) as part of their daily activities or routines. Go-alongs are “aim[ed] at capturing the stream of perceptions, emotions and interpretations that informants usually keep to themselves” (ibid: 464) by participating with individuals in their daily routines (e.g. taking trash to the dump, sampling water from streams, etc). An abbreviated list of participant observation, including ‘go-alongs’ and meetings attended is included in Appendix 1C.

1.4.4 Analysis

A combination of archival research, semi-structured interviews, and participant observation was conducted to expose what Henri refers to as “the hybrid spaces of environmental governance [that have been produced] over time in Nunavut” (2012: 54), meaning the differing cultural perspectives and knowledge systems that govern Iqaluit’s waste. The first two manuscripts in this thesis (Chapters 2 and 3) were written primarily based on archival research. These papers analyze the history of waste and colonialism in Nunavut within the context of Arctic academic research and key waste studies themes (e.g. management of ‘abject’, waste and
development, the Anthropocene\textsuperscript{12}, etc.). Interview responses were incorporated into these chapters where appropriate.

After interviews were transcribed, thematic coding was done using Microsoft Word, wherein recurring descriptive themes (Cope 2010) were highlighted in different colours. These themes included: the Iqaluit dump fire; social, infrastructural, municipal development issues; colonialism; population growth; other Iqaluit dumpsites; recycling and municipal waste management strategies; and territorial politics. Afterwards, the contents of these themes (i.e. recurring words, sentiments, and ideas, etc.) were examined for emerging discourses (Rose 1998). Due to limitations in time and thesis constraints, content analysis was restricted to discussions pertaining to the ‘Iqaluit dump fire’, as this was the most prominent theme in interviews. Themes often overlapped in discussions; in Chapter 4, for example, I discuss how responses about the Iqaluit dump fire-- namely those pertaining to risk management, scientific uncertainty, and social justice issues-- also called attention to other topics, such as Nunavut’s infrastructure deficit, territorial politics, and other Nunavut-specific social and environmental issues.

1.5. Fieldwork

Fieldwork was conducted in Iqaluit, Nunavut, from June 2nd- September 6th, 2014, for a total of 97 days; fieldwork included a combination of archival research, participant observation, and semi-structured interviews (discussed in section 1.4). Prior to arriving in Iqaluit, this research received approval through Queen’s University’s General Research Ethics Board (GREB Ref #: GENSC-059-14; Appendix 2A) to ensure compliance with the Tri-Council Policy Statement for

\textsuperscript{12} The ‘Anthropocene’ comprises an emerging body of humanities and social science literature that conceptualizes humanity as a geophysical force. The ‘Anthropocene’ is intended to signal the end of the Holocene, and scholars are readily debating the precise geological time point of when/if this change occurred. See Hird 2015 for further discussion of this term.
Ethical Conduct of Research involving Humans. In order to ensure community support and input for this research, Dr. Myra Hird met with members of the Nunavut Research Institute (NRI) and with Robyn Campbell from Sustainable Iqaluit in October 2013 to discuss the research project. Additionally, Dr. Hird, Dr. Allison Rutter and I met with Iqaluit’s Director of Engineering and Sustainability, Meagan Leach, to discuss the research project in December 2013. All research conducted in Iqaluit must obtain licensing from the NRI; the research licensing process requires approval from the City of Iqaluit who verifies that the proposed research will be beneficial, meaningful, and relevant to community members. This involved submitting a shorted version of my research proposal (translated to Inuktitut), along with my research ethics approval to the NRI, which was then further condensed and passed on to Iqaluit City Council. A copy of the one-page research proposal that was presented to Council is included in Appendix 3A. On April 8th, 2014, my proposed research project ‘Identifying Waste Facts in Iqaluit, Canada’ was passed unanimously by Iqaluit City Council, and this research received licensing through the NRI (License # 0102114N-M; Appendix 3B). As per the conditions determined by the NRI and agreed upon by those conducting research in the Territory, upon completion of my thesis, results will be shared with Iqaluit City Council (in person or via e-mail) in an appropriate format (cf ITK and NRI 2007) and made publicly available to Nunavummiut through the NRI library.

While my research initially focussed on waste in Iqaluit more generally, the scope of my project shifted due to a dump fire that began on May 20th, 2014 and lasted throughout my field season. Although the dump fire began two weeks before I arrived in Iqaluit, (and at this point had

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13 The proposal indicates my intent to start a Facebook page entitled ‘Iqaluit’s Waste Flow’ so that community members could engage with my research project. After careful deliberation, including numerous discussions with Iqaluit community members, I decided not to create the page, primarily because waste had become a contentious issue in the community and at least three other Facebook pages dedicated to waste in Iqaluit (e.g. Iqalummiut for Action; Iqaluit Recycling Society; Carbon Copy) had been created since my arrival. Instead, I posted about my research on Iqaluit Public Service Announcements-- a Facebook group with over 5000 members.

14 This was the name suggested by Queen’s GREB for the research project.
already been nicknamed the ‘dumpcano’\textsuperscript{15} by media outlets), the fire didn’t become the focus of my research until mid-summer when publics began ‘assembling’ (Latour 2007) to make the dump fire an issue. Specifically (and as is discussed in more detail in Chapter 4), the dump fire became an issue in mid-July when pregnant women and women of childbearing age were warned against breathing in dump smoke, which caused anxiety and stress for many community members. At this point, the focus of interviews almost inevitably became about the dump fire and the other issues (social and environmental) that the dump fire came to represent. As a result of this shift in focus, individuals that had not previously been involved with waste governance (e.g. the Government of Nunavut’s Chief Medical Health Officer, the Iqaluit Fire Chief, and so on) came to govern the waste issue. The Iqaluit ‘dumpcano’ therefore became what Stake refers to as a “case within a case” (2003:153), wherein a relatively unique occurrence (a dump fire) becomes representative of other issues.

1.5.1 Positioning

After arriving in Iqaluit, I spent the first several weeks orienting myself to, and involving myself in, the community as much as possible; this included making myself available to volunteer (at events such as National Aboriginal Day, Alianait Arts Festival, Relay for Life), and introducing myself to various community members, including those involved in waste management. This was also a valuable time to experience first hand what it was like to be a Southern (and Qallunaat) researcher in Nunavut territory. As Inuit Tapiriit Kanatami (ITK)\textsuperscript{16} and NRI have made clear, many Inuit (and other northerners) “have significant concerns about the manner in which research is conducted and about the impacts of scientific activities on their communities” (2007: 2); these concerns include how data and interviews are interpreted, that

\textsuperscript{15} This is a combination of the words ‘dump’ and ‘volcano’.
\textsuperscript{16} ITK is Canada’s national Inuit organization.
knowledge of participants is being respected and protected, that results are given back to the community, and that research is useful to, and representative of, community members (ibid). To this end, it was important for me to be forthright with individuals about how I, and others, would benefit (or not) from my research project, and about how results would be used and presented. All participants were informed that the major output of this research would be an academic thesis\textsuperscript{17}, but that the thesis itself may not influence community waste management practices.

While Iqaluit City Council unanimously voted in favour of my proposed research project, maintaining community trust remained an ongoing process throughout my field season. Upon revealing that I was a researcher, for example, I was repeatedly told about the ‘Nunavut Nuclear Family’, which was described to me as ‘mom, dad, children and an anthropologist’. While this comment was usually made jokingly and by friends, it points towards the abundance of researchers already enmeshed in the lives of Nunavummiut, and, accordingly, to the overwhelming number of supposed ‘arctic experts’ coming from Canada’s South (Nungak 2006; see also Sandiford 2006). That Southerners might be ‘arctic experts’ is a notion that is highly contested throughout the territory (ITK and NRI 2007; Henri 2012). Moreover, misrepresentations of Inuit and other aspects of ‘the North’ by Southern researchers and bureaucrats are well known in Nunavut, and have been recounted by Inuit and other Northerners. John Amagoalik, for example, recalls of his youth the many times when Arctic ‘experts’ came to Nunavut– often for a short period of time (and almost always in the summer months)– and would “return to their homes in the South and write their stories” (2000: 138), often attempting to solve the issues of Nunavummiut.\textsuperscript{18} At the time, Southern researchers and government officials readily

\textsuperscript{17} Some participants requested a copy of my thesis, and will be emailed a copy upon its completion.
\textsuperscript{18} That research in Nunavut is readily contested is particularly important to acknowledge in studies involving waste. Indeed, Zebedee Nungak’s (2006) well-known satirical ‘Science of Qallunology’ was predicated upon an imagined future social scientist studying the waste practices of Inuit. Nungak coined the term ‘Qallunology’— the science of
considered Nunavut communities to be empty “wastelands” where ‘issues’ could be solved by increased resource development and Inuit assimilation (ibid: 138). That colonialism remains a part of contemporary research practices is also discussed by Tommy Akulukjuk (2004), who writes that it is often difficult for Southern researchers to present solutions to problems in ways that differ from those already in place in Canada’s South. He writes of attending an Inuit Studies conference, for example, as “being studied through a microscope, [with Southerners] dissecting my organs and making conclusions from a Qallunaaq perspective and suggesting and making recommendations about how to go into the future” (Akulukjuk 2004: 212; my emphasis)—what was often done without actually talking to or consulting Inuit. In this way, many Northerners experience research as counter to Inuit self-determination.

As a result, many Inuit and other Northerners implicitly distrust Southerners visiting Nunavut communities, including researchers. As one Inuk woman explained to me:

Cause there's no real positive thing that's ever come out of Southerners invading a community, right? Like, honestly. Like, even if you go to a community for work or something, yes, people will be nice to you. People will be civil to you, like, as a Southerner. But there's always that sense of feeling, you can tell. They're like, "what are you up to, why are you here?". Cause they're like, what do you want with our land? What do you want with our- like, what are you guys here to do? Why did you pay money to come here? 19

white people and white knowledge systems— as a response to the many Southern researchers that were coming to the North, studying Inuit practices, and then leaving with a generalized view of what was presumed to be representative of all Inuit. He writes, “There is nothing in Inuit life that has not been examined, analyzed or documented... Eskimologists gather every two years at events called Inuit Studies Conferences in different cities all over the world to talk shop about their respective knowledge and acquired expertise.” Elsewhere he sarcastically proposes that “the best and brightest Arctic-oriented minds can tackle this subject [waste] at a future Inuit studies conference and seek some innovative solutions” (Nungak 2004: 22). Within the Science of Qallunology, Nungak suggests instead examining the “weirdness” of Qallunaat culture, which includes a cultural commitment to the suppression of bodily functions and the creation of ‘civilized’ garbage (Nungak 2006:18). In analyzing the competing understandings of waste held by Inuit and non-Inuit stakeholders, I attempt to examine the ‘weirdness’ that Nungak discusses. 19 Interview with long-term Inuit resident of Iqaluit, conducted 5 August 2014.
That my presence might be unwelcome by some Iqalummiut\textsuperscript{20} was made clear to me during my first week in Iqaluit. While out for dinner with a friend, I was introduced (as a researcher) to an older Inuk woman who was my friend’s acquaintance. After I greeted her in English, the Inuk woman refused to answer me until it was apparent to her that I understood that she, as an Inuk on Inuk land, had the right to object against speaking to me in my first language rather than in hers.

I wrote of this experience in my field notes:

After a few moments, I realized that she was introducing herself to me and saying her name in Inuktitut. After I understood what she meant and repeated what she said (but saying “Alex” instead of her name) she told me that she speaks two languages and that it’s her who gets to decide which is the language that she speaks - not me.

Her critique was valid. It was, in fact, fairly presumptuous for me to assume that a) not only would she want to talk to me, but b) that she would want to do so in English. She continued speaking to me in half English, half Inuktitut for the next half hour or so... She had me repeat several keywords back to her in Inuktitut. After telling me, again, that she likes to speak in her own language, I told her that that was valid and that she could speak with me however she would like as long as it was not in Spanish because then we would be speaking neither of our languages. She laughed and then the mood lightened. Looking back, I’m not sure if she was ever actually angry or whether this was her way of teasing me. Regardless, I’ll take note of her points. [AZ Field Notes 04/06/2014].

More than anything, these encounters were, as ITK and NRI suggest, a call for me, as a Southern researcher, to “be honest... be humble... be open” (2007: 7) and to avoid, as Emilie Cameron (2015: 34) writes, “being universal, declarative, and expert.”

Having discussed just a few of these encounters, I contend that simply acknowledging my presence as researcher in the North as problematic is not altogether useful; rather, I mention these encounters as they informed my research approach. While community distrust is often considered by Southern researchers as one of the many “challenges” to conducting research in the North (ITK and NRI 2007: 1), I took it less as a challenge to knowledge acquisition, and more as a

\textsuperscript{20} Iqalummiut is the local term used to describe those living in Iqaluit. There are variations in the term, and others use Iqalungmiut. In this thesis, I use Iqalummiut to coincide with the name of the activist group, Iqalummiut for Action.
necessary challenge to reframe what I consider knowledge acquisition to be. In line with Tommy Akulukjuk’s critique, then, my research is not meant to identify a technical solution to Iqaluit’s waste issues, but more so reflects what Emilie Cameron refers to as “learning to learn” (2015: 34): to spend time listening to community members so as to learn (and therefore discuss and critique) how issues identified by participants are embedded in everyday relations between actors.

As Cameron writes:

[The task of researchers] is not simply to listen to stories from the margins, to write better stories, or to more adequately weave “diverse perspectives” into Qablunaaq\(^\text{21}\) histories. It is, instead, to account for the ways in which our stories are embedded in much larger structures and patterns of relation, and how they relate to ongoing contestation over the fate of northern peoples, bodies, lands, and livelihoods. (2015: 150)

In this way, examining how different ways of managing, knowing, and being with nature/wastes are variously privileged or ignored is the subject of this thesis.

\(^{21}\) This is a spelling variation of the term Qallunaat that is more common in Nunavut’s Kivalliq region.
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Chapter 2

The Arctic Wastes

2.1 Abstract

In the Eastern Canadian Arctic city of Iqaluit, a three-story pile of waste rests atop a peninsula that extends well into Nunavut’s Frobisher Bay. The dump - which burned steadily throughout the summer of 2014 - is one of several waste sites in Nunavut’s only official city. It joins an unknown number of waste sites that the US and Canadian military, oil, gas, and minerals industries have left abandoned on and in the landscape. In this chapter, we examine waste within the wider context of colonialism as well as contemporary neoliberal governance practices to argue that waste itself is part of a colonial context within which Inuit and other Aboriginal peoples in northern Canada continue to live. Waste is a provocative material concept with which to think about neo-coloniality, and in the context of the Anthropocene takes on a distinct hue. Whether in the form of mining, nuclear, industrial, hazardous, sewage or municipal, and whether it is dumped, landfilled, incinerated or buried deep underground, waste constitutes perhaps the most abundant and enduring trace of the human for epochs to come. In this chapter, we take up the challenge posed by Dipesh Chakrabarty (2011) to conceptualize the neo-colonial subject within the context of the Anthropocene, wherein humanity is re-characterized as a geophysical force. While the Anthropocene speaks of a globalized human race to whom past and present generations project responsibility and reparation, we emphasize that the effects of this waste landscape - neo-colonialism’s dividend - is differentially experienced by Inuit people living in Canada’s North.
2.2 Iqaluit’s Waste

In the Eastern Canadian Arctic city of Iqaluit (population approx. 7000), a four-story pile of waste, known locally as the West 40 Landfill, rests atop a peninsula that extends well into Nunavut’s Frobisher Bay. To say that the dump ‘rests’, however, is perhaps misleading: for the fourth time in just over a year, the dumpsite spontaneously caught fire on May 20th, 2014. For over three months the fire burned continuously, leading to a variety of responses from stakeholders: publics filed numerous formal and informal complaints to the City regarding the smell of dump smoke; a Territorial health department advisory warned that children, women of childbearing years, pregnant women, the elderly, and those with respiratory issues should avoid breathing in dump smoke entirely (presumably the healthy post-menopausal, pre-elderly woman was safe); the local elementary school shut down twice due to children complaining of headaches; and several major community events were postponed, including the city’s annual spring clean-up. All of this culminated in the Federal and Territorial Government’s reassurance that the public’s exposure to dump smoke was safe for human health.

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22 The authors gratefully acknowledge the financial support of the Social Sciences and Humanities Research Council of Canada (Insight Grant number 435-201300560) in conducting this research. The title of this chapter derives from the term used by white explorers to describe land in Canada’s north (see Amagoalik 2000). The term is sometimes still used today in discussions about Arctic sovereignty (e.g. Harris 2005).

23 Iqaluit is the only city in, and the territorial capital of, Nunavut, Canada’s largest and newest territory. In 2011, the population of Nunavut was just under 32 000 people (Statistics Canada 2011a). Inuit make up approximately 85% of the territory’s population though this is significantly lower in Iqaluit (City of Iqaluit 2014a). The median age of Inuit living in Nunavut is 21 (Statistics Canada 2011b). None of the communities in Nunavut are connected by roads, and the land area of the territory is nearly 1.9 million km² (Statistics Canada 2011a).

24 The dump is reported to have self-ignited May 20th, 2014 (Varga 2014a). This spontaneous ignition is caused by bacterial metabolism of the dump’s abundant organic and inorganic material. The Iqaluit dump spontaneously ignited several times prior to the May 2014 fire. Fires on January 2013, December 2013, January 2014 and March 2014 lasted for less than a day each, but are thought to have contributed to the current landfill fire (Sperling 2014). A fire starting September 26th, 2010 lasted for 36 days.

25 The press release was distributed July 18th, however, the ‘women of childbearing age’ clause was amended on July 31st to only warn “pregnant women, as well as those who may become pregnant” (Department of Health 2014b) against breathing in the dump smoke. By this time, information from the original press release had already been widely reported. Dr. Maureen Baikie, the territory’s Chief Medical Officer reported that an eight-week air-quality monitoring study in Iqaluit showed that, for a given 24-hour period, pollutants in the smoke are “at values that are well below environmental guidelines and standards” (in Varga 2014b). For a more in-depth discussion, see Chapter 4.
Or, at least it *should* have been safe if standing at a distance of 70 meters from the dump. Meanwhile, a hired landfill consultant explained to Iqaluit City Council that their waste management operations “virtually guaranteed this problem would happen” (Sperling 2014: 57). Without technical intervention, the consultant assured City Council, the fire would burn for at least another year. Unlike the modern landfills of Canada’s other capital cities, Iqaluit’s municipal solid waste site is (noticeably) in constant exchange with air, land, and sea: what Southerners typically refer to as ‘the environment’.

The dump is just one of the many waste sites located near or within the City of Iqaluit. In January 2013, a 1995 map of the city’s contaminated waste sites resurfaced in the local Nunavut newspaper. In the article, federal and territorial politicians were asked for help in cleaning up the community’s six remaining waste sites; although most (if not all) of these sites are left over from federal government military and resource development initiatives, the responsibility for these sites is largely unknown. And in the nearly two decades since the map was originally commissioned as part of the Department of Indian and Northern Affairs’ Arctic Waste response program, only one site—Iqaluit’s ‘Upper Base’, a 1950s era Pinetree Line radar station (Eno 2003)—has been fully remediated. The remaining sites, which persist despite being known sources of contaminant exposure (ESG 1995), are unavoidable features of the landscape. A more than half-a-century old metal dump is located adjacent to a nearby Territory Park, right next to the city’s most popular campsite; three other waste sites, including the city’s dump, are located at Causeway, the city’s main launch point for those seeking going out on the land to hunt and/or camp; and two others (a metal dump, and the contaminated North 40 site) are centrally located between an under-construction airport, a college residence, and the territorial penitentiary. These sites, as the Councillor who wrote the article explained, “pose a threat to that [Inuit] way of life” (Dobbin 2013: 1) because of their desorption into local ‘country’ foods, such as berries and
aquatic wildlife (seal, clams, fish, and so on). More than just colonial reminders, we argue, these waste sites are colonial in and of themselves.

In this chapter, we examine waste within the wider context of colonialism as well as contemporary neoliberal governance practices to argue that waste is part of the colonial context within which Inuit and other Aboriginal peoples in northern Canada continue to live: waste, in other words, has become a particular neo-colonial symptom (Anderson 2010). Neo-colonial governance leads to the configuration of waste as capitalism’s fallout - its unanticipated supplement - which can be managed as a technological issue (bigger and better waste facilities) and individual responsibility for diversion (primarily recycling) (see Hird 2015). Perhaps, we will venture, the failure of waste in Canada’s northern communities to conform to Euro-Canadian governance may be understood as a living-with the historical colonial legacy that continues to indelibly shape the northern landscape and its people.

Waste is a particularly provocative material concept with which to think about neo-coloniality because of the important part this concept has played, and continues to play, in “excluding certain groups of people from specific social, political, and physical spaces” (Moore 2012: 787). The longstanding association of waste, dirt, and disease with racialized and colonized peoples as a justification for practices of subjugation certainly offers insights into waste as a cultural signifier (see Douglas 1966 and Kristeva 1982) but in the context of the Anthropocene waste takes on, we argue, a distinct hue. The Anthropocene captures an emerging recognition, and interest in the simultaneous operation of human-created infrastructures and global politico-economic practices characteristic of industrial capitalism, and geological processes stretching back through deep time. Whether in the form of mining, nuclear, industrial, hazardous, sewage or municipal, and whether it is dumped, landfilled, incinerated or buried deep underground, waste constitutes perhaps the most abundant and enduring trace of the human for epochs to come.
While stratigraphers debate the appropriate geographic coordinates for the next golden spike, the real provocation of the Anthropocene is not that we are leaving a message for some imagined future humanity to decipher, but that we are bequeathing a particular futurity through a projected responsibility. In this chapter, we want to take up the challenge posed by Dipesh Chakrabarty (2012) to conceptualize the neo-colonial subject within the context of the Anthropocene. The Anthropocene, Chakrabarty argues, re-characterizes the neo-colonial subject as both the colonized and - as a geological force - the ‘re-indigenized’ insofar as humans may no longer think themselves separate from nature. We will explore this as a provocation to better understand the human species’ precarious relationship with Earth, but also as a caution that it not subsume violent neo-colonial legacies within a universal discourse about humanity.

The history of waste in Canada’s North, we argue, is inseparable from its colonial legacy as US and Canadian military, as well as American and Canadian prospectors, industry and settlers both introduced waste to the North, and - for the most part - abandoned it there. This past, and waste’s future promise - the fallout of increased oil, gas and mineral extraction, military installations, shipping, and the tourist trade to the health of humans and nonhumans - projects a responsibility to present and future generations to resolve. And while the Anthropocene speaks of a universal human species that impacts the planet, we emphasize the uneven distribution of both the causes of Anthropogenic change, and of the effects of this waste landscape - capitalism’s implicit dividend - that are differentially experienced and lived by Inuit peoples of Canada’s North.

2.3 Teaching Iqalummiut26 to Waste

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26 Iqalummiut is the term used locally to describe those living in Iqaluit, and includes both Inuit and Qallunaat (non-Inuit) community members.
Much of Iqaluit’s short history involves Euro-Canadians and Euro-Americans teaching Inuit how to waste. Prior to the settlement of Qallunaat in Nunavut, the Inuit of Baffin Island (what is known as Nunavut’s Qikiqtaani Region) were semi-nomadic and relied solely on the land for sustenance (QIA 2010). One or two Inuit families together hunted a variety of seasonal animals (i.e. caribou, seal, ptarmigan, muskox, and polar bear) for food, clothing, tools and other necessities. In the summer, caribou skin was used to make summer tents, and in the winter, snow and ice were used to make iglu, and sod was used to make houses called qammar (ibid). Given the presence of middens across the Arctic, claims that Inuit produced little to no waste prior to colonization are likely made as political statements regarding the profoundly different volume and kind of waste that colonization brought to the Arctic. They also suggest that garbage itself might be a colonizing force— one that is necessarily configured through settler ontology, a point we return to later in the chapter.27

Inuit visited the area of Iqaluit to fish, hunt, and trade28; however, it wasn’t until the American military selected the region as a World War II airbase that Inuit began moving into year-round settlements. Although many Inuit settled near Iqaluit temporarily to work for the American military, by the early 1950s, only fifty Inuit lived in Iqaluit permanently (QIA 2010). In the late 1950s, when the Canadian government constructed the DEW Line as a strategic defense against Soviet invasion during the Cold War, Inuit began to settle in earnest (Eno 2003; Gagnon and Iqaluit Elders. 2002). This shift to a sedentary lifestyle, which was both driven by, and reliant on, government subsidies and a Euro-Canadian style labour-based economy, resulted

27 As Nungak remarks, “traditionally, Inuit society was garbage-less. All our stuff was either edible by dogs, or naturally degradable” (2006: 18).
28 ‘Iqaluit’ is Inuktitut for ‘place of many fish’.
29 The Hudson Bay Company established an outpost in the area in 1914.
in deep social and cultural changes that transformed the relationship between Inuit, land, family and community practices, food, health, education, and waste.

In general brushstroke, the history of colonization in Canada’s north resembles that of colonization in Canada’s south -- though, significantly, it occurred over a century later. Early explorers depended on Inuit to survive what Europeans experienced as the harsh northern climate. The Hudson’s Bay Company and other outfitters organized hunting around capital and profit. Like First Nations and other Aboriginal peoples in southern parts of Canada, Inuit in the North were rapidly and purposefully assimilated into mainstream Canadian culture.

Anthropological reports from the mid-twentieth century describe Iqaluit (then Frobisher Bay) as a town where “sophisticated southern populations”, “rugged old-timer Northern whites”, and a “shadowy social world of metis and natives” (Fried 1963: 59-66) lived together in close proximity. Whereas most government workers lived in “Southern Canadian type ‘suburbias’” (ibid: 58), many Inuit lived in self-made, one or two room shacks (Honigmann and Honigmann 1963). Since the Canadian military did not provide housing for Inuit casual labourers, Inuit used the military’s own discarded materials. An unnamed American military official, described the “ingenuity and cleverness” of his Inuk labourer in preventing waste materials from being produced—a characteristic that was not readily shared by his American counterparts (Gagnon and Iqaluit Elders 2002: 28).

The line between resourceful and dirty was (and is) largely dictated by normative assumptions about cleanliness and waste. As Marie Lathers notes, “management of the abject”

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30 See QIA 2013 for detailed community histories, including explanations of why colonization in Canada’s North did not occur until the 20th century. Tester 2010 provides further discussion of socio-economic changes during this time.
31 Frobisher Bay was the name given to the community by European settlers until City Council voted to change it to Iqaluit in 1987.
32 During this time it was common to use the terms ‘native’, ‘metis’, or ‘Eskimo’ when referring to Inuit people. These terms are now considered pejorative or simply incorrect. Eskimo, for example, is a Cree term meaning “eater of raw meat”. 
(i.e. of feces, dirt, or waste) was central to the American (and we would argue Canadian) colonial project of the early 20th century (2006: 419). The particularities of this project developed through a discourse of “excremental colonialism” (ibid: 419) wherein the ‘brown person’ became disempowered (and dehumanized) through their association with the abject. Indeed, one government official noted with disgust that when Inuit began wearing Euro-Canadian cotton materials, that the clothing was worn “until… it fairly rots off” (Lackenbauer and Shackleton 2012: 8). Here, as Warwick Anderson puts it, waste was used to delineate “the polar opposites of white and brown, retentive and promiscuous, imperforate and open, pure and polluting, civilized and infantile” (2010: 170-171). Though many Inuit fondly recall scavenging for food and other materials left to them regularly, in dumps, by the American military (Gagnon and Iqaluit Elders 2002), the Canadian government was less inclined to do so. All government employees were enjoined to ‘assist’ Inuit people’s (inevitable) transition to modernity by “insist[ing] upon the maintenance of cleanliness and sanitation amongst the Eskimo employees and their famil[ies]” (Lackenbauer and Shackleton 2012: 10). By 1960, for example, scavenging for household materials was banned in Resolute Bay. In Iqaluit, at least one Inuk reported fear of being caught by military officials for scavenging for wood and mattresses at an abandoned dump site (Gagnon and Iqaluit Elders 2002). Government reports from the mid 20th century discussed the difficulty Inuit had in adapting to Euro-Canadian standards of waste management (e.g. Harrison 1964; Thompson 1969). Ironically, Inuit were hired for the Euro-Canadian residents’ laundry operations, sewage disposal, waste collection, and cleaning, suggesting that while unclean themselves, Inuit were entrusted to unburden white people from the toil of their own cleaning (Gagnon and Iqaluit Elders 2002; Harrison 1964; Lackenbauer and Shackleton 2012).

The shifting Inuit way of life towards wage-labour and a market-based economy was reinforced by several directed government initiatives. Examining the development of Iqaluit,
Matthew Farish and P. Whitney Lackenbauer note that by the mid 1950s, Euro-Canadian bureaucrats took a “high modernist” approach to development in the Arctic (2009: 520). The explicit goal was to build “a nation in the northern half of this continent truly patterned on our [Southern] way of life” (ibid: 518). More than this, the North American Arctic was meant to become a “safe space for development projects” (ibid: 523; original emphasis). As more and more Inuit were assimilated into the market economy, Inuit across Nunavut began to rent government-subsidized housing. These houses were often described as unfit for the climate, and most relied on electricity for heating that was turned off if tenants did not make their rent payments (QIA 2010; Gagnon and Iqaluit Elders 2002; Thompson 1969).

Similar to American colonialists in the Philippines, which, as Anderson (1995) points out, quite literally examined slides of indigenous people’s feces, Canadian federal government employees were sent to inspect the cleanliness of Inuit houses. It was noted by government officials that Inuit women’s housekeeping “lacks organization” (Thompson 1969: 13). Federal government officials recorded Inuit diet (“...almost all the food was bought from the store” p.23), patterns of food preparation (“Soups are heated but do not always have water added to them” p.17), shopping (“men make most of the purchases” p. 27), and cleanliness (“toilet bowls are allowed to fill before they are removed… Washing clothes is still a problem in many homes” p.14-15). In the late 1960s adult education classes were provided to Inuit women whose housekeeping did not “measure up to the standards set by white women” (ibid:23).

The Canadian Government’s particular mode of paternal governance was reinforced well into the mid-20th century. Government officials, military and Southern industry personnel justified Inuit assimilation on the grounds that it was not only necessary for Northern

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33 This quote was said by Alvin Hamilton, the Minister of Northern Affairs and National Resources under Prime Minister John Diefenbaker.
development initiatives, but for Inuit people’s survival. Colonization, it appears, had been so successful that the traditional Inuit way of life, as well as the people themselves, were in danger of extinction. In 1964, the Department of Northern Affairs and National Resources created Qaujivallaalirutissat, a guidebook written in both English and Inuktitut, which was designed to help Inuit “when they are faced with the many new things which are happening in the North” (p.8). Here, the government explicitly recognized the reliance of Inuit on the market-based economy, stating that “[Working Eskimo] can no longer hunt with bow and arrow like in the old days...some of them would die if they were not helped by the white man” (Harrison 1964: 10). The guidebook advised that educating Inuit children with a Euro-Canadian curriculum was a vital factor in achieving Inuit assimilation:

Eskimo children know a lot about the animals birds and flowers around them. In school they can learn about the habits and usefulness of many things in nature. At school he also learns about mines, machines and factories in which many people work. He will learn how useful these things are to all men (ibid: 64).

Many thousands of Aboriginal children throughout Canada - including Inuit - were removed from their families and forced to live in residential schools. In Canada’s North, Inuit children were placed in communities throughout the other provinces and territories. Many Inuit believed (accurately or otherwise) that their family allowances would be taken away if they did not send their children to residential schools -- this would have meant a loss of crucial food or housing needed to support small children and elderly relatives (QIA 2010). Educating Inuit youth (particularly young girls) in other communities was thought to have the added bonus of influencing Inuit women to become better at household chores (Thompson 1969). Women, who

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34 This later became the Department of Indian Affairs and Northern Development in 1985, and Aboriginal Affairs and Northern Development Canada in 2011. Note the reiterated association between the Aboriginal peoples and development.

35 John S. Milloy (1999) provides a detailed history and description of Canada’s residential school systems from 1879-1986. The closing events for Canada’s Truth and Reconciliation Commission on residential schools were held in Ottawa in 2015.
were traditionally the dominant figure in the tent household, and whose “authority seems to have been usurped” (ibid: 20) by settlement, often found the furnished adult education classes to be both boring and demeaning. One government official, at least, recognized that Inuit women’s decision-making roles in families and communities had been irrevocably changed. His solution was to recommend involving Inuit men in the household, mainly as a way of enforcing Euro-Canadian gender roles: “the influence of men on purchasing, cooking, and home care should be realized and exploited…since women have been excluded from some of their traditional decision making situations” (ibid: 29). Within the Canadian federal government’s patriarchal tradition, colonialism and waste were inextricable.

In 1999, through the political struggle of numerous Inuit activists (who themselves had been educated in Canada’s residential school systems), the Nunavut Land Claims Agreement was made into law. The result was the creation of the largest land claim in Canada’s history and Inuit self-governance over the newly formed Nunavut Territory\(^{36}\). Inuit were no longer the ‘eaters of raw meat’ nor were they the numerical I.D. given to them by federal government officials\(^{37}\); now Inuit were to be considered ‘real human beings’\(^{38}\) with final decision making authority over the Territory’s government and development.

Since its colonization, both Iqaluit’s population and the amount of waste it produces have grown rapidly. In 1989, when Iqaluit’s population reached nearly 3000 people, the city was producing approximately 15,000 cubic meters of waste annually (Heinke and Wong 1990).

Plastics, which comprised only 4.2% of the waste stream in 1974 (compared to 10.1% in the rest

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\(^{36}\) Nunavut means “Our land” in Inuktitut. Prior to April 1st, 1999, Nunavut was part of the Northwest Territories (NWT).

\(^{37}\) Prior to colonization, Inuit did not have surnames and, because Inuktitut was an oral language, first names did not have consistent spelling. In 1941, all Inuit were given E-numbers (Eskimo-numbers), which allowed the government to accurately collect “census information, trade accounts, medical records and police records” (Bonesteel 2006: 38). The e-number system ended after 1968, when the NWTs ‘Project Surname’ requested that all Inuit select a surname to be used by government officials (ibid).

\(^{38}\) The term Inuit means ‘real human beings’. Inuk is singular.
of Canada), increased to 13.3% of the waste stream by 1989 (ibid). In 2011, with a population of just over 7400, annual waste production was calculated at 82,805 cubic meters (Exp 2011). As Inuit activist and writer Zebedee Nungak wryly notes, “Now, our garbage is as ‘civilized’ as anybody else’s.” (2004: 18).

2.4 And then some

The municipal solid waste openly dumped in northern communities is a small fraction of Canada’s northern waste portfolio:

- There are approximately - no one knows the exact figure - 27,000 abandoned or ‘orphaned’ mines in Canada, most of which are in Canada’s northern regions. The Giant Mine, located on the Ingraham Trail close to Yellowknife, was abandoned in 2005, leaving responsibility to the Ministry of Indian Affairs and Northern Development and the taxpayer for the cost and cleanup of some 100 on-site buildings, eight open pits, contaminated soils and waste rock around the mine, and some 237,000 tons of arsenic trioxide dust (Sandlos and Keeling 2012).

- In January 1978, the Soviet satellite Cosmos 954 exploded through the atmosphere over the Northwest Territories, spreading some sixty-five kilograms of fissionable uranium 235 over an area of 124,000 square kilometers (Heaps 1978).

- The grasshopper effect is a term used to explain how Persistent Organic Pollutants (POPs) from all over the world end up in polar regions. Many POPs are industrial waste by-products that are transported to the Arctic via air currents from southern communities. Contaminants evaporate in warm temperatures and condense in cold climates where they accumulate on the land and in country food. As a result, women who eat country food
have higher contaminant loads in their breast milk than those who do not (Kafarowski 2004).

- When the U.S. Army stopped work on the pipeline from Norman Wells to Whitehorse, it abandoned hundreds of trucks, graders and construction equipment as well as some 60,476 barrels of oil in the pipe, and some 108,857 barrels that are presumed to have spilled into the landscape (Up Here 2014: 15).

- The Distant Early Warning (DEW) line, set up in northern Canada during the cold war to detect incoming Soviet bombers and sea-land invasion left in its wake sixty-three abandoned sites contaminated with various toxic chemicals that have had to be removed – square inch by square inch – to southern Canada for treatment. The numerous military stations littered across the northern landscape also present various waste issues, from abandoned equipment to leaking chemical containers and brownfields.

- Disposal of sewage and greywater at-sea is regulated in all Canadian waters except for the Arctic Ocean where “any ship and any person on a ship may deposit in arctic waters such sewage as may be generated” (Arctic Shipping Pollution Prevention Regulations C.R.C., c. 353). There have been thousands of vessels travelling the Arctic since 1990, the vast majority of them by tourism, research, and federal government military support vessels (Pizzolato 2014).

- A new study reveals that concentrations of microplastics (plastics debris that is less than 5mm in diameter) in high Arctic sea ice is over two orders of magnitude greater than what is found in all other ocean surface waters, including the so-called the ‘Great Pacific Garbage Patch’ (Obbard et al. 2014). The research concludes that the Arctic is a “global sink” (p.4) for microplastic debris — one that will result in a substantial release of plastic particles into the ocean upon anthropogenically induced sea ice melt.
2.5 True North Strong and Free

In a contemporary refrain of Canada’s national anthem, Prime Minister Stephen Harper recently stated at the 2009 G-20 Summit that Canada has “no history of colonialism” (Ljunggren 2009). Harper reiterated the government’s stance that Canada is a nation whose resources and opportunities are shared equally by all citizens. As well as denying hundreds of years of Old World dependence on Canadian resources, and of prospector and settlers’ dependence on Aboriginal peoples for survival, navigation, hunting, and labour - all of which inspired the material and cultural subjugation of Canada’s original peoples - Harper’s statement exemplifies the liberal state that Michel Foucault identified, that “justifies its jurisdiction on a type of origin myth” (Asch 2007: 281). Faced with the long and deep history of Aboriginal peoples in what became Canada, Michael Asch argues that Europeans chose to identify colonial settlement as sovereignty’s historical starting point. The Crown declared Canada a terra nullius before colonization; an absurdum recently reiterated by the Supreme Court of Canada.39

Embedded in the colonial imagination of sovereignty is the messy juxtaposition of the Arctic as simultaneously the ‘true north strong and free’40 - a remote and pristine landscape whose innocent history embodies an aesthetic of uncontained and uncontaminated wilderness; the North as Canada’s largest and most diverse emerging resource for industrial extraction - a vital piece of the circumpolar pie; and, increasingly, the North as Anthropogenic trace and therefore “a symbolic pinnacle for global sustainable development” (Shadian 2006: 249).41

The dramatic increase in demand for northern natural resources over the past twenty years has only intensified with the prospect of climate change making these resources more accessible

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39 In R. v. Sparrow, S.C.R., the Supreme Court of Canada declared: “there was from the outset that sovereignty and legislative power, and indeed the underlying title, to such lands vested in the Crown” (in Asch 2007: 283).
40 The anthem goes: ‘Oh Canada, our home and native land, true patriot love in all our sons command. With glowing hearts we see thee rise, the true north strong and free’.
41 Canada vies for its share of this pie with Russia, Norway, Sweden, the USA, Greenland, Iceland and Finland.
According to Aboriginal Affairs and Northern Development Canada, the North contains about twenty-five percent of Canada’s remaining discovered recoverable crude oil and natural gas, and about forty-percent of Canada’s projected future discoveries (Government of Canada 2010). This means more people and equipment moving temporarily from south to north, much more drilling and extraction, and inevitably, more waste.

A technocratic language of environmental management is increasingly eclipsing debates about Inuit control over land and sea; a discourse that includes not only the interests of scientists and conservationists in land stewardship, climate regulation, and biodiversity, but of oil, gas and mineral mining, tourist, and other Euro-Canadian and international corporates. Once again, Inuit rights are being fused with resources into a single issue (Shadian 2006: 250). Inuit rights over northern development in areas of oil and gas exploration, hunting and fishing is now advanced on the grounds of thousands of years of successful Inuit stewardship. However, this stewardship is formulated within terms that assume resource development as a given; and moreover, as Jessica Shadian argues, within a discourse that corroborates Canada’s western neoliberal ideology (ibid). In other words, Inuit have rights because of their status as Canadians, and it is the needs of Canadians as a whole (i.e. resource extraction, profit, global corporate investment, and employment) that define the terms of sustainable development in the North. As the Canadian government’s ‘Northern Strategy’ states:

Canada’s North is a fundamental part of Canada – it is part of our heritage, our future and our identity as a country. The Government has a vision for a new North and is taking action to ensure that vision comes to life – for the benefit of all Canadians. (Government of Canada 2014, our emphasis)

As such, “indigenous people have in effect been engaged in a massive program of foreign aid to the urban populations of the industrialized North” for the past several hundred years (Kloppenburg 1991). Thus, through contemporary interests in development, Inuit communities
are being assimilated into greatly expanding industrial corporate interests in the north through casual resource extraction labour, capacity-building training, and the tourist trade (Bravo 2006). Inuit communities are themselves caught up in often fraught internal struggles as they negotiate access to development on the land and in the sea (e.g. Bernauer 2012; CBC News 2015).

For Inuit, the North is a place of complicated histories of violence, subjugation, collective memory, landscape, survival, tradition, and more. Researchers continue to identify the multitudinous human health and environmental risks that attend northern development, such as living with contamination (see for example Kafarowski 2004, Sandlos and Keeling 2012). The strategic interest in the North, first as a military defense site in the 1940s and then as a site for resource extraction and development that has been accelerating since the oil crisis in the early 1970s, continues to promise the spoils of western civilization to Inuit peoples: more jobs, more training, more money, and greater investment. But as one advocate for Inuit rights challenging the Canadian polar gas pipeline project points out:

Initiatives such as the pipeline have too often been proposed together with promises that it will shepherd native people into the 20th century…[instead] too often it serves only to dislocate and disorient native peoples and leaves them unequipped for the 20th century, stripped of their lands and waters and the ability to follow their traditional pursuits once it has passed them by (in Shadian 2006: 253).

Thus amongst whatever dividends Inuit may or may not actually accrue - and numerous studies demonstrate that many are peripheral and temporary - problems associated with what is known as the ‘staples trap’ or ‘resource curse’ (see Southcott 2012 for example) - northern development ultimately leaves substantial waste in its wake:

Today, the greatest and certainly the most direct threat to the security of Arctic residents stems from damage to the environment. The Arctic, in effect, has been treated as a dumping ground by government, military establishments and industries concerned only with the needs of southern societies (Simon in Shadian 2006: 256).
Whether or not environmental degradation is the most direct threat, there is no doubt that it adjoins poverty, suicide, a safe and affordable housing crisis, food security, substance abuse, and a host of other profound and pressing issues facing Inuit people.

### 2.6 Self-determination

This is not to say that Inuit do not act, know, or care about waste management. In Iqaluit, as with other Arctic communities, there exists a multiplicity of perspectives on waste and other issues. Rather than rehearsing a familiar colonial discourse that defines (and thus confines) indigeneity to local or traditional practices and epistemologies, we argue Inuit perspectives are embedded—whether deeply aware of, occurring in response to, or independent of, Nunavut’s recent and ongoing colonial history.\(^{42}\)

Many Inuit, for example, consider community and resource development as a necessary and even desirable way forward in the context of Nunavut’s myriad social issues -- many of which stem from decades of colonial violence (Tester and Irniq 2008; Cameron 2012; QIA 2013) and “chronic underfunding” from Canada’s federal government (Sharon Ehaloak in LeTourneau 2014: 1). Inuit living in Nunavut have amongst the lowest household incomes in the country (Statistics Canada, 2012), and the difference in average income between Inuit and Qallunaat\(^{43}\) is striking: in 2005, the average income for non-Inuit Nunavut residents was $70 000 per year, while Inuit residents earned just under $22 000.\(^{44}\) Nearly 60% of those living in Nunavut smoke, ranking it the highest territory or province per capita in the country (Statistics Canada 2013). Residents also have high levels of diabetes, heart disease and other diet-related illnesses, and Nunavut households experience food insecurity at a rate seven times higher than the Canadian

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\(^{42}\) See Emilie Cameron (2012)’s discussion of how Inuit epistemologies and livelihoods have been considered in social science climate change research.

\(^{43}\) This Inuktitut word refers to non-Inuit people.

\(^{44}\) Information obtained from Aboriginal and Northern Affairs Canada completed Access to Information Request: A-2013-01167
average (Government of Nunavut 2007). In the city’s two grocery stores, food comes highly
packaged and/or or nearing its expiration date. Violence against women is a major issue, and the
single women’s shelter struggles to meet the overwhelming need. Substance abuse is a major
problem, and alcohol can only be purchased in restaurants and hotels. Suicide rates are ten times
higher in Nunavut than in the rest of Canada (Chachamovich et al. n.d.). In September of 2014,
an 11-year old boy committed suicide in Cape Dorset, the territory’s second child suicide in just
over a year (Rogers 2014).

For many Southern Canadians, the dump fire was simply a by-product of poor leadership
on the part of the city. Years of improperly managed waste—the mixing of plastics, paper,
cardboard, food waste, batteries, and even human sewage at the dump—have produced what the
landfill engineer emphatically described as “one of [the] worst landfills in North America”
(Sperling 2014: 2). Yet for many of those living in Iqaluit (Inuit and Qallunaat), the dump fire
was indicative of something more—a double standard experienced by those living in Canada’s
North. In Iqaluit, musings of ‘this would never happen in Toronto’ were not uncommonly stated.
So too were responses from Southern Canadians who consider living in the Arctic ‘to be a
choice’, one that is inherently unsustainable due to high government subsidies (Jay 2013).

These comments contrast what Inuit activist Sheila Watt-Cloutier refers to as “The Right to Be
Cold”: the right for Indigenous populations to live on traditional lands and not be forced to move
or otherwise act or live in ways that are prescribed to them by Euro-Canadians. As such, when
the territorial and federal governments refused to provide funds towards the dump fire’s projected
$7 Million extinguishing fee, many Inuit protested. Inuit and others advocating for improved
waste technology and for the Iqaluit dump to be extinguished, were doing so not necessarily out

45 He continued, “What you have is a dump. Not a landfill.”
46 See also the many responses given to the National Post when they asked readers how to go about ‘solving
Canada’s native issue’ (Russell 2013)
of a desire to expand consumption and capitalism, but as a way of addressing long-standing issues of inequity.

Through our discussions of waste with Iqaluit community members, current and historical relationships with the federal government were frequently brought to the fore. For example, Iqalummiut complained of the yearly military exercise ‘Operation Nanook,’ which spends millions of dollars ‘defending Arctic sovereignty’ rather than addressing “a real emergency,” such as the Iqaluit dump fire (CBC News 2014). Similarly, one long-term Qallunaat resident lamented that the federal government did not understand ‘Northern sovereignty’, which, according to her, necessarily requires “women and children, communities, clam diggers, and fisherman, and berry pickers” in order to exist (See Chapter 4). It is perhaps not surprising, then, that in a region where sovereignty is configured through *interactions with* nature rather than ownership over it\(^\text{48}\), that issues of waste are frequently related to the mid-20th century colonial period -- when (as we discussed earlier in this chapter) settler framings of humans dominating nature were enforced. One Inuk man, for example, explained how waste and consumption practices emerged as the result of government initiatives. In doing so, he re-situated current waste problems within the context of the federal government’s ‘high modernist’ project in the Arctic:

> It's a catch 22 kind of thing...Because we didn't need television, we didn't need rifles, we didn't need snowmobiles. We were living just fine the way we were. And this white man comes “oh you need shelter, oh you need furniture to get status in your life. Oh you need pots and pans”. But we didn't. We were fine the way we were.... As soon as the white man said, "you need to be in communities"...We were all scattered all over the place, and then the government said we got used to money. And the government said “if you want more money you gotta send your kids to school [in the South].” And that's how the communities formed.\(^\text{49}\)

\(^{47}\) Interview with long-term Qallunaac resident, conducted 25 August 2014.

\(^{48}\) In an essay, Rachel Qitsualik (2013) discusses her conceptualization of Inuit self-sovereignty through a discussion of Inuit cosmology and history, which she then compares with ‘anthropocentric’ understandings of sovereignty.

\(^{49}\) Interview with long-term Inuit resident of Iqaluit, conducted 15 June 2014.
Our respondents’ characterizations of federal government relationships, as they relate to personal experiences of colonialism, are important. They are materially constitutive of how Inuit and other Iqalummiut participate politically as activists, politicians, industrial negotiators, disengaged citizens, and so on. As another respondent remarked:

Even on the land- you know, we put them [garbage] in the boats, our tents, [when we] we go on the land. Garbage. Garbage. We eat, eat, eat. Garbage. Put it in the garbage bag. Right after, if we are going to leave from the campsite, we are going to take the garbages too. Because you have to respect the land. It's just the land and the nature. I know nature gets mad all the time. We cannot handle it. Right? Human beings. Humans, us humans, cannot (pauses) like (pauses) control the nature. Right?... We live in the richest land of Canada and of the Universe. We have sapphires, we have crystals, and animals....There's a lot of beautiful lakes, you can catch some fish. Red fish, arctic char, you know? Other stuff. Salmons. We've got all of them almost. Arctic cods. You can go like five minutes and go find cod, and go make some fish and chips for ourselves….That’s the way. We don't deal with garbage. We [Inuit] don't want them [the garbage] to be in the lakes, or on the river, or on the sea, because we have to eat it [and] be responsible for everything...I know they [the federal government] come and say, ‘yeah, I'm just a number’ and blah blah blah. They don't consider us as human beings. I know it …. They [the Federal Government] think they found us, but no. Been there for centuries and stuff. ...They [my ancestors] lived environmentally free. It was strong stuff. Healthy. You never seen garbage. Nothing.50

This statement was made in the context of Inuit struggles for self-determination: it points to a Western cosmology that separates humans from their environment as the cause of anthropogenic "mega-problems" including climate change and other waste-related issues. Our respondent's use of the term “environmentally free” problematizes the very immaterial construction of ‘environment’ as a concept - of a nature that is placed ‘outside of’ human existence. And the focus on garbage as not having existed prior to colonial contact underscores this point because any materials that were wasted could not have been ‘out-of-place’ in that the very definition of materials as ‘out-of-place’ is derivative of a settler cosmology.51

50 Interview with Inuit resident of Iqaluit, conducted on 22 June 2014.
51 These assertions of the absence of waste prior to colonization may be interpreted as reiterating the common colonial ‘noble savage’ trope of the mythical Inuit living in harmony with nature- what postcolonial scholars have noted is invariably a construction of the colonial gaze (see Rose 2003 for a detailed discussion of how the ‘noble savage’ and ‘dismal savage’ tropes have been used in academic waste literature to silence indigenous voices and
assertion that we cannot “control” or “handle” nature counters Western understandings of sovereignty wherein a mastery over people and nature are implicit. Read this way, this is less an aesthetic statement than it is naming the very relationship that the Anthropocene has just now discovered; that human/nature relations are inextricable.

**2.7 Conclusions**

If the ubiquitous waste that litters the Arctic landscape is the fallout of a colonial past, then the prospect of far more waste generated through northern resource development may characterize what Gregory (2006) refers to as Canada’s “colonial present”, and its forecasted future. Municipal solid, mining, and myriad other forms of waste constitute an anthropogenic legacy and capitalism’s profound fallout underwritten by “ideologies and discourses that facilitate resource development and environmental transformations” (Keeling and Sandlos, 2009: 123). In significant ways, modern waste management is a manifestation of the West’s colonial tradition, and its implementation requires an assimilation to predetermined neoliberal market-based definitions of what waste is and how it should be managed. For most Euro-Canadian communities, waste is ‘out-of-sight and out-of-mind’; “an ironic testimony to a desire to forget” (Hird 2013: 104). In this way, waste, both conceptually and materially, marks the success of the neo-colonial project -- its proliferation and techno-management are predicated upon an Enlightenment-rooted settler cosmology that emphasizes dominance over nature. In the northern Canadian waste landscape, this equates to teaching the colonial subject to, in the first instance, waste in new magnitude and kind, and then adopt neoliberal ways of dealing with waste’s proliferation; that is, waste as profit.

(ontology). We thank an anonymous reviewer for pointing out that tropes may also be used as a political strategy by indigenous people.
Yet within an Anthropocene logos, as Chakrabarty (2013: 1) points out, the neo-colonial subject may now be subsumed within a universalized *Homo sapiens*; a species for whom, in functioning as a geophysical force, sovereignty is no longer possible. He explains:

It has to be one of the profoundest ironies of our modern history that increasing use of such energy [fossil fuels] should have now transformed our collective image, in our own eyes, from that of an autonomous if not sovereign and purposeful agency - from the level of individuals to the level of groups - to that of a force, which is defined as ‘the sheer capacity to produce pull or push on an object by interacting on it merely as another object’. In other words when we say we are acting like a force, we say we don't have any sovereignty. We are like another object. A geophysical force has no sense of purpose or sovereignty.

On one hand, then, the Anthropocene, as discourse, is a universal de-colonizing project that challenges humanity’s separation from, and superiority over, nature. However, a humanity based on a universalized (post)sovereignty erases indigenous ways of knowing and being in favour of globalized technologies -- geoengineering and ‘big science’. Chakrabarty’s characterization of sovereignty is based on a knowable, stable, and predictable geologic - one that Inuit scholars argue has never, and could never, exist (Cameron et al. 2014; Qitsualik 2013). Inuit did not sustain an “anthropogenic” sovereignty prior to colonization (ibid: 27); yet Inuit efforts to self-determine require the adoption of these frames in negotiations with Canada’s federal government. Techno-managerial approaches to the Anthropocene’s ubiquitous, toxic, and indestructible wastes hinge on a sovereign approach to human/nature relations. The dangerous irony of the Anthropocene, then, is less that the possibility of sovereignty has collapsed, and more that the various technologies predicted to ‘solve’ our global environmental problems are framed through an understanding of sovereignty that always separates waste from resource, dirt from clean, and uncivilized from civilized -- a configuration that, as the Anthropocene has already begun to show us, is inevitably doomed to failure.
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Chapter 3

Raven, Dog, Human: Inhuman Colonialism and Unsettling Cosmologies

3.1 Abstract

As capitalism’s unintended, and often unacknowledged, fallout, humans have developed sophisticated technologies to squirrel away our discards: waste is buried, burned, gasified, thrown into the ocean, and otherwise kept out-of-sight and out-of-mind. Some inhuman animals seek out and uncover our wastes. These ‘trash animals’ choke on, eat, defecate, are contaminated with, play games with, have sex on, and otherwise live out their lives on and in our formal and informal dumpsites. In Southern Canada’s sanitary landfills, waste management typically adopts a ‘zero tolerance’ approach to trash animals. These culturally sanctioned (and publicly funded) facilities practice diverse methods of ‘vermin control’. By contrast, within Nunavut communities of the Eastern Canadian Arctic, ravens eat, play, and rest on open dumps by the thousands. In this paper, we explore the ways in which western and Inuit cosmologies differentially inform particular relationships with the inhuman, and ‘trash animals’ in particular. We argue that waste and wasting exist within a complex set of historically embedded and contemporaneously contested neo-colonial structures and processes. Canada’s North, we argue, is a site where differing cosmologies variously collide, intertwine, operate in parallel, or speak past each other in ways that often marginalize Inuit and other indigenous ways of knowing and being. Inheriting waste is more than just a relay of potentially indestructible waste materials from past to present to future: through waste, we bequeath a set of politically, historically, and materially constituted structures, norms, and practices with which future generations must engage.
3.2 Introduction

As capitalism’s unintended, and often unacknowledged, fallout, humans have developed sophisticated technologies to squirrel away our discards: waste is buried, burned, gasified, thrown into the ocean, or otherwise kept out-of-sight and out-of-mind. Despite efforts to disgorge ourselves of waste, millions of people live with, and on, our cast-offs. As well, an undocumented number of ‘trash animals’ — gulls, ravens, pigeons, raccoons, rats, mice, dogs, and polar bears — eat, defecate, play games with, have sex on, and otherwise live out their lives in our dumpsites. Culturally sanctioned, and publicly funded, modern facilities in southern parts of Canada practice diverse methods of ‘vermin control,’ legitimated within discourses of public hygiene and safety.

In the Eastern Canadian Arctic, waste and wasting exists within a complex set of historically embedded and contemporaneously contested neo-colonial regulations, policies, and formal and informal practices. Within Inuit communities, ravens rest on open dumps by the thousands, and sick polar bears may be killed (and discarded) out of respect. In this paper, we reflect upon why animals are ‘managed’ at modern landfill sites across southern Canada, and left unimpeded to scavenge on open dump sites in northern Canada. It is not, we will argue, simply a

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54 Kelsi Nagy and Phillip David Johnston III, eds., Trash Animals: How We Live with Nature’s Filthy, Feral, Invasive, and Unwanted Species (Minneapolis: University of Minnesota Press, 2013). This collection of essays written by scholars, artists, and journalists examines what it means to live with the nonhuman urban companions commonly depicted as ‘Trash’. Many animals are written about in the collection including magpies, pigeons, starlings, prairie dogs, packrats, coyotes, and more.

matter of modern versus outdated waste disposal technologies and practices — although this is a central way in which waste issues in the North are framed by government officials and the media.

In this paper, we explore the ways in which historically and culturally embedded practices inform particular relationships with the inhuman. Canada’s North, we will argue, is a site where differing cosmologies variously collide, intertwine, operate in parallel, or speak past each other in ways that often marginalize Inuit ways of knowing and being with animals and the landscape. We will examine how encounters with the inhuman have been, and continue to be, integral facets of the Northern Canadian colonial project. We begin the paper with a short history of Inuit culture prior to colonial contact, and the profound changes that took place as Canada, the United States, and other nations claimed increasing trade, resource, military, and sovereign interests. We argue that the pursuant historical and contemporary record of managing Inuit peoples, animals, and the northern landscape, is a direct outcome of the anthropocentric neo-liberal capitalist venture that forefronts Canadian sovereignty.\footnote{Throughout the paper, we refer to ‘southern’ and ‘northern’ as political designations. Southern refers to regulations, policies and practices associated with so-called modern waste management that developed within the context of a neo-colonial capitalist framework. The differentiation roughly corresponds to a dichotomy between landfills and other waste management practices found in southern Canadian urban centres, and so-called pre-modern open dumping consistently found in Canada’s Nunavut territory. This designation does not obviate the fact that Indigenous peoples live in southern communities, nor is it meant to deny the fact that colonial legacies exist in southern Canadian communities.}

This mapping of capitalist venture and neo-colonial governance is followed by a discussion of the burgeoning interest in those inhuman creatures who survive through relations with human debris. This literature points to the complex and often contradictory Western understandings of animals as ‘companion species,’\footnote{Donna Haraway, \textit{When Species Meet} (Minneapolis: University of Minnesota Press, 2007), 16.} whose lives are variously cherished, pampered, used as labor, abused, discarded, and killed. Our attention then turns to two particular animals — ravens and sled dogs — whose iconic presence in the North of Canada exemplifies the complex and often contradictory understandings of the inhuman within this particular neo-colonial landscape. Ravens and sled dogs feature in Inuit cosmology, hunting,
and culture, and both have endured — however tentatively — a rapidly and profoundly changing status in the North. This change has occurred, in part, because waste and its inhuman associates are ‘Othered’ within neo-colonial governance practices. Across Nunavut, this has contributed to the displacement of ravens as Creator of humankind to nuisance pests scavenging from open dumpsites, and the killing of thousands of Inuit sled dogs, whose deaths have forever changed the way Inuit experience human/nature relations. Using the Canadian Arctic as a case study, we explore the ways in which waste and associations with waste inform the neo-colonial present. We argue that inheriting waste is more than just a relay of potentially indestructible waste materials from past to present to future: through waste, we bequeath a set of politically, historically, and materially constituted structures, norms, and practices with which future generations must engage.

3.3 ‘Trash Animals’ and the North

As Donna Haraway’s path-breaking work argues, capitalism’s technoculture structures particular relationships with the inhuman. From agility training, medical and hygiene practices, to the selection of financially lucrative genes, we encounter our inhuman companions as fleshy forms of “lively capital.” Even shepherding and livestock dogs, whose companionship — both as labourers and as family members — has historically been requisite for the survival of many humans, developed over centuries of capitalism within the context of both nomadic and sedentary human livelihoods.

Some of our urban companion species have adapted to our lifestyles not at the point of production and consumption, but at the point of disposal. And somewhere between consumption and disposal, there is a normative shift in our encounters with animals. Combining waste and

58 Haraway, When Species Meet, 45.
animal studies, a number of scholars examine the treatment of human and inhuman urban ‘scavengers.’ Kelsey Nagy and Phillip David Johnson observe that “trash is not just the material stuff we throw away, but a classification that defines for us the ways we understand and act toward certain inanimate and animate objects.”

‘Trash animals’, as Nagy and Johnson argue, are despised, feared and mocked — they have become a “disgusting ‘other’ in our anthropocentric fantasies of existence.”

Postcolonial studies, waste studies, and critical animal studies have begun to explore the ways in which humans and animals are depicted through their associations with garbage. Postcolonial theorists, for instance, have examined how waste contributes to the ‘Othering’ of marginalized groups. Colonialism in Canada and elsewhere has long associated Indigeneity with waste, not least as a way of justifying colonial structures and practices of subjugation. This often occurred under the pretense of safety or civility — or what Marie Lathers refers to as “management of the abject.” In the late 1950s, for instance, when the Distant Early Warning Line (DEW Line) radar stations were being constructed by the Canadian military, nomadic Inuit families camped near DEW Line dumps to scavenge discarded food and other reusable materials. Inuit caught scavenging at the dump were described by RCMP as “bums and useless.”

RCMP and DEW Line operators, who considered the Inuit practice of scavenging offensive, responded by burning their food waste.

Indigenous studies scholars in the field of critical animal studies have examined how Western understandings of nature mix uneasily with Indigenous cosmologies. Within Inuit

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cosmology, the environment has anirniq — ‘breath’ or ‘spirits.’ According to this cosmology, Inuit hunters must follow a series of rules and modes of conduct made known to them through shamens, and passed vertically through generations of practice and storytelling. If these rules are followed, eventually an animal will allow itself to be killed, its anirniq will pass on to another animal, and nature will be respected. Moreover, Inuit cosmology recognizes that, while Inuit lives are entirely dependent on the land (nuna) for survival, that nuna — along with the life and breath that it supports — continues to exist with or without Inuit. Inuit cosmology also implicitly recognizes that one can never fully know nature. For Inuit, being confident in one’s relationship with the landscape is considered hubristic, dangerous, and counter to the understanding of Nalunaktuq — nature’s unpredictability. As Emilie Cameron and others point out, “uncertainty, unpredictability, and change” are foundational to understanding the Inuit relationship with nature.

When Christian missionaries and explorers arrived in the North, they brought with them an entirely different understanding of nature. In the first instance, missionaries taught Inuit that only humans have souls, and that God decreed humans’ preeminence over all else: “Let us make man in our image, after our likeness: and let them have dominion over the fish of the sea, and over the fowl of the air, and over the cattle, and over all the earth, and over every creeping thing

65 ibid, 169-170.
66 This is not to say that Inuit believe they did not impact nature; indeed, even talking about polar bears is considered to impact polar bear migration patterns (see Henri “Managing Nature”, 190-199.). What we mean is that nature was always understood as having the ability to act outside of Inuit control. If Inuit were gone, nature would simply act differently.
that creepeth upon the earth.” Colonial settlers considered it their right and responsibility to dominate the environment. What was for Inuit simply “a default to universal order” was for settlers, unadulterated “chaos.”

In Nunavut today, the Judeo/Christian legacy of environmental management contributes to a litany of enduring colonial practices that mix uneasily with Inuit cosmology and traditions. That is, disparate ideas of the relationship between humans, animals, and environment come to a head in often harmful ways for Inuit, especially in controversies over hunting. These controversies are predicated on fundamentally different understandings of environmental protection. For example, in 2007, Matt Rice, the anti-sealing campaign coordinator of the People for the Ethical Treatment of Animals (PETA) wrote to Iqaluit City Council asking the City to lower its Canadian flag to half mast as a way of mourning the seals killed in the community’s annual seal hunt. When City Council rejected the proposal, he told Nunatsiaq News that PETA considers the sale of seal pelts “a matter of waste and extreme cruelty.” Similarly, the European Union has banned the commercial use and import of all seal skins and seal products, stating concerns about “animal welfare.” These events follow the Greenpeace-supported ban on sealing in 1976, which contributed to mass Inuit food insecurity and poverty in the 1980s and 1990s. Most recently, comedian and talk show host Ellen Degeneres urged her fans to sign a petition condemning the seal hunt and to tell Canadians (i.e. Inuit) that “killing innocent animals is wrong.” Inuit people responded with a ‘sealfie’ movement, taking pictures of themselves next to seals.

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69 King James Bible, Genesis, 1:26.
70 Qitsualik, “Innummarik,” 27.
71 ibid, 28.
to seals, seal fur, or seal meat and sending these pictures via social media to the Ellen show.\textsuperscript{75}

When Inuit throat singer and activist, Tanya Tagaq tagged a picture of her baby next to a dead seal using the ‘sealfie’ hashtag, she received death threats from animal rights activists. For Tagaq, the photo was meant to convey an acknowledgement of the relationship between Inuit and seal. As she explained, “One of the traditions is to melt snow in your mouth and then put it into the seal's mouth so their spirit isn't thirsty in the afterlife...I put my baby there to show how peaceful it can be and how much you can respect the animal.”\textsuperscript{76} According to Tagaq and other Inuit, these attempts to prevent Inuit hunting exist as “a mini version of colonialism”\textsuperscript{77} faced by Inuit today. The anthropogenic blind spots embedded in anti-subsistence hunting campaigns exemplifies the “paradox” of modern Arctic sovereignty that is bequeathed through particular colonial traditions.\textsuperscript{78} As Tagaq puts it, “We’re the same. We’re flesh, we’re meat, we’re so stupid to think that we’re not...A wolf is not evil when it hunts a caribou.”\textsuperscript{79}

In the following section, we discuss two familiar ‘trash animals’ — ravens and gulls — that are differently ‘managed’ in Northern dumps and Southern landfill sites. We suggest that their management is informed by very different understandings of humans, trash, animals and nature. We discuss traditional Inuit relationships with animals, not as legends or myths (and therefore as points of erasure), but as a way to more accurately represent how colonization was (and remains) experienced in Nunavut communities. From this analysis, we move to a discussion


\textsuperscript{78} Qitsualik, “Innummarik,” 32.

of sled dogs, and a particularly traumatic event in the history of colonial settlement in northern Canada made possible by the reconfiguration of these dogs as companion species to hazardous threat to be resolved through wasting.

### 3.4 Tulugaq/Raven

From late April through to the end of May, Yellowknife increases its population substantially, as migratory birds including gulls, ravens, raptors, Sandhill cranes, and magpies flock to the Great Slave Lake region to construct nests, lay and incubate eggs, care for their offspring, and then help their young to leave the nest in a process ornithologists and bird enthusiasts know as ‘fledging’. Yellowknife is the capital and largest community in Canada’s Northwest Territories and as small as it is (the population hovers under 20,000 people) relative to southern Canadian urban centres, Yellowknife shares with its urban southern neighbors a particular approach to the 256 or so species of birds in the region, and the 30,000 tons of human waste the city produces.\(^80\) Yellowknife and southern Canadian communities, like those in North America generally, relate to the birds frequenting their landfills as largely a ‘wildlife hazard’ and ‘vermin’ that requires industrial management.\(^81\)

Move to the east some two thousand miles from Yellowknife to Iqaluit, and the scene is quite different. Hundreds, if not thousands, of ravens casually circle the town’s open dump, swooping leisurely to land on fresh piles of discarded food that the steady flow of trucks deposit on the colossal dump. The ravens are not in any hurry to grab the wasted food and fly off; they take their time. This is, in some ways, their dump, and no one attempts to scare them off.

Southern Canadian solid waste facilities typically adopt a ‘zero tolerance’ approach to these ‘trash animals.’ Gulls are most certainly the lowly, senseless and reckless underclass of the

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\(^{81}\) ibid, 28.
modern landfill, or ‘bird buffets’ as they are colloquially called. Landfills are a primary food source for the gull: in under fifteen minutes at a landfill, gulls are able to satisfy their daily nutritional requirements.\textsuperscript{82} According to a Massachusetts Department of Environmental Protection report, the goal of any landfill is not only to completely prevent gulls from feeding but also to “eliminate or reduce the suitability and attractiveness of the facility for other gull activities, such as resting, roosting, or loafing.”\textsuperscript{83} Gulls and other birds like to ‘loaf’ — communally rest, bathe, drink, or preen — on landfills because the expansive and relatively flat space provides both protection from predators and good visibility for spotting predators.\textsuperscript{84}

It is difficult to witness much bird ‘loafing’ on landfills in southern Canadian communities. Responding to community complaints about the noise birds make and the excrement they leave on the roofs of houses, as well as the risks birds pose to nearby aviation — where birds increase the risk of damaging aircraft and potentially injuring passengers and/or pilots — landfill operators focus on what they euphemistically call ‘wildlife management.’

Landfill operators do not like the attention scavenging birds bring to landfill sites: they prefer trash to disappear from people’s minds once it leaves their curbside. Thus operators have introduced a cacophony of management techniques that include canons, air-operated human effigies, scarecrows, chemical repellents that poison the land, distress calls, pyrotechnics (including bangers, screamers, and flaming whistles), tape ribbons and other shiny objects, helium-filled ‘evil eye’ balloons, decoys, collecting and oiling eggs (which kills the developing birds through suffocation) and even displayed bird carcasses (both real and facsimiles).\textsuperscript{85} But

\textsuperscript{82} Department of Environmental Protection, \textit{Gull Control at Landfills and Other Solid Waste Management Facilities}, (Boston, MA: Commonwealth of Massachusetts Executive Office of Environmental Affairs, 1998), 4.
\textsuperscript{83} ibid, 4.
\textsuperscript{84} Beacon Environmental, \textit{Wildlife Hazard Assessment}, 5.
problems abound: gulls turn out to be smart, and quickly figure out that the management tactics are distractions. Moreover, as landfill operators note, pyrotechnics and other strategies “will alarm and surprise some landfill customers, sometimes with very emotional effects.” Faced, then, with smart adaptive birds and skittish people, operators have recently introduced falcons and hawks to patrol the landfill landscape. These birds of prey have become part of waste management’s big business. They, according to hawk handlers, are allowed to eat any gull they catch, although this is not particularly good for the hawks because the gulls may carry contaminants through their contact with leachate. Female falcons are typically used because they are bigger than their male counterparts, and more aggressive.

In disconcertingly earnest statements, El Sobrante landfill spokesperson Miriam Cardenas exclaimed “We are using nature to control nature. It’s the most effective method,” and falconer Jorge Herrera described his work as “nature taking care of itself” as the falcons he uses sit on perches on the back of his truck with tracking devices attached to their ankles. Here, then, are birds of prey captured and implicated into a complex assemblage of bird-waste-human-landscape to live out their lives terrorizing other birds so that people are not disturbed by bird calls, rooftops remain unsoiled, and airport runways can be expanded. Enlisting hawks to distress and kill gulls makes good entrepreneurial sense: the hawks have silenced community complaints. The hawks, then, become part of the geoengineering architecture — not dissimilar to the covering over of landfills and their transformation into suburban sprawl — that encourages people to forget about waste beyond their curbside. Landfills in southern Canada tend to be sited away

86 Johnson, “Wind, Wings, and Waste”.
87 Parrilla, “Falcons Protect Landfill”.
88 ibid.
from communities and cordoned off behind high fences to be managed out-of-sight. Waste is something we do not want to remember, or be remembered for,\textsuperscript{89} and waste management corporations profitably meet this desire.

Waste in many of Canada’s northern communities is left there, on the land, in highly visible dumps; raw, uncompromising, and unapologetic. These northern landscapes are not covered over, and they are not out-of-mind. Tulugaq are the most common birds in Northern communities, and remain in the far North throughout the winter. According to Inuit creation narratives, Tulugaq made the world and the waters with the beat of his wings.\textsuperscript{90} Tulugaq the Trickster is respected for his resilience, intelligence, and sociability. Tulugaq teaches children how to live in community, and newborn Inuit boys are clothed in raven skin to help them become successful hunters.\textsuperscript{91} Tulugaq follow polar bears and scavenge leftover carcasses, and Inuit mimic the raven’s ‘caw’ to attract polar bears in hunting. Tulugaq also call wolves to dead animals so they will make the carcasses more accessible to the birds. Perhaps they now call humans to dumpsites to leave fresh trash.

In these narratives, ravens possess the ability to transmute; presently, it seems, into garbage pickers. Tulugaq have followed the transition of Inuit peoples from a nomadic lifestyle in which tulugaq assisted hunters in their search for food to sedentary community living whereby food is found conveniently left on the landscape at the community dump for ready picking. As McCluskey observes, “instead of dipping their wings to point to a polar bear, ravens are now


more likely to steal your dog’s food and dive-bomb your truck windows.”92 We bring birds to our waste sites, where they feed off all the stuff of our lives that we want to forget: “their success is due to our presence” as Gavan Watson puts it.93

The gulls, tulugaq and other species of birds that eke out a living on the trash heaps of human consumption may serve as a window into our consumption patterns, lifestyles, how we understand ourselves in relation to other people, objects, the environment, and so on. In a remark that points equally to nonhuman and human alike, Greg Kennedy notes:

‘trash’ means a manner of physically relating to other beings…. We exist, for the most part, in a way that violently negates beings rather than takes care of them.94

Indeed, news reports have documented Inuit Elders having to eat expired foods directly from local garbage dumps. This is perhaps unsurprising as food prices in Nunavut are the highest in the country; all foods come highly packaged and must be flown in or shipped from the South. While some suggest that retailers are benefiting from government food subsidies at the expense of people living in the community, the issue points to larger issues of development in the North. As Madeleine Redfern, an Inuk woman and former mayor of Iqaluit has stated, “clearly people don't have enough money to be able to feed themselves.” 95

While the City of Iqaluit grows (the community has doubled in population over the last two decades), tulugaq playing with waste has come to represent a larger sustainability issue. A long term Inuk resident of Iqaluit, linked Iqaluit’s tulugaq to larger issues of community living in the Arctic:

The amount of ravens there are in Iqaluit - it's disturbing... The amount of bird droppings there are on the buildings all over Iqaluit is disturbing ... [My ancestors] they wouldn't stay in one area. They would migrate with the animals so that they would sustain their own life. They wouldn't be in one area for very long because that food would be gone... At the rate it’s going [Iqaluit is not sustainable]. There's too many cars. There's too much garbage. There's too much [sic] people to sustain itself.96

For this resident, the congregation of tulugaq (and human) en masse is in itself disturbing. As Marie Lathers puts it, in the postcolonial era, native shit (or in this case, tulugaq shit) “reveals the failures of the new nationalism.”97 Tulugaq the Trickster now lives off, and exposes, changing relationships with the inhuman and the tenuousness of community living. Like others living in Nunavut, tulugaq has adapted to its colonial inheritance.

3.5 Qimmiiq/Sled Dog

Inuit consider the killing of thousands of Inuit qimmiit during the mid-20th century by Southern Canadians (government workers, RCMP officers, and teachers) a “flash point” of colonial trauma.98 In this section, we examine how the killing of qimmiit occurred as part of a neo-colonial governance strategy aimed at changing Inuit relationships with the environment. We will show how associations of qimmiit with waste reinforced Southerners’ perception of qimmiit as dangerous, which legally enabled the qimmiit slaughter, and forever changed the relationship between Inuit, qimmiit, hunting, family, and community practices: in short, how colonial settlement configured sled dogs as ‘trash animals.’ As a direct result of government policies aimed at managing qimmiit, Inuit were — intentionally or otherwise (and the government

96 Interview with long-term Inuit resident of Iqaluit, conducted 25 June 2014.
97 Lathers, Towards and Excremental Posthumanism, 419.
maintains that it was unintentional) — irrevocably forced into Canada’s resource based economy.  

For millennia, the bond between qimmiit and Inuit was integral to Inuit survival: when out on the land, qimmiit pulled sleds for hunting and moving families, and weakened polar bears and muskox for hunting; when navigating sea ice, qimmiit detected potentially fatal soft patches on the ice; while out harpooning seal, qimmiit knew to keep quiet; and while Inuit families slept, qimmiit warded off predators. During prolonged periods of starvation, Inuit ate qimmiit (the final step before eating leather from clothing, tents, and dog sled lines) and used their pelts for clothing. For Inuit hunters, survival required killing enough food to support both their families and their qimmit teams; strong and well fed qimmiit teams were a sign of masculinity. Qimmiit, while fiercely loyal to their Inuit families, were aggressive to other humans and often to each other — a characteristic essential to the success of qimmiit as hunters. The training of qimmitt, who were considered neither wholly domesticated nor ‘feral,’ was an ongoing task that required long term knowledge of Inuit and qimmiit relations. As children, Inuit boys were given qimmiit puppies to raise: training qimmiit was as much about socializing young Inuit to the lives of dogs as it was about domesticating qimmiit. Papikatuq Sakiagaq explains some of the understandings required for Inuit children to successfully raise qimmiit:

...in our customs there were a lot of regulations, though it seems typical that the Inuit don’t have regulations, but in spite of that assumption, we did have a lot of regulations. For example, in raising dog team, while they’re still puppies we had to stretch the legs, and rub their underarms, tickle them in order for them to get used to the harnesses, we did that during summer. While they’re becoming adolescent dogs, we would have to take

100 QTC, Thematic Report, 324-328.
101 ibid, 327.
102 McHugh, “A Flash Point in Inuit Memories,” 157
103 Pauloosie Veevee in QTC, Thematic Report, 323.
them for walks with their harnesses on…. We would make them run with their harnesses on, in order to keep them fit. If the Qimmiit are not tamed that way they cannot be part of a dog team, they would not know how to run appropriately, they would be stubborn.105

Thus, raising qimmiit as hunting companions was a process of mutual human-animal-community growth. Indeed, the Inuktitut word qimutsiit illustrates the connection between hunter and qimmiit, defining the point at which Inuit and qimmiit hunting teams become “irreducible.”106 Trained as qimutsiit, Inuit boys were considered men only when they were able to successfully support a full qimmiit team.107 Perhaps as a result of this close and unique connection, qimmiit were the only animals other than humans to be given the names of the deceased. The Inuit naming practice (which persists today108) ascribes the deceased’s attributes to a newborn Inuk or qimmiit. Through this custom, Inuit and qimmiit shared complex kinship systems: qimmiit were aunts, uncles, cousins, siblings, grandparents, and former qimmiit. For some Inuit, qimmiit were “everything”.109

The qimmiit killings began in the late 1950s after the Canadian government required all Inuit children be educated within a Southern educational system,110 which led to the rapid settlement of Inuit in government-created communities.111 In order for Inuit to hunt, live, or otherwise be out on the land, many hundreds of qimmiit were brought into small settlements over a short period of time. In some communities, the numbers of dogs nearly equalled the number of

105 Papikattuq Sakiagaq in Makivik Corporation, “Regarding the Slaughtering of Nunavik “Qimmiit” (Inuit Dogs) from the Mid-1950s to the Late 1960s,” for Minister of Indian and Northern Affairs for the Government of Canada, (2009), 11.
107 Pauloosie Veevee in QTC, Thematic Report, 323.
109 QTC, Thematic Report, 329.
110 ibid, 345-346.
humans. In the community of Pangnirtung (pop. 600), for example, an almost equal number of qimmiit (400) were killed between 1966 and 1967.112

Until this point, qimmiit had never been recognized as ‘animals’ in the Western sense of the term — as labour, commodity, or property — though they were now encountered as such by the Southern Canadians and RCMP officers who governed these new Arctic communities. On January 20th, 1949, under the premises of public health and safety,113 the Government of the Northwest Territories (who had no Inuit representation114) legally enacted the Ordinance Respecting Sled Dogs. The law prohibited qimmiit from running freely in communities. Any dogs caught roaming could be seized or destroyed at the discretion of an RCMP officer.115 As a result, Inuit living in communities were forced to tie up qimmiit — a type of confinement that disrupted traditional rearing practices,116 and often proved impossible because chains and collars were often unavailable in community stores.117 Community living also precluded Inuit from following migratory animals, which made feeding qimmiit practically impossible. When not tied up, hungry qimmiit could wander into community dumpsites and feed from waste, and these qimmiit were often much healthier than those who were chained.118 A report from arctic anthropologist Toshio Yatsushiro in 1959 describes the difficult decisions Inuit were forced to make:

The Eskimos [sic] understand, if they [qimmiit] are free they will be shot, but if they are tied they cannot get food, so maybe they will die anyhow. Eskimos bring food and water

112 QTC, Community Histories, 312.
114 Tester, “Mad Dogs,” 134.
115 ibid, 135.
116 Allowing qimmiit to roam free was essential for establishing pack positions and the development of hunting skills. McHugh, “A Flashpoint in Inuit Memories,” 164-165.
117 Makivik Corporation, “Regarding the Slaughtering of Qimmiit,” 12.
to the dogs when they have it, but often they don’t have it. So when the dogs go free they eat garbage — when the RCMP saw it they shot them it is not good.\textsuperscript{119}

Overall, tying up \textit{qimmiit} made little sense to Inuit, who did not (or could not) comply with the government-imposed law.\textsuperscript{120} And as Inuit witnesses attested,\textsuperscript{121} \textit{qimmiit} were killed regardless of whether or not they were constrained according to the regulations. When a hunter’s \textit{qimmiit} team was killed, hunting became impossible, and many Inuit were literally trapped in government communities.\textsuperscript{122}

The conviction that the \textit{qimmiit} killings were a government ‘conspiracy’ to, at best, assimilate Inuit into Southern modes of living, or at worst eliminate Inuit entirely, is commonly expressed throughout Inuit territories today.\textsuperscript{123} As Issacie Padlayat explains, “[t]he governments tried to eliminate us by eliminating the dogs we depended on for survival but fortunately the Inuit are able to withstand hardships.”\textsuperscript{124} For many Inuit, whose lives until this point had been so thoroughly integrated with the lives of dogs, the \textit{qimmiit} killings opened up the very real possibility that the police would also start murdering Inuit. Jamessee, an Inuk man, discussed this possibility with Yatsushiro in the 1950s:

\begin{quote}
Jamessee: Policemen [sic] kill Eskimos [sic], next time.
Toshio Yatsushiro: Eskimo . . . (sounding unsure).
Jamessee: Dogs, same thing, Eskimos.
Toshio Yatsushiro: Oh, Eskimos will shoot their own dogs.
Jamessee: Eskimo dogs same thing. One.
Toshio Yatsushiro: Same.
Jamessee: Policeman kill.
Toshio Yatsushiro: Policeman kill . . . dogs.
\end{quote}

\textsuperscript{119} QTC, \textit{Thematic Report}, 34
\textsuperscript{120} Moreover, the law was not translated into Inuktitut and many Inuit did not understand the RCMP directives. Tester, “Mad Dogs,” 136.
\textsuperscript{121} Many Inuit reported instances of sled dogs being killed while tied up. See QTC, \textit{Thematic Report}, pages 348, 354, 356 for examples.
\textsuperscript{123} QTC, \textit{Thematic Report}, 32-33
\textsuperscript{124} Makivik Corporation, \textit{Regarding the Slaughtering of Qimmiit}, 11
Jamessee: Dogs first, next Eskimo, maybe.\textsuperscript{125}

Witnessing the mass murder of their kin relations became a source of anxiety and depression for many Inuit; one that made little sense to the RCMP who considered dogs to be commodities. Moreover, these mass killings threatened what it meant to \textit{be} Inuit; to raise \textit{qimmiit}, to hunt, to experience oneself as the land. With RCMP officers enforcing laws predicated on colonial regimes to civilize and commodify nature, there was, as the Qikiqtani Inuit Association points out, “no need for a conspiracy.”\textsuperscript{126}

In a particularly revealing letter dated October 8th, 1958, Sergeant J.H. Wilson — an RCMP officer stationed in Quebec’s Nunavik region — reveals some of the misunderstandings held by Southern officials that contributed to the \textit{qimmiit} killings. In the letter, Wilson argues with Inuit claims about no longer being able to hunt, writing that “this is in fact is not correct as there has always been many more dogs here than are needed.”\textsuperscript{127} In his view (dog as commodity), an Inuk man’s dog team was easily replaceable — simply go to the dump, and grab a new one. This assumption, of course, denied Inuit understandings of \textit{qimmiit} hunting practices. The RCMP officer also shared his view on responsible \textit{qimmiit} ownership:

While there are a few inveterate hunters who do tie and care for their dogs properly, it would seem that most of the Eskimos [sic] cannot resist the temptation to let their dogs run loose with the hope that they will survive on the garbage from the RCAF Stn.\textsuperscript{128}

For Wilson, caring for \textit{qimmiit properly} becomes entangled with Southern understandings of civility: being civil requires the display of ownership and control over animals. ‘Proper’

\textsuperscript{125} Stevenson, “The Psychic Life of Biopolitics,” 600. The text has been modified for clarity.
\textsuperscript{126} QTC, \textit{Thematic Report}, 33
\textsuperscript{127} Croteau, \textit{Final Report}, 13
\textsuperscript{128} ibid, 13
qimmiit ownership came to exemplify colonial suppositions of good-citizenship, wherein qimmiit should be prevented from living with, and surviving off of, waste.

In 2006, the RCMP launched an internal enquiry to determine whether the RCMP had engaged in a federally mandated slaughter of qimmiit in the 1950s and 1960s. While the report denied that any mass culling had occurred, among its key findings were that “The Inuit sled dog is a large and aggressive animal that can pose a danger to public safety.” Moreover, the report concludes that Inuit sled dogs had primarily been killed due to a combination of “epidemics and socio-economic factors”, the latter including the “social benefits to which the Inuit people had access for the first time, including government education, healthcare, government housing, and government family allowances within settlements… [and] the introduction of the snowmobile.” Thus, as well as the RCMP denying the experiences of thousands of Inuit whilst echoing neo-colonial rhetoric, the portrayal of qimmiit as a threat to public health and safety is particularly questionable given the close proximity with which Inuit and qimmiit lived for thousands of years prior to colonization. Moreover, it denies the fact that qimmiit were only perceived as dangerous because of forced changes to how qimmiit and Inuit related both socially and materially. The overarching point — that the killing of qimmiit by settlers ensured the year-round availability of an Inuit workforce — is obscured by the RCMP report’s focus on education, health care benefits, and so on.

In their in-depth investigation into the qimmiit killings, which involved interviewing hundreds of Inuit and Qallunaat Nunavut residents, the Qikiqtani Truth Commission (QTC)

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130 Ibid, 14
131 Ibid, 15. Our emphasis.
concluded that the slaughter of qimmiit occurred “because Qallunaat were scared of dogs.”

For Qallunaat living in the North, stories of the few qimmiit attacks on humans were broadly circulated. The fear of qimmiit was, however, a loaded one, entrenched in Southern understandings of cleanliness, civilization, and safety. As with diseases spread by landfill gulls in the South, the killing of qimmiit was, according to the QTC “more about what they might do in the future.” The colonial rhetoric of safety and security, which scholars have argued is commonly used to justify both neo-liberal governance regimes and state violence, was, and continues to be, employed by Canadian government officials to legitimize expansion throughout Canada’s North.

3.6 Inhuman Colonialism

Iqaluit today is the largest and richest community in Canada’s Nunavut Territory. Whereas other communities practice open burning as a primary waste management practice (one that has led to many environment and human health concerns), Iqaluit is preparing to launch a newly minted Solid Waste Management plan and its community-wide beautification project is underway — signs of the City’s increasingly modern direction. As the Territory’s capital city and

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132 qimmiit were most often found “foraging around a dump or breaking into storage areas” and were actually more of a danger to public property than to people (despite their sometimes aggressive behaviour). QTC, “Inuit Sled Dogs in Baffin Region,” Accessed 1 February, 2015. http://www.qtcommission.com/actions/GetPage.php?pageId=39.

133 QTC, Thematic Reports, 367, our emphasis.


135 Indeed, Arctic sovereignty has been used by the federal government to justify economic expansion throughout the North. In his Speech from the Throne, Prime Minister Stephen Harper stated “the eyes of the world increasingly look enviously to our North. Our Government will not rest.” This was followed by promises of increased offshore patrol ships, the construction of a new highway through the Northwest Territories, and the construction of a northern scientific research station. Stephen Harper, “Speech from the Throne to Open the Second Session Forty First Parliament of Canada,” Accessed 5 February 2014.

136 Government employment (federal, territorial, and municipal) is a major source of employment in Iqaluit; however many of those filling government jobs are Southerners working in Nunavut temporarily. This accounts, at least in part, for the disparities between Inuit and Qallunaat household incomes.

the main stopping point to smaller Inuit communities, Iqaluit has become a collusion of identities. High suicide rates among Inuit and a recent syphilis outbreak emphasize Iqaluit’s postcoloniality, and at least eight abandoned military and community dump sites litter the community; ghosts of the colonial era. Though Iqaluit is often critiqued for being ‘Southernized’, its Inuit identity is strong: women (both Inuit and Qallunaat) may be seen walking down streets wearing amauti; children throat sing at community events.

Over half a century has passed since the Arctic was initially colonized, but once again, sled dogs are in the news: dog mushing, according to reports, is again being threatened. As part of the Iqaluit airport’s $300M dollar expansion — a public-private partnership with financial backing from both the Territorial and Federal governments — one of the community’s three remaining qimmiit lots is being placed off limits to be replaced by an asphalt plant. While the airport project will inevitably increase Southern activity in the region, for now, Iqaluit residents are concerned about where to put their dog teams. As a local dog musher explains, “If it becomes too much harder to have dog teams, people are just going to give up, and it’ll die off”.

While qimmiit are now the official animal symbol of Nunavut, only about 300 remain in Canada — a far cry from the some 20 000 that existed prior to colonization. In Iqaluit today, qimmiit are protected by law, albeit primarily for the purposes of conservation (“the Canadian Inuit Dog is the last indigenous dog to North America”) and commodification (“Canadian Inuit Dog and Dog Teams...are an integral part of the City of Iqaluit’s unique character and its

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140 Partriquin, “Move Over, Mushers.” 
141 McHugh, “A Flash Point in Inuit Memories,” 158. 
142 The Corporation of the Town of Iqaluit, “By-Law # 537: Canadian Inuit Dog and Dog Team By-Law,” (Iqaluit, NU: City of Iqaluit, 2001), 1.
economic and tourism development”).143 Within city limits, qimmiit are restricted to ‘Designated Dog Team Areas’,144 where all qimmiit must be tied up, tagged, and registered with the local authorities. In stark contrast to the tulugaq at the dump, Iqaluit’s qimmiit are ‘disciplined’, ‘tidy’, and ‘orderly’. Qimmiit have been, as Belcourt puts it, re-configured as “neoliberal subjects.”145 And these relatively new relationships with the inhuman animals (tulugaq and qimmiit) have become a part of Iqaluit’s colonial inheritance.

The dog lot in question is located along a 330m stretch of road on a former airport landing strip. And despite being located centrally between at least five dumpsites (including the old and current community dump site, and three military dumps), the lot is considered by many to be the safest place to keep their qimmiit. One of the other qimmiit lots is on the banks of Iqaluit’s airport creek, a site known for its high concentrations of carcinogenic chemicals known as chlorinated paraffins,146 likely leaching into the water from an up-creek military waste site. A Qallunaat dog owner, explains why she recently moved her dogs from airport creek:

I just started realizing that I've had a few dogs, um, die before the age of ten. And one of them, they had - I mean, I don't know exactly what was wrong with them, but she had her - her liver was totally not the right colour, not the right texture. All of that stuff. So - and then I had another dog die of prostate cancer, which is not really that normal for an unneutered male. And then I had another dog die, also around the same age of sort of unknown causes but sort of similar to how the one that I did know that she had a sort of screwed up liver…. And so all the dogs that I had that didn’t grow up on that creek lived to be about 14/15. And suddenly this whole generation of dogs that I had, seemed to be dying like younger than I would have thought. And like, you can't really draw that link, but it makes you think.147

143 ibid, 1
144 ibid, 6
147 Interview with long-term Qallunaat resident of Iqaluit, conducted 10 July 2014.
Waste, both symbolically and materially, has become part of Nunavut’s neo-colonial present. Like other social and environmental issues developed out of a history of colonial and neo-colonial governance, waste is now bequeathed to present generations. As we have discussed in this paper, the mid 20th century saw the establishment of military bases, mining ventures, and residential schools throughout the Arctic, leading to Inuit settlement, voluntarily or otherwise. This profound shift in lifestyle resulted in deep social and cultural changes that impacted the relationship between Inuit, land, family and community practices, food, waste, and the environment more generally. As Zebedee Nungak, writer and prominent Inuit activist explains, “Inuit society was garbage-less. All our stuff was either edible by dogs, or naturally degradable…. With garbage now a central part of life, it’s amazing to observe how tiny people’s consciousness is about garbage.”148 Despite Territorial efforts to incorporate Inuit epistemologies into territorial and municipal government decision-making processes, both the act of wasting and the management of waste are being governed through Southern structures, processes, and practices.149 Waste is, in many ways, itself neo-colonial. Nunavut communities, who produced little material waste prior to European contact, are now the largest producers of waste in Canada’s territories.150

Our examination of Nunavut’s ‘trash animals’ demonstrates how ravens and dogs, like Inuit peoples, have been incorporated into, and managed by, historically, culturally, and materially constituted cosmologies: an Inuit cosmology that emphasizes the senscience, agency, and spirituality of all (human)animals; and a Western cosmology sustained by beliefs in human exceptionalism, an inert landscape, and humans’ God-given right to control and utilize their...
environment — suppositions only exacerbated through neo-liberalism and capitalism. Within current neoliberal governance, waste is inherited as both material and symbolic forms of disorder, unruliness, and disgust. Referring to David Gilmartin’s analysis of British irrigation engineers in the Indus Basin, Baviskar notes:

Controlling waste was, in differing ways, crucial to both an agenda of increasing ‘scientific’ control over the environment, and to the state’s political manipulation of indigenous communities. Understanding the place of waste in colonial discourse is thus a way of understanding some of the most basic contradictions underlying this resource regime.¹⁵¹

Disorderly relationships with Inuit, animals, and the landscape have been variously embraced, compromised, co-opted, commodified, destroyed, rebuilt, and abandoned. In Nunavut, as elsewhere, we are tasked with the challenge of inheriting an increasingly messy, uncertain, and colonized lifeworld — one shaped by climate change, toxic and indestructible wastes, and unknown human and environmental impacts. Concern with naming our current ‘Anthropocene’ epoch is, amongst other things, a bid to formally acknowledge the association between neo-liberal governance, Western scientific modes of knowing, and our ecological and colonial inheritance. In this context, we must critically examine, question, and challenge the political, historical, and cultural structures through which our inhuman relations are variously practiced and embedded. Learning how to inherit, then, becomes a matter of reimagining and thus materially reworking our relationships with the inhuman in ways that accept rather than dominate other lives and livelihoods, and to go further to challenge waste strategies that promote neoliberal governance at the cost of community and environmental well-being. While Western

epistemologies may remain “blinded” by human exceptionalism,\textsuperscript{152} trash animals continue to remind us — however briefly, and to whatever end — of that which we can never truly abandon or forget. Though we may choose to ignore these animals or even legislate their disappearance, they will inevitably show up in our imagined sanitary lifeworlds.

\textsuperscript{152} Anna Tsing, “Unruly Edges: Mushrooms as Companion Species.” \textit{Environmental Humanities} 1, (November 2012): 144.
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Chapter 4

Taima (Enough): Risk Governance in the Iqaluit ‘Dumpcano’

4.1 Abstract

In the summer of 2014, the municipal dump in Iqaluit, Nunavut spontaneously caught fire for the fourth time in under a year. The deep-seated dump fire, which became known colloquially as the Iqaluit ‘dumpcano’, burned consecutively for over three and a half months. Children, elders, those with respiratory disorders, pregnant women, and others were warned to stay indoors as levels contaminants surpassed allowable limits set for Southern Canadian communities. While simultaneously releasing public health warnings, government officials reassured the community that contaminant exposure levels were not a cause for concern. Publics largely rejected the government’s messaging along with its scientific framing: classes and community events were cancelled; employers handed out gas masks; a local activist group formed. I argue that the community’s rejection of the government messaging speaks less to the public’s (in)ability to understand science, and more to a history of contaminant exposure and federal government underfunding that has been experienced by residents as a social and environmental justice issue. Examining the Iqaluit ‘dumpcano’ as a case study of an acute social/political/and environmental event, I explore how public contestation brought to the fore decades of colonial violence and contested understandings of Arctic sovereignty. I examine how the ‘dumpcano’ controversy was governed by divergent understandings of risk, and managed by public health officials primarily through a deficit model framework. While risk management practices privileged Western governance and framings of the issue, active participation by publics placed community understandings of health and wellbeing at the forefront of the ‘dumpcano’ debate.
4.2 Introduction

A little over one kilometer away from Nunavut’s “most notorious dump fire” (Rohner 2014: 1) (Figure 4.1), nearly 60 Iqalumiut\textsuperscript{153} packed into a local hall to learn of the City’s recently approved dump fire extinguishment plan. In Iqaluit, Canada’s northernmost and smallest capital city (pop. 7000), residents spent nearly three months heeding to public health warnings and breathing in contaminant-laden dump smoke. The public meeting — and indeed it was a meeting, and not a public consultation as experts made clear— was held at the request of Iqalumiut for Action- Stop the Dump Fires (IFA), a community activist group that formed a month earlier in response to community health concerns. Throughout the summer-long dump fire\textsuperscript{154}, levels of dioxins and furans exceeded allowable levels set for most Southern Canadian communities. And while the City of Iqaluit struggled to access funding to put out the fire, IFA lobbied other levels of government for financial assistance. Since the dump’s ignition 99 days earlier, the community kept appraised of the fire almost exclusively through social media, news reports, and word-of-mouth. A satirical Twitter account\textsuperscript{155} responsible for coining the hashtag ‘#dumpcano’ (a combination of the words ‘dump’ and ‘volcano’) led to the dump fire receiving national and international media attention. But despite the dump fire’s infamy, this end-of-August public meeting was the first official dialogue between experts and the public.

The meeting was attended by Inuit, Qallunaat\textsuperscript{156}, youth and Elders, and was indicative of Iqaluit’s diverse community.\textsuperscript{157} Like all other Territorial and City meetings held in Nunavut\textsuperscript{158},

\textsuperscript{153}Iqalumiut is the local term used to describe those living in Iqaluit. There are variations in the term, and others use Iqalungmiut. In this paper, I use Iqalumiut to coincide with the name of the activist group, Iqalumiut for Action.

\textsuperscript{154}The dump fire began on May 20th and was eventually extinguished September 16th, 2014. The public meeting was held on August 25th.

\textsuperscript{155}@yfbdumpcano on Twitter. The acronym YFB refers to Iqaluit’s airport code. The account can be found here: https://twitter.com/yfbdumpcano

\textsuperscript{156}Qallunaat/Qablunaat is the Inuktitut word for non-Inuit (non-indigenous) people. Singular of the word is Qallunaac. The term also encompasses a set of values that are regularly associated with non-indigenous Southern Canadians. For a detailed discussion of the term Qallunaat, see Cameron (2015: 22-24)
the public meeting was translated to both English and Inuktitut. Several prominent Nunavut politicians were in attendance, including Pat Agnakak, a Member of Legislative Assembly for the Government of Nunavut (GN), and Cathie Towtongie, the president of Nunavut Tunngavik Incorporated—the legal body charged with representing Inuit from across the territory. Other politicians, including Nunavut Member of Parliament (MP) and Canada’s Minister for Environment, Leona Aglukkaq, and the Canadian Prime Minister, Stephen Harper, (though in Iqaluit that day) were notably absent.

After spending the first hour of the meeting outlining the expected dump fire extinguishment process (the method would involve dunking burning waste into a lined containment pool while continuously spraying the dump with freshwater and recycled leachate to keep smoke from rising over the community\(^\text{159}\)) the Iqaluit Fire Chief turned the floor over to the public to ask questions and voice their concerns. Over next two hours, community members posed a variety of questions, ranging from logistical constraints (“Do we have enough firefighters?”) to contaminant monitoring (“Is there a way to monitor the amount of pollutants in the fish, the sea, and for the berries?”) to concerns over communication (“Have they prepared and informed the Elders who have health problems? Have they informed these people with what to do?”), to issues of inequity:

In my area, I think we are the most populated. We're the ones that get the smoke probably first, and I don't think the smoke coming to us is the same smoke that's coming up to [the air quality monitors]. I'm not sure- I could be wrong. But I'm worried.... We have overcrowding. There's lots of children, there's lots of elders. There's a lot of people. When you say [people] are at risk, a lot of them are in my area.\(^\text{160}\)

\(^\text{157}\) Iqaluit is Canada’s largest Inuit community with nearly 3900 Inuit (60% of Iqaluit’s population). 45% of Iqalummiut speak Inuktitut as their first language (Statistics Canada 2013).

\(^\text{158}\) Nunavut means ‘Our land’ in the Inuit language of Inuktitut.

\(^\text{159}\) AZ Field Notes 25 August 2014. The freshwater was pumped in from Iqaluit’s airport creek, over 1km away.

\(^\text{160}\) Field notes 25 August 2014.
More than just pointing out the ways in which expert knowledge could be improved, these questions contextualized the dump fire as an issue of public concern, where relationships between individuals and with the land are placed at the forefront of community health and wellbeing.

From a scientific and public health perspective, the dump fire was framed by experts as isolated, calculable, and controllable. As the GN Chief Medical Officer of Health told the audience:

Everything except the particulates and dioxins, and furans were below public health risks… Health Canada says in their report that they don't expect health effects in Iqaluit. The way to protect yourself is the same...Whether we found out today or in two weeks— and that's to avoid breathing in the smoke.\(^{161}\)

Yet despite reassurances from the GN and other government officials that environmental and human health risks were low, public concerns were not alleviated. Halfway through the public meeting, an Inuk woman responded to the experts’ health messaging, receiving applause from the audience:

[It’s] absolutely scary. It's absolutely sad that it's come to this point. My kids are breathing it. My niece is breathing it. My parents are breathing it. I can't wait until it's done. I can't wait until we don't have to worry. I can't wait until they don't close the school because of the smell— because of the toxins. I can't wait. I hope it stops. I'm scared of the water. All of the salt water that goes into dump to stop the fire, it's going to go back into the ocean. I eat country food. I eat seal. I eat birds. I eat berries. I am absolutely scared... I don't smoke, but I breathe in the toxins. Health Canada says don't worry. I'm worried. I can't wait until the dump's out.\(^{162}\)

When I ask a government official about public concerns, he replies, “We will be able to see it [contaminant levels]. Quantify it... These are facts, but the exposure— or, basically, the [risks of] exposure to our health— are perceptions.”\(^{163}\) In this way, concerns about the dump fire were differently framed and responded to by community members and government officials; for those attending the public meeting, concerns about contaminant exposure were not just a technical

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\(^{161}\) Field Notes 25 August 2014

\(^{162}\) Field Notes 25 August 2014.

\(^{163}\) Interview with Qallunaac government official in Iqaluit, conducted 27 August 2014. Note: this interview was conducted two days after the public meeting.
issue (about quantifiable levels of contamination), but embedded in community histories of contaminant exposure, relationships with colonial government officials, and contrasting ideas, values, and understandings of what it means to live together in healthy Nunavut communities.

In his highly influential work on risk theory, Brian Wynne (1996) argues for a more reflexive view of public-expert relations. Rather than viewing the public as wholly reactionary to the claims-making of experts, he suggests that both science and lay knowledge are always social, cultural, and political, and that they are recognized as such by publics. Specifically, he diverges from other risk theorists who conceptualize publics as acting solely based on the perceived validity of scientific risk assessments (e.g. Beck 1996; Giddens 1990). To this end, public controversies occur, not necessarily due to lack of available or adequate technologies to respond to, or detect, risks (though within Iqaluit this was also considered an issue), but because of institutionalized risk management practices that inadequately address how “issues are framed and thus given meaning” by community members (Wynne 2003: 402).

In this paper, I highlight the ways in which government practices of risk management — what are defined here as the aspects of risk governance employed by governments and public health officials, which are based on what is known and knowable (primarily through scientific knowledge and statistics) and that readily decontextualize risk issues — often speak past public meanings of risk. I begin this paper by providing an overview of the contemporary social science literature that examines efforts to integrate indigenous knowledge into Euro-Canadian governing practices in Canada’s North. Doing so, I discuss how risk management practices that overlook community perspectives, in turn ignore indigenous knowledge and governing systems. I then

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164 When discussing community practices or responses to the dump fire, I use the term publics (plural) as is standard in Science and Technology Studies to recognize that there is variability in opinions, culture, and beliefs within the Iqaluit community. In this way, ‘the public’ contains multiple publics. However, when I discuss government interactions with the community, I use ‘the public’ to note that messages were conveyed to the community (or public) more generally.
turn to the Iqaluit ‘dumpcano’ to examine how matters of public concern were governed through a ‘deficit model’ risk management framework, which privileged a scientific and technical understanding of the issue. This technical configuration led to risk management strategies (e.g. directing children and Elders to stay indoors) that, to many Iqalummiut, were considered an affront community well being. Significantly, the Iqaluit ‘dumpcano’ coincided with a growing movement of Inuit activism, resulting from long-standing issues of inequity and the Canadian federal government's recent prioritization of the Arctic for fossil fuel and mineral extraction. The ‘dumpcano’ controversy culminated with Iqalummiut formally requesting the federal government to abandon a concurrent Arctic sovereignty exercise, Operation Nanook, in favour of tackling a ‘real emergency that impacts the lives of Northerners’. Doing so was a politically strategic decision to re-contextualize the dump fire amongst the community’s myriad social and environmental issues, and efforts by Inuit and Northern communities to self-determine. The ‘dumpcano’ protests were thus aimed at reminding government officials to place community understandings of health and well-being at the forefront of political decision-making practices.

4.3 Indigenous Governance in the Arctic

Risk management, amongst other forms of governance in Nunavut, exists within a postcolonial context wherein the inclusion of Inuit knowledges into government management practices is frequently called into question (Amagoalik 2015). Within Inuit governance, the land, or nuna, and its associated relationships figure centrally. Inuk scholar Jackie Price (2007: 51) argues that Inuit epistemologies (and therefore governance) are rarely supported in Nunavut, at least in part, because “the GN does not support relationships in the way Inuit governance understands and supports relationships.” Here, she is referring to neoliberal forms of
governance\textsuperscript{165} wherein the central governing body — namely the Government of Canada — interacts and asserts its authority in ways that largely ignore community relationships unless they ascribe to the state’s economic rationalities (Price 2007). In this way, Brian Wynne reminds us that incorporating the “social needs, visions and priorities” of publics requires “actually learning to respect, hear, understand and respond” (Wynne 2007: 101) to community interests and needs in ways that scientific and economic frameworks often leave out. Price’s assertion that Inuit ways of knowing and being are structurally absent from Euro-Canadian governing practices, including risk management, is particularly relevant in Nunavut territory, where Inuit self-governance formed the basis of Nunavut Land Claims Agreement in 1999.

To this end, a number of scholars from Inuit Nunangat\textsuperscript{166} have begun articulating the possibility of integrating Inuit governance into government decision-making practices (see Price 2007; Price 2013; McGrath 2011; Nickels et al. 2012; Cameron et al. 2014). In a post-land claims era\textsuperscript{167}, what constitutes Inuit governance is the subject of some debate. According to Jackie Price (2013), Inuit she interviewed in the Kitikmeot region conceptualize Inuit governance (both contemporary and traditional) in terms of ‘wellness ’ and ‘well-being’ — terms used to describe a variety of practices aimed at improving relationships between individuals and with the land.

Discussing Jackie Price’s work, Emilie Cameron (2015: 157) writes:

> Part of the struggle Nunavummiut face... is to carve out the conceptual and metaphysical space to name the ways in which Qablunaq ways of thinking, being, and doing continue to shape life in the territory, and to re-establish Inuit ways. Nurturing relations with each other and with the land is central to this process, from the intimate scales of family and community through to territorial, national, and circumpolar mobilizations.\textsuperscript{168}

\textsuperscript{165} As Lemke argues, the rationality of neoliberal governance sets as “a central point of reference and support” (2000: 10) the economy and the making of financially responsible individuals. Neoliberal governance, in this way, is aimed at relationships with the self and others that create economically rational citizens.

\textsuperscript{166} This is the term for used for all Inuit lands, including Nunavut, Nunavik, Inuvialuit, and Nunatsiavut.

\textsuperscript{167} Nunavut became its own Territory in 1999, and prior to this it was part of Canada’s Northwest Territories. The creation of Nunavut Territory involved the largest land claim in Canada’s history.

\textsuperscript{168} For a more in-depth discussion, see Price (2013).
Janet Tamalik McGrath (2011) comes to a similar conclusion about the integration of Inuit perspectives and ontologies into Qallunaat systems, suggesting that the process is one of (re)focusing government supports towards Inuit peoplehood, personhood, and livelihoods. Accordingly, a shift towards privileging Inuit governing practices does not place Inuit governance at odds with scientific knowledge, but rather becomes a framework through which Inuit relationships (and therefore ways of knowing, being, and doing) may be supported in ways that neoliberal governance leaves out.

A shift towards governing aimed at the well-being of individuals through land and community practices often goes counter to Western governing practices, which focus on, according to Lisa Stevenson (2012: 605), managing “the formation of collectivities devoid of biography… [that] conceives life as artificially severed from community”— something that would never have been possible in traditional Inuit governance and community practices. She explains that Inuit naming practices, for example, are understood to transfer the characteristics of the deceased to newborns and, as a result, materially entwine Inuit bodies into complex relationships with humans, animals, and the land. By contrast, biopolitical (i.e. Western neoliberal) forms of governance configure community health and well-being based on population health statistics, overall contributions to the capitalist economy, and other indicators of ‘self-determined’ neoliberal subjects (Lemke 2001). This is not to say that biopolitical governance ignores community relationships, but that it emphasizes a certain type of relationship between individuals, self, and the land. In this way, while governments might encourage the inclusion

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169 In this context, livelihood refers to always having enough meat/food/money to eat (cited in Cameron 2015).
170 See, for example, dogs in Zahara and Hird forthcoming (Chapter 2). Stevenson (2014) similarly discusses how raven might become family members if embodied by dead relatives. These practices are not universal, but are differently practiced (or not) by Inuit.
171 Foucault defines this process as government rationality, or neoliberal ‘governmentality’. Lemke writes “The key feature of the neo-liberal rationality is the congruence it endeavours to achieve between a responsible and moral
of Inuit perspectives within government decision-making practices, it is regularly done so within culturally embedded constraints and frames.

Biopolitical governance and decision-making practices dominated government initiatives throughout Nunavut’s major colonial period (circa 1950-1970) and remain prevalent in Nunavut today (see Stevenson 2014).\textsuperscript{172} As Lisa Stevenson (2012) points out, a notable example of biopolitical governance includes the implementation of federal government housing for Inuit in the 1960s— which was done despite knowing that doing so would radically alter Inuit lives by forcing Inuit into a capitalist system\textsuperscript{173}. A report from the Subcommittee on Eskimo Housing Programs justifies the government’s reasoning, stating that “Surely, in any case, it is more desirable to have a live and slightly disturbed Eskimo than a dead one”\textsuperscript{174} (ibid: 592). This particular valuation of lives contrasts with Inuit governance, where the overarching goal was not to ‘stay alive’ but to achieve “self-sovereignty” (Qitsualik 2013: 32) through personal growth and wisdom gleaned from human and land relations.

Throughout Canada’s North, the inclusion of indigenous knowledge into Western governance practices — what is often referred to by government officials and social science researchers as ‘co-management’— is a stipulation for development and conservation near or within many Aboriginal communities. While co-management is often lauded by government officials, research that has critically examined co-management has noted its propensity to sustain individual and economic-rational individual” (ibid: 12). Governmentality thus encourages individuals to act in ways that acquiesce to the social and economic frameworks through which governments operate.

\textsuperscript{172} Some government initiatives that governed ‘life’ at the cost of Inuit culture and community practices include: the killing of thousands of Inuit sled dogs for the purpose of ‘public health and safety’ (Zahara and Hird, forthcoming); the placement of Inuit, including children, into Southern Canadian tuberculosis sanitorium, wherein many Inuit did not know where they were going, how, or if they would return to their communities (Stevenson 2014). The federal government did not always record the names of Inuit, or inform Inuit families when individuals died; however the government recorded the exact number of Inuit who were tested for tuberculosis and the number of deaths— statistics used to evaluate the initiative’s success (ibid).

\textsuperscript{173} Staying in one place, Inuit would no longer be able to follow animals and therefore engage in hunting practices.

unequal power relations with biases towards non-indigenous governing practices. According to Paul Nadasdy (1999) co-management’s focus on integrating indigenous knowledge into pre-existing (and often Western scientific) frameworks, inherently imposes settler understandings of what knowledge is and how it might be used; as a result, tacit knowledge involving understandings of land and community histories is often ignored. As Emilie Cameron (2012) points out, when discussing indigenous knowledge both administrators and scholars alike actively seek out forms of knowledge that adhere to settler understandings of indigeneity — as ‘local’ or ‘traditional’ rather than fluid, current, and adaptable — and therefore risk “delimiting the ways in which northern Indigenous perspectives, concerns, and critiques can be heard and can be effective” (Cameron 2012: 104). Similarly, critical development studies scholars have examined how, within the context of institutionalized decision-making processes, understandings of issues are regularly “rendered technical” (Li 2007), which further demarcates not only how knowledge is defined, but also how it might be obtained and utilized. And while Inuit epistemologies are recognized by the GN as rooted in distinctly Inuit ways of knowing and being, they are regularly made legible to government institutions “in a manner compatible with Western science and logic” (Tester and Irniq 2007: 50). In this way, indigenous knowledge is regularly transformed into what Mario Blaser refers to as “informational inputs” (2009: 15), thus further negating community values and perspectives.

By rendering issues technical, community understandings of colonialism and decades of institutionalized (and racialized) violence are thus considered outside the purview of how indigenous knowledge is incorporated into research and governing practices (Cameron 2012).

For further critical discussions of co-management in Canada’s north, see Sandlos and Keeling (2015) (Environmental Impact Assessments), Henri (2012) (wildlife management), and Cameron (2012) and Cameron et al. (2014) (climate change).
Indeed, institutionalized co-management frameworks engender “a naturalized discourse that specifically excludes political and ethical considerations” (Nadasdy 2005: 216, original emphasis) from indigenous knowledge. Similarly, risk management frames, wherein programmers draw boundaries around a “knowable, manageable, technical domain,” (Li 2007: 270) reinforce Euro-Canadian power and ideologies by establishing “a particular regime of truth in which certain knowledges become admissible or possible” (Armstrong 1983: 10). In this way, indigenous knowledge may be used to identify community sources of contaminant exposure (popular fishing spots, berry picking sites and so on), but rarely as a way of exploring causes or solutions to public controversies. To that end, both risk and co-management analyses have called for more meaningful public engagement (Hunt and Wynne 2000; Price 2007).

4.4 The Deficit Model and Risk Communication

What then, as Brian Wynne asks, “should be the proper epistemology for major public issues” (2003: 407)? As deeply social processes, government risk management frameworks are always epistemologically (Wynne 2003; Jasanoff 2003) and ontologically (Blaser 2009) rooted and practiced. Through a process that Bruno Latour (2004) refers to as “creating matters of fact”, government scientists and bureaucrats ‘render technical’ public concerns within institutionalized financial, material, and political constraints, values, and objectives to create ‘facts’ (by-laws, policies, measurements, and management plans) through which issues become managed. Within risk management processes, these ‘facts’ are often enforced through a set of practices and understandings that have been labelled the ‘deficit model’ by risk theorists (see Wynne 2006; Irwin and Wynne 1996). The ‘deficit model’ is so-called because it frames the problem of a given controversy as existing within an “ignorant and uninformed public” (Irwin 2008: 2) that is deficient in scientific or institutional knowledge and/or trust. In this way, issues are often addressed by governments as ‘risk communication problems’, wherein the solution becomes one
of educating the public about the ‘correct’ understanding of a given issue (Wynne 2006). In this way, solutions are often pre-determined, without taking seriously public concerns — something that is particularly problematic if public concerns are themselves aimed at the institution’s value systems and/or material constraints. As a result, risk management practices regularly impose “deeply alien identities and values, and ontologies” (Wynne 2003: 412) onto communities. Publics respond accordingly through public protest, ambivalence, distrust, and so on.

The federal government departments charged with advising the GN in matters of public health operate within a deficit model framework. Health Canada, for example, distinguishes between “actual factors that affect people’s level of risk” (2005: 5, my emphasis) and what they term “risk beliefs” — understandings of risk that stem from what they term ‘psychosocial factors’ (i.e. anxiety, fear of future dangers, or perceptual cues like coloured water, odours, chain link fences, placement of warning signs and so on). And while public participation in risk management is encouraged as a form of ‘best practice’ within aboriginal communities, this is done explicitly to “increase trust and understanding” of a given issue (Health Canada 2010: 10). The very notion that aboriginal communities might understand but disagree with government/scientific frames is foregone in lieu of scientific education — what public health officials term “capacity building” (Health Canada 2005: 1) or “empowerment” (CCA 2015: 39). As a consequence, governments perpetuate the notion that publics are only concerned about whether risks have been correctly accounted for and mitigated, and not, as Wynne suggests “about upstream (usually unaccountable) driving human visions, interests and purposes” (2006: 217). Moreover, the deficit model (re)frames an issue within the very epistemic logic that is often being contested. Deficit style risk management frameworks, then, which are devoid of listening and acting on community concerns, often ‘miss the music’ as Brian Wynne (2006: 211) puts it —
a critique that has been applied to both Inuit and non-Inuit encounters with Western governance systems (Jasanoff 2003; Wynne 2003; Cameron 2012).

Understanding that sustaining power relations is implicit to deficit model frameworks is particularly important in Nunavut communities where “Inuit forever have felt overpowered by the Southerners”\(^{176}\). In line with contemporary Science and Technology Studies and co-management literature (e.g. Jasanoff 2004; Latour 2007; Cameron 2015), in this paper, power is recognized as circulating through various actors and practices; it is “neither unidirectional, nor located in only one entity” (Hird et al. 2014) but is “dispersed, ubiquitous and dynamic” (Henri 2012: 38). Power, in the Foucauldian sense, is established through what scholars refer to as ‘the conduct of conduct’ (Dean 2009), wherein power is not just about the ability to constrain certain kinds of actions, but the possibility of producing them. Significantly, then, within Nunavut communities both Inuit and Qallunaat forms of governance readily inform the conduct of Nunavummiut, influencing their priorities and decision-making practices.\(^{177}\) As Emilie Cameron writes:

> Government efforts to reshape the conduct of Inuit conduct [intersect] with, and often [jar] against, the conduct of conduct in Inuit governance systems. That is, the rationalities, ethics, and intentions that shaped Inuit responses… must be understood not only in relation to the rise of governmental power in the North, but also as forms of conduct grounded in Inuit beliefs, values, aspirations, and governance systems. (2015: 126)

Therefore while assertions of Western epistemologies may be privileged through deficit-style risk governance frameworks, they always entangle with Inuit governing practices.\(^{178}\)

\(^{176}\) Interview with Inuk Iqaluit resident, 5 August 2014

\(^{177}\) This is particularly true in Iqaluit, which has nearly equal amounts of Inuit and non-Inuit people. Indeed, the IFA and other protest groups were considered “Very diverse… There’s some very ‘Southern’ people [in the group]. There's some very ‘Northern’ people.” Interview with Qallunaac member of IFA, 25 August 2014.

\(^{178}\) It should be noted that both Inuit and qallunaat made up IFA and other protests groups. It is not my contention to state that only Inuit were protesting; but rather, that particular aims and understandings of these groups were readily influenced by Inuit governing practices.
In what follows, I examine how the ‘dumpcano’ controversy was governed by divergent understandings of risk, and managed by public health officials primarily through a deficit model framework. While risk management practices privileged Western governance and framings of the issue, active participation by Iqaluit publics placed community understandings of health and wellbeing at the forefront of the ‘dumpcano’ debate.

4.5 Risk Management in the Iqaluit ‘Dumpcano’

On May 20th, 2014, the West 40 dump in Iqaluit, Nunavut spontaneously caught fire for the fourth time in under a year. Within 24 hours, the fire spread throughout the city’s four-story football field sized active waste disposal site. The community’s previous dump fires (occurring in December 2013, January and March, 2014) had been restricted to a small corner of the dump and were able to be extinguished. Despite initial attempts to extinguish the dump fire, efforts to do so forced the suspension of the community’s water supply—out of necessity, the City abandoned their efforts to put out fire, and the City’s management strategy shifted from extinguishment to containment. Fire crews dug additional fire breaks, including a trench between the smouldering section of the dump and a smaller, older pile, which was, according to the City’s Fire Chief “the most hazardous part of the landfill” (Varga 2014b: 1). In order to protect community health and the environment, the community was told that the dump fire would be left to burn out on its own (Murphy 2014a).

The occurrence of the dump fire and subsequently the City’s decision not to extinguish it are due, at least in part, to the material characteristics of Iqaluit and the West 40 dump site.

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179 While some refer to the West 40 dump as a landfill, it is in fact a dump. The distinction is a lack of waste segregation and landfill cells.
180 A landfill engineer later noted that these separate incidents were likely caused by the same fire (Sperling 2014).
181 Water in Iqaluit currently comes from Lake Geraldine—a small lake at the northern end of the community.
182 Indeed, one of the last scientific assessments of the dump identified the second dump pile as containing a variety of military waste and contaminants such as PCBs (ESG 1995).
Because Iqaluit is only accessible by airplane (and sealift during the summer), wastes accumulate but rarely if ever leave. Unlike the highly engineered waste disposal sites in Canada’s South that include sophisticated technologies for the detection, suppression, and disguising of landfill fires (FEMA 2002), Iqaluit’s dump lacks this infrastructure. According to federal government documents, the exact origins, depth, and diversity of wastes in the West 40 site are not known (PWC 1992; ESG 1995); however, as is evidenced by abandoned military equipment in some parts of the dump, the site is assumed to date back to the community’s origins as an American and Canadian military base in the 1940s-70s (ESG 1995). And while the dump became the City’s active waste disposal site in 1995, its use was intended to be temporary; because of limited financially feasible alternatives, the site remains in use but is well over capacity. Like many other Nunavut dumps that were created in the mid-20th century, the West 40 dump (which is located near the city centre on a peninsula that extends into the North Atlantic ocean) was sited for ease-of-use rather than safety (Johnson 2008). Despite its proximity to the ocean, seawater was not readily available for use by firefighters in May (the ocean was sea ice until July) nor was it recommended that salt water be used to put out the fire (Varga 2014d). From the perspective of the City, extinguishing the fire would require using freshwater that was not easily accessible and would hinder the community’s access to drinking water; firefighters would be exposed to a variety of hazards associated with burning waste materials, including explosions and exposure to unknown chemical mixtures.

Coinciding with the City’s decision to keep the dump fire burning came public health advisories from the GN. Within a week of the fire igniting, asthmatics, youth, elderly people, people with emphysema and other breathing conditions were instructed to stay indoors unless going outside was absolutely necessary (Varga 2014b) — a strategy known by public health officials as “shelter in place” (Public Safety Canada 2015: 1). This was advised in part because
“We [The GN] don’t even know what’s burning in the dump”, as a GN public health official explained to a local newspaper (Varga 2014d). Due to an absence of air quality monitoring systems in Iqaluit, an emergency response team of Environment Canada and Health Canada officials arrived in Iqaluit June 7-9th to monitor a variety smoke-related contaminants. According to initial reports, impacts to human health were expected to be minimal as long as community members kept a safe distance from the dump (approx. 70m); beyond this distance, contaminant concentrations were reported to be low other than the odd “smoke spike” of fine particulates (Varga 2014d). When outside, people were told to limit physical activity, and warned that they might experience symptoms including wheezing, chest tightness, dizziness, or shortness of breath (CBC News 2014b). Due to dump smoke blowing into the community, elementary schools cancelled classes and several community events were postponed (ibid; Nunatsiaq News 2014).

Beginning mid-June, air monitoring equipment was put in place to allow for daily and hourly analysis of contaminants. At this time, monitoring also began for dioxins and furans — contaminants known to be carcinogenic and harmful to human development at even low levels (Health Canada 2006). Measurements of dioxins and furans were sent to Southern Canada for evaluation — a process that took approximately 30 days to be analyzed and returned to Nunavut officials. During this time, publics were told by Environment Canada that they were in “little immediate danger” (Varga 2014d), but were also warned that concentrations of the most harmful contaminants — the dioxins and furans — were as of yet unknown.

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183 These include fine particulate matter, carbon monoxide, volatile organic compounds and hydrogen sulfide, PCBs, PAHs, and heavy metals (Varga 2014d; GN 2014)
184 According to Health Canada (2006:1) the ‘tolerable’ level, meaning “no serious health effects are expected” is 70 picograms per kilogram of body weight/month -- or 1/trillionth of a gram.
185 Field notes, 25 August 2014.
Not surprisingly, the government’s cautious yet reassuring messaging was taken by many community members as contradictory. Publics were forced to sieve through the government’s messaging, while dealing with very real physiological responses to dump smoke, including sore throats, headaches, nausea and so on. By June 10th — less than three weeks after the dump fire began— at least ten people had already visited the local hospital for dump-smoke related ailments (ibid). Due to pressure from constituents, and also due to their own concerns regarding dump smoke,186 Iqaluit City Council reversed their decision to let the fire burn and instructed the Fire Chief to “put out the fire in the way he sees fit” (Varga 2014f). Along with the directive to extinguish the dump fire, came the formation of the ‘Dump Fire Working Group’, which began meeting on June 20th and continued to meet throughout the summer. The group included representatives from ‘relevant’ GN and City of Iqaluit departments,187 Aboriginal Affairs and Northern Development Canada (AANDC) and the Iqaluit International Airport188. Additionally, an ‘Air Quality Monitoring Working Group’ composed of GN, Health Canada, Environment Canada, AANDC, and later on, Department of National Defence officials were meeting to discuss air quality monitoring and public messaging. Crucially, the groups included no non-experts; other than Council’s final decision-making authority, public framings of the issue were excluded from decision-making processes.189

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186 For example, Councillor Kenny Bell was quoted in the local newspaper as saying “What worries me most is the quality of life, and not just the potential of getting sick or being sick” (Varga 2014e)
187 Specifically, the group included representatives of the GN’s Department of Environment, Health, Executive and Intergovernmental Affairs, the Director of Protection Services, Fire Marshal, and the Manager for Emergency Response and Recovery. City of Iqaluit representatives were from Department of Engineering and Fire Department. The group did not include, for example, representatives from the Department of Culture and Heritage.
188 The Iqaluit dump is located near the Iqaluit airport and therefore the extinguishment process was likely to impact flight operations.
189 Unlike in major cities in Canada’s South, Iqaluit City Council is a volunteer position and not a full or part time job. If elected, these community members receive an honorarium of $100.00 per council meeting attended. Normally Council Meetings are held twice a month.
A turning point in public participation in risk governance came on July 17th, when concentrations of dioxins and furans were found to be above the standard set for the Southern Canadian province of Ontario. Accordingly, the GN released a public health advisory notifying all pregnant women and women of childbearing age to avoid breathing in the dump smoke (GN 2014a), which was now known to cause “a possible risk” of decreased fertility in male offspring (Health Canada 2014: 1). Although concentrations of dioxin were below thresholds known to cause cancer, levels of dioxins and furans had been, on average, three times the standard set for Southern Canadian province of Ontario (ibid). Though not known at the time, the highest known concentration occurred the day prior to the PSA, when samples showed levels of dioxin that were 11 times Ontario’s provincial limit (ibid).

The sudden shift in known risks significantly changed how people experienced the dump fire. For example, a woman of childbearing age living in Iqaluit explained to me her reactions to the PSA:

I felt really betrayed when that news release came out because, I was like, have you been sitting on this information? How long has this been a known thing? Like, should I have been wearing a mask the entire time? Cause I don't have kids yet, but I plan on it. And, I mean, knowing that it might not affect me but that it might affect my future children was like- oh, man. I was so furious. I was really angry.... And that was probably like a good weekend of like stewing. Because, I mean, it's too late now to do anything, cause those things have a half-life of like 6-10 years.

Conversely, from a public health perspective, the discovery of high levels of dioxins proved the success of risk management decisions: the government’s efforts to make the dioxin concentrations knowable had been realized and public health messaging had not changed since

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190 The Ontario standard—what was used by the Government of Nunavut—is a 24 hour average of 0.1pg/cubic metre. As noted earlier, there are no recordings of dump smoke prior to June 14th, 2014.
191 All measurements of dioxins and furans were sent to Southern Canada for evaluation, which took approximately 30 days to complete and be sent back.
192 Interview with Qallunaac resident of Iqaluit, conducted 18 August 2014.
the dump fire began (‘shelter in place’ was still the advice being given). For the GN, the issue of the dump fire was one of risk communication. As one public health official explained to me:

You know, there's pregnant women who've talked to their doctors so I've made a point of keeping the physicians- my colleagues- informed. Um, so I've found that decreases [anxiety]. But I've also found that people don't read the [GN’s] Q and As. They don't read the public health advisories, they don't particularly listen- that they hear somebody say something about how awful it is and repeat it. So it makes it very difficult to get the messaging across.193

As the Chief Medical Health Officer explained at a City Council meeting, the reason for public anxiety was that the messaging was being “interpreted broadly” by community members.194 In her framing of the issue, if women of childbearing age understood that they would only be impacted if they became pregnant during the dump fire, then the controversy would subside. For her, public concerns were about levels of contamination that the GN maintained were “not a public health emergency” (Varga 2014f). Significantly, the GN’s framing thus drew boundaries around the possibility that the dump fire could be experienced as anything other than a ‘risk issue’ — namely, that public concerns might have little to do with scientific thresholds or government evaluations of risk.

Yet throughout the summer, the issue of the ‘dumpcano’ continued to be governed through what Wynne refers to as ‘correctional idioms of communication” (2005: 66) aimed at refocusing the issue to one scientific knowledge and risk communication. The dioxin standard, as the Chief Medical Officer of Health explained during the public meeting, was based on animal tests and multiplied by a safety factor to account for differences in human physiology.195 Significantly, the public health framing required a ‘rational’ decontextualization of the dump fire — one devoid of government underfunding and histories of contamination. To do so, the Chief

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193 Interview conducted with GN Health official in Iqaluit, 8 August 2014
194 Field notes, 1 August 2015.
195 Field Notes 25 August 2014.
Medical Officer of Health remarked that levels of dioxins and furans were significantly lower in Iqaluit than in the nearby Northwest Territories, where forest fires had reduced air quality considerably; other public health messaging reminded citizens that contaminant concentrations caused by the dump fire were lower than those caused by smoking. From a ‘rational’ scientific perspective, then, there was little to worry about. As the Chief Medical Health Officer stated at a public meeting “I have two daughters in this community and I'm not worried about my future grandchildren”. In this way, the issue was the dump fire was entirely ‘rendered technical’, and power privileged within scientific knowledge frames and networks (Jasanoff 2004). And while this may have addressed certain public concerns (how contaminants might be harmful and to whom), the ways in which the dump fire was embedded as an issue of public meaning were not addressed within the government’s propositional risk management framework. As one community activist explained to me after the August 25th public meeting, “I don't think any of the questions have been answered except that you won't die by breathing it.”

4.6 Issues of Public Meaning

A major source of frustration within the community — and one that was targeted by community activist groups — came from the prolonged process of approving the dump fire extinguishment plan, which (along with other policy and logistical constraints) required that the City secure upwards of $7 million dollars to complete. For the City of Iqaluit, this expenditure would potentially require “putting a freeze on hiring, delaying capital building plans and halting purchases,” as the City’s Chief Administrative Officer was quoted as saying (Murphy 2014b: 1). Amidst many infrastructural issues, Iqaluit has a massive housing shortage, an aging sewage

196 Field Notes 25 August 2014.
197 Interview conducted with GN Health official in Iqaluit, 8 August 2014
198 Field Notes 1 August 2014.
199 Interview with long-term Qallunaac resident in Iqaluit, 27 August 2014.
treatment and collection system, several recreation projects underway, and high rates of alcoholism, homelessness, and suicide without a proper addictions treatment facility.\textsuperscript{200} When I ask community members where waste management fits within the myriad other issues that require financing, I am repeatedly told that choosing one issue at the expense of others is not a viable option. Accordingly, many community members pointed to waste management as inextricable from other social issues. A journalist that covered the dump fire extensively throughout the summer explained:

We're washing our berries now. They're warning that mother's sons might have fertility issues. Like, that is not good enough…. Imagine a town with the population of Nunavut, 35 or 36 thousand people- and I've heard this compared to Orillia, Ontario. Imagine if Orillia, Ontario had 45 suicides in one year. There would be like- Orillia, Ontario would be transformed... You know, but it's like, “That's Nunavut. It's way up there. People are going to kill themselves.” And it's like- it doesn't get the press, it doesn't get the public's attention that it needs, it doesn't get the money it needs.\textsuperscript{201}

Accordingly, when the dump fire extinguishment plan was downgraded to a projected $2.2 million dollar plan, publics expressed concern, knowing that a cheaper plan would likely mean reduced safety measures. As such, IFA began a letter writing campaign requesting assistance from Territorial and Federal politicians to provide funding to the City to extinguish the dump fire. By early August, the City’s own request for federal and territorial government funds was denied by both the GN and the Government of Canada — presumably, to avoid starting a precedent of Nunavut communities requesting funding for waste and other infrastructural issues.\textsuperscript{202} With higher levels of government refusing to provide additional funding, the sentiment

\textsuperscript{200} Currently anyone that needs to access addictions services is flown across the country to British Columbia. Amongst displacement issues associated with this practice, individuals are required to be sober at the time of boarding, which means that many people will never actually get proper alcohol or drug treatment.

\textsuperscript{201} Interview with Iqaluit journalist, conducted 3 September 2014.

\textsuperscript{202} The community of Rankin Inlet, NU’s dump spontaneously caught fire twice during the Iqaluit ‘dumpcano’, but both times was able to be extinguished (Rogers 2014). Outside of Nunavut, First Nations’ communities across the country lack adequate waste infrastructure (Bharadwaj et al. 2006).
that Iqaluit was dealing with this situation alone was prevalent. As one Iqaluit City Councillor noted during a Council meeting, “there is no Leona, there’s no Taptuna trying to help us out.”

In Iqaluit, this sentiment has been the norm in waste management, where adequate funding is largely absent. According to reports, it would cost nearly $250 million to bring Nunavut’s waste management infrastructure to the standards set in Southern Canadian communities — an amount that, under current funding arrangements, would take municipal governments over ten years to achieve (Varga 2014b). As has been noted elsewhere (Hird and Zahara forthcoming; ESG 1995), at least seven abandoned military dumps are located throughout Iqaluit (Figure 4.2). All of these dumps originated in the 1940s-1960s from the United States and Canadian militaries who abandoned their wastes upon leaving the city (ESG 1995). None of these abandoned waste sites have leachate containment systems and their contents, which include military vehicles, wiring, scraps of metal, barrels of oil, asbestos, and even an airplane (Figure 4.3), have become part of the community’s landscape. Previous studies have examined the water and soil near these waste sites and have found levels of heavy metals, PCBs, and other contaminants requiring remediation (ibid, PWC 1992). And while reports have called for these sites to be remediated since at least the 1970s (see GNWT 1972), other than the removal of PCB materials by the Department of Indian Affairs and Northern Development in the early 1990s (ESG 1995), these sites remain largely the same. In 2012, Transport Canada withdrew their application to remediate one of the dump sites, citing an inability to accrue funds for the $3-7 million project (Franz Environmental 2008; Joseph 2012). The project was abandoned despite the area posing an “immediate physical hazard and risk to those using the area for recreational purposes” (Franz Environmental 2008: 19); the dump site is located next to a popular camping

203 Inuit City Councillor Joanasie Akumalik. Field notes, 1 August 2014. He is referring to Minister of Environment and Nunavut MP Leona Aglukkaq and Nunavut Premier Peter Taptuna.
and fishing spot and is adjacent to a nearby territory park. For decades, Iqalummiut have been forced to accept certain levels of contamination in their community.

Community members, including City officials are concerned about these waste sites. In 1995, for example, Joe Kunuk, then mayor of Iqaluit spoke directly to a Canadian parliamentary committee, asking them to remediate Iqaluit’s contaminated sites (Parliament of Canada 1995: 1). His comment echoes many of the concerns expressed by Iqalummiut today:

In the past our elders were concerned about activities that created the old military dumping sites... As late as last week I heard from all the elders that they were told not to worry because the government knew what it was doing... Now we are being told, through studies and reports, that these sites have unacceptable levels of toxins and chemicals... People should not be frightened of the food they eat and the water they drink. We want to be free to move on the land without worrying about the sites that have been contaminated by the military or other outsiders...With our climate, location and scarce financial resources, we are forced to deal with an environment that is not acceptable to our residents and that we’re sure would not be tolerated in the south (Parliament of Canada 1995: 1)

Little has changed since a Public Works Canada report in 1992 concluded that “constraints [associated with waste management in the Arctic] are further aggravated in Iqaluit since most of the wastes are inherited from previous activities and ownership responsibilities for future clean-up activities remain to be resolved” (1992: iii). As recently as 2013, an Iqaluit City Councillor wrote an open letter to a local newspaper, calling on the federal government to remediate these waste sites, which “pose a threat to that [Inuit] way of life” (Dobbin 2013: 1). Within public framings, then, it made little sense to decontextualize the dump fire from historical underfunding and other sources of contamination

Emblematic of public responses to the dump fire was a photo taken of Julie Alivaktuk, a pregnant Inuk woman, that came to symbolize how the dump fire was experienced by many Iqalummiut. The photo shows a pregnant Alivaktuk standing in front of the dump fire wearing a surgical mask; on the palm of her outstretched hand is the word *Taima* (in English meaning
‘enough’) written in Inuktitut syllabics (Figure 4.4). The photo, which obtained hundreds of shares on social media (and became IFA’s Facebook profile picture), highlighted a recurring tradition of Inuit and other northerners “being left to waste” as Dillon puts it (2014: 1206). Commenting underneath the photo, Alivaktuk’s partner, Shawn Inuksuk, explained that taking the photo was intended to bring issues of contamination to fore: “The right to clean air is the most basic of human right. We feel strongly about it. We want people to know what’s going on.” (Murphy 2014c: 1). The Taima written on Alivaktuk’s palm entangled the dump fire with the countless PSAs, contaminant warnings, and abandoned wastes ‘temporarily’ placed in Nunavut communities, and whose impacts will undoubtedly outlast the bureaucratic tug-of-war through which they are embedded. In this way, public reactions to the dump fire were meant to, as Jasanoff puts it, point out “when the emperor has no clothes” (2003: 398) -- or, to call attention to the fact that Inuit and other northerners are routinely exposed to levels of contamination deemed unacceptable by Southern communities. Both the photo and subsequent reactions by publics were aimed at re-politicizing contaminant issues otherwise made apolitical by bureaucratic risk management practices.

### 4.7. Public Contestation and Arctic Sovereignty

While many scholars have noted that non-confrontational expressions of resistance are the norm in Inuit culture (Price 2007; Tester and Irniq 2007; Cameron 2015) — with Inuit historically engaging in “covert” rather than “overt” strategies of resistance204 (Tester and Irniq 2007: 49) — crucially, the Iqaluit ‘dumpcano’ occurred at a time when Inuit communities throughout Nunavut began actively engaging in public protest as a way of asserting Inuit values, knowledges, and perspectives. As Laakkuluk Williamson Barathy explains, Inuit began engaging...

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204 With various exceptions, including the implementation of polar bear quotas and the European Union sealing ban (Tester and Irniq 2007).
in highly visible (and confrontational) expressions of resistance alongside Canada’s larger indigenous movement\(^{205}\):

While Inuit have been successful in negotiating historic land claim agreements and self-government in both Inuit regions [Canada and Greenland], there is still a deeply embedded struggle to actually implement the agreements and have a lived experience of sovereignty...The southern swell of Idle No More arrived in the North at a time when many Inuit and Inuit organizations were frustrated in this incongruity [sic] of post-colonial Arctic society… Rising up is not simply about protesting federal government bills, but also a call from within to make personal and individual politicized choices (2013: 39-41)

This growing movement of Inuit activism coincides with a more traditionally vocal population of long-term and short-term Qallunaat residents. Accordingly, Iqaluit publics responded to risk management frames not through complacency or ambivalence, as Wynne (1996) suggests, but by protests aimed at longstanding issues of inequity and misunderstandings of what ‘sovereignty’ means to Inuit and other northerners.

After the GN’s public health advisory regarding dioxins and furans was released, several formal and informal community protests were held throughout Iqaluit. Near the end of July, the Qaggiavuut Society began holding a weekly ‘Art-in-the-Park’ event, wherein artists engaged in a variety of activities, including throat singing, drum dancing, acting, and storytelling, to channel frustrations and anxieties about the fire into public displays of activism. On August 21st, on the 92nd day of the Iqaluit dump fire, the group organized a campaign wherein community members took photos of the number ‘92’ in various location throughout the city and posted them to social media. IFA members began attending all weekly council meetings of which at least two were over capacity.\(^{206}\) As part of the group’s ‘media strategy’, a pregnant woman and member of IFA attended a council meeting, only to leave halfway through ‘due to dump smoke exposure’; she

\(^{205}\) In 2012, the ‘Feeding My Family’ food security movement and Facebook group was started, which now has over 20 000 followers on Facebook. Williamson Bathory explains that the group and a ‘Stop Harper’ Canada Day parade float, “mark the first tastes of street protests in Nunavut’s 15 year history” (2013: 39). Four subsequent protests were held across the territory as part of Idle No More.

\(^{206}\) Field notes 1 August 2014; 12 August 2014.
was subsequently interviewed by the local media about the fire. An anonymous videographer under the pseudonym ‘Carbon Capture’ posted a Youtube video of the Iqaluit ‘dumpcano’ showcasing as well the community’s other abandoned dump sites. The video quickly went viral and has since received over 20 000 views. By mid-August more than 500 people had liked IFA’s Facebook page, which was by then being used as a central hub to post dump-related videos, pictures, Council meeting minutes, advertise ‘dumpcano’-themed events, and to provide templates for lobbying government officials.

Again, the purpose of these protests was to call attention to the fact that the dump had then been burning for over three months and that the community was receiving little help from outside sources. Importantly, the final month of the Iqaluit dump fire coincided with two significant and overlapping events. First, was the annual summer visit from the Canadian Prime Minister, Stephen Harper, as part of his yearly ‘Northern Tour’ of Canada’s Arctic. The Prime Minister’s publicly unannounced visit to Iqaluit occurred at the end of August—over three months after the dump had initially caught fire. The second and more highly publicized event was the Canadian Armed Forces annual military exercise, Operation Nanook—what is considered by the Canadian federal government as the “largest sovereignty operation in the Canadian North” (NDCAF 2014). The exercise was held in Iqaluit from August 21-29th, bringing in hundreds of military personnel into the community. Consequently, when the dump fire began receiving national media attention (see Worden 2014; Canadian Press 2014), journalists linked Prime Minister Harper’s visit to the dump fire controversy. A column printed in the Ottawa Citizen stated:

207 Interview with IFA member, 9 August 2014.
208 See https://www.youtube.com/watch?v=a1GTSIAYQ5c
209 While the Prime Minister’s Northern Tour itself is well publicized, the communities visited on his tour change annually are not announced prior to his arrival. Though it was known he would be in Iqaluit for Operation Nanook, the community was not informed of the dates of his visit, or of any events that he would be attending.
When a problem is distant, it’s easy to ignore...Since taking power, Prime Minister Stephen Harper has gone on eight Arctic tours, the last couple to promote “Canada’s Northern Strategy.”... Now, a situation has come up that threatens our environmental heritage and will almost certainly set back social and economic development, and the federal government is silent (Gordon 2014: 1)

In this way, IFA and other Iqalummiut were successful in re-framing the ‘dumpcano’ as a governance issue.

According to Jackie Price (2013), discussions of governance in Nunavut often result in what she terms ‘arctic sovereignty debates’, wherein increased international and national interest in Canada’s Arctic (due to the prospect of oil and mineral deposits) has coincided with an increasingly vocal northern population with diverging interests, intentions, and values. For the Government of Canada, arctic governance has involved asserting their geopolitical dominance through increased research, military activity, and resource extraction — practices that the Government of Canada has characterized as “exercising our Northern sovereignty” (Northern Strategy 2015: 1). The federal government’s particular approach to arctic sovereignty is based on a European (and colonial) notion of “a rule that is not only heritable, but beyond question” (Qitsualik 2013: 23) — an understanding of sovereignty that contrasts with Inuit ontologies and epistemologies. As the federal government’s understanding of Arctic sovereignty has begun actively shaping their approach to governance in Nunavut territory (see Northern Strategy 2015), many Inuit and other Northerners have struggled to find a voice within Arctic sovereignty debates (Simon 2009). To this end, the Inuit Circumpolar Council created A Circumpolar Inuit Declaration on Sovereignty in the Arctic in 2009, which explicitly states that sovereignty in the Arctic is predicated upon “healthy arctic communities” that, at the very least, must “achieve standards of living for Inuit that meet national and international norms and minimums” (ICC 2009: 1). As such, sovereignty has been the focus of many Nunavut protests and initiatives aimed at promoting Mary Simon’s assertion that “sovereignty begins at home” (2009: 251). The
‘dumpcano’, as evidence of standards of living quite literally not meeting national norms and minimums became about arctic sovereignty.

Accordingly, after the GN and the Canadian federal government denied Iqaluit assistance to put out the fire, IFA began publicly lobbying Canada’s Department of National Defence (DND). On August 12th, representatives from IFA spoke to Iqaluit City Council, asking the City to formally request DND’s assistance in extinguishing the dump fire. The motion passed and Iqaluit’s Deputy Mayor, Mary Wilman, submitted a request to Operation Nanook for ‘material’, ‘human’, and ‘logistical’ resources to help extinguish the fire (Wilman 2014). In a statement echoing the stance of IFA, Councillor Joanasie Akumalik framed the DND’s sovereignty exercise within the context of Iqaluit’s dump fire and a history of “chronic underfunding” from higher levels of government (see Letourneau 2014: 1):

I am somewhat confused by the message from the Government of Nunavut and the Government of Canada. I don't think we should let them off the hook. They never fund the city very well in terms of infrastructure because Iqaluit is always growing. And both have not fully enforced their own regulations over the years. I'm also confused about the message that the [GN’s] Chief Medical Officer is sending. She has indicated that the dump fire is not a medical emergency but the Government of Nunavut has released a health advisory that states the dump fire smoke could have an impact on vulnerable people... There is a risk from dioxins. So that's why I'm confused why both governments are not taking responsibility. Cause we'll be hosting the Prime Minister and the military for Operation Nanook, which in 2012 cost $16.5M. This coming exercise will be a mock exercise to save a fake cruise ship. I think we should ask them to tackle a real problem and put out the dump fire.210

In this way, both community activists and (some) City officials became part of Iqaluit’s ‘problem’ public (Latour 2007). For many Iqalummiut, not only did the Canadian Government ignore the City’s request for assistance, but they were actively (and visibly) spending three and a half times the amount needed to extinguish the dump fire on a mock sovereignty exercise aimed at ‘protecting’ Canada’s Arctic. The federal government also benefited directly from its presence

210 Inuk Councillor Joanasie Akumalik at City council meeting. Field notes 12 August 2014.
in Iqaluit, through the creation and distribution of images of the Canadian Prime Minister meant to legitimize Canada’s claim to the Arctic as sovereign territory (Dodds 2013; see also PM 2014).  

That the community of Iqaluit would be re-focussing their frustrations on the Canadian military is perhaps not surprising given other examples of ongoing contamination and institutional ‘forgetting’ of colonized bodies and spaces. Lindsey Dillon (2014), for example, examined restoration work being conducted by the U.S. Navy at Hunter’s Point Shipyard, San Francisco, USA — a highly contaminated, racialized, and impoverished space, where military and navy wastes have historically been abandoned. While the Navy addressed the situation as a technical issue — a configuration that inherently “cleansed [the Navy] of its social and geographical relations” (ibid: 1215) — for residents of the site, both contamination and remediation were ongoing social, political, and ecological processes. As a result, residents living through Hunter’s Point’s gentrification retained a longstanding antagonism towards the US Navy— who, in the first the instance abandoned toxic wastes, and in the second remediated it for the benefit of affluent non-residents. Perhaps similarly, Major Pierre Maudette, the new commander for DND in Iqaluit was in attendance when the IFA formally requested DND’s assistance, though he did not address their request. Rather, Maudette was there to request the City’s assistance in finding an alternate location to conduct military exercises in the event that operations were interrupted due to dump smoke. The change in location would involve the military temporarily contaminating (and then remediating) a popular camping and fishing spot. Councillor Akumalik replied to Maudette’s request, stating “I say we put them [the Military] by

211 On August 12th, the Prime Minister’s Office asked Iqaluit City Council’s permission to allow an aerial drone to be flown over the City throughout the Prime Minister’s visit. The purpose of the aerial drone, which had already received Transport Canada’s approval (one that supersedes City Council’s), was to take promotional photos of the Canadian Prime Minister. Permission was granted after a tie vote on Council.

212 The waste was remediated for the purpose of building high-end condominium complexes, thus displacing local residents.
the dump. So that they can smell it, live it, eat it, breathe it” — a suggestion that was met with applause from the audience. Maudette conceded that the military was not aware that the site was being used recreational space, and, with the help of some Iqaluit City Councillors, a different location was selected.

In a similarly antagonistic sentiment — and one that points equally to Iqaluit’s waste as part of a larger social and environmental justice issue— the GN official charged with overseeing Nunavut’s dump sites explained to me:

I hope that the dump is still burning when [Prime Minister] Harper comes up here for his annual ‘summer vacation’ with the military. I really hope it's burning. And maybe... maybe they'll get it. That we have a serious infrastructure deficit up here and that building more garbage dumps is not the answer.215

Many other Iqalummiut described Operation Nanook as doing little to actually help the lives of Northerners: one respondent referred to the exercise as “Stephen Harper coming up to, you know, go sleep on a boat for a night”216, while another described it as “protect[ing] arctic sovereignty by burning fossil fuels, or whatever it is that they're doing.”217 To this end, the targeting of DND, was meant re-articulate (and thus reframe) the ‘dumpcano’ issue as one not devoid of Northerners, colonial histories, and responsibility. To those involved with IFA, requesting assistance from the Canadian military was not meant to be a practical or even expected solution to the dump fire; indeed, considering it as such would be a “really simplistic way of looking at it”218 as one IFA member told me. Rather, it was meant to highlight the various structural

213 He continued “A few years back the military used to come to the community. They used to make demonstrations to the community, make hot dogs, and so on. I propose we put that condition on them. They serve hot dogs for people, you know? Regardless I don’t support Operation Nanook, so I vote no.” At least three Iqaluit City Councillors expressed active support for Operation Nanook, so Akumalik’s sentiment was not unanimously held by all Council members.
214 Field notes 12 August 2014.
216 Interview with long-term resident of Iqaluit, conducted 1 August 2014
217 Interview with long-term Qallunaac resident and member of IFA, conducted 25 August 2014.
218 Interview with IFA member, conducted 9 August 2014
issues and modes of governance that ignore the well-being of northerners in ways that ‘well-being’ is understood and experienced by those living in Canada’s North. As such, when a local radio station dedicated over an hour of time to a ‘dumpcano’ themed music show (Figure 4.5) and decided to play only ‘Blackened noise,’ a subgenre of Black metal, described to me by the radio host as “very very very abrasive to listen to… the perfect, you know, urban, metallic, crunching, destruction sound, that would provide the suitable soundtrack for the dumpcano”\(^{219}\), these sentiments were also aimed at the longstanding issues of inequity that the ‘dumpcano’ came to symbolize. Accordingly, the radio host advertised the event alongside newspaper articles about Nunavut’s abandoned dump sites, high smoking rates, and wildlife declines\(^ {220}\).

To this end, Operation Nanook was a particularly strategic target for IFA, as it redirected the cause of Iqaluit’s waste issues to one of governance and therefore to conflicting understandings of Arctic sovereignty. According to the Canadian federal government, sovereignty is based entirely on “historic title, international law and the presence of Inuit and other Aboriginal peoples for thousands of years” (Northern Strategy 2015: 1). Stated otherwise, the federal government’s understanding of sovereignty is not contingent on having clean lands or uncontaminated people — an understanding that diverges from those of living in Canada’s North.

A long term Qallunaac resident and IFA member explained to me her interpretation of how arctic sovereignty is understood differently by Northerners and Southern Canadians. She explains:

> Soldiers and military- whatever you want to say- can defend your sovereignty, but they can't create sovereignty. It takes women and children, communities, clam diggers, and fisherman, and berry pickers to create sovereignty… That doesn't play into the photo ops of jets flying overhead. And when we look at the amount of money they we invest in the berry pickers versus that amount that we invest in the jets- that's the discussion around how effectively are we actually addressing- or do we need to address, or how do we address- any kind of sovereignty issues...But that's how northerners think about it. I mean, people use the land- not ‘use it or lose it’ in having guys march around on it- but

\(^ {219}\) Interview with Qallunaac resident, conducted 22 August 2014

\(^ {220}\) This can still be seen on the event’s Facebook page (Hurlements sur la Toundra, 2014).
snow machines. People going on snow machines, people going hunting. Young people having a transfer of hunting skills. Family spending a summer camping. Those are the ways that you genuinely know about [the land]. You own the land because you know about it. And you know about it because you live on it and you use it. And you hear stories about it and how history and geography and all those things come together. Family history, natural history, geography— they're all wound together in the way that northerners use the land. That's what really established northern sovereignty.221

The focus of IFA then, was not one of downstream waste management per se, but one of ethics and responsibility — and for some Iqalumiut, one of sovereignty. In this way, an investment in community infrastructure and activities that support community health and well-being and that encourage active participation in, and creation of, the Arctic’s natural social environment— what is also the foundation of Inuit governing practices (McGrath 2011; Price 2007) — is, for many Northerners, what was being affronted by the dump fire: children and Elders were unable to go outside; berry picking became a source of anxiety; community celebrations were postponed. Discussions of risk management, which purposefully ignored public framings of the issue, further reinforced a governance structure for which local understandings of community health and wellbeing were neglected.

In the end, the Department of Defence did not provide additional services to help the community with the dump fire; rather, DND officials privately conducted additional testing for dioxins and furans — the results of which were not shared publicly.222 Indoor air quality was assessed in the locations where military personnel were sleeping, and soil samples were preemptively taken near military headquarters — tests that had not, and were never, conducted elsewhere in the community. While levels of contamination were, by and large, considered to be below allowable standards for human exposure, both pregnant women and asthmatics were not deployed to Iqaluit (Rennie 2014). In this way, not only were Southern Canadian military

221 Interview conducted with long-term Qallunaac resident and member of IFA, 25 August 2014.
222 This information was made available through the completed access to information request, #A-2014-00932.
personnel more informed than Iqalummiut of potential hazards associated with the dump fire, but these risks were deemed hazardous enough to warrant halting the deployment of vulnerable Southern Canadians.\footnote{The exact wording of the internal memo reads “...as a precautionary approach, those with severe lung disease (asthma) as well as pregnant women should not be part of the deployment to Iqaluit” (Completed Access to Information Request to Department of National defence A-2014-00932; original emphasis). DND also created a contingency plan in case emissions were to increase.} That military officials who defend sovereignty should have greater protection measures than the community members who create it is, in this way, implicit to governance structures wherein sovereignty is defined as land ownership and constituted through military operations.

4.8 Conclusions

According to Inuk scholar Jackie Price (2007), that Inuit governing practices are not privileged by the GN relates to inherited government practices and priorities, wherein ethics, understandings of humans, nature, land, and so on, are variously embodied and constituted: the very raison d’être of Western modes of governance contrast with Inuit governance in that it focuses primarily on “public interest, legal responsibility, [and] money allocated,” rather than “community well-being, means of conflict resolution, [and] constant affirmation of community.” (ibid: 52). That publics might disagree with the knowledge system for which they are being prescribed causes those responsible for risk management to configure the public as a “problem” needing to be resolved (Latour 2007: 6). But, as Brian Wynne explains, that publics have become a ‘problem’ undermines the fact that they have a “legitimate claim to debate those [scientific] assumptions” (1996: 59) — namely that because of legal responsibility, money allocations, and other characteristics of scientific knowledge systems, expert understandings of risk are always value-laden and always incur uncertainties (Wynne 2006). In this way, from a Euro-Canadian government perspective, controversies surrounding risk governance are readily configured as a
risk communication issue; meanwhile the issue of concern for Iqalummiut had more to do with the fact that the ‘dumpcano’ both stemmed from, and reinforced, factors that stand in the way of community health and well being: namely, a lack of resources provided to Nunavut communities, the inability to engage in community practices without fear of contamination, and risk management practices that prevented avenues for meaningful public engagement. That community concerns about berry-picking were addressed by converting local concerns into “instructional inputs” (Blaser 2009: 12) — adding ‘wash your berries’ to the public health warning— is evidence of this disconnect.

I began this paper with a discussion about the difficulties of incorporating community perspectives into institutionalized risk management frameworks. IFA highlighted the importance of this in their request to Operation Nanook, which, according to them could have been “a true example of how all levels of government, and citizens, can work together to tackle a real emergency and create a more sustainable City and Territory” (IFA 2014: 2). Understanding that local knowledge includes understandings of risk that, in the case of Nunavut, are embedded in community histories of contamination, is part of addressing risk management issues in ways that respect the livelihoods and understandings of those living in Canada’s North. As Brian Wynne notes, public contestation “is rarely only about propositional truths, but... about what is the proper public meaning and definition of the issue(s) being contested” (2003: 404). As the ‘dumpcano’ controversy makes clear, opening frameworks to allow for broader discussions of community health, colonialism, and sovereignty— not as data, but as a part of the framework— is a necessary component of Inuit self-determination.

As Peter van Wyck aptly points out, Iqaluit’s dump fire was a “potent visual trope” (2014: 10) for what has been referred to as “Canada’s Northern Hypocrisy” (Gordon 2014: 1); namely, that Canada depends on the Arctic to legitimize its Northern sovereignty claim (and therefore
retain access to what the Canadian Prime Minister Stephen Harper has called a “treasure house”\textsuperscript{224} of oil and mineral deposits; PM 2013: 1), meanwhile those living in Canada’s North face myriad social and environmental issues. In the instance of the Iqaluit dump fire, the federal government literally ignored community concerns. Accordingly, on August 25th, the day of the Prime Minister’s visit to Iqaluit, representatives from another activist group, Feeding my Family\textsuperscript{225}, held protests outside of the Prime Minister’s hotel about “a range of issues” (CBC News 2014c: 1) from the Iqaluit dump fire to the high costs food in Canada’s North. That evening, less than 60m away from the widely attended public dump fire meeting, Prime Minister Stephen Harper and Nunavut MP Leona Aglukkaq attended what the media termed a “feel good community event” (ibid), where several Canadian Olympic gold medalists handed out hockey equipment to Iqaluit children. Echoing the sentiments of IFA, Feeding my Family organizer Leesee Patpatsie explained to the local newspaper that the Prime Minister’s visit was taken as an opportunity to insert Inuit lives into discussions about Canada’s North, and “That people do stand up in the North and we can protest in the North” (ibid:1). Accordingly, the public assembly that came about due to the ‘dumpcano’ was less about ‘solving the waste management issue’, and more about articulating that ‘solving the waste management issue’ involves supporting community relationships and perspectives in ways that neoliberal governing practices leave out.

\textsuperscript{224} He continues, “Now, as we know, much of the North’s treasure is underground” (PM 2013:1)

\textsuperscript{225} This group aims to raise awareness about the high costs of northern food prices. Their Facebook group of the same name has over 25 000 members.
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Figure 4.1: Photo of the Iqaluit Dumpcano and Map

Figure 4.2: Map of Iqaluit’s abandoned waste sites.

Figure 4.3: Iqaluit’s North 40 Waste site

Photos taken by A. Zahara, 2014.
Figure 4.4: Taima (Enough). Photo of Julie Alivaktuk

Photo credit: Shawn Inuksuk, 2014. From CBC News,
Figure 4.5: Promotional poster for ‘Dumpcano’ themed radio show

Francois Ouellette (2014).
Chapter 5: Conclusion

5.1 Conclusion Overview

Throughout this thesis, I have explored the historical and contemporary governing practices that manage waste and waste issues in Iqaluit, Nunavut. Governing practices inform the ways in which certain issues do (or don’t) become political, and through neoliberal governmentality, dictate how publics are meant to act and become ‘good’ contributing capitalist citizens. Through an examination of waste governance, this thesis highlights some of the ways in which the social lives of humans and waste have been, and continue to be, uniquely entangled in Canada’s North. In what follows, I provide a summary of the key themes this thesis has explored. I then discuss several theoretical and practical research implications of this thesis, and accordingly, suggest a way forward with Iqaluit’s waste.

5.2. Summary of Key themes

5.2.1 Waste and Colonialism

Many Inuit maintain that waste did not exist prior to colonization (Nungak 2004), which suggests a distinct Inuit ontology and relationships to what Southerners might consider to be waste materials. Moreover, the association of Inuit with waste (for example, scavenging at community and military dump sites) prompted many assimilative policies and practices. As is discussed in Chapter 2, the process of government officials teaching Inuit how to consume, waste, practice hygiene, cook, (not) scavenge at dumps, and otherwise fear germs and other waste materials, was an integral component of managing Inuit and of integrating Inuit into the capitalist economy. Through various initiatives (residential schools, housekeeping inspections, mandatory cooking classes, and so on), the federal government managed Inuit through

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226 This was also mentioned in at least four interviews with Inuit participants. Traditional ‘wastes’ include animal parts, clothing materials, and so on.
neoliberal governing practices. While this was done (sometimes) with good intentions, the result was forced assimilation aimed at changing Inuit relations with community practices and with the land.

When the American and Canadian militaries left Iqaluit, wastes were abandoned on the land, with little intention of their remediation. Since this time, Inuit and other Northerners have had to deal with waste and levels of contamination in their communities, and have been forced to manage waste at the cost of addressing other infrastructural concerns. For many Northerners, these wastes are not just a technical issue, but represent a particular valuation of Northern communities by federal government officials— one that has resulted in both contamination and infrastructural underfunding.

As is discussed in Chapter 2, divergent Qallunaat and Inuit cosmologies informed many decision-making practices throughout the colonial period. According to Rachel Qitsualik, ensuring that the unknown becomes knowable, manageable, and “tidy” (2013: 27), was (and remains) a central tenet of colonialism throughout Canada’s North. It led to the killing of Inuit sled dogs that were perceived as a potential (unknown) threat to human health and safety, and to other assimilative management policies predicated on the ‘uncertain’ survival of Inuit people. More recently claims of an ‘unmanageable’ and ‘unsovereign’ Anthropocene caused by climate change have paved the way for global management strategies aimed at ‘once again’ being able to manage the Earth— a possibility embedded in Western culture that continues to be enforced through technocratic governing practices.

As Myra Hird remarks, “Perhaps we may venture even further to suggest that waste in Canada’s North is colonialism” (2015: 12, original emphasis). Ontologically (and materially), this proposition makes sense; the creation of potentially indestructible waste materials—including plastics, nuclear waste, mining waste and so on— is predicated on an ontology where it
is assumed that it could be possible to manage wastes, Others, and the environment in perpetuity. But as this thesis has shown, efforts to do so consistently fail: trash animals emerge on and through our wastes; previously unknown contaminants are discovered; Inuit and other Northerners denounce assimilative management practices.

**5.2.2 The Vitality of Waste Materials**

This thesis adds to a body of literature that explores the materiality of waste (Hird 2012; Clark and Hird 2014; Reno 2014). Throughout this thesis, Nunavut’s unique waste assemblages—municipal solid waste, military dumps, dioxins, and so on—variously showcase the vitality of waste materials. In Chapter 2, Dr. Myra J. Hird and I discuss how understandings of ‘humanity’ existing as separate from nature—though common in Western thought and governance practices—is markedly immaterial. In Chapter 3, we highlight how waste materials themselves (re)configure human/nonhuman relations. In Chapter 4, wastes—namely, the Iqaluit dump fire—figure centrally in debates over Arctic sovereignty. Metabolizing waste materials self-ignite, assembling publics of concerned citizens. These publics interact with federal government and military officials who themselves assemble around melting sea ice, fossil fuels, and the prospect of increased tourism, international interests, and so on. In this way, waste and other materials actively engage with humans, dictating social relations and informing governance practices.

Moreover, this thesis highlights how Inuit and Qallunaat governing strategies are themselves rooted in relationships with the land. Survival of Inuit people required intimate knowledge of land, which in itself dictated (and continues to dictate) community roles and relationships between individuals (Cameron 2015; Price 2007). By contrast, an enlightenment based human/nature dualism has informed many Euro-Canadian governing strategies and initiatives aimed at managing or conserving nonhuman animals and indigenous people.

**5.2.3 Self Determination**
Ensuring that future generations of Inuit have the ability to self-determine was central to the Nunavut Land Claims process and the formation of Nunavut Territory (Hicks and White 2000). Therefore, within a context of burgeoning interest in the arctic by national and international governments and non-state actors— all of who have a financial stake in the arctic’s neoliberalization— it is particularly important that Inuit and other northerners retain control over land and community practices (see Simon 2009; Cameron 2012). To this end, I have noted various ways in which waste— and the actors who assemble around waste— ensure or undermine (see also section 5.2.1) the ability for Inuit (and Nunavut communities) to self-determine.

As Tester and Irniq remark, the pervasiveness of Inuit understandings of relationality— which in turn influences community perspectives and priorities— may be conceptualized “as a place for resistance” (2007: 57) by recognizing that they include “what people learn from experience, from family and community, and from stories handed down about how to live fully and effectively” (Usher 2000: 186). That Inuit knowledges continue to inform community practices is discussed in Chapter 2, and is evidenced by the difficulty, and ultimately the failure of, colonial government attempts to force Inuit to ascribe to Euro-Canadian understandings of nature and cleanliness. Similarly, Chapter 3 showcases how Inuit and other Northerners are actively rejecting colonial understandings of environmental management in debates over wildlife governance, which includes a very different relationship with Iqaluit’s ‘trash animals’. In Chapter 4, I highlight how Inuit governing practices are also asserted through political engagement within Qallunaat institutions. This may include engaging in public protest; attending City Council meetings; becoming an Iqaluit City Council member; lobbying territorial or federal governments for funding; advocating for sustainable waste management and development; acting as business or political leaders, and so on. In this way, Inuit and other northerners are actively shaping their future through various technologies and practices.
5.3 Research Implications

This thesis adds to a growing body of humanities and social sciences literature in environmental studies— including research in the Anthropocene, critical animal studies, and waste studies— that critically engages with, and theorizes, human-animal-geology relations. And while these bodies of literature might have the ability to “articulate a ‘thicker’ notion of humanity, one that rejects reductionist accounts of self-contained, rational, decision making subjects” (Bird Rose et al. 2012: 2), doing so readily involves acknowledging (and subsequently not participating in) discourses and practices that promote hegemonic understandings of humanity/nature. As Driftpile Cree Nation scholar, Billy-Ray Belcourt, remarks, analyses of the nonhuman that fail to “center an analysis of settler colonialism… [are] thus a form of colonial violence wherein indigeneity is invisibilized” (2015: 2). By acknowledging and respecting Inuit cosmologies, it is my hope that this thesis—and future scholarly research within these and other environmental studies disciplines— might contribute to more inclusive discussions of what it means to live together in rapidly changing human/nonhuman lifeworlds.

To this end, this thesis has showcased some of the ways in which both Inuit and Western ontologies and epistemologies readily inform community practices of environmental governance in Iqaluit. As this thesis has shown, the privileging of neoliberal understandings of waste and risk—what is common in Canadian government decision-making practices— has both historically and contemporarily resulted in management practices that fail to acknowledge community concerns. And while the Government of Nunavut has, to varying degrees of success, attempted to privilege Inuit epistemologies within wildlife governance227 (Tester and Irniq 2008; 227 Wildlife governance in Nunavut constitutes what Henri refers to as “a mixed success” (2012: 312). She writes that current wildlife governance practices have “permitted some level of knowledge generation and sharing, collaborative learning, problem solving and consensus building among certain participants,… [but] have also generated polarisation, opposition, mistrust, disengagement, and feelings of disempowerment among other actors.” (ibid: 313). For her, the issue of wildlife governance is not that collaboration is not possible, but that it “be further
Henri 2012), I contend that doing so is largely absent in waste management policies and decision-making practices (see also 5.4). Accordingly, it is possible that this thesis might result in certain policy recommendations. Risk management protocols that stipulate immediate public engagement or consultations with culturally relevant stakeholders (such as the Government of Nunavut’s Department of Culture and Heritage or Iqaluit’s Pirurvik Centre) might allow for Nunavut-specific risk management policies that more accurately respond to community concerns. Going further, these stakeholders might also be consulted with in the development of territorial specific thresholds for contaminants—something that might be possible considering many standards (such as those for dioxins) have yet to be set for Nunavut Territory. An Inuk woman who attended the public dump fire meeting noted the importance of implementing culturally relevant standards and practices, noting that “those standards, while they may be good in Ontario, well they may be missing some standards in Iqaluit.”228 Indeed, a Nunavut-specific standard for dioxins might be more stringent than those in Southern Canada, invoking emergency responses at 0.1pg/cubic metre in lieu of ‘shelter in place’. While this or other policies might differ from those in Southern Canadian communities, they would more closely respect community understandings of health and wellbeing (i.e. that it would be unacceptable for Elders, youth, and pregnant women to not be able to safely engage in community activities outdoors, particularly during the summer months), and place risk management within a very different framework of values and ethical constraints.

Perhaps moreover, this thesis highlights the many ways in which federal government encouraged with neither the precondition of simply incorporating and reconciling IQ within the ‘universal’ framework of science, nor that of incommensurability between ontologies, epistemologies and praxis.” (ibid: 320). Doing so, according to Henri, would ensure that governing practices more adequately meet the aims and objectives of the Nunavut Land Claims Agreement and ultimately refocus governance issues towards how individuals and communities value and practice relationships—what she considers to be necessary to allow for more inclusive, respectful, and meaningful dialogue between Inuit and scientific knowledge holders (ibid).

228 Field Notes, 25 August 2014.
funding practices, priorities, and modes of governance readily prevent the ability for Northerners to live safely in Nunavut communities. Specifically, this thesis provides evidence that at least two community locations—the abandoned military dump outside of Sylvia Grinnell Territory Park (Figure 4.2: Site 1) and Iqaluit’s airport creek—are known sources of harmful contaminants that may be a potential danger for community health and wellbeing. The former is located on Transport Canada land and is known within the federal government Department to require remediation. The latter is one of Iqaluit’s last remaining Designated Dog Team areas where community members can house their sled dogs. This information might be helpful to the City of Iqaluit, who has included “work[ing] towards clean-up of former waste sites”, “[being] active outdoors” and “supporting a strong Inuit identity” (2014: 1,13) as part of its Sustainable Community Plan. In this way, this thesis’ exploration of Iqaluit’s waste may be of practical significance to the community.

5.4 A Way Forward with Waste

In Canada’s South waste is governed to be ‘out-of-sight and out-of-mind’ or to be made apolitical through routinized waste management practices (Hird et al. 2014). Conversely, in Nunavut communities, waste remains on the land, unremediated, ubiquitous, and contaminating; in this way, Iqaluit-- like other Nunavut communities-- exists as a space where “the material stuff of waste and unequal social formations” (Dillon 2014: 1210) are inseparable. And while many Nunavummiut actively express concern about waste-related issues, for most Canadians, waste in the Arctic is a non-issue, overlooked by images of hunted seals, drowning polar bears and international disputes over arctic sovereignty. In this way, waste in the Arctic remains

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229 As Franz Environmental Inc. informed Transport Canada and Public Works Canada of the military vehicle dump, “It is our opinion that remediation/risk management priorities should be based on the removal of physical hazards and source area impacts, as well as the containment and control of metals in the surface water pathways (i.e., Main Drainage through Vehicle Dump) discharging to Sylvia Grinnell River “ (2009: i)
largely apolitical; and consequently, as Bruno Latour (2007: 7) writes, it becomes “perversely [one of] the most important aspects of what we mean by living together.”

As community members made abundantly clear throughout my field season in Iqaluit, improving waste management infrastructure is a necessary component of building healthy Nunavut communities; however, doing so remains a challenge. So far, the Iqaluit dump fire and associated renovations at the West 40 dump have cost the City nearly $5.0 million (Varga 2015). Moreover, implementing the city’s newly approved $14.0 million solid waste management plan poses several logistical challenges, including the construction, operation, and maintenance of windrow composting and an incinerator— the first of their kind in Arctic Canada (see exp Solutions Inc. 2014).\footnote{Indeed, City of Iqaluit engineers expressed concern over incineration due to high costs and ongoing difficulties experienced by other Arctic communities (e.g. Nuuk, Greenland) with operations and maintenance (exp Solutions Inc. 2013)} This summer, the City of Iqaluit is expected to submit a request-for-proposals for firms to implement and design these systems— a process that has been significantly set back due to the dump fire.

According to City reports, the implementation of new waste infrastructure is intended to make the community a “leader” in sustainable living and development (City of Iqaluit 2014: 12). And while the Iqalummiut I spoke with expressed nearly unanimous support for the City’s prioritization of waste management, waste, in its relation to the City’s rapid growth and development\footnote{Since the early 1990s, Iqaluit’s population has more than doubled, growing from 3000 to nearly 7000 people in 2015 (City of Iqaluit 2011). The rate of growth, according to the City of Iqaluit’s General Plan (2010) is due to the community’s high fertility rate, a young population, but also a 40% increase in non-Inuit residents.}, remains a far more contentious issue. As an Inuk woman and long-term Iqaluit resident explained to me:

If you go to a [smaller Nunavut] community, there's not as much garbage as there is here. And it probably does have a lot to do with the fact that they're not as Southernized as us, because those kids still get out on the land all the time. They still get the cultural experience and they're being taught properly, raised properly, like, in that sense. Right?... I think the city's just going to grow
and keep growing...Honestly, the City itself is trying to Southernize Iqaluit. And they don't really ask the people what they want.²⁵²

For her, the ability to go out on the land— to hunt and otherwise be with, and learn from, the Arctic environment— is a critical component of waste management. Smaller communities, which have not seen the influx of growth and Southerners that Iqaluit has, subsequently have less waste. Her reference to ‘Southernization’ here is not simply about the wastes that are associated with population growth, but is one of competing and rapidly changing cosmologies. To this end, another Inuk and long-term resident of Iqaluit expressed to me a similar worry about the community’s ‘Southernization’. He explains:

They [municipal and territorial politicians] are trying to project this "oh we're better than third world countries because we have healthcare, we have cars, we have sustainable water" but we're using more water than ever before. It's not an endless supply of water. Right? Like, it's going to run out eventually then where will we get our water? (Pauses) Like- I weep for my grandchildren. Where are they gonna get their water? How are they going to get their fresh air? Will they know how to hunt or where the animals are? Because we're expanding too much... At the rate we're going, what wildlife are there going to be in 20 years? What size is Iqaluit going to be in 20 years? Is it going to be twice, triple, quadruple the size? And if so, where are the animals going?...I think we're going towards Qallunaat- white people. We're going towards that mentality anyway. Because the Inuit just got what they needed in the olden days...That wasteful stuff that 30 years ago wouldn't happen because if we were hungry, we'd go out in the land. ²³³

From these perspectives, tacit knowledge learned from the land, and an understanding of sustainable human/nonhuman relations are at stake with the city’s rapid development.²³⁴

According to these interview respondents, how humans relate to, and interact with, the land materially impacts the amount of municipal waste that is produced.

Importantly, the City of Iqaluit has made significant efforts to engage with Iqalummiut about community development. To develop a community-specific definition of sustainability, Sustainable Iqaluit (a branch of the City’s Department of Engineering and Sustainability)

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²⁵² Interview with Inuk community resident, 5 August 2014.
²³³ Interview with Inuk community resident, 25 June 2014.
²³⁴ While hunting itself would tangibly create less waste than purchasing food, I take these claims about ‘going towards Qallunaat’ and Iqaluit’s ‘Southernization’ to refer to changing relationships between community members and with the environment associated with a neoliberal approach to development.
conducted over 200 meetings with an estimated 700 Iqaluit residents. The resulting definition of sustainability that developed through these meetings, is one based on relationships, “to the environment…to social and family well being… of the self to his or her own inner spirit” (City of Iqaluit 2014: 4) -- a definition that closely relates to Janet Tamalik McGrath’s (2011) discussion of what she refers to as ‘Aupilaarjuk’s triad’\(^{235}\), or what forms the basis of ‘Inuktitut knowledge systems’: namely, Inuit *Inuuqatigiingniq* (peoplehood), *Inuusiqattiarniq* (personhood), and *Niqiqainnarniq* (livelihood). In Aupillarjuk’s triad, livelihood (monetary economy) is inseparable from knowledge of, and relationships with, the land.\(^{236}\) Significantly, however, the City of Iqaluit’s definition of sustainability is interpreted as the ‘pillars’ of sustainability, comprised of ‘society’, ‘economy’ and ‘environment’ (City of Iqaluit 2014). Within the economy frame, Iqaluit’s future is imagined as having “a trained local workforce filling jobs created by economic growth… [with] a diversity of job opportunities from entry-level to advanced positions in transportation, construction, logistics, heavy machinery, and also higher education”; and where “Business leaders regularly come together to share ideas about Iqaluit’s potential, and to contribute to economic development planning” (ibid: 59); and where an expanded mining sector is expected to bring the community various “associated economic benefits” (ibid: 48). While Iqaluit’s Sustainability plan has gone through great lengths to keep the focus of development on relationships (with the land and with others), I take my respondents’ worries as stemming from the possibility that, through a focus on economic growth -- where economy is considered separate from the environment-- community relationships might be subsumed within a neoliberal rationality (Lemke 2001), wherein neoliberal governance practices are configured “only as a

\(^{235}\) McGrath (2011) developed this triad in her PhD thesis through a weeklong interview with the Elder Aupillarjuk.

\(^{236}\) In this context, livelihood refers to always having enough meat/food/money to eat (cited in Cameron 2015). As Cameron writes, “He discusses at length how relations with hunting and meat rationing transfer to relations with money, and the need for Inuit youth to acquire strong skills in both.” (ibid: 100)
solution to poverty, not as a cause” (Li 2007: 267). As, Emilie Cameron writes, the question of development, then, is less about whether developing is inherently good or bad, “but rather, whether the relations that Inuit might forge [through development]...will, indeed, support and sustain life, and if so, what kind of life, for whom, and on whose terms” (2015: 101).

Accordingly, how Iqalummiut interpret relationships-- with themselves, with others, and with the environment-- has significant consequences in terms of waste management. As Myra Hird discusses, waste is predicated upon a highly relational ontology of forgetting: waste is thrown ‘away’ and disposed of often in unknown ways, “made possible through legislative decision, regulative decree, risk models, community accession, and engineering practice” (2013: 107). In this way, forgetting about waste means forgetting that human practices always exist within the context of a finite but always engaging social environment. By contrast, Inuit Qaujimajatuqangit, as Tester and Irniq remark “is about remembering, an ethical injunction that lies at the root of Inuit identity” (2008: 59); it is about remembering the stories, understandings, and practices that make possible alternative frameworks for self-determination (Stevenson 2006).

This is not to say, then, that efforts to improve waste management should be forgone (indeed, it is essential infrastructure that many Inuit and other Northerners have for a long time been advocating for), but that they should be integrated in conjunction with efforts to support Inuit governance and culture. This should be done for at least three reasons: 1) Waste management technologies are necessary to help protect human health and the land from contaminants caused by waste; however, they do not reduce waste, and technologies of

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237 Here, Tester and Irniq are citing Stevenson (2006).
238 As a City of Iqaluit employee explains to me “How do you reasonably say, ‘We're going to curb development in the North’ and effectively deny another thing to people that we've denied so much else to? I mean, how do you moralize that?” See also, JL Richards and Associates and Golder Associates (2000).
diversion may in fact *increase* waste production (Lougheed et al. 2014) and therefore are not in
and of themselves sustainable; 2) Nunavut Territory is recognized as Inuit land, and Inuit
epistemologies and ontologies are intended to be integrated— if not privileged\(^\text{239}\) — in governance
practices throughout the territory; and 3) Indigenous cosmologies provide a useful framework
for thinking through the relationality of nonhumans (Tallbear 2014), including waste materials.
Engaging with, and relating to, waste *as lively matter* is largely absent in larger Southern
Canadian communities, which may contribute to unsustainable community development and the
privileging of neoliberal and technocratic governing practices (Bennet 2010).

Within a context, then, of myriad social and environmental issues, the necessity of
community growth and development, and Inuit efforts to self-determine, I suggest that
improvements to Iqaluit’s waste management infrastructure should integrate supports to Inuit
culture and knowledge systems. Doing so involves replacing a technical configuration of waste
with one of knowing, being, and relating to others and the environment; and would help meet
City of Iqaluit goals and definitions for sustainable community development.

\(^{239}\) As Aupilaarjuk observes, “We now use the qablunaat *piqqusiq* [ways] in some regards, and it is evident that we
will not leave that behind, it is certain that we will use some aspects of it. However our *inuuniq* [inuk-ness] needs
always to be bigger, in our homeland.” McGrath (2011), quoted in Cameron (2015: 127).
5.5 Works Cited


Glossary

**Amauti:** A traditional Inuit coat worn by women for carrying babies and small children.

**Anirniit:** Inuktitut word meaning the ‘breath’ of human and nonhuman things; this is a concept that might be translated into English as ‘spirits.’

**Biopolitical governance:** Governance aimed at the life of populations (Agamben 1998). It is related to neoliberal governance in that humans are configured largely as economic actors. This in turn leads to practices of ‘anonymous care’ exerted by the state (Stevenson 2014) aimed at governing the lives and bodies of individuals within populations.

**Cosmology:** Culturally and materially embedded understandings of creation, which inform a set of values, ethics, and practices that inform community ontologies and epistemologies.

**Epistemology:** A way of knowing oneself, the environment, and others. In indigenous thought, theories of knowing are closely attached to place (Watts 2014).

**Eskimo:** A Cree term meaning ‘eaters of raw meat’.

**Inuit:** An Inuktitut term meaning ‘real human beings’.

**Inuit governance:** Governing practices that are informed by Inuit epistemologies, ontologies, and cosmologies. In this thesis, I draw on the work of Price (2007), Price (2013), McGrath (2011), and the City of Iqaluit (2014), to conceptualize Inuit governance as ‘wellbeing’—or as having healthy relations with the self, with others, and with the land.

**Inuit qaujimajatuqangit:** A concept that loosely refers to ‘Inuit traditional knowledge’. It may be understood as a “seamless concept…everything is related to everything else in such a way that—counter to the logic of Western science—nothing can stand alone, even in the
interest of gaining an appreciation of the whole” (Tester and Irniq 2008: 49). It also includes understandings of history—of one’s community, land, and ancestors.

**Iqalummiut**: A person who lives in Iqaluit, Nunavut.

**Governance**: Refers to the manner in which issues, like those related to waste management, are produced, controlled, and regulated through the practices of actors and institutions (Davies 2008). Governance focuses on the diffuse network of power that influences decision-making practices and outcomes.

**Governmentality**: What has been referred to as ‘the conduct of conduct’, whereby states implement policies aimed at directing behaviour by encouraging individuals to act as ‘good citizens’ (Foucault et al. 1991). Governmentality is a combination of the two words ‘government’ and ‘rationality’.

**Nalunaktuq**: An Inuktitut word loosely meaning ‘nature’s unpredictability.’ As Rachel Qitsualik explains, “The basic gist is that, for each iota of what one believes to be known about the Land (i.e., nature), there is a great deal more… For it is not to say that there is nothing one can learn about the Land; but only that there is no end to what can be learned” (2013: 24). It is an epistemological and ontological concept of knowing and respecting nature in a way that is humble rather than dominating.

**Neoliberal governance**: Governance aimed at the well being of states and populations through increase trade, economic development, and other ‘free market’ machinations. The wellbeing of the state is assessed through factors such as ‘Gross domestic product’.

**Neoliberal governmentality**: A neoliberal rationality that attempts to achieve a congruence between “a responsible and moral individual and an economic-rational individual” (Lemke 2002: 12). Governmentality thus encourages individuals to act as ‘good citizens’ in ways that acquiesce to the state’s social and economic rationalities.
Nunavummiut: A person who lives in Nunavut

Ontology: A way of being in the world. It is informed by understandings of how things can and do exist, historical human/nonhuman relations, and the connections between cosmology and practice (Blaser 2009).

Power: In this thesis, power is recognized as circulating through various actors and practices; it is “neither unidirectional, nor located in only one entity” (Hird et al. 2014) but is “dispersed, ubiquitous and dynamic” (Henri 2012: 38). Power, in the Foucauldian sense, is established through the interactions and relationships between actors and their practices. Power is not necessarily about the ability to constrain certain kinds of actions, but the possibility of producing them.

Tulugaq: Inuktitut word for raven

Qallunaat: An Inuit term that, in a general sense, refers to non-Inuit and non-indigenous people. It also represents a set of values and characteristics that are often associated with non-indigenous ‘Southerners’ (See Cameron 2015: 22-24). Singular of this word is Qallunaac.

Qimmiit: Inuktitut word for Inuit sled dog. Qimmiiq is singular
Glossary References


Appendices
Appendix 1: Selected archival research, interview, and participant observation data

A. List of Iqaluit Waste Reports

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<tr>
<td>Exp Services Inc.</td>
<td>City of Iqaluit 2011 Complete Waste Audit Results</td>
<td>City of Iqaluit</td>
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<tr>
<td>Exp Services Inc. (2013)</td>
<td>City of Iqaluit Solid Waste Management Plan (No incinerator)</td>
<td>City of Iqaluit</td>
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<td>City of Iqaluit (2014)</td>
<td>City of Iqaluit Solid Waste Management Plan (with incinerator)</td>
<td>City of Iqaluit</td>
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<tr>
<td>City of Iqaluit</td>
<td>Iqaluit Sustainable Community Plan</td>
<td>City of Iqaluit</td>
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</tbody>
</table>
B. Semi-Structured Interviews Data

Total # of Semi-structured Interviews: 27
  of these respondents who are Qallunaat: 21
  of these respondents who are Inuit: 6
  of these respondents who responded as Government of Nunavut officials: 6
  of these respondents who responded as current/former City of Iqaluit officials: 6
  of these respondents who responded as journalists: 3
  of these respondents who were involved in waste management due to employment: 12
  of these respondents who are/were involved in grassroots waste management: 13
  of these respondents who are not actively involved with waste management: 6
  of these respondents who I initiated contact with: 19
  of these respondents who initiated contact: 8

C. Participant Observation data

<table>
<thead>
<tr>
<th>Date</th>
<th>Method</th>
<th>Description</th>
</tr>
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<tbody>
<tr>
<td>June 3rd, 2014</td>
<td>Participant Observation</td>
<td>Iqaluit Press Club Meeting</td>
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<tr>
<td>June 28th, 2014</td>
<td>Participant Observation</td>
<td>Celebration of the Seal</td>
</tr>
<tr>
<td>July 4th, 2014</td>
<td>Go-along</td>
<td>Sampling with scientists in Airport Creek</td>
</tr>
<tr>
<td>July 8th, 2014</td>
<td>Participant Observation</td>
<td>City Council Meeting</td>
</tr>
<tr>
<td>July 18th, 2014</td>
<td>Participant Observation</td>
<td>Informal Community Cleanup</td>
</tr>
<tr>
<td>July 22nd, 2014</td>
<td>Participant Observation</td>
<td>City Council Meeting</td>
</tr>
<tr>
<td>July 23rd, 2014</td>
<td>Participant Observation/go-along</td>
<td>Sampling and training with ASU</td>
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<tr>
<td>July 25th, 2014</td>
<td>Go-along</td>
<td>Trip to scavenge at West 40 dumpsite</td>
</tr>
<tr>
<td>July 23rd, 2014</td>
<td>Participant Observation/go-along</td>
<td>Sampling and training with ASU</td>
</tr>
<tr>
<td>July 25th, 2014</td>
<td>Go-along</td>
<td>Trip to scavenge at West 40 dumpsite</td>
</tr>
<tr>
<td>August 1st, 2014</td>
<td>Participant Observation</td>
<td>Special City Council Meeting</td>
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<td>August 6th, 2014</td>
<td>Participant Observation</td>
<td>Qaggiavuut Society</td>
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<tr>
<td>Date</td>
<td>Activity</td>
<td>Event Description</td>
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<tr>
<td>August 8th, 2014</td>
<td>Participant Observation</td>
<td>‘Dumpcano’ Art in the Park</td>
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<tr>
<td>August 12th, 2014</td>
<td>Go-along</td>
<td>Help researcher collect water samples</td>
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<tr>
<td>August 12th, 2014</td>
<td>Participant Observation</td>
<td>City Council Meeting</td>
</tr>
<tr>
<td>August 13th, 2014</td>
<td>Go-along</td>
<td>Scavenge wood at West 40 dumpsite</td>
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<tr>
<td>August 18th, 2014</td>
<td>Participant Observation</td>
<td>Special City Council Meeting and Finance Committee Meeting</td>
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<tr>
<td>August 25th, 2014</td>
<td>Participant Observation</td>
<td>Public Meeting: Iqaluit Dump fire</td>
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<tr>
<td>August 26th, 2014</td>
<td>Participant Observation</td>
<td>City Council Meeting</td>
</tr>
</tbody>
</table>
Appendix 2: Ethics Information

A. Ethics Approval and Interview Guide

February 10, 2014

Mr. Alexander Zahara
Master's Student
School of Environmental Studies
Queen's University
Kingston, ON, K7L 3N6

GREG Ref #: GENSCE-059-14; Romeo # 6011801
Title: "GENSC-059-14 Governing Waste in Iqaluit, Canada"

Dear Mr. Zahara:

The General Research Ethics Board (GREB), by means of a delegated board review, has cleared your proposal entitled "GENSC-059-14 Governing Waste in Iqaluit, Canada" for ethical compliance with the Tri-Council Guidelines (TCPS) and Queen's ethics policies. In accordance with the Tri-Council Guidelines (article D.1.6) and Senate Terms of Reference (article G), your project has been cleared for one year. At the end of each year, the GREB will ask if your project has been completed and if not, what changes have occurred or will occur in the next year.

You are reminded of your obligation to advise the GREB, with a copy to your unit REB, of any adverse event(s) that occur during this one year period (access this form at https://eservices.queensu.ca/romeo_researcher/ and click Events - GREB Adverse Event Report). An adverse event includes, but is not limited to, a complaint, a change or unexpected event that alters the level of risk for the researcher or participants or situation that requires a substantial change in approach to a participant(s). You are also advised that all adverse events must be reported to the GREB within 48 hours.

You are also reminded that all changes that might affect human participants must be cleared by the GREB. For example you must report changes to the level of risk, applicant characteristics, and implementation of new procedures. To make an amendment, access the application at https://eservices.queensu.ca/romeo_researcher/ and click Events - GREB Amendment to Approved Study Form. These changes will automatically be sent to the Ethics Coordinator, Gail Irving, at the Office of Research Services or Irvingg@queensu.ca for further review and clearance by the GREB or GREB Chair.

On behalf of the General Research Ethics Board, I wish you continued success in your research.

Yours sincerely,

Jean Stevenson, Ph.D.
Chair
General Research Ethics Board

c: Dr. Myra Hird, Faculty Supervisor
B) Semi-Structured Interview Guide
Governing Waste in Iqaluit, Canada
A) Permanent Residents
Inuit? ____________ (Y/N/Undisclosed)
Role in waste management _______________ e.g. Citizen, landfill worker, city official, etc
1. What is waste?
2. How do you engage with waste?
3. Are you concerned about waste? Why or why not?
4. Do waste/waste management issues exist in Iqaluit? If so, what are they?
5. Who/what is responsible for waste issues in Iqaluit?
6. How did older generations engage with waste? What/how do they waste?
8. Has waste in Iqaluit changed in your lifetime?
9. What events changed the way locals waste?
10. Who are the biggest wasters in Iqaluit?
11. How does waste in Iqaluit compare to other communities in Nunavut?
12. Who makes the waste management decisions in Iqaluit?
13. What messages about waste do you hear? From who?
15. Is there a solution to Iqaluit’s waste management issues? If so, what?

B) Non-Permanent Residents
Inuit? ____________ (Y/N/Undisclosed)
Purpose in Iqaluit _______________ e.g. Researcher, Industry, Government, etc.
1. What is waste?
2. How do you engage with waste in Iqaluit? In the South??
3. Are you concerned about waste? Why or why not?
4. Do waste/waste management issues exist in Iqaluit? If so, what are they?
5. Who/what is responsible for waste issues in Iqaluit?
6. What waste/waste management issues exist in the South?
7. What waste/waste management issues exist in the South?
8. How did older generations engage with waste in the South? What/how do they waste?
9. How do younger generations engage waste in the South? What/how do they waste?
10. Compare Iqaluit and the South in terms of waste/waste management.
11. Who are the biggest wasters in Iqaluit? In the South?
12. What messages about waste do you hear in the South? From who?
13. Are you involved in Iqaluit’s new Waste Management Plan? How?
14. Is there a solution to Iqaluit’s waste management issues? If so, what?
Appendix 3: Nunavut Research Licensing

A. Project Summary for City of Iqaluit. Presented April 2014.

Please identify the individual, the organization, the school, and the home community of those doing the research.

Alexander Zahara, School of Environmental Studies, Queen’s University in Kingston, Ontario
My hometown is Prince Albert, Saskatchewan

Please list a timeline for your work, including dates of consultations and the amount of time you will spend in our community.

I expect to be in the community conducting research from May to August 2014.
I may be returning periodically from September 2014 to August 2015.

Please give the field of study and the subject of study for this project.
Environmental Studies. I will be conducting social science research on waste in Iqaluit.

Does the project involve any other community than Iqaluit? If so, where and how?
The project will be restricted to Iqaluit. It is possible that archival research will reveal information about communities outside of Iqaluit.

Briefly, what is your method of data collection? (survey, interview, collection of material, etc)
Interviews, archival research, and participant observation at the landfill and other waste sites

The City of Iqaluit appreciates community involvement form researchers. How will your group be willing to communicate your findings to the population?
We intend to start a Facebook group for the proposed project so that community members may contact us if there are questions about the research. I will share results with the Simply Science Schools program and radio stations like CBC North, Nunatsiaq News, and Windspeaker

NOTE: This is meant to be a one page summary, please do not exceed the space on this page.
B. Scientific Research License

Nunavummi Qaujisaqtulirijikkut / Nunavut Research Institute

Box 1720, Iqaluit, NU X0A 0H0 phone: (867) 979-7279 fax: (867) 979-7100 e-mail: rmahs.cnrf@artccollege.ca

SCIENTIFIC RESEARCH LICENSE

LICENSE # 01 021 14N-M

ISSUED TO: Alexander Zahara
School of Environmental Studies
Queen's University
116 Barrie St.
Kingston, Ontario
K7L 3N6 Canada

TEAM MEMBERS: M.Hird, A.Rutter, G. Whitelaw

AFFILIATION: Queen's University

TITLE: Identifying Waste Facts in Iqaluit, Canada.

OBJECTIVES OF RESEARCH:
The study will rely heavily on archival research, including previous research studies (such as the Sustainable Iqaluit documents and academic research), waste management plans, newspaper reports and publicly available government documents. The proposed study will develop a history of waste in Iqaluit using a variety of media, government and industry publications.

TERMS & CONDITIONS:

DATA COLLECTION IN NU:
DATES: May 01, 2014 - August 31, 2015
LOCATION: Iqaluit

Scientific Research License 01 021 14N-M expires on December 31, 2014
Issued at Iqaluit, NU on April 25, 2014

Mary Ellen Thomas
Science Advisor