

CLIMATE CHANGE AND CULTURE CHANGE IN SALLUIT, QUEBEC, CANADA

by

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THESIS ABSTRACT

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Title: Climate Change and Culture Change in Salluit, Quebec, Canada

The amplified effects of climate change in the Arctic are well known and, according to many commentators, endanger Inuit cultural integrity. However, the specific connections between climate change and cultural change are understudied. This thesis explores the relationship between climatic shifts and culture in the Inuit community of Salluit, Quebec, Canada. Although residents of Salluit are acutely aware of climate change in their region and have developed causal explanations for the phenomenon, most Salluit residents do not characterize climate change as a threat to Inuit culture. Instead, they highlight the damaging impacts of globalization and internal colonialism as a more serious problem. This counter-narrative suggests that focusing narrowly on climate change can obscure the broader and more immediate challenges facing Inuit communities. Such a realization demonstrates the need for researchers to locate climate change within a matrix of non-climatic challenges in order to mitigate threats to indigenous cultures.

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CHAPTER I

INTRODUCTION

The Arctic is warming at an unprecedented rate. The Intergovernmental Panel on Climate Change (IPCC) has documented that, over the past century, temperatures in the region are warming nearly twice as fast as the global average (Trenberth et al. 2007). Yet the environmental changes in the Arctic extend far beyond rising temperatures.

Precipitation, the cryosphere and extreme weather patterns have also changed.

Researchers have demonstrated that anthropogenic greenhouse gas and aerosol emissions have contributed to increased precipitation in the Arctic (Min, Zhang, and Zwiers 2008).

Similarly, scientists have documented alarming changes in the cryosphere as a result of warming temperatures. Data of sea ice extent during recent years suggest that ice coverage may be declining significantly faster than the IPCC projected in its 2007 report

(M. Wang and Overland 2009). In addition, snow cover area in the North American Arctic has been trending downward for approximately 30 years and permafrost is also thawing (Turner, Overland, and Walsh 2007). Climate models project that all of these effects will continue and worsen in the future (Christensen et al. 2007). Furthermore,

researchers are finding that some climate models indicate that storm frequency will increase in the Arctic under the conditions of a warming climate (Bengtsson, Hodges, and Keenlyside 2011).

Shifts in Arctic climate will have widespread effects on the circumpolar ecosystem. Animals – including walrus, seal, narwhal, polar bear, as well as some fish and bird species – are already negatively affected by climate change. Exacerbating those effects, new species are invading the Arctic, often to the detriment of indigenous species.

As with the impacts on fauna, Arctic flora is changing significantly. Species from lower latitudes are migrating northward, substantially altering landscapes. Alarming, shifts in vegetation will likely act as a positive feedback on the climate system and aggravate Arctic warming (Post et al. 2009). The rapidly changing Arctic climate and its effects on the ecosystem have led many scholars and commentators to characterize northern latitudes as the canary in the coal mine, foreshadowing the climate-related challenges that will later affect more temperate locations (Weatherly 2005).

Along with the broader implications of Arctic climate change, policymakers, researchers, and commentators are increasingly aware of the ways that changes in the Arctic climate intersect with the region's residents, especially those belonging to indigenous communities. Of the approximately four million residents of the Arctic, 10% are indigenous. However, in some regions, including parts of Canada and Greenland, this number far exceeds 50% (Hassol 2004, 6). As Martello notes, the Arctic's indigenous residents "are among those poised to pay the highest price for problems such as climate change" (2004, 109). Indeed, many Arctic peoples are already experiencing the significant effects of a warmer and less predictable environment. At least twelve Alaskan Native communities are exploring or planning for relocation due to flooding and erosion (GAO 2009). Ford (2009a) summarizes other effects, essaying:

Compromised food security and health status, loss of life and serious injury, and inability to practice traditional cultural activities have been documented in all Inuit regions and can be expected to continue as the climate changes. (2009a, 2)

The challenges that Ford reports have engendered a growing number of policy-oriented studies examining the vulnerability of Arctic people's economies, subsistence activities, and physical well-being to climatic change.

At the same time, representatives of Arctic peoples, especially in North America, are framing climate change as existential threat to indigenous culture. Most notably, Sheila Watt-Cloutier – past International Chair of the Inuit Circumpolar Council (ICC) – has frequently emphasized the connection between climate change and a threatened Inuit lifeway. In a 2004 speech at the Conference of Parties to the UN Framework Convention on Climate change, she warned:

For Inuit, warming is likely to disrupt or even destroy their hunting and food sharing culture ... Climate change, then, is not some indistinct future circumstance. It is a very specific and lethal fate for Inuit. (Watt-Cloutier 2004)

Watt-Cloutier echoes her reference to a “lethal fate” in other speeches and writings. In 2005, she led a petition to the Inter-American Commission on Human Rights arguing that climate change violated Inuit human rights (the petition was ultimately dismissed). One of the legal arguments the petitioners made was that climate change prevents Inuit from enjoying “the benefits of their culture,” a right guaranteed under the American Declaration of the Rights and Duties of Man (ICC 2005, 74–78). In their argument, the petitioners are explicit about the ultimate outcome of climate change for Inuit, asserting:

Given the widely acknowledged and extensive connection between the natural environment and Inuit culture, the changes in arctic ice, snow, weather patterns and land caused by climate change is resulting in the destruction of Inuit culture. (2005, 76)

By characterizing climate change as an existential threat to Inuit culture, the petitioners emphasize the human costs of climatic shifts in the Arctic.

Watt-Cloutier is not alone in suggesting that climate change endangers the cultural practices and understandings of Inuit. For example, Mary Simon, the current president of Inuit Tapiriit Kanatami (ITK) – the Canadian national Inuit organization –

characterized climate change as a critical challenge to Inuit culture several times in a 2004 speech. She argued:

Discussion of climate change frequently tends to focus on political, economic, and technical issues rather than human impacts and consequences. I want to alert you to the impacts that Inuit and other northerners are already experiencing as a result of human-induced climate change, and to the dramatic impacts and social and cultural dislocation we face in coming years.

She continued by describing one element of that cultural dislocation, the inability to hunt safely and access traditional foods:

Eating what we hunt is at the very core of what it means to be Inuit. When we can no longer hunt on the sea-ice, and eat what we hunt, we will no longer exist as a people. (Simon 2004)

Simon's speech indicates that climate change is far more than a technical problem in Northern communities; it places a fundamental stress on Inuit culture.

However, not all Inuit leaders are so confident that climate change will lead to cultural destruction. Speaking at the University of Edinburgh, ICC – Greenland President (and current International Chair of the ICC) Akkaluq Lynge located the challenges of climate change within a long history of adversity that Inuit have faced. Emphasizing the remarkable ability of Inuit to adapt to change, Lynge questioned the eventual cultural outcomes of climate change. He stated:

It is too early to tell how climate change will ultimately affect us. Will the impact of climate change be as powerful and culture-changing as our missionaries and our colonizers were? Will we find the right adaptation measures? I don't know the answer to that. (Lynge 2009)

Lynge's speech underscores the uncertainty of how Inuit will manage the outcomes of climate change and what the ultimate climatic-effects on Inuit culture will be.

Surprisingly, scholars and policymakers have not explored the cultural effects of Arctic climate change in relation to indigenous peoples or how these effects could be

mitigated. While a number of researchers have begun to explore the human dimensions of Arctic climate change, most of these studies have focused on its economic effects. Despite the discursive ties that leaders such as Watt-Cloutier and Simon commonly profess – and the uncertainty expressed by Lynge – to date there is little data revealing how indigenous residents of the Arctic understand the consequences of climate change on their culture. Such information is urgently needed to ensure the sustainability of indigenous communities and cultures, and to inform the adaptation policies that will be implemented in the future.

1.1. Significance and Purpose of Thesis Research

This thesis explores how climate change affects the cultures of Arctic indigenous peoples and how policies can be most responsive to the cultural needs of aboriginal communities in the North. Given the geographical enormity of the northern circumpolar region and the diversity of peoples dwelling in it, I limit this query to impacts on Inuit, who comprise the largest group of related indigenous people in the Arctic. More narrowly, I focus this research on the community of Salluit, Nunavik, in the Canadian Arctic. The overarching goals of my work are to document and analyze the climate-related cultural challenges facing residents of Salluit and to demonstrate the importance of carrying out similar projects in communities throughout the Arctic.

1.2. Chapter Summaries

The remainder of this thesis is divided into five chapters. Chapter II provides a review of the existing literature on the human dimensions of climate change in Inuit communities and offers a critique of how prior scholarship has not adequately explored the ways that climatic shifts may catalyze cultural change.

Contextualizing my fieldwork in relation to the literature, Chapter III presents my research questions, a description of my study site, and an explanation of the methods I employed to gather and analyze my data.

In Chapter IV, I summarize the results of my fieldwork in relation to my research questions and expected findings. In Chapter V, I discuss these results in the context of the scholarly literature, highlighting how they converge and differ from the existing scholarship. In addition, I relate supplementary information that I gained during fieldwork. These data do not address my research questions in the narrow sense, but help provide an important context for, and explanation of, my results.

Finally, in Chapter VI, I distill my findings into a series of conclusions and recommendations. These recommendations consist of academic interventions that could help Inuit better weather the many changes they face now and in the future.

CHAPTER II

LITERATURE REVIEW

Over the past decade, there has been a growing interest among scholars and policymakers concerning the ways that the dramatic changes in Arctic climate are affecting, and will continue to affect, Inuit communities. Researchers have produced an impressive body of literature that documents Inuit vulnerabilities to climate change in relation to functional areas of life, including harvesting, food security, and health. A majority of these studies focus – directly or indirectly – on the risk that climate change poses to Inuit subsistence economies. While extremely important for identifying the quantifiable costs of climate change, these studies leave the cultural consequences of environmental shifts less explored. Of the scholars who engage culture at all, most treat the concept solely as a component of vulnerability in the subsistence sector. As a result, researchers have successfully incorporated how cultural change in Inuit communities affects residents' ability to respond to climate change, but do not analyze how climate change itself catalyzes cultural shifts.

The purpose of this chapter is to explore the ways that scholars focusing on Inuit vulnerability address issues of culture. To that end, this chapter has several sections. First, I review the vulnerability scholarship related to Inuit communities, documenting how the majority of the literature focuses exclusively on functional issues of vulnerability. Second, I analyze how vulnerability researchers have generally addressed culture as simply being a component of vulnerability rather than an area of vulnerability. Third, I argue that scholars' tendency to limit culture to an input of vulnerability is embedded in the major conceptual frameworks of the sub-discipline. Finally, I highlight

the few academic voices emphasizing the need for broader understandings of vulnerability and adaptation, specifically understandings that include the cultural.

2.1. Vulnerability in Inuit Communities

As noted above, the burgeoning literature on climate change vulnerability in Inuit communities has overwhelmingly focused on the functional domains of life. By functional, I refer to the areas of life associated with meeting the basic needs of human beings, specifically harvesting (and the related issue of food-security) and health.

Scholars have largely focused on these areas because Inuit residents of the Arctic are highly dependent on natural resources. Inuit participation in resource-based economies, according to researchers, makes them highly vulnerable to climate change (Bravo 2009; Ford 2009a; Riedlinger 2001; Riedlinger and Berkes 2001).

2.1.1. Harvesting

The bulk of the scholarship on vulnerability in Inuit communities explores issues related to harvesting. As Ford, Smit, and Wandel note, Inuit are most concerned with climatic changes that affect subsistence activities (2006, 146). Within this portion of the literature, researchers have delineated the various ways that climate change will impact harvesting activities. Among these, studies have documented the ways that climate change will affect hunter safety, accessibility of hunting areas, and the availability of game species.

2.1.1.1. Hunter Safety

One way a warming climate threatens harvesting activities is by compromising hunter safety. In an article reporting on climate change vulnerability in the community of Arctic Bay (Nunavut), Ford, Smit, and Wandel (2006) demonstrate that climatic shifts have

made hunting more dangerous. They document four hazardous conditions related to climate change, including thin sea ice, unpredictable weather, the unanticipated break-up of sea ice, and rougher seas. Framing climatic changes within a broader context, Ford and his colleagues suggest that hazardous climate conditions are exacerbated by increasingly risky behavior catalyzed by economic, technological, and policy changes. For example, they note that the economy of Arctic Bay is now mixed, with most hunters also holding wage employment. As a result, they argue that hunters have less flexibility regarding when to hunt and choose to maximize their harvesting activities by hunting during risky conditions. Yet the authors also identify the adaptations that Inuit have employed to mitigate these risks, including behavioral shifts (changing when and where they hunt, and the supplies they bring) and technological changes (utilizing GPS, satellite phones, and more powerful outboard motors). This ability to adapt, they emphasize, depends on financial resources that are not evenly distributed throughout the community. With climatic stressors likely to grow in the future, Ford and his co-authors predict that the stratification of the community – coupled with decreased sharing and knowledge transference – reduces residents' long-term adaptive capacity and will make hunting more hazardous.

Ford et al. (2006) report similar findings in Igloolik (Nunavut), where societal transformations have increased sensitivity to environmental change while simultaneously decreasing adaptive capacity. They demonstrate that adaptive strategies that previously would have insulated Inuit communities against climate change have lost integrity due to the establishment of permanent settlements, the introduction of cash, and the development of schools, among other factors. The results of these changes include

growing dangers for hunters – such as falling through thin ice, losing one’s way, or becoming stranded while hunting – and more costly adaptation measures. The authors imply that the combination of future biophysical and social changes could lead to increasing vulnerability.

Mirroring Ford’s research in Nunavut are studies from other Inuit regions highlighting climatic threats to hunter safety. Ford and Pearce (2010) conducted a systematic literature review on climate change vulnerability in the Inuvialuit Settlement Region (ISR) in the Northwest Territories (NWT). They found that the literature is consistent in identifying sea ice conditions as a danger to hunters. Providing more detail, Pearce et al. (2010) relate how hunters in Ulukhaktok (NWT) have been caught in sudden storms and frequently encountered unsafe sea ice conditions during travel. They note that dangerous travel conditions have led hunters to become isolated from hunting parties, lost, stranded, or involved in accidents. Although residents have been adapting so-far by taking extra-precautions (such as carrying additional gear) or utilizing alternative routes, the authors argue that Inuit adaptive capacity is strained by social dynamics similar to those mentioned by Ford. Based on additional research in Ulukhaktok, Pearce et al. (2009) echo these findings and argue that harvesting-related travel has become more dangerous due to increasingly rapid and unpredictable spring melts and less consistent periods of sea ice break-up. As with the previous publications, the authors assert that the community’s adaptive capacity is inhibited by the need to work for wages, intergenerational ruptures that impede knowledge transfer, and the use of alcohol and drugs. They suggest that future climatic changes will create further risks for hunters without intervention through adaptation policies. Tremblay et al. (2006) also explore

hunter safety, in this case in Nunavik, finding that many Nunavimmiut (residents of Nunavik) are utilizing alternative trails to avoid travelling over dangerously thin sea ice. Yet their research also reveals that some thin ice is hidden by snowfall, exposing hunters to significant dangers. Unlike the aforementioned publications, the authors do not explore how biophysical changes intersect with social stressors in creating vulnerability.

As indicated in the preceding pages, hunter safety is closely linked to sea ice conditions because Inuit use sea ice for transportation to harvesting areas and as a platform for hunting. As Ford et al. note:

As the climate changes, indigenous knowledge of the sea ice is challenged and confidence to use it is reduced; accidents due to unusual and unexpected ice conditions have been reported across the Arctic and evidence indicates that climate change is already impacting Arctic residents. (2009, 138)

Several scholars focus specifically on changes in sea ice and demonstrate how those changes affect hunter safety. Working in Sachs Harbour (NWT), Nichols et al. (2004) stress the recent and significant changes in sea ice conditions that residents had observed. They note one informant's claim that first-year sea ice – ice that had formed that year – was 2.5 meters thinner than it had been in previous decades. According to the authors, residents of Sachs Harbour have become increasingly concerned about the safety of thin ice. In addition, Nichols and her colleagues indicate that early (and unexpected) melts are detrimental to hunter safety, as are rougher summer boating conditions associated with a lack of sea ice. Laidler et al. (2009) document similar changes in sea ice around Igloolik. They delineate the seasonal changes in ice conditions, noting that a slower autumn freeze-up, a floe-edge closer to the community, and a less predictable break-up period all endanger hunters. These phenomena make it more likely that hunters will fall through thin ice or become stranded as sections of ice break-off from landfast ice.

Although the authors argue that residents of Igloolik are currently managing risks associated with hunting, they assert that changes to the economy, sharing networks, and the exchange of traditional knowledge constrain adaptive capacity. Furthermore, they underscore differential vulnerability within the community, arguing, for example, that youth have less exposure to environmental change, but also lack the skills to effectively adapt to changes. Conversely, they suggest that active hunters have greater exposure to changing sea ice, but also have the knowledge and judgment to mitigate risk.

Gearheard et al. (2006) indicate that Clyde River (Nunavut) Inuit share concerns about sea ice. The authors note that travel routes over sea ice have suddenly become dangerous, forcing hunters to prematurely abandon hunts. In addition, they argue that changes in sea ice can coincide with other climate-related changes to compound dangers.

They write:

Thinner sea ice interacts with other recent environmental changes such as increased weather variability, changing wind patterns, seasonal timing of breakup and freeze-up, and snow conditions, to create new hazards for those using sea ice. (2006, 210)

Gearheard and her colleagues emphasize that the myriad effects of climate change act as feedbacks on one another, multiplying danger to hunters. Even when hunters prepare for certain dangers (such as thin ice), other conditions (such as unusual snowfall) can obscure those risks. The net effect is that the varied environmental impacts associated with climate change significantly compromise the safety of harvesting activities.

2.1.1.2. Accessibility of Hunting Areas

Many of the same environmental phenomena that are undermining hunter safety are also making it increasingly difficult to reach harvesting grounds. In some instances, the adaptations to dangerous conditions (such as altering the timing and location of hunts)

prevent access to hunting areas. In other cases, environmental conditions directly prevent accessing animals. Given Inuit reliance on sea mammals, some of these inaccessible hunting sites are on sea ice. For example, Ford et al. (2009) reveal that the extreme ice conditions of 2006 prevented residents of Igloolik from accessing walrus. They note that, due to decreased ice, many walrus were located further from the community than usual and beyond the range of most hunters. In addition, the authors mention that walrus have also remained closer to the shoreline, where they are harder to access.

Along with harvesting areas on sea ice, harvesting lands have also become more difficult to reach. Ford et al. (2008) highlight the changing snow conditions that have made land travel more difficult in Igloolik and Arctic Bay. They describe how either too much powdery snow or a lack of snow can impede snowmobile travel to hunting areas. While these conditions might not entirely preclude access to hunting grounds, the authors emphasize that they increase the time demands and financial costs of hunting. In some cases, though, climate conditions force harvesters to wait for more favorable circumstances. Pearce et al. (2009) specifically focus on vulnerability related to travel routes in Ulukhaktok and find that inland trails are particularly affected during the spring melt. They argue that changes to trail conditions have not only affected access to harvesting areas, but have led some residents to choose to hunt less. Environmental conditions are not only affecting the ability of Inuit to reach spring hunting grounds. Summarizing research on climate impacts in the Arctic, Hinzman et al. (2005) note that later fall snows delay or prevent inland travel, such as during caribou hunts. The implications of snow and ice conditions on harvesting are profound and have motivated collaborative research between residents of Nunavik and scientists. Tremblay et al.

(2009) describe this project and highlight the challenges that Nunavimmiut face in accessing hunting territories. The collaboration has helped to disseminate information about travel conditions and trail networks.

2.1.1.3. Availability of Species

Not only are harvesting areas becoming less accessible, harvested species are becoming less healthy and abundant. In their chapter in the Arctic Climate Impact Assessment (ACIA), Nuttall et al. (2005) underscore the connections between climate change and the well-being of Arctic ecosystems. They note that the range and abundance of marine and terrestrial mammals will likely be negatively affected by a warming climate. The net effect of these changes, they argue, will be significant shifts in the harvesting lifestyles of Northern peoples.

Arctic case studies have confirmed the (potential) threat of climate change on harvested species. Conducting community-based research in Sachs Harbour, Berkes and Jolly (2001) identify four areas of concern regarding climate change. Along with decreased access to harvesting grounds, increasing hazards for hunters, and less predictable conditions, they remark that residents recognize climate change as a threat to species availability. Specifically, the authors relate community concerns that caribou may face starvation, proximate seal and polar bear populations could decline, fish habitats could be damaged, and new species will migrate to the region. In addition, Berkes and Jolly point out that adaptive behavior – such as killing more animals when the opportunity presents – could ultimately lead to declining game populations.

Working in Ulukhaktok and Tuktoyaktuk (NWT), Andrachuk and Pearce (2010) describe current and future vulnerabilities related to harvested species. Among these,

they note that, at present, caribou populations may be declining due to climatic factors and wildlife health maybe be compromised. Looking forward, they suggest that climate change could lead to declines in polar bear, seal and caribou populations; changes that would significantly affect the communities' access to traditional foods. Similarly, Prno et al. (2011) direct attention to changes in wildlife occurring in Kugluktuk (Nunavut). They also found that community members have observed changes in caribou, along with declining Arctic Char populations and unhealthy animals.

Changes to populations of critical species are also taking place in the Eastern Arctic. Laidler and Gough (2003) explore the implications of climate change for communities on the coast of Hudson Bay. According to them, Inuit communities in Quebec face changing migration routes of geese, seal and walrus populations that are now located further away, and polar bears whose health is compromised by declining sea ice, among other impacts.

2.1.2. Food Security

The combination of growing hazards for hunters, less accessible hunting grounds, and shifting animal populations not only challenge harvesting activities, they also compromise food security. To date, relatively few studies have explicitly examined how climate change will affect the availability, access to, and quality of food. Ford and Beaumier (2011) highlight a variety of threats to food security in Igloolik. Although non-climatic stressors – such as the cost of store-bought food, less frequent hunting, and declining sharing – are the most proximate causes of food insecurity, the authors characterize climatic conditions as exacerbating these issues, particularly in regards to traditional foods (which Inuit colloquially refer to as country food). Also in Igloolik,

Ford (2009b) looks more specifically at the role of climate change in the vulnerability of Inuit food systems. He finds that abnormal sea ice conditions in 2006 prevented successful walrus and caribou harvesting, and, in some cases, decreased the frequency of fishing expeditions. The result of these harvesting difficulties was less country food in the community. In response to the relative absence of country food, Ford emphasizes that residents had little choice but to settle for less desired, more expensive, and unhealthy store-bought food. Importantly, Ford recognizes that climatic and non-climatic factors (such as declining participation in hunting) converged to generate food insecurity in 2006 and that vulnerability was not evenly distributed across the population.

Focusing on one particularly vulnerable group, Beaumier and Ford (2010) explore food insecurity among Inuit women in Igloolik. They discover that women in Igloolik face regular food insecurity, especially in relation to country food. While food insecurity is largely a product of economic and social conditions – including poverty, high cost-of-living, and decreasing participation in hunting – the authors also note that changing climatic conditions have exacerbated hunger in the community. While residents are coping with food insecurity, they argue that the coping strategies Inuit women use may contribute to future vulnerability, especially to climatic stressors.

Along with Ford and Beaumier's work in Igloolik, researchers have identified climatic stresses on food security in other parts of the Canadian Arctic. Nancarrow and Chan (2010) find that climate change is affecting food systems in the communities of Repulse Bay and Kugaaruk (Nunavut). Looking specifically at the country food harvest, they discover that climate change has a significant effect on harvesting activities and country food consumption, but whether that effect is positive or negative is not clear.

Basing their research on community perceptions, they demonstrate that changes in ice, snow, and water may decrease populations and harvests of ringed seals and polar bears. However, they argue that a longer boating season could increase access to, and consumption of, caribou and fish. Furthermore, while declining consumption of some animals will limit ingestion of certain nutrients, they note that increasing consumption of other species would provide alternative sources of some of those nutrients, as well as additional nutrients.

Working in four communities in the ISR, Wesche and Chan (2010) explore how climate change might influence consumption of the nutrients in country food. They found that climatic shifts were undermining the availability of caribou, an important source of nutrients. Some of these nutrients, they note, can be replaced with species substitution. However, they assert that other nutrients cannot be found in replacement foods. In response to potential nutrient deficiencies, they advise that “nutritionists and public health officials will need to develop feasible nutrition supplement programs” (2010, under “Adaptation Option”).

2.1.3. Human Health

The consequences of climate change on harvesting and food security are raised in research into the vulnerability of human health. While researchers document many health concerns related to climate change, a number of these are related to the procurement and consumption of country food. In their chapter of the ACIA focused on health, Berner et al. (2005) present a thorough accounting of the health effects of climate change. They categorize health impacts as either direct – comprising extreme weather events, temperature-related stress, exposure to UV-B radiation – or indirect, which

include the effects on flora and fauna, changes to the physical environment, damage to the built environment, and increasing concentrations of contaminants in food and water sources. Many of the effects – such as heat-related illnesses and infectious diseases – are only logical speculations; however, the authors make a stronger case concerning health impacts related to harvesting and the built environment. Berner and his coauthors highlight the negative effects of a dietary shift towards processed, store-bought foods and the threats to water supply infrastructure. In addition, they note the potential mental health effects of climate change, which they argue consist of acculturative stress and the challenges of rapid social change. Furgal (2008) summarizes more recent research regarding the health effects of climate change. He reiterates the direct and indirect health impacts projected in the ACIA report and underscores critical health vulnerabilities, most of which are connected to traditional livelihoods.

Furgal and Seguin (2006) report similar findings. The authors summarize studies of health vulnerability to climate change in Nunavik, Labrador and the ISR. They relate a broad array of climate-related health impacts, including heat-related respiratory stress, increased exposure to ultraviolet radiation, more prevalent infectious diseases, a greater number of waterborne illnesses and dangers associated with a less stable built environment. Yet the most common area of health vulnerability involves subsistence harvesting. From research in Nunavik and Labrador, Furgal and Seguin note the dangers that hunters face travelling over thin and unstable sea ice, and in unpredictable weather conditions. Furthermore, they assert that climate change is impeding the regularity of hunting activities. Based on community workshops in the ISR, they note that country food has become more difficult to obtain, harder to store, more easily spoiled, and will be

consumed less. Echoing other vulnerability research, the authors argue that Inuit adaptive capacity is limited by the availability of technology, financial resources, and knowledge.

Parkinson and Butler (2005) and Parkinson and Evengård (2009) highlight the relationship between climate change and infectious disease in the Arctic. They project that climate change will increase the prevalence of foodborne, waterborne, zoonotic, and vector-borne diseases. While many of the potential infectious diseases relate to changing animal and insect populations and increased flooding, a number of the infectious disease risks that the authors identify are spread through the harvesting system. For example, rising temperatures may increase the incidence of botulism associated with traditional fermented proteins. In addition, the authors assert that multiple illnesses stemming from the consumption of shellfish, giardia from untreated drinking water (like that consumed during harvesting activities), and tularemia from preparing or consuming small mammals are likely to become more prevalent.

Other authors have explored in more detail the effect that climate change will have on waterborne illnesses. Martin et al. (2007), for example, discuss how climate change might affect drinking water quality in Nunavik communities and, in turn, human health. They note that higher temperatures could increase the prevalence of bacteria and parasites in water sources and could lead to water shortages in some communities. Based on their reliance on untreated water sources – either during harvesting activities or based on preference while in the community – Inuit face significant health vulnerabilities due to climate change. The authors recommend increased monitoring of water sources, improved infrastructure, greater involvement of community health workers in testing

drinking water, and awareness campaigns regarding untreated water. Extending the work of Martin and his colleagues, Harper et al. (2011) undertake a quantitative analysis of the relationship between climate change and drinking water quality. Working in two Nunatsiavut (Labrador) communities, the authors investigate how extreme weather events (including heavy precipitation or rapid snowmelt) that are projected to increase with climate change affect the prevalence of waterborne infectious gastrointestinal illnesses (IGI). They find a statistically significant relationship between the influx of water from rainfall or snowmelt and the incidence of IGI reported at each community's clinic.

Along with the infectious disease risks linked to climate change, Kraemer, Berner, and Furgal (2005) investigate how changing conditions will affect contaminants in country food. Scholars have long recognized that Northern indigenous peoples face significant exposure to contaminants due to global circulation patterns and bioaccumulation in large mammals. Based on Arctic peoples' existing vulnerability to contaminants, the authors suggest that climatic shifts could increase exposure. They argue that temperature changes will likely increase the use of some contaminants in Southern regions and facilitate their transportation to the Arctic; increased UV radiation might contribute to greater mercury concentrations in the environment; and increased precipitation and run-off will deposit atmospheric contaminants on land and in bodies of water. Yet they also note that climate change could decrease indigenous consumption of traditional foods, which is the main avenue of exposure. Due to the contradictory effects of climate change, the authors recommend a research program to better understand how the aggravating and mitigating effects of climate change will balance out.

2.2. Culture in Vulnerability Studies

The preceding review demonstrates that the literature explores vulnerability in functional areas of life. However, each of these areas – harvesting, food, and health – has cultural dimensions. Thus, it is important to analyze how vulnerability scholars have addressed issues of culture within their research.

2.2.1. Culture as a Component of Vulnerability

Vulnerability researchers most often include culture as a component of vulnerability. In other words, they consider cultural issues as factors that contribute to exposure sensitivity and adaptive capacity. The scholar most aligned with such an understanding of vulnerability is James Ford, although Furgal, Laidler, Pearce, and Prno also employ this conceptual model. These authors effectively incorporate Inuit cultural values and practices (and how these values and practices have changed) into their framework. Consider, for example, the article by Ford et al. (2006) concerning harvesting vulnerability in Igloodik. In it, the authors discuss how technological change – specifically the use of snowmobiles, communications technologies, and global positioning systems (GPS) – have both increased and decreased Inuit exposure to climate hazards. For instance, snowmobiles have increased accessibility to distant hunting grounds, but are also make hunters more prone to travel over dangerous ice than dog teams (who would sense and avoid thin ice). Similarly, while GPS has increased navigational abilities, it has decreased navigational competence, with fewer youth learning traditional navigation methods. Such a knowledge decline is problematic when GPS units fail or have inaccurate data and young hunters are unable to compensate. In addition, Ford and his colleagues detail how cultural changes have undermined adaptive

capacity. They note that traditional knowledge, which in the past has facilitated Inuit adaptation to environmental change, is no longer being successfully transferred between generations. They highlight how formal schooling, western social norms, and television, among other factors, have led to declining participation in hunting activities among youth and, consequently, a loss of knowledge. Furthermore, they argue that the establishment of permanent settlements has prevented the adaptive strategy of group mobility, and that changing economic and social norms have undermined sharing practices.

To take another example, examine Pearce et al. (2010), in which they analyze vulnerability in Ulukhaktok. They describe a series of adaptation constraints emerging from social and cultural changes over the past fifty years. Among these restrictions is the need for money (in order to purchase transportation technology), which has emerged from the development of a wage economy. Pearce and his colleagues explain that earning money is difficult because of limited employment opportunities and the lack of qualifications among the workforce. Without access to employment, they argue that Inuit cannot afford the technologies necessary for adaptation. Furthermore, the need for money restricts residents' flexibility regarding when and for how long to hunt, preventing a critical adaptive strategy. Like the Ford piece, the authors also argue that declining participation in hunting activities has interrupted the intergenerational transfer of traditional knowledge. Furthermore, they note that significant substance abuse within the community undermines residents' adaptive capacity by monopolizing financial resources or facilitating poor decision-making.

While not all vulnerability research incorporates thorough consideration of cultural change, both of these examples reveal the way that a growing number of scholars

are doing so. By highlighting the cultural changes affecting Inuit communities, these researchers locate climate change within a broader context of the cultural change that has taken place for decades.

2.2.2. The Cultural Consequences of Climate Change

While some scholars incorporate cultural change into their model of vulnerability, to date, no vulnerability researchers have thoroughly considered how climate change will influence cultural change. Such an omission is important because – as many of these researchers recognize – harvesting and country food are integral to Inuit culture. Often, however, scholars make no mention of the cultural outcomes of climate change. Even when the issue is raised, authors make only a passing reference to the cultural effects of climate change. For example, Ford et al. (2008) recognize that harvested species have a cultural role that cannot be reduced to economic value. Moreover, they emphasize that specific species have variable importance depending on the local context. Yet, they do not cite significant evidence regarding the cultural importance of harvesting, nor do they explore how the loss of staple species would impact Inuit culture.

Similarly, in his study of traditional food, Ford (2009b) notes that country food is culturally significant. Yet he does not explore why it is significant or how climate-induced changes in the food system might affect Inuit culture. Likewise, Wesche and Chan (2010) claim that access to food relates to cultural well-being and assert that they are taking a “holistic” perspective towards food security, but never analyze the cultural repercussions of a lack of country food. Similarly, Nancarrow and Chan (2010) raise the cultural implications of food insecurity several times in their article, but treat them in a superficial way. They assert that traditional foods boost “cultural morale ... and

participation in culturally-specific activities” (2010, 2), but do not explore such claims in any more depth.

Vulnerability research regarding human health follows the same pattern. Two of the health publications cited above include references to cultural effects of climate change, but do not substantively engage the issues. In the ACIA report, Berner et al. (2005) project that climate change will negatively influence mental health in Arctic communities. They argue that acculturative stress resulting from the loss of traditional practices (such as harvesting) could lead to “substance abuse, depression, and suicide” (2005, 894). While the relationship between climate-induced acculturation and mental health is an important area of study, the authors only conceive of acculturation as causing psychological distress – a subjective characterization of health. As a result, they fail to make sense of how indigenous peoples themselves understand climate change to relate to cultural change. Therefore, the authors consider the behavioral but not the cultural component of health. Similarly, Furgal mentions the effects of climate change on “mental, social and cultural well-being” (2008, 337). Yet in the two paragraphs that he devotes to the topic, he reduces social and cultural well-being to subjective categories. Citing a study from Nunatsiavut, Furgal notes that harvesting activities are significant because they provide “the connection with the land,” bring “individuals together” and are “an important part of reconnecting with Inuit identity” (2008, 337). With no further reflection on these issues, he does not clarify the relationship of Inuit culture to a changing climate.

Although a number of scholars make provocative statements about the cultural impacts of climate change, none of them engage the issue with the level of analysis that it

requires. Of course, none of these scholars set out to explore the cultural outcomes of climate change. The fact that they do not do so should not be read as a critique of their scholarship, but as a reflection of different research priorities. The omission of the cultural consequences of climatic shifts simply suggests an important and understudied aspect of climatic change in Inuit communities.

2.3. Conceptual Problems with Vulnerability

With the exception of some of the research on health, most of the climate change vulnerability research on Inuit communities emphasizes threats associated with harvesting activities. The implicit assumption embedded in these vulnerability studies is that the harvesting sector is a critical area of research because of its role in subsistence. Both Bravo (2009) and Head (2010) offer insight into why vulnerability and adaptation research is so narrowly focused on subsistence. The two authors independently argue that the language of vulnerability and adaptation is borrowed directly from human and cultural ecology. That discipline, they note, often focused on the relationship of hunter-gatherers to environmental change. Bravo argues that cultural ecologists enlisted assumptions about economic rationality to understand how indigenous people would react to environmental change (2009, 259). Similarly, Head points out that human ecologists constructed the environment and culture as discrete things where the former acted upon the latter (2010, 235). Both assert that using the language of vulnerability and adaptation risks reviving functionalist and rationalist explanations for how human beings engage with a dynamic environment. The continued emphasis on subsistence (and other functional domains such as health) discounts other models for understanding relationships between peoples and the world around them.

The functionalist undercurrents that Bravo and Head critique are evident in the major conceptual models scholars employ in Arctic vulnerability research. Both the so-called vulnerability approach and the notion of socio-ecological resilience (SER) push culture to the periphery. The vulnerability approach, pioneered by Ford and Smit, constructs vulnerability as “a positive function of a community’s exposure [to climate change effects] and a negative or inverse function of a community’s adaptive capacity” (2004, 393). The authors rightly note that much previous work on vulnerability has focused exclusively on biophysical conditions without considering social factors and argue that their model remedies this oversight. They define exposure sensitivity as a combination of specific climate effects (such as the unpredictability of weather events) and a community’s connection to those risks. So while an urban community in a developed country might not be particularly affected by unpredictable weather, Inuit – who spend significant amounts of time engaged in harvesting activities – would be sensitive. Adaptive capacity, in the authors’ terms, is the ability of a community to cope with or adapt to climatic changes and is a product of social, cultural, technological, and economic factors (2004, 393).

While Ford and Smit consider culture in their conception of vulnerability, they only do so as an input into their model. They do not address the effects of climate change on culture or the possibility that Inuit culture itself could be vulnerable to climate change. As a result, their model does not adequately incorporate how human beings understand themselves, their environment, or the challenges that they face. While defining the term, they write of vulnerability:

There is broad agreement that it refers to the susceptibility to harm in a system relative to a stimulus or stimuli. (2004, 392)

By treating human beings as part of a broader system – something the authors do further on in the article as well – they are unable to include worldviews, relationships, and meaning as part of their model. Moreover, they leave undefined what constitutes harm to a system or how the people affected understand harm. Furthermore, they suggest that the aim of the vulnerability approach is to reduce risk, but treat risk as a self-evident category. Based on the issues they raise in their review of the vulnerability of Arctic communities, their undefined terms “harm” and “risk” seem to refer only to functional categories such as food security, harvesting activity, health, and infrastructure, but not to culture.

The related conceptual framework of socio-ecological resilience (SER) shares many of the same limitations. The concept of SER, emerging out of work by Holling (1973) and promoted by scholars associated with the non-profit Resilience Alliance, refers to the capacity of socio-ecological systems to “tolerate disturbance without collapsing into a qualitatively different state that is controlled by a different set of processes” (quoted in Bravo 2009, 261). Bravo critiques the concept of resilience by arguing that the emphasis on “avoiding systemic collapse” embeds a climate crisis narrative (2009, 260). Yet there are two more pressing problems with SER. First, as Adger (2000) argues, the relationship between social resilience and ecological resilience is not clear. He underscores the potential reductionism associated with socio-ecological resilience. He essays:

Seeking to analyse the resilience of social systems by using analogies from the ecological systems is akin to endogenizing the role of social institutions in the wider environment. (2000, 351)

In other words, Adger is suggesting that treating social “systems” in the same way as ecological systems subsumes the social within the environmental. Doing so forces

researchers to treat human beings in objectified terms that preclude an analysis of meaning, intention and understanding – the very basis of what we can call culture.

The second problem of SER is that the social is framed largely in the functional terms of the economy and resource management. Folke (2006) traces the development of SER. His review of the literature demonstrates that research into SER has focused on how economic actors manage resources and how environmental changes affect economic systems. To illustrate, Adger et al. describes the adaptive capacity of resilient socio-ecological systems as the “regenerative ability of ecosystems and their capability in the face of change to continue to deliver resources and ecosystem services that are essential for human livelihoods and societal development” (2005, 1036). The authors’ emphasis on resources and services for “livelihoods and societal development” privilege economic relationships between human beings and the environment over the ways people make meaning of the world around them. Similarly, Berkes and Jolly (2001) explore SER in relation to climate change in an Inuvialuit community, but consider only the economic significance of the harvesting system. Regarding resource management, Clark and Slocombe (2009) analyze the Champagne and Aishihik respect practices relating to grizzly bears. Yet the authors exclusively focus on how these practices functionally constitute a resource management system that supports SER. The resilience literature’s focus on economics and resource management prevents a consideration of the cultural vulnerability to environmental change.

To the extent that proponents of SER do incorporate culture into their models, they do so only in functional ways. Hornborg (2009) offers a pointed critique of

resilience, arguing that culture is constructed in discredited ways. He persuasively argues:

The discourse on resilience is oblivious not only of power, conflict, and contradiction, but also of culture. The institutions and knowledge systems that Berkes and Folke refer to as ‘cultural capital’ are acknowledged as significant components in socio-ecological systems only inasmuch as they contribute to resilience, that is, in the obsolete and functionalist sense in which culture was conceived in mid-20th-century schools of anthropology such as cultural ecology and cultural materialism. ... ‘Culture’ in the modern anthropological sense is obviously not acknowledged as a relevant component of socio-ecological systems. (2009, 255)

Hornborg emphasizes that resilience thinkers only analyze culture to understand how social processes generate resilience or create vulnerability in ecological systems.

Similarly, Rival, although generally sympathetic to resilience thinking, recognizes that SER views culture through the lens of naturalist epistemology (2009, 296). Nadasdy (2007a; 2010) makes an equally important critique when he argues that SER is embedded in a cultural and political context that colors interpretations of resilience. These three scholars, then, judge SER as an ethnocentric framework.

The major conceptual tools utilized in vulnerability research – the vulnerability approach and SER – both relegate culture to a mere input for determining how communities will cope with climatic shifts. In addition, both models emphasize functional outcomes such as food security or harvesting practices. While important, such an emphasis leaves the cultural dimensions of climate change unknown.

2.4. The Cultural Dimensions of Climate Change

While the vulnerability literature is consistent in ignoring the cultural outcomes of climate change in Arctic indigenous communities, there are several recent publications that demonstrate the need for an alternative approach. O’Brien (2010) and O’Brien and Wolf (2010) argue that values are an understudied area in vulnerability and adaptation

research. They posit that understanding what affected communities value is essential for determining adaptation measures. Both note that adaptation cannot be categorized as desirable without understanding particular individual or community values. Therefore, they argue that it is important to locate vulnerability and adaptation within the context of values and the people who hold them.

Also critiquing decontextualized approaches to adaptation, Adger et al. (2009) assert that most scholars conceive of the limits to adaptation in biophysical, economic, and technological terms. Due to these assumptions, Adger and his colleagues argue that adaptation becomes a technical and objective problem. In contrast to these approaches, he proposes understanding the limits of adaptation with other categories as well.

Specifically, he suggests that scholars explore:

Ethics (how and what we value), knowledge (how and what we know), risk (how and what we perceive) and culture (how and why we live). (2009, 338)

These areas of analysis are central for making sense of how communities understand who or what is vulnerable to climate change effects and, hence, how to adapt. The authors reveal that understanding a community's goals regarding adaptation, the ways that people know about climate and what phenomena they perceive as dangerous are all essential for understanding how effective and relevant adaptation strategies will be. While all of these social conditions are cultural, Adger and his co-authors explicitly address the need to understand how climate changes affects cultures. They essay:

We argue that specific losses of physical places involve loss of attendant cultural and social significance that is invisible to the prevailing calculus. In some cases significant physical changes to places from climate change impacts will influence the ways in which individuals interact with the natural and social environments. These impacts are rarely included in the way that adaptation is framed or the subsequent decision making calculus. (2009, 348)

Their recognition that there are inevitable (although indeterminate) cultural effects of climate change and that these effects have been largely ignored in vulnerability and adaptation research is significant. Along with their emphasis on the context of values, knowledge, and risk perception, their emphasis on culture constitutes an important research agenda.

To date few scholars have engaged this agenda to uncover how climate change affects cultures. Sakakibara notes that while many scholars have explored the physical and human consequences of climate change, little research has examined “the impacts of environmental change on the cultural activities associated with everyday life” (2010, 1004). She does not provide citations to indicate any existing research regarding the cultural consequences of climate change. To date, Sakakibara is the only researcher I know of who has carried out research exploring such issues. In two articles, Sakakibara investigates the ways that changing climate is affecting traditional culture among the Iñupiat of Alaska. In the first (Sakakibara 2008), she demonstrates how Iñupiat storytelling in the community of Point Hope has evolved in response to climate change. She reveals that, as the climate has changed, Iñupiat stories of the prevalence, behavior, location, and danger of entities she calls “spirit beings” have also changed. In the community of Point Hope, which had to be relocated in the 1970s, Sakakibara argues that residents have encountered greater numbers of human-shaped other-than-human beings in the abandoned town, fewer animal-shaped beings overall, and more ghosts in dreams. Furthermore, she draws attention to the changing ways that residents perceive other-than-human beings. She explains:

In the past, spirit beings were often considered dangerous and opposed to humans, but the current environmental change seems to influence the survival of both

parties in the habitat they share. . . . Traditionally, they avoided some good hunting or fishing areas because of spiritual appearances; now, however, they are making conscious and unconscious alliances with spirit beings in order to remain rooted in their land. (2008, 466)

In this passage, Sakakibara demonstrates the changing relationships between residents of Point Hope and other-than-human beings who share the land with them. Her work on storytelling underscores the significant relationship between climate change and culture and the need to study that relationship.

In another publication, Sakakibara (2009) connects climate change to changes in Iñupiat drumming in Barrow (Alaska). She explains that, as a whaling people, the Iñupiat connect themselves with the whale through drumming. As climate change has affected the Barrow whale harvest, Sakakibara relates the fears of Iñupiat residents who suggest that the whale drum ceremony is at-risk. She notes that part of challenge in maintaining the ceremony is the lack of whale products to produce the drums (2009, 297-298). Just as importantly, she argues that the timing and continuity of the whale drum ceremony is affected, because drumming requires successful hunts. Sakakibara demonstrates the importance of drumming utilizing the testimony of Iñupiat. As one of her informants explains:

Drumming and whaling are one. Music, like our songs and dance, teach us how to wait for the whale, [how] to communicate with the whale, [how to] harpoon the whale, [what to do] after the hunt, [and how] to pay respect to the whale. (2009, 292)

With this essential connection between drumming and whaling, Sakakibara underscores the potential toll that climate change might take on Iñupiat relationships with whales.

While the communities she works with are clearly worried about the effects of climatic shifts on their connection with whales, she also highlights the active conversation residents are having about adapting their traditions. Based on Sakakibara's findings and

the timeliness of her work, it is clear that both the cultural vulnerability to climate change and communities' responses are important areas of research.

2.5. Conclusions

In this chapter, I have reviewed the salient literature on the vulnerability of Inuit communities to climate change. In doing so, I have underscored three significant tendencies within the scholarship. First, I highlighted the fact that most research has focused on functional areas of life. Next, I documented that scholars have treated culture as an input to vulnerability, but largely ignored cultural change as an outcome of climate change. Lastly, I argued that this omission is a product of the major conceptual models in vulnerability research. These three tendencies help bring into relief the fact that the cultural consequences of climatic shifts have mostly been ignored.

Yet, as the final section indicates, there is a growing recognition that exploring biophysical, economic, and social (meaning, in this literature, institutional) components of vulnerability is not adequate for understanding how climatic shifts will affect communities and what adaptation ought to look like. With the work of Sakakibara as a model, there remains a clear need to build upon the still-valuable research into the quantifiable effects of climate change with additional qualitative studies into the cultural dimensions of climatic shifts.

CHAPTER III

RESEARCH DESIGN AND METHODS

As emphasized in Chapter II, examining the cultural dimensions of climate change necessitates an understanding of local values, knowledge, and worldviews. Gathering such information necessitated two periods of fieldwork in Inuit communities for the completion of this thesis. The primary data collection for this thesis consisted of informal interviews, formal interviews, and in-depth participant observation in the community of Salluit, Nunavik in Northern Quebec. These qualitative methods were required to explore the cultural dimensions of climate change among Sallumiut (the Inuttitut term for residents of Salluit). The purpose of this chapter is to describe the research questions, study site, and methodologies of this research project. I also provide comments at the end of the chapter on several limitations of my research design.

3.1. Research Questions

As discussed in the concluding sections of the prior chapter, the cultural dimensions of climate change are an important and understudied area of research. In order to explore how Inuit make sense of climate change and its effects on their lives, scholars must query Inuit understandings (not simply observations) of climate change. Furthermore, in light of scholarship documenting how indigenous people have unique ontological categories for, and ways of knowing about, the environment (see, for example, Bird-David 1990; Bird-David 1999; Ingold 1996; Nadasdy 2007b; Scott 1996; Scott 2006), it is necessary to explore the non-functional effects of climatic shifts on Inuit communities. To do so, I investigate the following questions in the remainder of this thesis:

1. What climatic changes have Sallumiut experienced?

2. How do residents of Salluit understand the causes of climate change?
3. In what ways does climate change affect Sallumiut values, relationships, and the meaning of traditional activities?
4. What policies can be implemented or strengthened to lessen these effects?

3.2. Study Site

In order to answer these research questions, I utilized a single case study of Salluit, Quebec. Salluit is an Inuit village of approximately 1,300 people located on Sugluk Inlet, which branches off of Hudson Strait along the northern coast of Quebec. It is one of 14 Inuit communities in Nunavik – the predominantly Inuit region of Quebec.

I carried out research in Salluit during two visits to the community. The first, a preliminary trip from December 3 – 10, 2010, provided time to conduct preliminary reconnaissance of the village in order to refine research questions and prepare the logistics for my longer research stay. I also had the opportunity during this visit to introduce myself and my project to community officials, and obtain verbal assent for my research activities. In addition, I introduced myself to the larger community via the local FM radio station.

My second, more extended and in-depth period of fieldwork took place from February 1 – April 1, 2011. During this time, I carried out all of my formal interviews, the bulk of my informal interviews, and most of my participant observation. I also recorded many of the observations I carried out during daily participant observation within the community.

3.2.1. Regional Context and History

Like other Inuit communities, Salluit is a recent invention. Prior to the twentieth century, Inuit mainly lived in small nomadic bands and were largely free of sustained contact with government agents. Instead of the government, trading companies (especially the Hudson's Bay Company (HBC)) and Christian missionaries were the main non-Inuit influences in the Arctic (Saladin d'Anglure 1984, 501–505). The HBC was especially instrumental in developing relationships with Inuit through trading and the extension of credit. During and after the Depression, Inuit economic interactions with the HBC broke down and, coupled with crashing caribou populations, left many Inuit facing starvation. As a result, Quebec sued the Federal Government in order to determine which jurisdiction bore responsibility for Inuit living within the borders of the Province. The Supreme Court of Canada ruled in favor of Quebec, considering Inuit welfare the domain of the Federal Government. Due to an increased awareness of the Arctic as a strategic region during wartime, in the postwar period the Canadian government extended services in the region – including building a federal day school in Salluit in 1957 (Vick-Westgate 2002, 33–38, 54). These services coalesced around HBC trading posts and missions and became permanent settlements. In the 1950s and 1960s, Inuit families gradually moved “off the land” and into the communities. Initially, residents continued to live in snow houses and tents within the communities (Saladin d'Anglure 1984, 505–506). In 1959, the Government began building permanent housing for Sallumiut (Makivik Corporation).

As the Quebec sovereignty movement gained steam in the 1960s, the Province asserted increasing authority for its Arctic affairs. A provincial bureaucracy assumed responsibility in place of Federal institutions. Quebec provided community

administration, healthcare, law enforcement, social services and schooling to Nunavik communities (Crowe 1991, 204). Although the sovereignty movement ultimately led to legislation requiring the exclusive use of French in businesses and schools, the Provincial Government exempted Nunavimmiut from these requirements (Vick-Westgate 2002, 76)

In the 1970s, residents of Salluit, along with other Nunavimmiut, the James Bay Cree, and the Naskapi sued the Canadian Government to prevent the implementation of the James Bay Project. The James Bay Project was a major hydropower endeavor that would provide renewable energy for the Province and beyond, but would severely affect aboriginal lands. Although the project began without the consultation of Inuit, Cree, or Naskapi, the peoples were able to obtain an injunction that suspended the project. The Quebec Court of Appeal later overturned the injunction; however, the potential intervention of the Supreme Court of Canada motivated negotiations between the litigants (J. Miller 2009, 259–260). The Supreme Court's 1973 decision, *Calder et al. v. British Columbia*, determined that the aboriginal peoples of Canada had a pre-existing and potentially ongoing title to their lands (see Foster, Webber, and Raven 2007). Choosing to avoid litigation in light of that precedent (and fearing political repercussions), the governments of Canada and Quebec signed the James Bay and Northern Quebec Agreement (JBNQA) with the Cree and Inuit in 1975. The JBNQA provided Inuit of Quebec with C\$90 million over 20 years, ownership of and usage rights on certain lands in exchange for extinguishing aboriginal title over their traditional territory. Nunavimmiut created the Makivik Corporation to administer the settlement funds on behalf of the JBNQA beneficiaries (Anderson 1999, 62–67).

Along with the new land regime, the JBNQA established a series of regional institutions serving Nunavik residents (Inuit and non-Inuit). These institutions include the Kativik Regional Government (KRG), the Kativik School Board (KSB), and the Nunavik Regional Board of Health and Social Services (NRBHSS). The KRG is responsible for infrastructure, service delivery, policing, economic development, and resource management. Furthermore, the KRG holds authority over the region's municipalities (Peters 1989, 183). The KSB administers education services for the region under the purview of the provincial education system. The KSB education system differs substantially from Quebec schools and holds significant autonomy (see Vick-Westgate 2002). As its name implies, the NRBHSS administers medical and social services for the region's residents. Each of these institutions is governed by elected representatives, however they do not constitute self-government. The Province retains jurisdiction over the region.

In 2011, Nunavik held a referendum regarding the establishment of a Nunavik Regional Government (NRG). The NRG would have amalgamated the KRG, KSB, and NRBHSS into a single entity. Non-binding provisions for future negotiations regarding self-government were included in the agreement. On April 27, 2011, Nunavik voters rejected the agreement with a ratio of approximately two to one (Rogers 2011).

3.2.2. Community Description and Demographics

The following section provides an introduction to Salluit and its demographic, linguistic, religious, and economic character. This information serves as an important baseline to understand the data I present in Chapters IV and V. As of a 2007 population estimate, Salluit had 1,302 residents, making it the fourth largest village in Nunavik (Institut de la

Statistique du Québec 2008). Salluit has a rapidly growing and young population, expanding nearly 16% between the 2001 and 2006 censuses. In 2006, the average age of a Salluit resident was 20.2 years and 38.2% of the population was under the age of 15. The vast majority of the community is Inuit. According to the 2006 census, 93% of Salluit residents were of Aboriginal identity (with all or nearly all of these people being Inuit) (Statistics Canada 2007). The non-Inuit portion of the population (almost all of whom are White and referred to as *Qallunaat*) consists mostly of government employees working in healthcare, education, social services, and regional administration. In addition, there are some Qallunaat employees at Salluit's Northern Store (one of two stores in the community). Many, but not all, of these individuals live in Salluit for a few years and then return to Southern Canada. There are also some Qallunaat who have married into Inuit families and have permanently relocated to Salluit.

Nearly the entire population (93%) speaks Inuttitut as their mother tongue. Inuttitut is also the language used most frequently at home, in social situations, and in the conduct of business. However, in workplaces and in interactions with Qallunaat, knowledge of Canada's official languages is usually necessary. English was the most spoken official language (36%), while 27% had knowledge of English and French, and 9% had knowledge of French alone. In addition, 27% of the population did not have knowledge of French or English (Statistics Canada 2007). Both French and English are languages of instruction in Salluit's primary and secondary schools. Prior to third grade, instruction is in Inuttitut and, after that time, parents can choose either French or English classrooms for their children. As Crago (1992) notes, parents often strategically place

some children in French classrooms and others in English classrooms so that families can maximize their language competence.

All Sallumiut are Christian, although not all attend church. There are two churches in Salluit, one Anglican and one Pentacostal. At most church services, only select portions of the population are regular attendees. However, nearly every Inuit home I visited had a bible in Inuttitut syllabics and many people who did not attend church described themselves as Christian. At times of community events – such as funerals – a much larger group of the population attends church.

Salluit's formal economy is largely based around municipal and government services. The only significant private employers within the community are the Northern Store and the Co-op, both of which are general stores selling food, electronics, clothing, appliances, and hardware. In addition, some residents work at Xstrata Nickel's Raglan Mine approximately 250 km from Salluit. However, working at the mine necessitates spending weeks at a time away from the community. The lack of private business means that there are few employment opportunities. Compounding the lack of available jobs, 65% of the population did not have a high school diploma. At the time of the 2006 census, the official unemployment rate was 28% and only 230 residents over the age of 15 worked full-time (Statistics Canada 2007).

While median household income is seemingly high (C\$67,840 in 2006), this measure of wealth is deceiving. The average household size is large (4.9 persons) and households often consist of more than one family. According to the census, 100% of houses are rented (although, from my fieldwork, I know there are 3 privately owned homes) and 38% of dwellings require major repair. Exacerbating the lack of income is

the high cost of living. Comparative Price Index data gathered by Université Laval reveal that, compared to Quebec City, food is 60% more expensive, snowmobiles are 16% more expensive, gasoline and household products are 79% more expensive, and personal care products are 41% more expensive in Nunavik. Sallumiut occasionally receive a relatively large influx of cash from their profit sharing agreement with the Raglan Mine. Salluit and Kangiqsujuaq, the most proximate communities to the mine, along with Makivik Corporation share 4.5% of operating profits (Salluit receives 45% of that amount) (Xstrata 2006). In 2011, Xstrata shared a total of C\$15.2 million with the two communities and Makivik. While this year Salluit is using the money for a community swimming pool, in some years the money has been distributed directly to individuals (Nunatsiaq Online 2011).

Along with the formal economy, many Sallumiut are regularly or occasionally active in subsistence harvesting. Data from the 2001 Aboriginal People's Survey show that 97% of Salluit residents hunt for food and 100% fish for food and gather wild plants for food. However, the number of residents who participated in those activities within 12 months of the survey is significantly lower. Sixty-one percent report hunting within that time frame (9 percentage points lower than Nunavik overall), 73% report fishing within 12 months, and 58% report gathering wild plants for food (6 percentage points lower than Nunavik overall) (Nunivaat 2001).

Through provincial, KRG, and Makivik funding, Salluit administers a Hunter Support Program (HSP) that purchases country food from hunters or other communities for distribution to Sallumiut and subsidizes the purchase of camping, safety gear, and fuel for hunters. In addition the HSP purchases locally produced goods, such as sleds, knives,

furs, and clothing from Sallumiut for discount resale to JBNQA beneficiaries or full-priced sale to non-Inuit (Kativik Regional Government 2011). The HSP provides only supplementary income to Sallumiut. According to Chabot (2003), HSP income offset less than 20% of hunting costs for full-time hunters in Nunavik.

3.2.3. Past Research Experience

Sallumiut have previously encountered researchers on several occasions. Among older people in the community with whom I spoke, many remember the anthropologist Nelson Graburn arriving and living in Salluit in the late-1950s and 1960s. Graburn published his ethnography of Salluit (then called Sugluk) as Eskimos without Igloos (1969). In addition, older residents remembered Bernard Saladin d'Anglure, also an anthropologist. These Sallumiut recalled both men fondly, especially for their ability to learn Inuttitut. Among other researchers who have worked in the community, most residents I spoke with were aware of recent studies into climatic impacts on permafrost conditions conducted by Michel Allard, a physical geographer from Université Laval, and his colleagues. Some of Allard's work has been primarily based in physical science (for example, Allard and Kasper 1998; Allard, B. Wang, and Pilon 1995; B. Wang and Allard 1995). However, he has also engaged in applied work in Salluit. Specifically, he worked with a team to identify infrastructure hazards related to permafrost thaw and propose a development plan to address them (Centre d'Études Nordiques 2011; Allard et al. 2004). Most Sallumiut with whom I spoke shared a generally positive reaction to Allard and his colleagues. In addition, many years of archeological research has been undertaken at the Tayara site on Qikirtaq Island at the mouth of Sugluk Inlet (see, for example, Taylor

1968; Todisco and Bhiry 2008) and several younger Sallumiut mentioned working as archaeological assistants.

In addition to these long-term research relationships, there have been a number of short-term projects in Salluit, mostly relating to health issues. For example, Wheatley and Wheatley (1981) and Poirier and Brooke (2000) have studied contaminants and Inuit perceptions of contaminants in country food, respectively; Van Wagner et al. (2007) examined the resurgent practice of midwifery in Inuit communities including Salluit; and Kirmayer et al. (2009) explored the intersection of Inuit conceptions of self and mental health throughout Nunavik, with some research conducted in Salluit. Recent research includes work by Desbiens (2010), who discusses the methodological challenges associated with climate change research with women from Northern communities.

Beyond the discussion regarding Graburn, Saladin d'Anglure, and Allard, the Sallumiut I interacted with had little to say about researchers. Most asserted that they were neutral towards researchers visiting Salluit, but some had a more skeptical view. For instance, when I first arrived in Salluit, I met a woman who asked me why I was there. When I explained that I was a student doing research, her first response was "What do we get out of it?" Her reaction indicated the research fatigue that many Inuit in various communities experience. Such a position also reveals the challenge of building trust with residents of Salluit as a researcher staying in the community for a relatively short period of time.

3.2.4. Relevance as a Study Site

Although findings from an individual community cannot be extended to Inuit villages in general without further research (see Yin 2009, 43–44), funding and time constraints

limit this thesis to a single study site. Acknowledging the limitations of a single case-study approach, Salluit is an appropriate location for research because of its current climate-related challenges and its residents' retention of traditional culture. Salluit is acutely affected by climate change, with temperatures rising 2.6°C between 1990 and 2003 (NRC and CIP 2007, 2). While many communities must adapt due to rising sea levels and erosion, melting permafrost has forced residents of Salluit to engage in a planning process. Located in a valley, the community faces risk of mudslides and land settling. With limited room for expansion within the village center, new areas must be developed to meet demand for residences and public buildings in the future. A committee with representatives from Quebec, the KRG, and Salluit are evaluating adaptation measures (George 2009). Based on this planning process, residents of Salluit are likely to have awareness of climate change and to have thought about its effects on cultural practice. Additionally, residents of Salluit have likely already encountered climate-related changes in the areas of hunting and overland transportation (Tremblay et al. 2006).

Along with being significantly affected by climate change, Salluit is also a relevant study site for my research because its residents continue traditional cultural practices. As noted earlier, 93% of residents consider Aboriginal languages their first language and 100% of Inuit residents have knowledge of an aboriginal language (Statistics Canada 2007). As Dorais (1999) highlights, Nunavik has the highest rate of language retention of all Inuit regions. According to Hinton (2001), language retention is directly tied to traditional culture, suggesting that the Inuit of the region continue to live in ways substantially different from non-indigenous populations. In addition, recent

literature emphasizes that Salluit features a vibrant subsistence economy focused on hunting terrestrial and aquatic mammals (Poirier and Brooke 2000, 79). Both the linguistic and economic practices of Salluit residents indicate the vitality of the traditional cultural practices I intended to study.

3.3. Research Methods

Since the focus of this thesis is documenting and analyzing the effects of climate change on cultural perceptions, understandings, values, and meanings, the use of qualitative methods was essential. As Winchester (2000) argues, qualitative methods are best used in human geography for understanding questions about structures and individuals. She offers two archetypical questions to illustrate these research areas, including:

Question One: What is the shape of societal structures and by what processes are they constructed, maintained, legitimized and resisted?

Question Two: What are individuals' experiences of places and events? (2000, 4-5)

As this research concerns both how individuals experience the effects of climate change on cultural practice and the ways that those experiences will challenge and reconstitute Inuit culture (which Winchester would call a structure), neither a quantitative nor mixed methods approach would be appropriate. Creswell (2009) outlines several factors that necessitate a solely qualitative approach, several of which are germane to this study. Among them are the fact that the phenomena under study are deeply rooted, complex, potentially 'intangible', and not well understood (2009, 32–33).

Further, this project originates from the position that indigenous peoples live within relational ontologies that undermine what Latour (1993) calls the "Internal Great Divide" between nature and culture (Blaser 2009a). Such a position – empirically supported in the work of Bird-David (1999), Blaser (2009b; 2010), Hallowell (1992),

Ingold (2000), and Morrison (2002) – demands a social constructivist approach, which is closely tied to qualitative methodologies (Creswell 2009, 8).

In order to implement this approach, I employed multiple qualitative techniques, including formal interviews, informal interviews, and participant observation. Each of these techniques yielded information relevant to triangulating the dataset (Patton 1987, 60–61).

3.3.1. Formal Interviews

Formal interviews are encounters where both the interviewer and the interviewee understand the purpose of the conversation. There are several types of formal interviews, including unstructured and semi-structured interviews (Bernard 2011, 157–158). Dunn (2000) defines unstructured interviews as being focused on individuals' perceptions and histories. During unstructured interviews, he asserts, questions are driven by a participant's responses. In contrast, he characterizes semi-structured interviews as content focused and organized around specific topics that are discussed in a particular order (2000, 61). The formal interviews I conducted in Salluit straddled the line between the unstructured and semi-structured typologies. Although I utilized an interview guide, I often deviated from this guide when participants wished to discuss other topics. While I raised all of the themes from my interview guide in most interviews, I did not bring them up in the same order in each interview. In addition, I began interviews by eliciting information tied to participants' life stories, a technique related to unstructured interviewing (Dunn 2000, 63).

Utilizing a hybrid-style of interviewing was significant for two reasons. First, it allowed me to ask questions about the effects of climate change on Sallumiut without

structurally limiting our conversation to issues of climate change. As a result, I was better able to gauge the relative significance of climate change in relation to other salient issues Sallumiut define. As Desbiens (2010) reflects (based on her experience interviewing Sallumiut about climate change), expanding from a narrow focus on climate change to include personal narratives allows the researcher to better understand the issues important to individuals. She essays:

Consequently, our exchanges had to begin as far away as possible from the research questionnaire, leaving behind the disembodied ‘What are some of the changes you’ve noticed in the resources?’ to start instead with a connective question: ‘Where were you born?’ It was a movement, as it were, from an exogenous construction of knowledge – the ‘research project’ – to an endogenous one, a life history, situated in time and space. (2010, 413)

Desbiens’ experience demonstrates that deviation from a strict semi-structured approach helps researchers appreciate local context and how research topics intersect that context (or fail to do so).

The second value of integrating unstructured and semi-structured interview styles is in fostering rapport with participants. Although Dunn delineates divergent opinions about whether professional or empathetic interview relationships are ideal, in Salluit the latter was beneficial (2000, 67). The historic mistrust between Inuit and Qallunaat has been significantly influenced by professionals from the South – teachers, healthcare workers, and bureaucrats - who kept Inuit at a distance despite residing in the North (see Brody 1975). In order to overcome skepticism, it was important to engage participants on a human level. Displaying interest in participants as human beings with unique narratives rather than as sources of predetermined areas of knowledge allowed me to build mutual, trusting relationships with those who I interviewed.

3.3.1.1. Interview Guide

Due to the amorphous character of culture – a problem that has not been resolved despite the numerous and ongoing debates over the definition of the concept (see Lemert 2006) – I had to operationalize culture in order to carry out fieldwork. Specifically, I had to define how I was going to analyze the effects of climate change on culture in order to develop an interview guide. I chose to limit my guide to particular areas of culture that I thought could be fruitfully examined. I built the interview guide around questions of how climate change would affect hunting, the consumption of country food, and the character and extent of sharing. I chose these areas of cultural practice because each area has an established literature demonstrating its centrality to Inuit worldview. I discuss each of these categories in more detail below.

3.3.1.1.1. Hunting

Many scholars have demonstrated that hunting activities are of central importance to Inuit culture. For example, Dorais, reflecting on the people of Quaqtaq, another Nunavik community, argues:

For Quaqtamiut, hunting, fishing, and trapping are much more than mere economic pursuits. They symbolize a way of life closely related to Inuit identity. Many men and women state that, apart from being an opportunity to get access to fresh food, these activities help them keep contact with traditional culture. (1997, 53)

By emphasizing its role in identity and cultural continuity, Dorais highlights the non-material facets of hunting in Inuit communities (for a similar argument, see Condon, Collings, and Wenzel 1995). Explaining in more detail the relationship between hunting and culture, Wenzel argues that Inuit have an “ideology” of subsistence hunting (1991, 60–61). He explains further:

For Inuit, hunting constantly reiterates the moral balance that constitutes the basic relationship between human beings and animals. The fundamental trait that underpins these relations is the belief of Inuit that a reciprocity exists between hunter and animal, between one person and another, and between the human community and the natural environment. (1991, 141)

Wenzel emphasizes that Inuit hunting practices are inherently bound up with the ethical value of reciprocity, which takes place at a variety of scales. Affirming the notion that hunting is more than a subsistence practice, other researchers (Gombay 2010; Tyrrell 2007) have also emphasized the ethical and relational character of hunting.

Together, these scholars underscore the cultural importance of hunting beyond its role as a particular economic adaptation. Given the substantial consideration of harvesting activities in the vulnerability literature (as discussed in Chapter II), it seems that harvesting is an ideal area of Inuit life in which to explore the cultural effects of climate change.

3.3.1.1.2. Country Food Consumption

Compared with the literature noting the cultural significance of hunting, very few scholars have highlighted the role that country food consumption plays in cultural life. Yet, Borré (1991; 1994) has located the consumption of country food within an Inuit worldview that links health to relationships with animals. Working with Inuit in Clyde River, Borré (1991) discovers that Inuit understand the ingestion of seal to be essential for physical and psychological health. She highlights Clyde Inuit arguments that their blood is directly produced by eating seal blood and that eating seal keeps the body warm, thereby protecting the “soul.” Furthermore, Borré argues that Inuit reconstitute the relationship between themselves and animals through the consumption of country food (1991, 54). Similarly, in her 1994 article, Borré outlines the ways that Inuit argue the consumption of country food can heal the body, including the treatment of headaches,

gastrointestinal problems and nausea, among other maladies. She asserts that consuming country food leads to a proper bonding of the body and soul.

The evidence that Borré provides indicates that, for Inuit, consumption of country food is not simply a matter of nutrition, but a relational process with animals that ensures physical, psychological and social well-being. With the vulnerability literature suggesting that climate change places the traditional food system at risk, studying the effects of climate change on country food consumption (and how Inuit understand consumption) is important.

3.3.1.1.3. Sharing

Intimately tied to hunting activities and country food consumption, sharing is a defining feature of Inuit culture. Freeman notes that “sharing food is a basic ethic in Inuit society” (1998, 32). Indeed, a number of studies reveal that sharing is widespread in Inuit communities (see, for example, Collings, Wenzel, and Condon 1998; Wenzel 1995). Sharing among Inuit is not simply a means of distributing risk, it is also a strategy for maintaining cosmic order. Describing the motivations for sharing in a Nunavik community, Gombay relates:

[Sharing food] is required as a means of establishing and maintaining the relations of humans in the larger environment, particularly with respect to the animals they hunt, fish, and trap. (2010, 241)

Gombay reveals that sharing is intimately tied to Inuit understandings of, and relationships with, other-than-human beings. As such, sharing is a critical cultural practice. Similarly, in discussing Inuit conceptions of beluga whale hunting, Tyrrell argues:

Respect for whales is further expressed by generosity with the harvest, sharing it with family and neighbours. From an Inuit perspective, therefore, beluga whales

are sentient beings who inhabit the same social space as humans and other animals, and with whom respectful relationships must be maintained. (2007, 579)

According to Tyrrell, sharing is a means of negotiating interpersonal relationships between human beings and other-than-human beings. Sharing is thus a critical component of an Inuit world system that recognizes the importance of respect between hunters and animals.

The essential role that sharing plays in Inuit worldview is clear. Like hunting and country food consumption, the importance of sharing to Inuit culture makes it a relevant area to include on the interview guide.

3.3.1.2. Interview Logistics

I conducted interviews for this thesis primarily inside participants' homes. I also was given permission to use a room at the FM radio station and a conference room at the municipal building to conduct interviews. I recorded interviews with a digital voice recorder and later transcribed the entirety of the recordings. More information about the methods used to transcribe the interviews is provided below. Interviews lasted between thirty minutes and two hours, with the majority of interviews taking forty-five minutes to one hour.

3.3.1.3. Compensation

I compensated interviewees at the rate of C\$40 per interview, paid either in cash or deposited into Co-op accounts. Monetary payment for interviews is a controversial practice in social science research. For example, Weiss (1994) asserts that payment to informants is likely unnecessary. More critically, Davis (2008), having spent a career working in indigenous communities, discusses some of the challenges that paying informants entails. Among them, he mentions that informants might see payment as

disrespectful or could manufacture information in order to receive payment. Srivastava (1992) also addresses the issue of compensation, arguing that monetary payment should not be inherently seen as negative. Yet he also argues that payment needs to be locally contextualized. He writes:

My submission is not that every return in fieldwork should be in money. But if money is an expected category in the local exchange system, the ethnographer should have no moral hesitation in using it. (1992, 19)

Thus, Srivastava points to the need to compensate local communities for their time in a manner consistent with their expectations.

Before travelling to Northern Quebec, I discovered that monetary payment was a normal part of the research culture in Inuit communities. Other researchers – working in both Nunavut and Nunavik – explained to me that payment was a standard practice and that amounts varied by community. I also found out that KRG generally paid participants in its research projects and that Avataq Cultural Institute – Nunavik’s cultural repository – paid participants at a rate of C\$100 per half day. As a result, when I arrived for a preliminary visit to Salluit, I was prepared to offer compensation. However, community officials were reluctant to provide me a guideline for an appropriate payment amount. As a result, I decided I should offer a figure that would be manageable in the context of my budget without being disrespectful.

Payment ultimately proved to be both beneficial and detrimental. On the one hand, it was certainly easier to recruit skeptical Sallumiut for interviews. On the other, it sometimes seemed that these participants were more interested in the compensation than the conversation. In a few interviews, participants were clearly reluctant to share information for more than a few minutes of their time and were only interested in payment. In some others, it seemed that interviewees were trying to give me the

information that I wanted to hear. In addition, the decision to pay encouraged Sallumiut to think of me as the same kind of researcher that they have encountered recently – a policy-oriented researcher working for an organization and only interested in specific kinds of information. As a result, payment made it somewhat more difficult to achieve rapport with participants.

3.3.1.4. Interpretation

I conducted interviews in English and in Inuttitut with the help of interpreters. Over the course of my fieldwork, I employed four interpreters during interviews with Sallumiut who were not comfortable speaking in English. Like monetary compensation for informants, the use of interpreters is also a controversial practice. Watson (2004) summarizes the value of knowing local languages during research. She notes that communicating in an informant's language is more conversational, facilitates rapport between researchers and informants, and mitigates asymmetrical power relationships. Yet, it is also clear to many that the use of interpreters is, at times, necessary. Smith (2010) recognizes the occasional need to work across language differences, but raises several important qualifications to the use of interpreters. Among these, she highlights the importance of deciding whether to use local interpreters or outside interpreters; the possibility that an interpreter could introduce personal bias; and the choice between foreignizing and domesticizing translations.

While recognizing the myriad issues of representation, power, and “uncontrolled equivocation” (see Blaser 2009a, 883), I had no choice but to use non-professional, local interpreters. Given the complexity of Inuttitut as a language and the few opportunities for formal instruction, I had no opportunity to learn the language before beginning

fieldwork. In addition, there were no professionally trained interpreters in Salluit for me to approach. Given my budget constraints, I could not bring an outside interpreter to Salluit. Thus, the particular variations of interpreting relationships discussed in the literature had little relevance to my ultimate use of local, amateur interpreters.

Upon my arrival, officials from the municipality recommended two interpreters for me to work with. After meeting with both, I chose to work with the interpreter who had stronger English skills. However, after conducting several interviews with me, she suddenly (and without explanation) was no longer available. As a result I had to utilize the other interpreter recommended to me by the municipality. After conducting one interview with her, I realized that her English did not foster the nuanced conversation I wished to have. Then, I found another interpreter through trusted acquaintances in the community. I conducted several interviews with him, but again found that much was being lost in translation. After another recommendation, I found the interpreter I used for the remainder of my fieldwork and approximately half of the interpreted interviews.

Although the use of multiple interpreters was not ideal, I had little choice. I recognize that my interpreters almost certainly introduced their own biases into the interviews. I attempted to control for that bias by looking for clues as to when an interpreter was editorializing. For example, one interpreter would often provide very short translations of much longer Inuttitut responses. As I transcribed the interviews, I made notes of that fact and avoided attributing those answers to the informant. Despite the introduction of bias, the use of local, non-professional interpreters also helped generate interesting data. On occasion, an interpreter would engage in a conversation

with an informant that deviated from my line of questioning. In these cases, I benefitted from witnessing local discussions about particular issues.

3.3.2. Informal Interviews

In contrast to formal interviews, informal interviews are simply conversations that take place organically. Bernard describes the informal interview process as recalling “conversations heard during the course of a day in the field” (2011, 156). He notes that informal interviews are ideal for preliminary fieldwork and for investigating questions that may not be included in an interview guide. In my case, my condensed fieldwork meant that formal and informal interviews were taking place simultaneously. Although I arrived in Salluit with an interview guide, I used informal interviews to develop a basic understanding of the community. In addition, I learned about issues through informal interviews that were relevant to my research, but I would not have known how to ask about in a formal interview.

I engaged in informal interviews in a variety of places around Salluit, but especially at the municipal offices, at the Co-op, and in the homes of acquaintances. These encounters were casual conversations that took place without pretense and through which I learned a significant amount about life in Salluit. I recorded my observations from informal interviews with notes and follow-up reflections. These proved useful during the data analysis phase of my work.

3.3.3. Participant Observation

Participant observation has long been an important method in cultural anthropology and human geography. Like informal interviews, participant observation is a method structured around observation of and participation in everyday activities (Kearns 2000).

Laurier (2010) notes that the goal of participant observation is to become embedded in the subject of study in order to be able to comment on that subject.

By spending two months in Salluit – where there were no opportunities to suspend my immersion in the community – I had no choice but to engage in participant observation. Participant observation helped contextualize the data I collected through interviews. In addition, I was able to observe and take part in activities on the land and in the community. These experiences allowed me to recognize and understand the environmental changes that Sallumiut reference as well as the social changes they discussed. I recorded my experiences in fieldnotes for future analysis. While participant observation was a useful technique, given my relatively short period of fieldwork, I was not able to fully integrate myself in the community and truly become a participant. This failure certainly limited the information I was able to collect through participant observation.

3.4. Sampling

For my formal interviews, I assembled a sample of 44 Sallumiut. I weighted these interviews towards community elders (Sallumiut over 60 years old) because this segment of the population was most likely to have the greatest knowledge of traditional culture and how it might change. However, I also interviewed at least four people for each age group younger than 60 years old. Table 1 summarizes the sample by age. I chose to include younger population groups for three reasons. First, I had discovered that there were several people in their 50s who had knowledge nearly equivalent to the elders. Second, after completing a number of interviews with elders, I decided that I wanted to compare their responses to the responses of younger generations. Third, I largely

exhausted the population of elders with whom I could speak well before concluding my fieldwork. This was due to both the small number of elders and the fact that not all elders were willing to speak with me. While I did not interview large enough samples of younger Sallumiut to make definitive comparisons, I was able to gain a general insight into the similarities and divergences between the responses of participants in different age groups.

Table 1. Formal interviewees by age range.

Age Range	# of Subjects
18-29	4
30-39	6
40-49	5
50-59	6
60+	23

In order to assemble the sample, I relied on several purposive sampling methods. Patton (1990) identifies fifteen strategies for purposive sampling, several of which I employed in selecting my sample. My principal sampling strategy was a stratified purposeful sample, in which I focused on elders. I also utilized three other samplings methods, both within the context of my stratified sample (i.e. among elders) and outside of it (i.e. among younger age groups). First, I used snowball sampling, in which current participants help identify and recruit future participants. Second, I utilized opportunistic sampling – following leads that emerged during the fieldwork process. Third, I utilized convenience sampling, in which access is the primary criterion. Although Patton is critical of convenience sampling, I found it fruitful. Often, choosing to speak to someone who was available and willing yielded interesting information. Given the small size of

the community and my use of in-depth interviews, convenience sampling was a worthwhile method for gaining cultural understanding. Finally, because my sample is widely distributed across age groups (and that distribution was intentional), my study has elements of a maximum variability sampling strategy, which can help identify patterns that are consistent across generations.

3.5. Analysis

During and after the collection of interview data, I transcribed the complete recordings. Despite recommendations from experienced researchers that I only transcribe the parts of interviews that I deemed relevant, I chose to transcribe entire interviews. As Dunn (2000) notes, transcription is an opportunity to engage with interview data and constitutes preliminary analysis. Becoming reacquainted with the data through transcription, I was able to begin to recognize the commonalities across the interviews.

Dunn also delineates two types of content analysis: manifest and latent. While manifest content analysis examines the dataset for literal connections, latent content analysis explores the meanings that emerge within and across the interviews. Being more concerned with the interpretive project of understanding the themes expressed by participants rather than the specific language, I examined the latent content of the interviews. However, as Dixon notes (2010), content analysis has tended towards quantitative representation and the assumption that meanings are fixed in language. As a result, formal content analysis is inappropriate for this study into cultural realities. Instead, I combined elements of latent content analysis with inductive thematic analysis.

3.6. Limitations

As with all field-based projects, especially work focusing on questions related to culture and culture change, there are several important limitations regarding the methodologies I used in this thesis. First, my reliance on a single case study means that findings from Salluit cannot be generalized to other Nunavik villages, Inuit communities, or indigenous groups. However, it is important to note that the use of a single case study can support or undermine existing assumptions and suggest avenues for future research. Second, this study employs several sampling techniques that do not generate a statistically relevant sample. As a result, findings from this study cannot be considered representative of Sallumiut as a whole, but only of the individuals I spoke with. Furthermore, the testimony Sallumiut provided to me is not objective. Rather, I have interpreted it and embedded my own assumptions, only some of which I can account for. Therefore, I should note that my interpretations are not definitive readings of the interviews and do not necessarily portray exactly the interviewees' intended meanings. Finally, I chose to focus on particular areas of Inuit culture – hunting, country food consumption, and sharing. Therefore, my findings do not necessarily suggest that other parts of Inuit culture – ritual or storytelling, for example – are affected by climate change in similar ways.

3.7. Conclusions

In this chapter, I provided an overview of the methods I used for collecting data for this thesis in Salluit. I have presented my research questions, provided a brief overview of my study site, and demarcated the methods that I utilized in this study. Furthermore, I

have noted some of the limitations associated with my approach. The data I collected and analyzed using these methods are presented in the next two chapters.

CHAPTER IV

FINDINGS

The purpose of this chapter is to present research findings from fieldwork conducted in Salluit in December 2010 and from February to April 2011. These findings reflect research questions querying how Sallumiut experience climate change and understand its causes; whether or not residents of Salluit are concerned about climatic changes; and in what ways they expect it to affect the values, relationships, and meanings associated with specific cultural practices. In the following pages, I summarize my findings to demonstrate that Inuit have a significant body of climate change observations, that they identify specific causes for climatic shifts, and that they do not anticipate climate change to fundamentally alter traditional culture.

4.1. Evidence of Climate Change

While Inuit observations of climate change were not the primary target of my research agenda, they were both prerequisite to investigating my research questions and predictably emerged during the course of conversations with Sallumiut. In the following section, I report on Sallumiut observations of climatic change in and around their community. Due to the long-term permafrost study and municipal planning process led by researchers at the Université Laval (see Allard et al. 2004) and the myriad other environmental changes apparent throughout the Arctic region, I anticipated that all adult residents of Salluit had witnessed phenomena that they would characterize as climate change. As expected, nearly all of my respondents had observed what they described as climate change. Their observations consisted of the following phenomena, discussed in more detail below: ice, snow, temperature, predictability and animals.

4.1.1. Ice

4.1.1.1. Sea Ice

The most common manifestation of climate change mentioned by interviewees was the change in sea ice. Sugluk Inlet, to which Salluit is adjacent, freezes each winter and the sea ice becomes a major thoroughfare for locals travelling in and out of Salluit by snowmobile. According to several respondents, the inlet ice has historically formed in October or November. This year, the sea ice had not formed until late-December or early-January.¹ The late freeze-up was a radical aberration and disrupted life in Salluit. Specifically, the lack of sea ice prevented the community's regular Christmas and New Year's activities – including snowmobile races – that take place on the ice. As one resident recounted:

This past year, 2010, ... winter was a long time coming – I mean freeze-up didn't happen until January. ... I remember as a boy when it started to freeze and it was travelable on the land when there was more snow. The second and the third week of November used to be a freeze-up period. That was normal then. It looked normal then, but now the last few years, let's say about 10 or probably slightly more, freeze-up is much slower. And this year, I thought I was going to see canoe races at Christmas time. Normally it would be snowmobile races. ... That didn't happen because the water was usually kind of rough, but it never froze, not until January. (Male, age 53)

As this man explains, the change in sea ice was an iconic shift in historic climate patterns. By preventing the traditional Christmas activities, the lack of sea ice epitomized how far the climate was deviating from its past norms.

¹ Respondents provided inconsistent dates for when the inlet froze. There are two likely reasons for the incongruence. First, freeze-up is a process. There is floating ice before the inlet is fully frozen and safe for travel. Interviewees may have been defining freeze-up in varying ways. Second, the specific date of freeze-up mattered very little. Rather, the timing of freeze-up in relation to certain events (i.e. Christmas games) is what was significant to respondents.

For many residents of Salluit, the lack of sea ice made their observations of climatic change sharper. Unlike some other indicators of change – which may only be apparent to persons engaged in hunting or other land-based activities – the lack of sea ice affected all residents. The unfrozen inlet was a clear indicator to all Sallumiut – whether or not they had spent time traveling on the land – that environmental patterns had shifted. In interviews, conversations about Sugluk Inlet often stimulated further reflection on environmental change.

4.1.1.2. Land Ice

Climatic abnormalities have not affected sea ice alone. Although discussed by relatively few respondents, some Sallumiut were aware of changes in land ice – particularly lake ice – as well. A number of individuals mentioned that the lakes had frozen later than in the past and that the ice is not as thick as it used to be. While fishing on a lake south of Salluit with Inuit friends, I witnessed the thin ice. As my friend drilled a hole in the ice, he explained that he wasn't using any drill extensions on his four-foot drill. The previous year, he told me, he had used two or three extensions while fishing and, even then, could not always drill deep enough to break through the ice. In an interview, another man, who had not been fishing this winter, had said the lake ice thickness had been decreasing for years. He said that 5-10 years ago, the ice would have been between 6 feet and 10 feet thick. In recent years, he claimed the ice was between 3 feet and 5 feet thick.

4.1.2. Snow

Next to sea ice, Sallumiut most frequently invoked the lack of snow as an indication of climate change. 2010 was tied with 2005 as the warmest year in terms of average global temperatures since instrumental records began (NOAA 2011). Conditions in Nunavik

followed this trend and temperatures remained warm into the first months of 2011. In particular, snowfall in the region was below normal, especially in early winter. When I arrived for my preliminary site visit in December 2010, there was very little snow on the ground. When I returned in February 2010 for extended fieldwork, there was more snow, but Sallumiut consistently asserted that levels were radically below normal. Multiple respondents told me that snow levels were below normal and impeded travel by snowmobile, a phenomenon I witnessed first-hand. Some reflected on the change from when they were young, describing how the snow level was higher than the windows of houses in the past and much, much lower today. Still others talked about how the mountains surrounding town were usually covered entirely by snow, but this year the ground was visible.

4.1.3. Temperature

In accordance with observations of declining ice and snow cover, most residents I interviewed described year-round temperatures as warming. Many people claimed that the normal wintertime temperatures from past decades no longer occur. Some explained the change in terms of temperature's effects on the body. Interviewing one elder with the help of an interpreter, he explained:

Even the hunters ... they don't have frostbite anymore on the cheeks. Usually, whenever they would go out hunting in January and February, they would come back with ... frostbite. And there's no more frostbite even. Even with red cheeks, [there's] no more of that. (Male, age 62)

Others suggested that they now felt colder despite warmer temperatures. They claimed that the humidity had risen so that temperatures in the North now felt more like those in the South. Instead of the dry cold of the past, they asserted that there was a moist, bone-chilling cold.

Two respondents posited the opposite – that winter is becoming colder. One claimed that the weather is correcting itself because it became very cold in February of this year. He asserted that – compared with the winter of 2009-2010 – this winter had temperatures closer to what he remembered. Another individual stated that the coldest parts of the winter were colder than he remembered in the past

Although much less regularly mentioned, multiple respondents stated that it was specifically winter and spring temperatures that had warmed. Other interviewees characterized warmer temperatures in terms of a longer summer and fall season than occurred in the past (see section 4.1.4.2)

4.1.4. Unpredictability

4.1.4.1. General Unpredictability

Intrinsically tied to the changes in the aforementioned phenomena is the unpredictability associated with environmental conditions. While Inuit are famous for their ability to ‘read’ environmental conditions (see Gearheard et al. 2010), many respondents explained that it had become harder to anticipate weather and seasonal patterns. Multiple individuals discussed failing to predict hunting weather accurately, despite using strategies honed over generations. Others told stories of being stranded on the land when weather changed suddenly. For instance, a younger man described how the spring melt came abruptly and unexpectedly, leaving him and his hunting party stranded:

We never know what’s going to happen anymore. I don’t want to be stuck. We were in Deception Bay one time on a Friday, it was nice, it was sunny. Over the weekend ... the heat came in so fast, it was sunny all day. The heat was so enormous, and all the tracks, the rivers, were melted. And we couldn’t go by Ski-Doo. It was too much land. So everybody was stuck and nobody went back on the Ski-Doo. (Male, age 38)

As this resident's recollection demonstrates, the weather patterns and seasonal transitions no longer take place in a predictable fashion.

4.1.4.2. Seasonal Unpredictability

Among the main manifestations of the unpredictable climate are changes to the duration and predictability of the seasons. Among Sallumiut's most common observations of climate change is that winter is becoming shorter. Undoubtedly influenced by the extreme weather of 2010, many respondents told me that winter has become an abbreviated season. According to most Inuit I spoke with, winter did not really arrive until after New Year's. This was consistent with my observations. During my initial site visit in December 2010, temperatures in Salluit were 15°-20°C warmer than usual and were, in fact, warmer than temperatures at the same time in Montreal (see Nunatsiaq Online 2010).

While the brevity of the winter season was a common point of discussion, interviewees regularly mentioned the changes in other seasons as well. Most notably, many people emphasized that spring ended earlier than before. The end of spring is generally tied to the ice and snowmelt and the availability of open water. According to Sallumiut, the sea ice melt used to occur in June or July, but is now beginning in May or June. In contrast to the shorter spring, local residents talked about longer summer and fall seasons. Importantly, Sallumiut reported that the seasonal transitions are much less consistent than in the past and vary widely from year to year.

4.1.5. Permafrost

Along with seasonal indicators of climate change – such as ice, snow, temperature, and predictability – thawing permafrost is one of the most frequently cited indications of

environmental shifts. More Sallumiut are aware of changes in the permafrost because of the studies carried out by Université Laval and the subsequent land-use planning process. Several respondents highlighted the mudslides that occur due to the larger active layer of permafrost. In addition, a number of people discussed seeing ice in the soil, which they had never seen before.

4.1.6. Plants and Animals

Many respondents noted climate-related changes to the local flora and fauna, although there was little convergence of those observations. Although not frequently mentioned, multiple interviewees noted that plants had changed. Specifically, the various berry varieties in the area had either failed to bear fruit or had grown “abnormal large berries.” Additionally, one respondent said that there were new bushes near Salluit and another noted – in general terms – that there are new plants in the area.

Most commonly, Sallumiut mentioned seeing new species of birds near town. Some said they had seen robins or blue jays. Others simply noted the colors of the birds, saying that there were previously unknown blue birds and orange birds.

Indigenous birds had also changed their migratory patterns. Two elders mentioned that the ptarmigan had not returned to the area when they were expected. Another described how white birds, which usually migrate south in the winter, had stayed through the cold months. And one elder described her husband finding a slew of dead eider ducks who had died from exposure after failing to migrate south.

Finally, several interviewees described seeing changes in the health of caribou, noting that there were more parasites and that the animals looked skinnier.

4.2. Environmental Changes Related to Mining

Along with the environmental changes that Inuit directly attributed to climate change, Sallumiut frequently mentioned environmental changes that clearly had other sources. Of these, interviewees most regularly talked about the effects of the Xstrata Nickel Raglan Mine. As one of my interpreters explained repeatedly, a lake adjacent to the mining site has become contaminated by the mining activity. Sallumiut are aware of the contamination because several locals had recently become sick from eating fish caught in a certain area of the lake. An Inuk acquaintance told me about the effects of the mine:

We used to go fishing quite a bit in the Deception Bay area, but that's kind of out of the question for the community ... because of the mining. We are afraid that we might eat the affected fish. ... People have eaten the fish in Deception Bay lakes and got sick instantly and would have to be medivaced right away. (Male, age 33)

As this man explained, there is specific environmental degradation caused by mining activities and threatening the community.

Curiously, many respondents did not differentiate between environmental changes that they attributed to climate change and environmental changes associated with mining. Often, a single question would elicit a response encompassing both phenomena associated with climate change and the degradation Sallumiut tied to mining activities.

4.3. Causes of Change

Given the detailed and varied observations of climate change in and around Salluit, it is necessary to explore how Sallumiut understand those changes within the context of their worldview. Prior to beginning fieldwork, I anticipated that Sallumiut would explain climate change in terms of an animistic cosmology. While respondents offered consistent and detailed causal explanations of climate change, these did not conform to my

expectations. The vast majority of responses fell into two categories: Christian eschatological causes and the effects of industrial society.

4.3.1. Eschatological Causes

A majority of respondents asserted that climatic changes were in some way related to the end times. Frequently, as I asked what caused climate change, an interviewee would tap on his or her bible and explain that it is written there that these environmental changes would happen. Specifically, these committed Anglicans were referring to the events detailed in the apocalyptic New Testament book Revelation. Interviewees explained that the bible predicted that the end times would feature high temperatures. As I sat at the dining room table of one elder – who was watching her grandchild – I asked if she was concerned about the changes. She began to reply about her worries, but abruptly shifted her answer and said:

This bible says that the world will end, so it will end. ... So the world's going to boil, it's going to be hot, hot, hot. It's going to be changing everything. (Female, age 63)

Her response was not unique. Many interviewees mentioned the bible or the end times as the cause of the changes.

The respondents invoking the bible did not limit its explanatory power to climate change. Some used it to explain contemporary wars and natural disasters. The morning after the March 11, 2011 earthquake in Japan, I ran into an acquaintance as I walked to an interview. He mentioned the earthquake and told me that it did not surprise him because of what he had read in the bible. He said that earthquakes and other disasters would become more common.

At least some respondents were aware that biblical explanations conflicted with the scientific worldviews of many Qallunaat. One man first responded to my question

about causation by saying “global warming”. When I asked him what he meant by that he replied, “You want my belief?” He seemed surprised that a Southerner would ask.

After I assured him that I did want to hear his beliefs, he continued:

Ok, well the way I believe is Revelation. That’s what I believe. In the bible it says that there’s going to be a great heat ... and men will be scorched by heat until they want to repent. It’s in the bible. That’s what I believe. That’s why we’re going to the heat now. It’s getting warmer everyday, every year. (Male, age 38)

Similarly, another respondent agreed that pollution led to climate change, but also said there were “other things.” When I asked her to expand on her answer, she said:

You have to be open to my answer with other things. You have to be open to the fact that I read the bible. The bible tells me this is going to happen. I read the English bible – King James – and I have my Inuttitut bible. Therefore, all this shall come to pass. (Female, age 58)

These respondents demonstrated an awareness that their explanation for environmental change differed from my own. Their hesitation in offering religious explanations suggests that their interaction with Whites has not been characterized by cross-cultural understanding. Rather, their initial responses parroting scientific explanations implies that they intended to tell me what they thought I wanted to hear.

4.3.2. Industrial Causes

Along with an understanding of climate change as a function of biblical prophecy, respondents regularly discussed the role of industrial society in environmental change. Mining, as mentioned earlier, was often underscored as the source of specific environmental degradation. However, climate change was also described as the result of industrial activities more broadly. This characterization was not a description of climate processes and the role of greenhouse gas emissions. Instead, interviewees constructed critiques of modern industrial society – ‘Southern’ society – and its relationship to

climate change. Most often, these critiques centered around archetypical images of industrial development – smokestacks, factories, and power plants.

While speaking with one elder with a particularly overt contempt for the South, he described the changing snow and its cause:

Not particularly that there was more snow, but the snow was more pure because there was much less smoke coming out of your stacks down South. ... But today, as your smoking stacks are smoking a lot, the snow doesn't smell anymore. It's more like a toxic smell that occurs inside the snow ... it's not as good as it was. ... Your smoking stacks, you should stop them. Stop manufacturing cars and try to give us free time that we used to have when I was a kid. (Male, age 63)

When I asked if smokestacks were the only cause, he continued:

No. You keep going outside the atmosphere and poking a lot of holes into our ozone layer. That's what's bothering us. You're an American. You're the right person to talk to about this. So stop your discoveries. (Male, age 63)

From this elder's perspective, climate change is a function of an industrial society. He does not simply critique the particulars of industrial production, but its very existence. He demands, "stop manufacturing cars," "stop your discoveries." For him, climate change is not a technical failure, but an inherent condition of industrial society.

An Inuk acquaintance, who has spent considerable time in Southern Canada, put it more clearly. He explained the causes of change succinctly:

The Earth ... Once it gets older, if we keep on polluting it, it will deteriorate. Carbon, smokestacks, and ... oil slicks. And mostly pollution. (Male, age 53)

When I asked if there was anything Inuit could do to mitigate or stop the changes he thought for a moment and replied:

Not the Inuit, I don't think so. They can talk and probably say, "Look what's happening. Maybe if you can stop that, maybe it will eventually go back to its normal way of going." (Male, age 53)

Questioning why he thought Southerners had not switched to more sustainable practices, he offered a pointed criticism of Western society:

Money. Greed. Everybody thinks that money is the only way to survive, but that isn't the answer to me. ... We all know that we need to spend money to get things that we have to use, but money is not the answer. ... If we want to help the Earth to survive, we have to look for an alternative way to clean it up without using this money ... if we were to live freely and to help each other, like in the old days, like our forefathers used to live – they survived without money – if we were to live like that and give abundantly, I think it's possible. But money, everybody talks about money. Money to me is greed. ... That's not the answer. (Male, age 53)

This man's response delineates between Western society – dominated by money and greed – and traditional Inuit life, which was (and often still is) organized around reciprocity. Thus, according to this respondent, climate change is not primarily a function of Western industrial practices, but of the narcissistic social characteristics motivating those practices. Moreover, he does not consider Inuit to have much power in the situation. They can raise awareness, but not change the pervasive greed of Western society.

Similarly, one of the most respected hunters in the community demarcated climate change as a function of industrial production related to war. An interpreter related his perspective on the industrial roots of climate change:

He ... thinks it's because there's wars. ... Smoke from manufacturing from the war. The smoke is coming up here. The smoke that they're making down there is coming up here. (Male, age 70)

Again, this respondent linked climate change with an industrial production that has an ethical (or, more accurately, unethical) dimension. His remarks reflect the broadly held opinion that damaging industrial emissions are a product of Southern anti-social behavior.

A young man echoed the previous statements, discussing both the role of war and consumption on the environment:

I remember around 1991 when there was a Gulf War, there was very orange smoke that came through the North. ... We heard it was all from the Gulf War,

from those big fires. ... It has something to do with the Southern part of the world. ... If they would ban all gasoline powered equipment and vehicles, it can stop. But otherwise, it's just going to keep getting worse and worse because people need stuff. They need power plants, they need manufacturing plants and all. (Male, age 37)

From the perspective of this resident of Salluit, the industrial foundations of climate change are tied to the perceived war-making and consumption of Southern society.

Of course, not all Sallumiut argue that fundamental characteristics of the South are the root of climate change. Many did not mention industry as a cause of climate change at all. Others argued that the effects of industrial society were not previously known. One woman, articulate in English and educated in Southern Canada, characterized the situation thusly:

They didn't know. Them people that are making cars and having smoke factories and all that, they didn't know. So what we know now, if they don't do nothing about it, then there's somebody who has to be blamed for that. (Female, age 58)

While there may not have been an ethical dimension to the past environmental degradation that the industrial societies engendered, this respondent suggests that today there is an ethical issue. From this perspective, and those more critical of industrial society, the South now has an obligation to address its role in climate change.

4.4. Concern about Climate Change

Based on Salluit residents' developed body of climate change observations, their detailed explanations of climate change causation, the commentary claiming that Inuit culture is threatened by climate change, and the broad range of studies suggesting Inuit are particularly vulnerable to environmental change, I expected that respondents would express significant concern about climatic shifts. However, I found that Sallumiut experienced inconsistent levels of concern regarding climate change on their lands and many Sallumiut did not characterize themselves as worried at all.

Some interviewees did describe themselves as worried about climate change. Yet when I asked these respondents to explain their worry, they generally characterized their concerns in terms of how climate change affects the built environment. To illustrate, consider this statement by a community member about why climate change worries him:

One time, maybe 5-6 years ago, we had such a big wind that it blew the top off the water treatment plant ... all I saw was the insulation fly by. ... Plus the permafrost. I'm worried about that. It's melting a lot. This area is all sand; it can all slide away from the permafrost. (Male, age 49)

As this man indicated, his primary concern was the way that climatic shifts will impact the infrastructure of the town.

Echoing the words of the previous respondent, another man identified his concerns about climate change:

I'm worried that if it gets too hot – like we see the houses in the beach area – the erosion might become too high. The tide will go too high. ... In the fall time, we had the whole wharf over there right to the top with water. First time we ever saw that. (Male, age 37)

Again, this resident is stressing his concerns over the way that climate change will threaten the built environment – in this case houses and the wharf. Additional respondents discussed the effects of climate change on other parts of the community infrastructure, specifically the cemetery (which is endangered by mudslides). Certainly such fears are reasonable. Storms, melting permafrost, and rising sea levels – among other factors – all endanger houses and community infrastructure. Undoubtedly, these pose a risk to the continuity of village life and the safety of the community. Yet these fears do not extend to the ways that climate change will affect traditional Inuit life.

Others described their worry in very specific terms. Most often, their concern had to do with the availability or quality of hunted foods. Two respondents mentioned that they were concerned about how the lack of snow would affect the calving of seals (which

takes place in snow caves). Several respondents described themselves as worried about the quality of hunted foods, which they noted were more affected by parasites and disease. Another interviewee mentioned that his concern regarding animals revolved around growing populations. He argued that the fact there are more animals might lead to more illness among the game. A young woman described her concern about the availability of game:

I think it's connected to climate change. ... The arctic animals usually stay in the cold and if it's not cold anymore, they're not going to be there. (Female, age 25)

In addition, a few respondents mentioned other, specific, concerns. Among them, some interviewees discussed worries about safety traveling on the land. One woman simply noted that “when it's too hot, it's too hot for us.”

Despite the aforementioned residents who expressed concerns about climate change, most interviewees did not describe themselves as being worried. Many not only denied being worried about the changes, but actively dismissed the possibility. Several members of the community asked – in one way or another – why should they worry. Consider one elder's response, as related by an interpreter, as to whether he was worried about climate change:

Not really. He cannot do anything about it, so what's the use of worrying? What's the use of worrying when you cannot do anything about it? ... If he was worried about something and it becomes something else, then what's the use of worrying? (Male, age 60)

Another elder made a similar comment, again rephrased by an interpreter:

She doesn't worry about the future, but ... when it becomes summer, we're going to use very thin clothes. (Female, age 72)

A religious elder echoed the previous statements when I asked him if he was worried about climate change:

No, no. I am happy because my bible tells me don't worry. It has to be like that.
(Male, age 65)

Such statements demonstrate the absurdity – from the perspective of some Sallumiut – of worrying about climate change. Climate change is an uncertain process and one that is hard to distinguish from other forms of environmental change. Moreover, these residents recognize the limits of their own agency. There is no function in worrying about what climatic shifts may or may not occur and, therefore, there are more appropriate ways to expend energy.

4.5. The Cultural Effects of Climate Change

Given the awareness of locally manifest climate change and their limited concerns about those changes, it is necessary to explore how Sallumiut anticipate the cultural outcomes of Arctic climate change. Based upon the scholarly consensus that climate change is having – and will continue to have – clear affects on harvesting activities and country food consumption, I expected that residents would delineate a close relationship between climate change and changing values, relationships, and meanings associated with cultural practices. Surprisingly, I instead found a prevalent opinion that climate change would not significantly affect cultural activities at all.

As I noted in Chapter III, culture is an extraordinarily vague and ill-defined concept. To ground it – and make it operational – I specifically looked at three areas of traditional Inuit life that vulnerability scholars suggest are related to climate change and that have been thoroughly addressed in the anthropological literature. These three areas are hunting, consumption of country food, and sharing.

4.5.1. Hunting

A majority of respondents mentioned that climate change is affecting, or will affect, hunting in ways consistent with the issues described in the vulnerability literature. Most frequently, Sallumiut mentioned that the changes in the weather would prevent or limit hunting in early winter. They based their estimation on the lack of sea ice and snow cover, which is necessary for travel by snowmobile. While some of these respondents suggested that being delayed during the early part of the season would mean less hunting overall, others expected that opportunities would remain constant or even increase. An elder who remained an active hunter said of his colleagues:

Even when the weather's bad, they always go out hunting. (Male, age 72)

Some of those Sallumiut who expected hunting to continue argued that hunting could take place by canoe or ATV earlier in the season. One respondent spoke to Inuit adaptive capacity regarding mode of travel. When I asked him if less snow would prevent hunting, he replied:

Before they had the Ski-Doo and the transportation, they had the dog team and their kayaks and things like that. It was possible to live here without that before and I believe that if we keep the tradition, we can still do it. (Male, age 56)

I interpreted his statement not as a call to return to past technologies, but as a confident assertion that Inuit can and would adapt to changing realities. In this case, he's arguing that snowmobiles are not necessary for hunting because Inuit survived without them in the past.

Respondents also proposed other adaptive strategies that hunters might have to employ. For instance, one of the most respected hunters in the community noted that Sallumiut might need to utilize new harvesting areas. An elder said that if the weather

continued to change, the community might need to find funding in order to hunt by airplane as is done in other communities.

In addition, some interviewees thought that warmer weather would mean that more people – including women and youth – would hunt in the coldest winter months. One elder said she had never hunted in January or February before, but was able to do so this year. A teenager, who was participating in a hunting education program, thought that warmer temperatures would be good for hunting. He emphasized that:

Everybody likes sun and going out. (Male, age 18)

Although this young man also spoke of the warm December as being a “sad” time for the community, he expressed little concern that hunting traditions would be fundamentally undermined by changes in the weather.

Along with the need to delay early season hunting, many respondents suggested that climate change has made hunting more dangerous, an issue consistently addressed in the vulnerability literature. An elderly hunter who did not think that hunting had been affected yet was worried about safety on the land. He noted that people had been stranded due to unexpected changes in weather. Similarly, a young hunter discussed the possibility of being stuck in melting streams and encountering dangerous ice conditions.

Yet even these Sallumiut, who were concerned about hunter safety, did not think that climate change would fundamentally alter hunting as a traditional activity. Indeed, one elder noted that older hunters would not have trouble adapting to climate change. In response to whether he is confident that he can get himself out of challenging weather, a younger hunter defiantly stated:

Yes. The safety gear is not like before. GPS, radio. I can spend the night on the trail, it happened before. It’s nothing new. (Male, age 37)

Clearly, Sallumiut do not expect that climate change will undermine the practice or significance of hunting. Moreover, they do not anticipate that the dangers of climate change will present entirely novel situations; rather, climate change may make an already dangerous activity more dangerous. In other words, Sallumiut will have to apply skills and knowledge that they already have to cope with changes. The significance of such information is that Sallumiut do not expect cultural practices to change in ways that undermine the meaning of the activities.

4.5.2. Country Food Availability and Consumption

A plurality of respondents indicated that country food would become less available as a result of climate change, reflecting the consensus in the vulnerability literature. They argued that due to snow and ice conditions, it would be more difficult for hunters to travel on the land and kill game. Most of these interviewees based their projection on the conditions of late-2010. Only one respondent suggested that climate change had contributed to food shortages in previous years. Those most pessimistic about the future availability of country food thought that Inuit would have to turn to alternative food sources. Generally, they thought Sallumiut would have to shift to expensive store-bought food, which they characterized as unhealthy and causing illness. One man went so far as to suggest that Sallumiut engage in agriculture:

Well, I think we're going to have to look for another alternative to survive. ... I know the weather is getting warmer. I think we'll have to start living like the Qallunaat by growing plants. Maybe greenhouses in the North. (Male, age 53)

This man, along with several other respondents, expects that climate change will stress their ability to obtain country food and argues that Sallumiut need to prepare alternative means of food procurement.

Although a group of Sallumiut are concerned about how climate change may affect access to country food, a larger number of interviewees either explicitly denied concerns about the way climate change might influence the availability of country food or did not mention it at all. Most often, respondents recognized that there are shortages of country food, but did not link such events to climatic shifts. Several interviewees explained the shortages in terms of feast and famine. When I asked if food availability was a problem, one man simply shrugged and replied:

In some days people get hungry, but in other days there's plenty of food. (Male, age 56)

His matter-of-fact tone suggested that the disparity between periods of plenty and periods of want was not unusual. That sentiment was repeated by several other respondents, who noted that there were other times when food was not available that were unrelated to climate change. Some people thought there might be less food at certain points in the year and more at others. In one instance, a man mentioned that there was little country food available when snow and ice conditions were not adequate, but there also was little food after conditions improved. He explained that the hunters had been traveling out on the land, but had simply been unsuccessful in catching animals. The relatively common lack of country food can be interpreted to mean that lean times in particular months of the year will not radically change Sallumiut's access to, consumption of, or relationship with their traditional foods.

Two respondents thought that Sallumiut could adapt to changing environmental conditions by purchasing food from other communities and having it flown to Salluit. This is a strategy that has already been employed when certain species – such as caribou – have not been accessible in the area around the community. For these interviewees,

climate change is simply another factor affecting food supply rather than necessitating a fundamental break in food traditions.

As their statements demonstrate, many Sallumiut are experiencing intermittent interruptions to their supply of country food. However, most respondents did not express concern that they would not have enough country food. Moreover, several implied that the supply of country food has not changed significantly as a result of climatic shifts. Instead, they argued that there will be – as there has been in the past – times of plenty and times of need. Such results contradicted my expectation that the changing availability of food would have additional effects on Inuit culture.

4.5.3. Sharing Practices

Along with hunting activities and consumption of country food, sharing is a fundamental component of Inuit cultural life. In fact, based on my conversations with Sallumiut, it may be a more basic element of Inuit identity than the other cultural features that I explored. Before beginning fieldwork, I hypothesized that climatic shifts would negatively influence sharing practices by encouraging more Southern wage labor and limiting the amount of country food (the primary means of sharing) that is available within the community. Further, I expected that decreased sharing would have significant consequences related to residents' ethical values, as well as relationships within the community and with animals. Yet, again, my findings did not bear out my expectations.

Although I discussed sharing and how it had changed in every interview, only one resident tied current or potential changes in sharing practices to climate change. In that case, the respondent suggested that future sharing will be affected by changes in the

weather. However, she immediately qualified her remarks, noting that sharing has already changed – a statement she made without invoking the role of climate change.

Remarkably, no other respondent suggested that climate change affected sharing whatsoever. Most respondents were cognizant of changes in sharing practices, but did not attribute these changes to climatic shifts. Some interviewees expected that diminished access to country food would impede sharing, but these respondents did not relate diminishing amounts of country food to climate change. Several individuals – specifically those under 30 years of age – asserted that sharing had not changed at all.

Participants' responses indicate that, heretofore, climate change has not undermined traditional sharing practices among Sallumiut and caused the cultural degradation I expected. Furthermore, residents' testimony demonstrates that they do not expect that climatic changes will significantly alter exchange and distribution customs in the future.

4.6. Conclusions

Despite my hypothesis that Sallumiut would expect climate change to pose a fundamental threat to Inuit culture, virtually no respondents anticipated that traditional cultural activities – in the forms of harvesting, country food availability and consumption, and sharing – would be affected in significant ways. Logically, such a finding precluded an analysis of the deeper effects of changing practices, including the effects on values, relationships, and meaning. This finding cannot be dismissed as a lack of awareness about climate change on the part of Sallumiut. As residents' observations of change demonstrate, Sallumiut are highly conscious of the environmental changes that are surrounding them. Moreover, they characterize such abnormalities as climate change.

The question must then become, why do Sallumiut not expect their traditional practices to be affected by climate change? This question will be explored in the next chapter.

CHAPTER V

DISCUSSION

In this chapter, I analyze my research findings on the effects of climate change in Salluit in comparison to the literature I reviewed in Chapter II and discuss why these findings contradict the conclusions drawn by other researchers. In the preceding chapter, I presented my research findings on the effects of climate change among residents of Salluit. As I argue in the following pages, the outcome of my research is inconsistent with the dominant narrative offered by most scholars who study climate change vulnerability in the Arctic. The experiences of Sallumiut reveal that the popular and scholarly consensus – that climate change is already significantly affecting the livelihoods of Arctic indigenous peoples – is not as straightforward as most proponents claim.

5.1. Incongruencies with the Scholarly Consensus

In Chapter II, I reviewed the relevant literature regarding climate change vulnerability in Canadian Inuit communities. In doing so, I demonstrated that scholars consistently characterized Inuit subsistence as vulnerable to climate change, especially regarding harvesting activities. In nearly all of the literature, the authors documented current climate-induced changes affecting local populations. While the Sallumiut with whom I spoke identified climatic changes mirroring those reported in the literature, most of those same community members did not perceive climate change to be significantly affecting subsistence activities, county food consumption, or sharing practices. And, though Salluit residents recognized that climate change was influencing harvesting activities in some of the ways documented in the literature (declining hunter safety and decreased

access to hunting areas), few thought that these effects made a significant impact on Inuit cultural practices. There are multiple plausible explanations for the inconsistency between the literature and my findings in Salluit. Among these are the variations between case-study communities and the fact that Sallumiut may not think about climate change and its effects on the longer timescales of academic thought (for a discussion of time among Arctic indigenous peoples, see Natcher et al. 2007; Stevenson 2009). More research is warranted to explore these possibilities in Salluit.

Since Sallumiut expressed limited concern about the effects of climate change on harvesting activities, the availability of country food, and reciprocity, I was unable to identify the cultural outcomes of climate change that I argued are absent in the literature. In order to uncover the cultural consequences of climate change, I would ask members of the community about how climate change was affecting a particular area of cultural activity. Based on the scholarly consensus that climate change is significantly impacting harvesting activities, I expected that Sallumiut would readily discuss their concerns. I anticipated that such a discussion would lead to additional questions about effect of climate change on values, relationships, and ethics. Yet, as my findings demonstrate, this rarely happened. In most cases, respondents suggested that the effects of climate change would be limited or non-existent. As a result, the cultural outcomes of climate change (if any) are still largely unknown.

However, in the process of answering my questions about the cultural effects of climatic shifts, many respondents advanced a counter-narrative to the threat of climate change. I argue that this counter-narrative represents a major reason that Sallumiut did

not characterize climate change as a critical threat to harvesting, food, or sharing practices.

5.2. Explanation of Incongruencies with the Scholarly Consensus

That my findings oppose a dominant narrative about how climate change may affect Arctic indigenous peoples should not suggest that climate change does not threaten these communities. Certainly, the evidence underscores the fact that Sallumiut recognize specific effects that climate change has – or might have in the future – on everyday life. Yet rarely did local residents express a broader concern about the current or potential role of climate change in catalyzing unwanted cultural change. One reason that my findings are inconsistent with the literature is that there are many more salient challenges to traditional culture than climate change. Most respondents located climate change within a complex matrix of cultural threats, many of which were of greater and more immediate concern.

Throughout my formal and informal interviews with Sallumiut, residents would respond to my questions about the cultural consequences of climate change by discussing other factors that were affecting the community. As I spoke with more people, I began to realize that there was a remarkable consistency in the way that Sallumiut discussed the issues facing Inuit culture, and the values, relationships, and ethical system of which it consists. Together, their testimony delineated a series of threats all tied to the colonial relationship between Canada and Inuit, and the encroachment of Southern social systems. Specifically, the threats are all permutations of the imposition of Southern institutions, products and pastimes upon Sallumiut. In the following pages, I demonstrate how Sallumiut assert that these threats have undermined traditional Inuit life. Although space

does not permit me to share all the cultural threats that respondents raised, I address the most frequently cited issues related to hunting, country food, and sharing. As these discussions emerged out of my questions about climate change, I organized residents' responses in terms of the categories (hunting, country food, and sharing) that I laid out in the previous chapter.

5.2.1. Threats to Hunting

As I began my fieldwork, I found that when I asked individuals if they were concerned about how climate change would affect hunting, they provided a nuanced and unexpected response. They managed both to be concerned about how the community was maintaining hunting practices without tying that concern to climate change. As my interviews continued, I learned that there were many challenges to maintaining traditional hunting practices that were wholly unrelated to changes in the environment. The major issues that Sallumiut raised during our conversations are discussed in the following sections and consist of the wage economy, institutionalized education, and Southern "culture."

5.2.1.1. The Wage Economy

The most significant impediment to hunting among Sallumiut is the wage economy. Most Sallumiut who I encountered either explicitly or implicitly highlighted the financial obstacles to hunting. These Sallumiut emphasized the capital costs of hunting equipment, the regular expenses associated with hunting and the time constraints that wage employment places on hunting excursions.

The wage economy's disrupting effects have been developing over the past 60 years. As a function of technological change and the federal government's creation of

permanent villages in the Eastern Arctic, Inuit have become increasingly dependent on wage labor in order to procure hunting essentials. As Inuit replaced harpoons with rifles and dog sleds with snowmobiles, hunting became a capital-intensive activity. The adoption of snowmobiles did not take place willingly – the settlement of Inuit in to permanent communities necessitated traveling longer distances to access game or traditional hunting grounds (Wenzel 1991). In addition, in Nunavik, the federal and provincial governments slaughtered many of the sled dogs in the 1950s and 1960s – allegedly for reasons of public safety – eliminating the alternative to snowmobiles (Croteau 2010). Just as snowmobiles have become prerequisite equipment for winter and spring hunting, outboard motors and ATVs have now become standard modes of transportation in summer and fall. Together, these capital expenditures necessitate that hunters have significant incomes. Furthermore, regular expenses associated with hunting and a generally high cost-of-living mean that most Sallumiut have difficulty being able to afford to hunt at some times. In addition, the time that Sallumiut must commit to employment activities in order to maintain a steady income detracts from their opportunities to hunt. These issues are well-documented in the anthropological literature (Chabot 2003; Hobart 1982; T. Smith and Wright 1989; Wenzel 1991). The effects of equipment costs, regular expenses, and the time commitment of wage labor are examined further in the following pages.

5.2.1.1.1. Capital Expenditures

The most significant impediment to regular hunting is access to equipment. In order to hunt successfully throughout the year, a snowmobile and canoe are necessary. Many people also utilize ATVs for hunting inland during the summer or when the snow is not

suitable for using a snowmobile. The cost of this transportation equipment is immense and prevents many people from traveling on the land. To illustrate, consider my conversation with a hunter in his 30s. He had told me that fewer people were hunting today than in the past. When I asked him – expectantly – if the decline in hunters was due to the weather, he instead raised the issue of money:

For example, a snowmobile is around fifteen grand at the Co-op these days. Nobody can afford a Ski-Doo. (Male, age 38)

While this hunter exaggerated by suggesting that no Sallumiut can afford to purchase a snowmobile, there are a large number of community members who do not have the money to make such a purchase. Even those who do manage to obtain a snowmobile often do so on credit. As a result, some people become overextended and are unable to purchase other necessities. Compounding the cost of a snowmobile is its limited lifespan in the Arctic. Multiple residents confirmed what I had read in the literature – snowmobiles only last several years before needing replacement. With the price of a snowmobile usually over C\$10,000, the annual cost of purchasing one often exceeds C\$3,300.

Some Sallumiut are simply unable to afford snowmobiles or other equipment. Most commonly, elders would tell me that they no longer hunted because they did not have a snowmobile. Usually retired, these elders did not have the income to purchase a snowmobile. Yet younger people also noted their inability to buy equipment. In one informal conversation a 33-year-old man explained why he did not have a snowmobile. He had bought a new canoe on credit the previous year and was making payments on that loan before he would buy a new snowmobile. While he was confident he could afford to purchase a snowmobile for the following year, he spent the winter of 2010-2011 unable

to go hunting. Another man, who was in much worse financial straits, was unable to afford equipment of any kind, despite working. With his wife and children sitting next to us, he said:

We have nothing. That's why [we have] no Ski-Doos, that's why. I'm working all the time, everywhere. (Male, age 43)

Although he had a permanent job with regular hours, this man could afford none of the hunting equipment that most Sallumiut considered necessary for successful outings.

While this man still attempted to hunt by foot, he clearly could not spend as much time hunting as his peers who had equipment. Moreover, even if he had hunting transportation, his regular work schedule would restrict the time he had available to hunt.

5.2.1.1.2. Regular Expenses

Regular expenses related to harvesting activities are also a major barrier to hunting.

When I asked one 37-year-old hunter why few people younger than him hunted regularly, he replied:

A lot of things are expensive. Like, if you want to go hunting, you have to have money. You have to get the money to buy gas, to get the ammunition for your gun, and a lot of things. (Male, age 37)

Another respondent delineated the regular expenses associated with hunting, estimating that to go out seal hunting for three or four days would cost him C\$500 for food, gas, oil, and ammunition.

In addition to the goods necessary to hunt, one must make sure their equipment is functioning. Using the snowmobile as an example again, many Sallumiut who owned machines noted that they were in need of some repair. Snowmobiles require regular repair due to the extreme conditions of the Arctic and the heavy use to which Inuit

subject them. One man described the decline in hunting as a product of the time required to maintain a snowmobile:

Less and less [people are hunting] every year. I see that. Because before, every house used to have a sled and a Ski-Doo. It's not like that anymore. It's more cars, because it's a hassle ... to maintain your snowmobile. Because you've got a job and you have to clean it every month and you have to buy gas and you have to buy oil. (Male, age 35)

As this respondent makes clear, the costs of maintaining a snowmobile (as well as fueling it) have already motivated a decline in hunting. Even after obtaining hunting equipment, the repeated cost of using that equipment is a significant barrier to participation in hunting practices.

5.2.1.1.3. Time Constraints

Along with the substantial monetary costs associated with hunting are the opportunity costs hunting exacts. In order to afford to hunt, Sallumiut must have adequate incomes. Whether obtaining money through work or through familial sharing networks, some Sallumiut must spend time working rather than hunting. Even if individuals wished to hunt more – and many profess that they do – it is often impossible to take more time away from work. As one man who has decreased the amount of time he spends hunting explained:

I like hunting very much, it's just that I try to stick with my job, making a living. My kids need to eat. [I've] got to pay bills now. I cannot survive with hunting, the income is too low. (Male, age 38)

This man's testimony demonstrates that the need for money has shifted the balance between hunting and wage labor. While in the past hunting has been the primary vocational activity, Inuit reliance on technologies that can only be purchased through wage labor has relegated hunting to an avocation for many people.

The zero-sum relationship between participation in the wage economy and hunting has affected most Sallumiut for generations. Even community elders describe the conflict between wage labor obligations and hunting activities taking place in their youth. Consider this elder, who first got a job in 1958. When I asked him if he continued to hunt after he began working, he replied:

Yeah, yeah, yeah. Even after I got a job, on weekends we used to have hunting. The workers were hunting on weekends. We do the same thing [now]. We didn't do trap hunting, but we were continuing to hunt on weekends. (Male, age 70)

Although this elder was proud of his ability to keep hunting, it is clear that his participation in the wage economy came at a price. He could only hunt on weekends and he stopped trapping. Those changes indicate the way that hunting shifted from being a subsistence activity to one that supplemented participation in wage earning activities. With the temporal demands of wage labor monopolizing the time of Sallumiut for over fifty years, hunting has been deprioritized within the community.

5.2.1.2. Schools

Among the stressors undermining hunting, Sallumiut often mentioned the role of Southern-style schooling. According to the Inuit I spoke with, institutionalized education exists in a mutually exclusive relationship with Inuit education. As children spend more time in school, these respondents argue, they have less time to learn land-based skills from their elders.

Such an idea seems generally borne out by the history of Inuit education. Salluit's first proper school opened in 1957 and was run by the federal government. Although initially many families did not enroll their children in the school, over the past half-century school enrollment (at least at the primary level) has become ubiquitous. Over the same time period, participation in hunting activities has declined.

Although, today, Nunavimmiut have significant control over the schools through the Kativik School Board, the curriculum is still built around provincial standards (Vick-Westgate 2002). According to many Sallumiut I spoke with – especially elders – the academic curriculum leaves little time for traditional and land-based education, an opinion substantiated in other research (see Pearce et al. 2011). Despite being part of the formal curriculum, several respondents denigrated the quality of Inuit culture courses in the school. When I asked one woman about the cultural education curriculum, she phrased it bluntly, saying, “That’s like a laugh,” meaning that the courses are not serious. She then continued, highlighting the conflict in priorities between the school system and residents:

Well, people talk about the traditional education, but ... as you have heard from the people, it’s not flexible enough. Both adult ed ... and the regular sector. So it’s not just math and second language that they have to learn, we have to learn our own culture too. (Female, age 57)

Others affirmed her position, describing the cultural education courses as too limited to be effective. One elder noted that there is no hunting curriculum in the school, functionally discouraging young people from hunting. When I asked him if there was too much emphasis on Qallunaat education, he responded through an interpreter:

Yeah. At five years old they start to learn the White man’s way. (Male, age 70)

For Sallumiut like this elder, the demands of institutionalized schooling and failure of a formalized cultural curriculum undermine traditional education.

Part of the challenge that Sallumiut face in teaching youth traditional activities is the difference between Inuit and Qallunaat pedagogies. While Southern knowledge is taught abstractly – as information to be learned rather than applied – Sallumiut routinely emphasized that they learned through observation and practice (see Vick-Westgate 2002).

A respected hunter who often shared his hunting exploits with me, explained through an interpreter:

He thinks that a person has to follow a hunter in order to learn how to be a hunter. Not in school. He doesn't have to go to school, because he cannot learn ... that in school. He has to follow a hunter in order to learn how to be a hunter. (Male, age 72)

Similarly, another hunter recalled how he gained his knowledge:

We didn't go to school at that time when we were young. We learned by seeing what [the elders] do. We followed them when they were making igloos. We see ... how they're making [it]. So we try it, try it, and try it. (Male, age 65)

From these perspectives, the school serves as a barrier to hunting education because hunting cannot be taught or learned in a classroom. Instead, both respondents argued that it must be learned experientially.

The impediments to traditional education have serious effects. Foremost has been the decline in hunting among school-aged youth. During one interview, I engaged in a conversation about the decline in hunting with an elder and an interpreter. I was asking if climate change had affected how often young people were hunting. Our conversation continued with his response:

Answer: It's not only that – that they don't want to go out anymore. Not only that.

Question: Not only the weather?

A: Not only the weather.

Q: What are the other reasons?

A: Because the school has interrupted their hunting ways. (Male, age 65)

His immediate response and confidence in his answer signaled to me that the role of the school in undermining hunting was far more significant factor in discouraging hunting than climate change. Certainly the school system has been affecting Sallumiut hunting practices and traditional activities for far longer than the effects of anthropogenic climate

change have been apparent. One older woman explained how the introduction of the school had prevented traditional education:

In [older] generations, [young people] really wanted to learn hunting or sewing and then [the government] sort of forced them to go to school when they didn't want to. But they had no choice but to go, when they really wanted to be outside hunting or sewing. (Female, age 62)

As this elder explained, the school redirected previous generations from participating in traditional activities to attending school. In effect, the government began to chip away at the integrity of knowledge transmission fifty years ago. Today, that policy and its more recent iterations have led to declines in traditional knowledge, land-based skills, and hunting among younger Sallumiut.

Several respondents captured the antagonism between traditional education and the institution of the school. While speaking with a younger man who was very much concerned with hunting, I asked him if he was one of the more serious hunters his age. He responded that there were some who were much more active hunters and then continued:

And those guys that go hunting today are the ones who dropped out of school when they were kids because they were hunting with their fathers and grandparents. The school was too much for them to keep up ... the Inuit way of living, the traditional way. There are a few who don't speak English that I know of. They spent most of their time out there hunting and camping while I was in school. (Male, age 33)

This interviewee makes clear that schooling and traditional education are currently – to some degree – mutually exclusive. That is not to suggest that Inuit youth must choose between a Southern-style education and a traditional education, but that individuals who favor one form of knowledge must necessarily sacrifice some of another form. The woman previously quoted as referring to cultural curriculum in the school as a “laugh,” shared a similar sentiment and revealed its importance:

I also wanted to say that I have known students, grade 3, 4, 5, 6 students, especially young boys [who] would rather go out hunting and not care too much about the education system. And they tend to drop out because they'd rather go hunting. So, even though they don't have the system to educate them, like math or whatever, they are able to survive. They've been taught to survive in the land. These kind of people, you can rely on for survival. (Female, age. 57)

Not only does this respondent highlight the frequent incompatibility between institutional education and land-based skills, but she also asserts that it is the youth who hunt rather than spend time in school who can be trusted for safety on the land. Importantly, she emphasizes the relationship between traditional knowledge and survival, a relationship that is conspicuously absent in subjects such as math. An elder affirmed the connection between traditional knowledge and survival when I asked him if younger Sallumiut knew enough to be safe on the land. He responded through an interpreter:

They're not doing what they used to do, so ... it's dangerous. They go to school. (Male, age 60)

While the woman quoted above identified youth who had dropped out of school as the people "you can rely on for survival," this elder categorized youth who attended school as being at risk while hunting. For him, the school monopolizes time that used to be spent learning land-based skills. Consequently, young people do not have the knowledge to travel and hunt safely on the land.

Rather than seeing climate change as a fundamental threat to hunting activities, many Sallumiut linked the decline in hunting practices to institutional education.

Institutional education has interrupted traditional hunting practices in ways that the modest cultural curriculum now incorporated in the schools cannot remedy. The basic schism between the abstract pedagogy of the school and the participatory learning of traditional education prevents students from gaining the skills and experience to be effective and motivated hunters. As a result, the most serious and safest hunters were

students who once dropped out of school relatively early to learn traditional skills from their relatives. The majority of Sallumiut - who spent their youth in school – either did not become active hunters or lack some of the critical skills and experience enjoyed by past generations. Thus, the Southern-imposed institution of the school has significantly contributed to the relative marginalization of hunting practice and skills.

5.2.1.3. Southern “Culture”

The third major threat to participation in hunting activities that Sallumiut regularly expressed was the effect of what I term, for the sake of simplicity, Southern “culture.” This term refers to pastimes and diversions that are characteristic of Southern Canada and that are now present in the North. In the following sections, I focus on two manifestations of that culture: media and controlled substances.

5.2.1.3.1. Media

Satellite television, video games, and Internet access are common in Salluit. The majority of homes that I visited had televisions with satellite access. Many also had video game systems for children and somewhat fewer had broadband Internet access. Frequently, elders would tell me that young people were not hunting as often because they were spending their time watching television and playing video games.

Speaking critically of the younger generation, many of my interviewees argued that young people did not find hunting to be as much fun as the new pastimes. A man in his 30s, with a large family himself, explained why younger people are not learning as many hunting skills:

Nowadays they don't [learn] much because we have too much Internet and too much TV at home. (Male, age 37)

As this man suggests, the ubiquitous presence of Southern media technologies distracts and discourages young people from learning how to survive on the land. In an exchange with a middle-aged man, I heard a similar observation while a child in his home played videogames. He began:

Answer: In order to survive from generation to generation, the young really have to go out and learn hunting techniques. Fishing techniques.

Question: But now they're not?

A: No. These are modern times. TV, games, school. (Male, age 49)

Such observations were not made by younger adults (those under 50) alone. Elders also recognized the changes brought by Southern media forms. When I asked one elder if climate change was causing fewer people to hunt, she replied through an interpreter:

The reason they don't go out hunting as much is because they're doing what they usually do in town. ... She knows that it's from that. That's the only thing they work on now. Playing video, watching TV. ... It really gets her because in a good weather like that, they're just playing video games or watching TV. ... It's not only teenagers that are affected with the watching TV, it's even middle-aged people. (Female, age 62)

This elder observed the pervasiveness of the problem. The ubiquity of television extends across multiple age groups. Rarely would I walk into a house in Salluit where the television was not on. Rarer still were the occasions when I entered a residence without a television or even satellite access.

Whereas television is a diversion enjoyed by community members across age groups, video games are an equally problematic pastime that specifically affects Sallumiut under 30. Like television, video games distract younger Sallumiut from learning the skills they need to be effective and safe hunters. One father described how Southern diversions dominate young people's lives. When I asked him if young people were hunting as much as they used to, he replied in English with considerable effort:

No ... Video games, hockey – that's it. [A youth] went out, he's walking around, [and] after he goes back home. Video games. (Male, age 43)

In other words, young community members do not engage seriously in activities other than pastimes. While many Sallumiut would mention the merits of hockey – indeed, most are fans of the Montreal Canadians and Salluit's own team – few would suggest that video games benefit youth. Instead, as this man suggests, video games monopolize young residents' time and undermines hunter education.

The dominance of video games as a diversion poses significant risks to safety on the land and to the integrity of Inuit identity. One elder – who was involved in educating young hunters - articulated the negative effects of video games:

We know that [young people] have [a] problem because they have everything. Like video games ... video games are not good. It's dangerous. We know that now. (Male, age 65)

Through his response, it is clear that Sallumiut now recognize the ill-effects of video games. Most significantly, he highlights their danger. In the context of the conversation, danger might have multiple meanings. Among them is the danger that video games pose to the ability of young people to learn traditional skills and be contributing members of the community.

I became aware of the damage video games cause while speaking with a man in his early-30s. He was sitting at the Northern Village offices and was waiting to get paid for a few days of work he had done during the Ungava Cup hockey tournament. As we talked, I learned that he was unemployed and spent most of his time playing video games. He told me that every night he would play video games until 7 am. When I asked if he ever went hunting he explained that he hadn't been hunting since he was a teenager. His case illustrates the shift in priorities among many young people. Even when they are at

the age of peak physical ability, they have not learned the skills for, or developed an interest in, hunting.

An even more recent technological encroachment into Inuit communities is the Internet. While the Internet no doubt plays an important role in communication between Inuit communities and the South, it also has its negative effects – especially in relation to young people. A mother of several children explained that hunting was declining because adults were not taking their offspring hunting as frequently. When I asked if that was a problem, she confidently replied:

I think so. It could create a problem, because by then, that particular young person will not want to hunt or go out in the land and just staying home on the computer or whatever. (Female, age 47)

Her concerns are both a warning and an observation. She expects that in the future, the lack of traditional education could lead to a decline in hunting. Yet she also acknowledged that fewer young people are hunting already. Many of them are becoming ever more preoccupied by the Internet and other technology. It is, therefore, increasingly difficult for young people to learn and be motivated to hunt.

5.2.1.3.2. Drugs and Alcohol

Along with technologies brought from the South, many Sallumiut have adopted another form of diversion characteristic of Southern Canada and the United States: drug and alcohol abuse. For some Sallumiut, drugs and alcohol were the most worrisome introduction into the community. I asked one woman about whether she worried about her children's and grandchildren's future. Although I expected her to tell me that she was concerned about the effects of climate change, she instead told me that it was alcohol and drugs that made her apprehensive. Assuming her answer was incomplete, I asked whether there were other factors that worried her, she replied:

Not so much about other things. Other things we are able to cope with the change more. But with these kind of problems, it's mainly the drugs. The heavy drugs and the alcohol. (Female, age 47)

That this respondent was not concerned about other issues speaks to Inuit resilience and adaptive capacity in the face of major changes. However, she also speaks to how severely drugs and alcohol have affected the community. A man who does not hunt clarified the effect of drugs and alcohol on intergenerational relationships:

It probably mostly has to do with cannabis and booze. Elders tell us, "Don't do that stuff" and young people take it anyway. Probably widening the generational gap. (Male, aged 49)

As this man describes – and others confirmed – substance use undermines communication between elders and younger generations. The consequences of such a social change are immense and likely affect all aspects of community life. A breakdown in intergenerational communication has a particularly significant effect on hunting, where skills and knowledge are passed on through intergenerational relationships.

The role that substance abuse plays in declining hunting participation is significant. According to some members of the community, drugs and alcohol are the principal reasons that the number of serious hunters has declined. One of the most respected hunters in the community explained the problems with drugs through an interpreter:

The other thing that worries him most is [that young people] smoke a lot. They smoke weed. They're more into weed than being interested in hunting. (Male, age 70)

As this elder indicates, many younger Sallumiut have prioritized substance use over hunting education and practice. According to other informants, the problem is widespread in the community. One younger man, who no longer hunts, told me that most people 18-25 abuse drugs rather than go hunting. Similarly, a 57-year-old woman

informed me that there are fewer hunters because of drugs and alcohol, even among adults over forty.

As these respondents reveal, drug and alcohol abuse is a critical barrier to hunting activities. By breaking down intergenerational relationships critical to hunting education and by distracting youth from hunting activities, substance use exerts a negative pressure on participation in land-based practices. Moreover, the use of substances both costs money and makes earning money more difficult, further discouraging participation in expensive hunting excursions.

Like the challenges of the wage economy and institutional schooling, Southern diversions have already undermined the traditionally central place that hunting has in Inuit life. These introduced ways of having fun have become so popular among youth that some Sallumiut no longer wish to hunt. More significantly, the time spent engaging with media technologies or using substances detracts from the limited time available to learn land-based skills. Even if young people decide in the future that they want to hunt, they will likely lack the skills to do so safely and effectively.

5.2.1.4. The Colonial Challenge to Hunting

As the previous pages indicated, the threats to hunting that Sallumiut most often discuss are a product of historical and ongoing colonial relations. The combination of economic shifts, the establishment of Southern education, and the rise of Southern-style leisure form an immense barrier to the continuation of hunting as Inuit have done for hundreds of years. These economic, institutional, and cultural shifts have stripped some Sallumiut of the financial capacity, time, and motivation to hunt.

In comparison to the projected effects that climate change may have on hunting, the wage economy, institutional education, and Southern diversions have pressured hunting activities for decades. The money and time required make hunting an activity that is pursued only between work and school obligations. The educational system, media, and substance use have damaged intergenerational relationships critical to the exchange of environmental knowledge and skills. And the availability of Southern media, drugs, and alcohol have distracted young people from expending the effort necessary to learn how to hunt effectively.

Whereas climate change merely alters the conditions a hunter might encounter, the colonial legacy changes the calculus of choosing to hunt and learning the necessary skills. As a result, the Southern-catalyzed social changes that Inuit have faced for fifty years are the real drivers of decreasing participation in hunting activities.

5.2.2. Threats to Country Food Access and Consumption

As with hunting, I anticipated that Sallumiut would identify climate change as a major threat to country food access and consumption. Sallumiut consider the consumption of country food extremely important, especially given the exorbitant cost of store-bought food. And while perhaps more respondents were concerned about the effect of climate change on country food than on hunting, most Sallumiut offered an alternative explanation for declining access to, and consumption of, traditional food.

As revealed in the previous chapter, many Sallumiut logically expect that decreases in hunting will lead to less country food for the community. While some respondents anticipated that the food supply would diminish because of climate-related barriers to hunting, many more simply stated that less hunting would lead to less country

food. As demonstrated in the preceding section, most Sallumiut attributed the decline in hunting to economic, institutional, and social causes rather than climate change.

Therefore, we can accredit much of the concern about access to country food to non-climatic issues such as the wage economy, schools, and Southern-style diversions.

Yet, access to country food is not the gastronomic issue that Sallumiut raised most often. More frequently than respondents mentioned concerns about access, they mentioned fears about a declining preference for country food among certain segments of the population. According to residents, country food consumption is declining, particularly among younger people. These respondents argued that the decline in consumption is catalyzed by a preference among young people for store-bought foods over country food.

Many Sallumiut emphasized that fewer children were eating country food. Although most of these respondents said that, in their family, children enjoy country food, they argued that young people in general were less interested in eating country food. For example, an interpreter related the thoughts of one of the oldest members of the community:

He has heard that they are eating less country food, teenagers nowadays. (Male, age 78)

Another elder reiterated the observation that youth are not eating as much country food, stating through an interpreter:

Nowadays they just go to the store and buy store-bought food, instead of trying to eat country food. (Male, age 62)

In that same interview, my interpreter shared her thoughts about declining county food consumption:

But the kids don't want to eat raw food anymore. Too complicated for them.

From these observations, it is clear that many adults perceive a loss of interest in country food on the part of young Sallumiut. When speaking with a 30-year-old man, I confirmed these observations. When I asked him if he was able to eat as much country food as he wanted, he told me “I’d rather eat from the stores.” I was surprised, as few previous respondents had shared such an opinion. I questioned him again, asking him if he could choose between frozen caribou and a cheeseburger, which he would select. He quickly replied, “Cheeseburger” and added that he would always make that choice. He asserted that his peers would also consistently choose store-bought food over country food.

Interviewees offered various reasons for the declining consumption of country food. Often, respondents would link the decline in consumption to parenting. Many Sallumiut argue that people develop an “immunity” – by which they mean a tolerance or need – for certain types of food. Usually, they discussed this in the context of how country food shortages might affect elders who needed the traditional food they grew up with. Sometimes, though, interviewees would use similar language to talk about the younger generation’s taste for store-bought foods. For instance, one elder noted:

They like chicken, sausage, pork chops, hot dogs, hamburgers. Because they’re born with it now. (Male, age 65)

His statement suggests that despite living in the North, young people have become conditioned to eat store-bought food because it is a ubiquitous part of their upbringing. While that is not true in all households, it certainly is true in many. A younger woman highlighted the difference in her upbringing from her peers who prefer store-bought food:

They’re brought up like that. Like not all the families are the same. Like I was brought up with country food, so I love eating country food. But younger people are getting picky. And there’s good stuff at the stores, so I guess they prefer store-bought. (Female, age 25)

While this woman had the benefit of being raised eating country food, she recognized that many other young people have not had this opportunity. The result, she emphasized, is that the youth are becoming “picky” about the foods they eat.

Other respondents also attributed the decline in country food consumption to parenting, but in more pejorative terms. Several asserted that parents are giving their children too much choice when it comes to diet. One elder discussed how parents react when children do not want country food:

When they found [that children] don't want it, they stop. They only buy from stores. (Female, age 65)

Sharing a similar view, a young father said:

Their parents give them too much choice of what to eat. Like, “You want this or that?” It's too much like that and I see that it's not good. Like it's spoiling them. I can only blame the parents because you have to have good family values. (Male, age 37)

These residents are deeply critical of the leeway that parents allow their children regarding diet. They underscore the fact that children are dictating the kinds of food that they eat.

Yet parents are placed in a difficult situation. Children have become increasingly demanding. An elder quoted earlier explained how some young people react in extreme ways:

It's the kids that don't want to eat. Even they don't want to see us older people eating raw food. It offends them to see [older people] eat like that. (Male, age 62)

According to this man, young people have diverged so much from traditional tastes that it is affecting the ability for the generations to relate to one another. Some parents might find young people's resistance difficult to face.

Furthermore, children are not alone in favoring store-bought food. Several interviewees indicated that even adults are less committed to eating country food and much of that has to do with the convenience of store-bought food. As one man put it:

Less people are more interested in country food nowadays because they're more used to store food. ... A man will say, " Oh it's too cold for me to go out there. I don't want to go out and go and kill caribou. I can go and get some food from here [the store]". Some people are like that. (Male, age 56)

This man underscores that, in comparison to the work entailed with obtaining country food, using store-bought food – especially popular frozen, prepared meals – is much easier. Others offered similar perspectives. For example, one man hypothesized about why parents would feed their children store-bought food:

Maybe us adults are feeding teenagers less country food because it's very convenient to buy chicken that you can just put in the oven. (Male, age 46)

Like this man, another father suggested that the use of store-bought food is motivated by the ability to heat-and-serve:

Maybe because it's easy for the parents to cook store-bought food. Throw it in the microwave and it's ready. (Male, age 49)

As these residents make clear, a significant part of the motivation towards store-bought food is convenience.

5.2.2.1. The Colonial Challenge to Country Food Consumption

The shift towards store bought food is both generated by and generates the economic, institutional, and cultural conditions discussed in the section on declining participation in hunting. For example, the time constraints of employment and the capital costs of hunting make accessing country food challenging. Unlike country food, which takes time, effort, and skill to obtain, store-bought foods are readily accessible.

While purchasing food might save time, the high cost of food in the Canadian Arctic means that Sallumiut must devote significant financial resources to food purchases. This financial burden necessitates continued commitment to the wage economy and aggravates the high costs of hunting. Moreover, Sallumiut often purchase prepared foods that are high in fat, sodium, and sugar. Undoubtedly these foods appeal (and are marketed) to young adults and children, just as they do in other parts of Canada and the United States. As children grow accustomed to eating packaged foods, there is less of an incentive to learn hunting skills. The lack of experience hunting in turn further undermines the connection to country food. Thus, the declining consumption of country food reflects the ongoing colonial and market encroachment into the North.

5.2.3. Threats to the Sharing Ethos

Like participation in hunting and the consumption of country food, the culture of sharing among Sallumiut has changed in significant ways as a result of colonial intrusions. In the past – and to lesser degrees in the present – sharing has been a defining feature of Inuit communities. As one woman, fluent in the contrasts between Inuit life and Southern life, put it:

When you think of [an] Inuk ... the first thing you'd think of is not for one's self. I look out for one's brother. So it's like all for one's self [in] your culture, but in our culture it's like not for one's self. ... That's the means of survival. (Female, age 58)

Contrasting sharing to the narcissistic ethos of Southern society, this woman stresses the value of reciprocity in Inuit communities. Indeed, reciprocity is an integral characteristic of Inuit life. Demonstrating that fact, a young woman explained what would happen if the sharing ethic disappeared:

For most of the population, if it was like that, Inuit culture wouldn't be there anymore. (Female, age 25)

The importance of sharing that this respondent relates indicates the risk that changes in exchange entail.

The cultural significance of sharing is particularly germane to my study because a majority of Sallumiut with whom I spoke are cognizant of the shifts in the sharing ethos, which mostly revolves around food. While interviewing a pair of married elders, I asked if residents were still sharing as much as they had in the past. The husband responded ruefully:

No, no, no. We get a part or something ... but not like before. When somebody comes with the seal, we used to go there and we'd get something out of it. Not like today. It is different now. Sometimes they keep the seal for themselves. ... It's not the same anymore. (Male, age 64)

This man's notion that people had become less generous was not unique. Other respondents shared similar views. A grandmother explained to me why sharing is important:

I'd like to eat with other people because we eat ... more food. With others, they eat more [and] we eat more. We love to share food with others. It's good that way. It doesn't happen much anymore, but it used to. (Female, age 65)

Not simply an observation made by elders, some youth are also aware that sharing practices have declined. The young woman quoted above noted:

The helping and sharing is still here, but it's not as much as it used to be anymore. Because younger persons think that they rule now. (Female, age 25)

As these Sallumiut describe, sharing traditions are less practiced today than in the past. In light of the social significance of sharing, it is important to identify the causes of the change.

To reiterate my findings from Chapter IV, I expected to find that climate change and its attendant effects would negatively impact sharing. Yet, as I delineated in more detail in that chapter, very few Sallumiut argued that changes in sharing are a function of

climate change. Yet a large number of Sallumiut recognize that sharing has declined and offer explanations for this change. Based on my interviews with residents, I identified two major reasons for the decrease in sharing, both related to the colonial relationship with Canada. According to respondents, the decrease in sharing is largely caused by the commoditization of country food and the quota on beluga hunting.

5.2.3.1. The Commoditization of Country Food

Many Sallumiut with whom I spoke discussed the decline in the sharing of country food in relationship to money. Country food, which scholars have often characterized as a common pool resource (Gombay 2005a; J. Schmidt and Dowsley 2010) – a resource from which it is difficult to exclude access – has become increasingly commoditized in recent years. Gombay (2005b; 2009) demonstrates that the sale of country food to institutions (specifically the Hunter Support Program) has become widely accepted and sales between individuals are becoming more common, if still condemned. While Gombay argues that self-imposed restrictions on the sale of country food allows the commoditized country food market to coexist with a traditional sharing system, I found contradictory evidence in Salluit. Specifically, my interviews suggested that country food is becoming commoditized in relation to both institutions and individuals. Furthermore, some respondents explicitly connected the establishment of the Hunter Support Program to the private sale of country food.

Many Sallumiut suggested that sharing had declined because residents had become more interested in money. While interviewing an elder who had been an accomplished hunter in his younger years, I learned that young hunters are more

motivated by monetary compensation than in the past. He explained through an interpreter:

Let's say for hunting: younger [people], they just want to get money. Before they didn't think about the money for hunting. Before it was not like that. Slowly, the hunters [have become] few and they go hunting just to get money. ... [A] few hunters ... don't use only Hunter Support and they're selling to people. ... Let's say I go and get the mussel, I pronounce by radio or they're looking for a person they want to buy [their harvest]. (Male, age 80)

This elder's experience reveals how country food has been commoditized in recent years. As the second part of his statement demonstrates, the commoditization has extended even to the private sale of harvested foods via the local FM radio station. His perspective was certainly not an isolated one. Another elder also pointed to the financial motives of contemporary hunters, saying through an interpreter:

Those who would hunt, they only think of money now. (Male, age 72)

The emphasis that these respondents place on monetization of harvesting demonstrates how novel this commoditized system seems. Only a few interviewees suggested that the sharing system had not significantly changed.

The cause of the change is, as Gombay highlights, the formation of Hunter Support Programs, which purchase harvests from hunters and distribute the meat through the community (Gombay 2005b). While Hunter Support is very popular and virtually all respondents spoke positively about its effect on food security, several people are aware of how it has altered the community's conception of country food. For example, one experienced hunter explained how Hunter Support has reorganized the sharing system:

They want only money ... instead of sharing meat with the people. ... If two canoes, three canoes [go out and] if one catches one seal, he gets only because he wants to go to Hunter Support. Years ago, one seal, three boats – everybody shares the one seal. (Male, age 65)

Although the Hunter Support Program provides needed funds for hunters to allay the capital expenditures and regular expenses associated with hunting, this man uncovers the unintended consequences of the policy. By monetizing harvests in relation to institutions, country food becomes commoditized even in interpersonal relationships. As a result, the traditional sharing system has declined. A resident contrasted sharing practices before and after the establishment of the Hunter Support Program:

I've seen a lot of improvements with the program in town ... [but] it's not all good. Because before the Hunter Support Program, the town shared their catch without pay. They made sure that whoever went on the land or fishing or in the waters, they shared freely with every household. Not matter if it's a tiny piece, they share it anyways. This is diminishing. That's the bad part, because even on the local radio you can hear somebody, "I'm selling a goose, a frozen goose, I'm selling mussels." You need money to get these now. It's not shared. (Female, age 58)

While she continued by explaining the benefits of the Hunter Support program (the subsidization of hunting), she unequivocally expressed the disintegration of the sharing networks that defined Inuit life for generations. Moreover, she links the rise of the interpersonal sale of country food to the establishment of a Hunter Support program that pays for harvests. The role of Hunter Support in changing the sharing system was confirmed by another man, who noted that communities without Hunter Support programs share more than those that have programs.

The private sale of country food is a growing problem in Salluit. The majority of residents I spoke with were opposed to the sale of country food between individuals. One younger man explained to me:

It's been crazy because they never used to sell country food, but now they try to sell maqtaq. Sometimes people sell fish. And those mussels, they always sell mussels now. And seaweed and blueberries. ... We hear that a lot. ... They should at least try something else, other than trying to sell country food. Myself, I once told them that, "You guys should put a stop to ... any kind of country food on the radio." ... It's not right, I'd say it's not right. It's not our tradition, too.

And it's especially not right when people take something from the community freezer ... and sell it on the radio. (Male, age 37)

This man was not alone in being angry about the private sale of country food. When I asked a teenager about what he thought of the practice, he exclaimed:

It sucks! ... We don't have to sell the food, like caribou meat [and] fish. We don't have to sell it, but we can give [it for] free. It's free food. It's free for all of us. (Male, age 18)

Just as this young man expressed his exasperation about the private sale of country food, another man – struggling to express himself without the assistance of an interpreter – shared his outrage:

Some people he got no money, he can't take it. He want it, he got no money, he can't take it. Only take it with dollars, dollars, dollars. It's like the same as the South. (Male, age 43)

With his relation of the private sale of country food to the South – a society that many Inuit view as driven by the unethical pursuit of money – this man underscores the problem that Sallumiut see in the private sale of country food. The sale of country food further erodes traditional sharing practices – a defining characteristic of Inuit life – in the service of impersonal economized exchange.

The shift towards a monetized country food market does not simply make Salluit more like the South, it is a product of the colonial intrusions of the South. Several people explained why the selling of food has become more common. One highly respected elder noted without a hint of judgement:

Somebody is looking at money more. ... When you spend something, you keep something. (Kakinik, p. 59)

Tying the increase in country food sales to the costs of hunting, this man reveals how the economic shifts that have disrupted hunting activities have also disrupted sharing practices. Given the expense of hunting, the high cost-of-living, and the relative lack of

employment opportunities, Sallumiut desperately need income. Some members of the community have sought to augment their income through the institutional or private sale of country food. Even the Hunter Support Program itself is designed to combat the ill-effects of the wage economy in Salluit. Thus the economic shift that has taken place in the North has directly contributed to the decline of traditional sharing activities. Indeed, my interpreter confirmed that the need for income motivates the sale of food. She explained:

They sell it instead of sharing it. They sell it now to get food on the table or something else.

Like the previous statement, my interpreter connects the choice to sell country food to a need for income. Together, these residents demonstrate that the decision to sell food is not independent of the structural changes to the economic system wrought by Canada.

Not all of the respondents who criticized the sale of country food attributed it to the cost of living in Nunavik. However, several people did link it to another Southern introduction: drugs. According to multiple respondents, the food sellers were motivated by a desire to purchase drugs. When I asked one man about how sharing had declined, he replied:

People in town, they like pot. They want pot money. (Male, age 49)

Reflecting the same sentiment, the young man quoted earlier as saying that selling food “sucks” explained why some Sallumiut engaged in the practice:

They need money for weed, that’s why. (Male, age 18)

And another young man expressed the same opinion, saying:

Most of them sell because they want drugs or money. (Male, age 30)

Although these statements should not be generalized to suggest that all or most Sallumiut who sell food do so in order to purchase drugs, it is significant that multiple respondents independently addressed the issue. Further, it reflects the same general process as selling food in order to make legal purchases in the community. As Sallumiut have become inundated with institutions, products, and pastimes from the South, traditional sharing networks have suffered changes. Again, the changes in Inuit practice stem from the broader colonial context.

5.2.3.2. Government Restrictions on the Beluga Whale Harvest

Like the commoditization of country food, the quota on the beluga whale harvest is a Southern introduction that drastically compromises sharing institutions. The Canadian Department of Fisheries and Oceans established a quota, currently limiting Salluit's beluga harvest to twenty-five whales per year (George 2010). The vast majority of Sallumiut I spoke with oppose the quota, arguing that beluga populations are not threatened by their hunting activities. Moreover, almost all Sallumiut insisted that they have not and would not overharvest beluga (Tyrrell 2007 records similar perspectives in the community of Quaqtaq). Yet many people did not limit their criticism to the lack of access to beluga and instead emphasized the deleterious effects that the quota has on sharing within the community.

The government-imposed limits on the beluga harvest restrict residents' access to local delicacies, especially maqtaq (beluga whale skin). As a result, many Sallumiut have observed changes in the way community members share with one another. One man explained how the quota affects sharing:

Without the quota we tend to share more ... and we get to see less crime being done. With the quota, there seems to be more greed and when there's greed,

there's more crime. ... If there was no quota, we'd get what we ... want and that was it. (Male, age 53)

While emphasizing that Sallumiut responsibly manage the beluga population themselves, this interviewee highlights the ways that the quota is harming the community. By preventing the community from getting an adequate whale harvest, the quota regime creates a scarcity that encourages greed, crime, and hoarding. In a discussion with an elder, I gathered more details about how the quota catalyzes crime and selfishness. He explained:

These days, whenever somebody caught a beluga, when there already has been a quota set and they want to get extra, it's bad because the person will not give away what he's caught. ... They're shy to share what they have caught illegally. (Male, age 72)

In other words, this man is revealing that even if Sallumiut harvest beyond their assigned quota, sharing of that meat is inhibited. Hunters are fearful of punishment for violating the quota and will not share to avoid being caught. Thus the quota restricts sharing through both scarcity and fear of legal repercussions.

The quota has not simply forced a shift away from the practice of sharing, it has also engendered conflict within the community that undermines the ethic of sharing. While the tensions resulting from the quota are implied in many of the interviews I conducted, in two cases respondents addressed them directly. One elder, who emphasized that he did not want anything to do with the whale harvest because of the tension, explained:

The only problem people are fighting over is maqtaq. The whale skin. This is something we don't need, fighting over that, because this is not our custom. ... People are fighting over that nowadays. Changing the lifestyle. ... I see my friends sometimes fighting over [it], disagreeing with each other on that. It's one of those things that the white people bring in and then people fight over that. This is something the government does to us – namely, the Department of Fisheries and Oceans. (Male, age 60)

This man's testimony demonstrates that sharing is not simply a practice, but an ethic for interpersonal relationships. The quota's effect on sharing practices is indicative of its deeper impact on the social and ethical fabric. Another woman suggested similar consequences when I asked her about whether there was conflict due to the quota:

It's not so much arguing over it ... it's a silent thing that it's there. (Female, age 57)

Although she does not share the same observations of open conflict as the previously mentioned elder, she similarly identifies the detrimental social effects of the quota. Specifically, she's observed passive conflicts emerging between people due to the quota. The observations of these two community members suggest the deep changes in the sharing system brought by the quota.

Many residents do not assume that the government had good intentions when it established the quota. Instead, some Sallumiut interpret the quota – and its effect on sharing - as representative of the government's desire to marginalize and assimilate Inuit. While interviewing an elderly couple, their granddaughter began interjecting in the conversation to clarify some of their answers. When we began to discuss the quota, she became worked up and said:

It's like the government doesn't want to give us any food that we can afford. ...
It's like the government doesn't want us to eat any country food anymore.

From the perspective of this young woman, the quota is an assault on the ability of Inuit to maintain their traditional practices. Rather than a technical manifestation of wildlife management, she sees the quota as the imposition of external values. A younger man discussed in great detail how the quota is a product of Southern values rather than a solution for a technical problem:

The DFO scientists, they think they know everything because they ... track ... like one or two beluga, but there's thousands passing by. ... The animal rights activists always say they're protecting the wildlife and all, but what they're protecting is what they don't have. ... They don't have the belugas, they don't have the caribou, they don't have the polar bears, they don't have the penguins and all. What's they're not protecting are the cows, the pigs, whatever there is. But whatever is up North, that is out of reach, they use that as a means to make more money. ... Whenever they're discussing about the wildlife in the North ... the first thing on my mind is that they will not impose a ban or put them as endangered or as a species-at-risk or whatever title they give in order to minimize Inuit from hunting them. I really don't like that. The wildlife scientists, how are they studying our animals? They come here for, what, two months? And there's twelve months in the year and in two months you think you know everything about that animal? There's not enough input from Inuit views. ... Even though there's a lot of myth ... there's Inuit belief that, I'd say, is as fair as a scientific finding because it's been passed on from generation to generation. (Male, age 37)

In his critique of the beluga quota and the system it represents, this man demonstrates that most scientific exercises are grounded in assumptions foreign to Inuit epistemology. He queries the strategies that scientists use to study Arctic animals and notes that they rely on selective sampling and short field seasons, of which he implicitly disapproves. Further, he highlights the fact that Inuit understandings of animals are not sufficiently incorporated into wildlife management programs. Significantly, he conflates animal rights activists (who have explicitly attempted to undermine Inuit hunting culture) with scientists. That conflation reflects the deep distrust of government policies regarding wildlife and the motives that those policies embody. Finally, he emphasizes that the goals of wildlife harvest restrictions are to “minimize Inuit from hunting” and to generate wealth for the South, goals which explain the apparent hypocrisy of protecting Arctic animals but not domesticated animals in the South.

The notion that the government acts in opposition to Inuit with policies like the quota is more explicit in the words of a cantankerous elder I interviewed. When I asked him about the quota, he angrily responded:

Government will play anything that they wish to play towards the culture. I know they've tried to wipe out the Inuit nation in the past, through me. So they don't give a fuck about the people. (Male, age 63)

The deep distrust of the government that he expressed reflects the intrusion and damage that Canada has inflicted (and continues to inflict) upon its Inuit citizens. Although his palpable anger demonstrates the way that the quota in particular, and government policies in general, have damaged the community in a variety of ways, one victim of this policy is the integrity of traditional sharing practices. To Sallumiut, the effects of the quota are not unforeseen consequences but part of a long-term disregard for Inuit culture on the part of a Canadian government that has historically sought to eliminate traditional practices. Like the challenges to hunting and consumption of country food, the decline in sharing is directly attributable to government policies and the extension of Southern values.

5.2.3.3. The Colonial Challenge to Sharing

The commoditization of country food and the quota on the beluga harvest are products of the colonial legacy in Nunavik that fundamentally complicate traditional sharing practices. The expansion of the wage economy and the need for income motivate Sallumiut to take part in the sale of country food, whether to the Hunter Support Program or directly to community members. While selling food to the Hunter Support Program is not condemned as often as sales to individuals, some Sallumiut recognize that it changes sharing dynamics. The private sale of country food is widely recognized as an inappropriate practice. Yet both are driven by a need for money, either to recoup hunting costs or for other expenses (both legal and illicit). The demand for income undermines the sharing ethos that is characteristic of Inuit communities.

The imposition of the quota on the beluga harvest discourages sharing by artificially creating a scarce resource. The lack of beluga products motivates some

Sallumiut to keep what they are able to obtain rather than offer it to other community members. Even when the community catches more than its quota of beluga, residents are reluctant to share because they fear punishment for overharvesting. Most Sallumiut oppose the quota and some see it as evidence of the Canadian government's disregard for Inuit knowledge and culture.

Whether or not the Canadian government recognizes how its policies affect Inuit culture, the past and current government policies have the effect of marginalizing sharing in the community. Together, the commoditization of traditional food and the quota on beluga break down exchange within the community and further entrench the wage economy.

5.3. Conclusions

The preceding account of the significant threats that Sallumiut face regarding the maintenance of traditional hunting, eating, and sharing practices stands in stark juxtaposition to the relative lack of concern that residents expressed about the effects of climate change on Inuit culture. In comparison to the widespread, institutionalized challenges that Inuit face on a daily basis, the still-unclear environmental changes in the Arctic – changes relatively similar to those Inuit have faced for hundreds of years – seem comparatively innocuous. That, of course, is not to say that climate change is not a threat to Sallumiut. Rather, residents' testimony details just how daunting are the hurdles unrelated to climate change.

Inuit face a matrix of Southern impositions, ranging from imported economic and educational systems to processed foods and hunting restrictions. Furthermore, many of factors that undermine cultural integrity and Inuit identity reinforce each other. For

example, a newfound preference for store-bought foods among youth further binds families to the wage economy. The consequences of these colonial impositions on hunting, country food consumption, and sharing are nothing new. Over several decades, they have destabilized the traditional value of self-sufficiency, interrupted intergenerational relationships, and stressed an ethical system based on reciprocity.

It would be a mistake to examine how climate change may affect Inuit culture in the future without taking account of the threats that already exist. Moreover, to attempt to formulate policies to help Inuit maintain their livelihoods vis-à-vis climate change without first addressing the various other factors affecting cultural integrity would be self-defeating. The colonial legacy and its consequences on Inuit culture must be addressed more fully to ensure that essential Inuit traditions are not decimated.

CHAPTER VI

CONCLUSIONS AND RECOMMENDATIONS

I began this thesis by asking how climate change influences the cultural dimensions of life in Inuit communities. Without the benefit of many precedents in the literature, I investigated this question in the community of Salluit. Yet, once in Salluit, I did not find a community emphasizing the threat of climate change. Although Sallumiut related their observations of climate change and delineated ways that it influenced behavior, local residents did not characterize climatic shifts as a threat to their cultural practices. Rather, I found myself in a village that was much more aware of the negative impacts of their colonial relationship with Southern Canada, especially as these impacts undermined traditional practices. During my interviews for this thesis, Sallumiut explained to me how the wage economy, educational institutions, Southern diversions, market-based food systems, and wildlife management programs marginalized their hunting culture, decreased young peoples' consumption of country food, and constrained the sharing practices integral to their ethical system.

6.1. Implications

Identifying the economic, institutional, and social changes in the Canadian Arctic and their deleterious effects on Inuit culture is not novel. Indeed, many anthropologists have devoted substantial texts to exploring such issues (see, for example, Brody 1975; Condon 1987; Dorais 1997; Roberts 1983; Shephard and Rode 1996; Stern 2010). Furthermore, a number of the climate change vulnerability scholars are aware of the pervasive effects of a half-century of rapid cultural change on Inuit communities. Yet, what is unique about this study is that I arrived in Salluit expecting to investigate issues of climate change and

instead encountered an overarching narrative about the corrosive role of Southern institutions and practices on Inuit cultural activities.

Such an unexpected result points towards a schism between policy and research priorities and human needs. As Desbiens notes, “No one can deny that the dominant topic for research funding in the North is climate change” (2010, 413). However, while research into Arctic climate change and its effects is certainly important, my study suggests that research into climate change vulnerability does not necessarily reflect the most salient challenges that Arctic communities face. Instead, the discourse about climate change vulnerability and adaptation is heavily infused with normative assumptions (Brace and Geoghegan 2011). For example, Bravo (2009) argues that most discussions of Inuit and climate change coalesce to form a climate crisis narrative, which emphasizes the power of the global climate vis-à-vis the powerless position of indigenous peoples. He further suggests that such narratives give license to technocratic interventions. Comparing climate adaptation to international development, he persuasively essays:

In the Arctic climate change may in fact become the new byword for negotiating the conditions of inward investment that in the Third World is called development. In the Arctic as in Africa, the activities of an army of consultant climate modellers, ecologists and anthropologists, working for governments and non-state actors like indigenous organisations and environmentalist groups sustain the narrative that defines communities ‘at risk’ in order to justify expert interventions. (2009, 262)

Bravo’s vision of a region defined as “at-risk” is already evident. Similarly, Martello (2004; 2008) delineates how Inuit have become representatives of climate change, often portrayed as lacking agency in the face of environmental shifts. Furthermore, the mobilization of researchers is well underway, as evidenced at conferences such as the

ArcticNet Annual Scientific Meeting, where hundreds of Arctic climate change researchers converge.

While climate change has become the dominant paradigm for Arctic policy and research in recent years, it is not necessarily the most (or second or third most) significant issue confronting Inuit. Fox (2002) observed that Inuit she worked with would often respond to questions about climate change by discussing a variety of other challenges facing their communities. The behavior she describes reflects the fact that the changes Inuit are best equipped to handle are environmental changes. Based on decades of experience in Inuit communities, Wenzel (2009) argues that Inuit will mostly be able to weather the biophysical changes they encounter as a result of anthropogenic climate change. The real test, he posits, is whether their adaptive strategies will be available in the context of climate change policies regarding “wildlife conservation, sustainability, and environmental management” (2009, 97). Wenzel’s position reveals that it is not necessarily climate change itself that threatens Inuit, but rather the way that climate change is socially and politically constructed as a problem to be solved. In this way, climate change mirrors the economy, educational practices, food system, and wildlife populations, all of which have (now or in the past) been framed by Southerners as policy problems necessitating the imposition of a wage economy, formal schools, market-based food exchange, and wildlife quotas. As many residents of Salluit testified, the creation of these institutions has significantly undermined cultural practices at the core of daily life.

Recognizing that climate change is not the primary concern in Inuit communities, a number of researchers have argued that climate change adaptation must be “mainstreamed” into existing policy priorities. For example, Ford et al. (2007) stress the

need to link climate change adaptation to existing strategies for alleviating socio-economic stress. Further, Ford et al. (2010) argue that many of the policy interventions necessitated by climate change overlap with strategies to reduce vulnerability to these other risks. Among the areas of intervention that they suggest, are “supporting the teaching and transmission of traditional skills ... and ensuring the flexibility of resource management regimes” (2010, 187). Yet, the argument for mainstreaming assumes that these non-climatic policy priorities are sufficiently understood and efficaciously formulated. Without adequate research specifically examining the issues that Inuit themselves find most important, how can climate change policy be effectively mainstreamed? Furthermore, if scholars do not study the local salience of climate change relative to myriad other changes, how can resources be best appropriated to help communities address the challenges (including climate change) that they encounter? And finally, if non-climatic policy interventions simply replicate the technocratic models used in the past, how could these policies serve as vehicles for climate change adaptation?

Thus, I am not arguing against climate change research and policy in Inuit communities, but suggesting that it be better balanced with attention to the variety of other issues confronting such communities. As Desbiens eloquently writes:

In looking for solutions with local people, a research agenda that defines change too narrowly may, in fact, be taking us away from solutions that really address the challenges of living in the North – not yesterday, not tomorrow, but *today*. (2010, 414)

To frame her point in another way, the definition of policy problems from outside the community risks obscuring the most pressing and relevant issues in Inuit communities.

6.2. Further Research

The findings that I present in this thesis are not conclusive. In other words, they do not suggest the creation of specific policies to address issues of cultural vulnerability in Salluit or other Inuit communities. In addition, the nature of this research does not provide a sufficiently intensive analysis of policy problems to make specific policy recommendations for Inuit communities. However, my findings in Salluit provide a foundation for framing additional research on climate change and culture. Two areas of particular concern for scholars and policy-makers are outlined briefly below.

6.2.1. Community Priorities

First and foremost, my work indicates that it is critically important for climate change researchers working in Inuit communities to investigate where community members locate climate change relative to other risks. Given the spatially varied effects of climate change across the Arctic, we can expect that different communities will frame the risk of climatic shifts in different ways. The need to spatially and culturally contextualize the risk of climate change is clear. If the threat of climate change is taken as fact or overemphasized, it would obfuscate the challenges that community members are interested in addressing most. Doing so could divert research and government funding from more important programs to less important programs. The representation of communities at-risk has potentially explosive repercussions. Not only might it catalyze unwarranted expert intervention, but it can generate unnecessary fear among Arctic residents (as has happened with warnings about contaminants in country food).

6.2.2. Policy Responses to Non-Climatic Threats

Along with greater overall contextualization of climatic threats in future studies, it is also important for researchers to identify policies that would limit the cultural threats that Sallumiut (and likely other Inuit as well) currently experience. Despite the well-developed body of literature documenting economic, institutional, and social changes in Inuit communities, there are few policies that actively address these issues at their core. For example, although Salluit has a community-run program training youth in hunting, school-age children do not participate in this program because of conflicts with their educational commitments. While the training program is helping young adults gain hunting skills, it cannot account for conditions that prevent the transmission of hunting knowledge in the first place. Therefore, important issues like the pedagogical incommensurability between Inuit knowledge and formal schooling demand more attention with the goal of establishing policies to mitigate the effects of the colonial relationship between southern Canadians and Inuit.

6.3. Concluding Remarks

Without a reorientation away from viewing climate change as an unqualified threat to Inuit culture, Inuit communities will continue to be subject to impositions from outside. While the imposition might only be a research agenda rather than an economic or educational system, the power dynamics and imbalances remain the same. In order to avoid reproducing the colonial relationship, it is essential for Inuit to be able to define for themselves the problems they wish to solve. Based on the outcome of my work in one Inuit village in Arctic Canada, it is clear that climate change is certainly a challenge in northern communities, but it is not the only challenge. Only when researchers are able to

respond to the needs of a community rather than impose characterizations of risk from the outside, will it be possible for more effective research and policy to result.

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